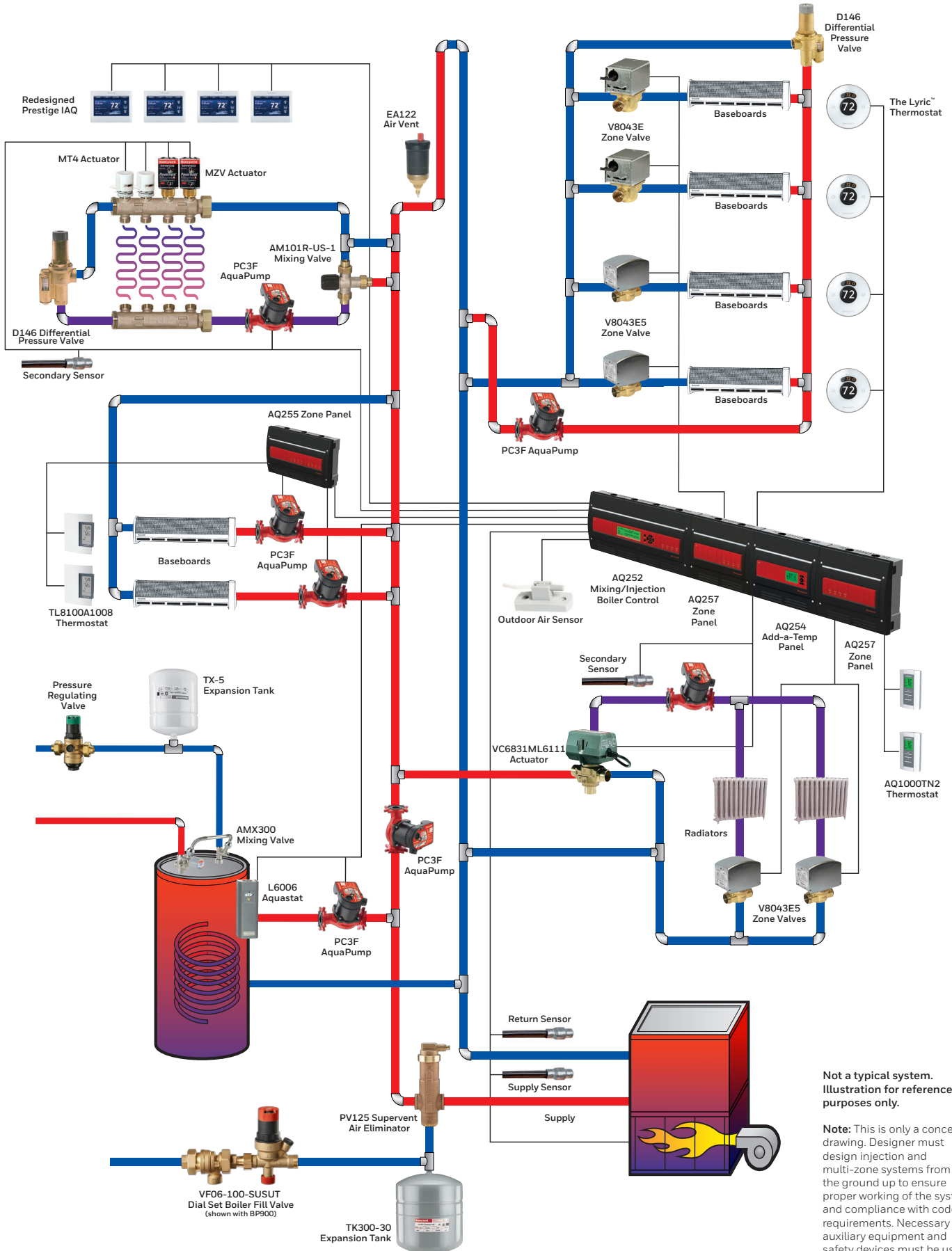


# Count on Our Full Line of Hydronic Heating and Potable Water Solutions



# Hydronic Controls for Multi-Zone System

Honeywell makes a wide variety of controls for traditional hydronic heating systems. This concept drawing shows various components that can be used in zoned hydronic systems.



Not a typical system. Illustration for reference purposes only.

**Note:** This is only a concept drawing. Designer must design injection and multi-zone systems from the ground up to ensure proper working of the system and compliance with code requirements. Necessary auxiliary equipment and safety devices must be used.

\*Picture courtesy Runtal North America.

# Table of Contents

---

Model Index .....	iv	Subject Index .....	v
<b>Potable Water Products</b>			
Mixing Valves .....	1	Pressure Regulating Valve .....	12
Residential Expansion Tanks .....	11	Water Leak and Freeze Detector .....	14
<b>Home Control Thermostat and Zoning</b>			
Programmable Thermostats .....	22		
<b>Residential Combustion Control</b>			
Aquastat Controllers .....	29	Temperature Controllers .....	45
Well Assemblies .....	44		
<b>Hydronic Controls</b>			
Hydronic Switching Relays .....	49		
Transformers for Hydronic Controls .....	53		
Residential Heating Valves and Actuators .....	54		
Motorized Zone Valves .....	56		
AquaPUMP Hydronic Circulating Pump .....	78		
Differential Pressure Regulators .....	80		
Backflow Preventers .....	88		
Boiler Fill Valves .....	89		
Thermometers and Gauges .....	90		
Boiler Trim Kits .....	92		
Thermostatic Radiator Valves and Actuators .....	105		

# Model Index

---

<b>A</b>	
AM-1 Series .....	62-3098 ..... 1
AMX Series .....	62-3074 ..... 5
AMX300 Series .....	63-9876 ..... 7
AQ1000TN2 .....	63-9379 ..... 21
AQ1000TP2 .....	69-2245EF ..... 21
AQ2000 .....	63-9686 ..... 19
AQ250 .....	68-0306 ..... 17
AQ255 .....	69-1981 ..... 18
AQ257 .....	69-1981 ..... 18
AT140 .....	68-0054 ..... 53
<b>B</b>	
BP900 .....	62-3088 ..... 88
<b>C</b>	
C7089 .....	69-2055EFS..... 25
C7189 .....	69-2459EFS..... 26
CHW .....	33-00080 ..... 14
<b>D</b>	
D146M .....	62-3019 ..... 80
DSO6 .....	33-00010 ..... 12
<b>E</b>	
EA122A .....	62-3038 ..... 82, 83
EA79 .....	62-3034 ..... 81
ERM.....	33-00135EFS..... 24
<b>F</b>	
F76S .....	62-3015 ..... 15
FM911 .....	33-00022 ..... 89
FV180 .....	62-3086 ..... 84
FV180A .....	62-3086 ..... 84
<b>H</b>	
HR90 .....	33-00086EFS ..... 100
<b>L</b>	
L4006 .....	60-2104 ..... 29
L4008 .....	60-2104 ..... 31
L4081 .....	60-2105 ..... 34
L4103 .....	60-2344 ..... 32
L6006 .....	60-2104 ..... 29
L6008 .....	60-2104 ..... 31
L6081 .....	60-2105 ..... 34
L7224 .....	69-1957 ..... 36
L8100 .....	60-2336 ..... 33
L8124 .....	60-2061 ..... 37
L8148 .....	60-2278 ..... 39
<b>M</b>	
M6063 .....	95C-10887 ..... 55
MT100C .....	95C-10682 ..... 106
MT110C .....	95C-10682 ..... 106
MV876 .....	62-3061 ..... 16
MX Series.....	62-3079 ..... 9
MZV Series.....	62-3099 ..... 76, 77

<b>P</b>	
PC3F1558 .....	68-3083 ..... 78
PC3F2699 .....	68-3084 ..... 78
PC3F4344 .....	68-3085 ..... 78
PV Series .....	50-9337 ..... 85, 86
<b>R</b>	
R8182 .....	68-0105 ..... 43
R845 .....	60-2481 ..... 50
R847 .....	60-2481 ..... 49
R856 .....	60-2171 ..... 49
R8845U .....	68-0215 ..... 51
RA832 .....	60-2481 ..... 50
RA889A .....	68-0216 ..... 52
RA89 .....	60-2481 ..... 50
REM1000.....	69-2592EFS..... 26
REM5000.....	69-2055EFS..... 27
<b>S</b>	
SV173 .....	63-9479 ..... 87
<b>T</b>	
T100 .....	EN0H-2018GE25 ..... 93, 102
T104 .....	62-3004 ..... 96, 97
T2040 .....	33-00204EF ..... 101
T775 .....	63-1318 ..... 45, 49
TH8000 Series.....	69-1896 ..... 23
THM5421 .....	68-0311 ..... 24
THM4000.....	68-0312 ..... 27
THM6000R.....	69-2567EFS ..... 25
TK300 Series.....	62-3080 ..... 91
TL8100A .....	69-2018ES ..... 28
TX Series.....	62-3082 ..... 11
<b>V</b>	
V110 .....	62-3004 ..... 94
V135 .....	95C-10711 ..... 93
V200 .....	63-9379 ..... 98, 99, 105
V2000 Series.....	63-9379 ..... 98, 99
V4043 .....	60-2133 ..... 59, 61
V4044 .....	60-2133 ..... 62
V5442N .....	95C-10888 ..... 54
V8043 .....	60-2133 ..... 63, 65, 67-70
V8044 .....	60-2133 ..... 71
VC Series .....	95C-10647 ..... 56, 57, 58
VF06.....	33-00022 ..... 89
<b>W</b>	
W8735 .....	W8735 ..... 42
<b>X</b>	
XPS Series .....	62-3080 ..... 108
<b>Y</b>	
YTHX9421 .....	68-0311 ..... 22



## A

Accessories  
 AQUATROL 20  
 Mixing Valves 3  
 RedLINK Enabled Thermostats 25  
 Thermostatic Radiator Valves 105  
 Water Filters 16  
 Actuators  
 Thermostatic Radiator 96  
 Air Eliminators 85  
 Air Purger 84  
 Air Vents and Eliminators 80–87  
 AquaPUMP Hydronic Circulating Pump 78  
 Aquastat Controllers 29–44  
 Automatic Air Vent for Heating System 83  
 Automatic Air Vent for Non-Heating System 82  
 Automatic Backwash Control 16

## B

Backflow Preventers with Intermediate Atmospheric Vent 88  
 Boiler Control Panel for Hydronic Zoning 17  
 Boiler Fill Valves 88  
 Boiler Trim Kit with Air Purger 92  
 Boiler Trim Kit with SuperVent 92

## C

Cartridge Cage 3-way Mixing Valves 56  
 Combination Aquastat® and High Limit Controller 32  
 Combination Protectorelay® and Hydronic Heating Controllers 43  
 Commercial Expansion Tanks 105–106  
 Control Centers 49  
 Controllers  
 Aquastat 29  
 High Limit 32  
 Protectorelay and Hydronic Heating 43  
 RedLINK 26  
 TheraPro Electronic Radiator 100  
 Control Panels  
 Hydronic Zoning 17

## D

“DialSet” Boiler Fill Valves 89  
 “DialSet” Low Lead Pressure Regulating Valve 12  
 Differential Pressure Regulators 79  
 DirectConnect™ Thermostatic Mixing Valves 5  
 Diverting Valves 9  
 Line Voltage 62  
 Low Voltage 71  
 Domestic Hot Water Priority 42

## E

Electronic Relay Boiler Control Panel for Hydronic Zoning System 17  
 Equipment Interface Modules  
 Prestige IAQ 24  
 Expansion Panels  
 Hydronic Zoning 18  
 Expansion Tanks  
 Commercial 107  
 Domestic Hot Water 11  
 Residential 91

## G

General Purpose Transformer for Hydronic Heating Controls 53  
 GoldTop™—Universal Air Vent 84

## H

Heavy Duty Relay 49  
 High Capacity Thermostatic Radiator Valve Actuators 96  
 High Capacity Thermostatic Radiator Valves 94  
 Hydronic Circulating Pumps, AquaPUMP™ 78  
 Hydronic Switching Relays 49–52

## I

Industrial Air Vents 81

## L

Large Flow Proportional Mixing or Diverting Valve 9  
 Linear/Modulating Cartridge Cage 2-way Zone Valve 58  
 LineVoltPRO® 8000 7-Day Programmable Hydronic Thermostat 28  
 Lyric™ Water Leak and Freeze Detector 14

## M

MaxiVent™ Air Vent 84  
 Mixing Valves 1–10  
 Cartridge Cage 56  
 Large Flow 9  
 Motorized Zone Valves 56–77  
 Multiple Aquastat® Controllers 34

## N

Non-Programmable Communicating Thermostat 21

## O

Oil Electronic Aquastat Controller 36  
 One-pipe Steam Thermostatic Radiator Valve 104  
 Outdoor Reset and Domestic Hot Water Priority 42

## P

Portable Comfort Control 27  
 Pressure Regulating Valves 12–14  
 Prestige 2-Wire IAQ Equipment Interface Module 24  
 Prestige® 2-Wire IAQ Thermostat 22  
 Programmable Heat/Cool Thermostat 69  
 Programmable Thermostats 22–28  
 Pumps  
 Circulating 78

## Q

QuickFit® Zone Valves for Canada 70  
 QuickFit® Zone Valves, Low Voltage 69  
 Quick Open Cartridge Cage 2-way Zone Valve 57

## R

RedLINK  
 Accessories 24  
 AquaReset 42  
 Internet Gateway 24

Portable Comfort Control 27  
 Remote 26  
 Sensors 24  
 Thermostats 22  
 Wireless Adapter 27  
 RedLINK Wireless Entry/Exit Remote 26  
 Relays  
 Aquastat 39  
 Heavy Duty 49  
 Triple Aquastat 37  
 Relays, Hydronic Switching 49  
 Remote Bulb Controllers 31  
 Remote Temperature Controllers 45  
 Remote, Wireless Entry/Exit 26  
 Replacement Parts  
 AQUATROL 20  
 Mixing Valves 4, 8, 10  
 Pressure Regulating Valves 13  
 Water Filters 16  
 Zone Valves 73, 77  
 Replacement Zoning Modules, AQUATROL 19  
 Residential Expansion Tanks 11, 90–91  
 Residential Heating Valves and Actuators 54, 55  
 Rotary Actuator 55

## S

Sensors  
 RedLINK 24  
 Service Check Valves 91  
 Stand-Alone Controllers 45  
 Standard Capacity Thermostatic Radiator Actuators 102  
 Standard Capacity Thermostatic Radiator Valves Body 98  
 SuperVent® Air Eliminator 85  
 SuperVent® Vent Top 87  
 Switching Relays 49

## T

TheraPro Electronic Radiator Controller 100  
 Thermometers  
 Sweat Connection 90  
 Threaded Connection 90  
 Thermometers with Thermowells 90  
 Thermostatic Mixing or Diverting Valve Actuators 93  
 Thermostatic Mixing or Diverting Valves 93  
 Thermostatic Mixing Valves 1, 5  
 DirectConnect 5  
 Thermostatic Radiator Valves and Actuators 92–104  
 Thermostats  
 AQUATROL 21  
 LineVoltPRO 8000 28  
 Prestige IAQ 22  
 Programmable 22  
 VisionPRO 8000 23  
 Transformers  
 Hydronic Controls 53  
 Tridicators 90  
 Triple Aquastat® Relay 37

## V

Valve Bodies Cross Reference 97  
 Valve Cartridge Changing Tool 106  
 Valves  
 Boiler Fill 89

# Subject Index

---

- Diverting 9, 62, 71
- Mixing 1
- Motorized Zone 56
- Pressure Regulating 12
- Thermostatic Mixing 93
- Valves for Steam
  - Low Voltage Normally Open 67
- VisionPRO® 8000 with RedLINK™  
technology 23

## W

- Water Filters 15
- Water Leak and Freeze Detector 14
- Well Assemblies 44
- Wireless Adapter, RedLINK 27
- Wireless Indoor Air Sensor 26
- Wireless Outdoor Sensor 25

## Z

- Zone Control Builder Packs 72
- Zone Valves
  - Line Voltage 59
  - Low Voltage Normally Closed 63
  - Low Voltage Normally Open 68
  - Motorized 56
- Zone Valves for Canada 65
- Zone Valves for Steam
  - Line Voltage 61
  - Low Voltage Normally Open 67
- Zone Valves, Linear Pre-balancing 76
- Zone Valves, Motorized 56
- Zoning Expansion Panel for Hydronic Zoning  
System 18

## AM-1 Series Thermostatic Mixing Valve



NPT



PEX



Sweat



CPVC



ProPress

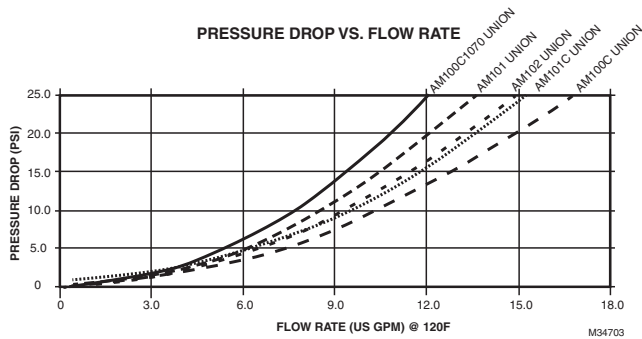
Honeywell AM-1 series adjusts, maintains, and limits the hot water temperature settings to provide comfort and protect equipment at home. While increasing the amount of safe, usable hot water, it efficiently offers anti-scald, anti-chill protection.

- Features dual purpose mixing or diverting valves
- Offers constant water temperature under changing operating conditions
- Temperature is limited at any point and if cold water supply is interrupted, flow reduction occurs in seconds
- Provides reliable performance at minimum flow of 0.5 gpm and proportional valve for simultaneous control of hot and cold

- Maximum pressure 150 psi and maximum temperature of 212°F (100°C)
- Tamper-resistant design with nickel-plated brass construction and EPDM O-rings
- Designed for easy maintenance and Teflon® coating prevents mineral build-up and extends life
- Lead free products have products numbers end in LF

**Applications:** Domestic water; Nursing homes; Public facilities; Automatic faucets; Radiant floor heating; Space heating; Combo systems; Solar hot water; Greenhouses; Industrial applications; Photo processing

### Pressure Drop Chart

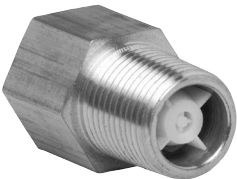
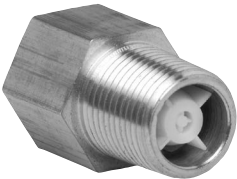




Material Number	Pipe Size in/(DN)	Connection Type	Capacity (Cv)	Operating Temperature °F (°C)	Approvals, ASSE	Comments
AM100-1LF/U	1/2 in. (DN15)	NPT	3.2 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM100-UP-1LF/U	1/2 in. (DN 15)	Union ProPress	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM100C1070UCPVC1LF	1/2 in. (DN15)	Union CPVC	1.8 Cv	70°F to 120°F (21°C to 49°C)	1070/1017	Low lead Content <.25% by weighted average
AM100C1070-UP-1LF	1/2 in. (DN15)	Union ProPress	1.8 Cv	70°F to 145°F (21°C to 63°C)	1070/1017	Low lead Content <.25% by weighted average
AM100C1070-UPEX1LF	1/2 in. (DN15)	Union PEX	1.8 Cv	70°F to 120°F (21°C to 49°C)	1070/1017	Low lead Content <.25% by weighted average
AM100C1070-US-1LF	1/2 in. (DN15)	Union Sweat	1.8 Cv	70°F to 120°F (21°C to 49°C)	1070/1017	Low lead Content <.25% by weighted average
AM100C1070-UT-1LF	1/2 in. (DN15)	Union NPT	1.8 Cv	70°F to 120°F (21°C to 49°C)	1070/1017	Low lead Content <.25% by weighted average
AM100C-1LF/U	1/2 in. (DN15)	NPT	3.2 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM100C-UCPVC-1LF/U	1/2 in. (DN15)	Union CPVC	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM100C-UPEX-1LF/U	1/2 in. (DN15)	Union PEX	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM100C-UP-1LF/U	1/2 in. (DN15)	Union ProPress	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM100C-US-1LF/U	1/2 in. (DN15)	Union Sweat	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM100C-UT-1LF/U	1/2 in. (DN15)	Union NPT	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM100R-UP-1/U	1/2 in. (DN15)	Union ProPress	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM100R-UPEX-1/U	1/2 in. (DN15)	Union PEX	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM100R-US-1/U	1/2 in. (DN15)	Union Sweat	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM100R-UT-1/U	1/2 in. (DN15)	Union NPT	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM100-UCPVC-1LF/U	1/2 in. (DN15)	Union CPVC	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM100-UPEX-1LF/U	1/2 in. (DN15)	Union PEX	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM100-US-1LF/U	1/2 in. (DN15)	Union Sweat	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM100-UT-1LF/U	1/2 in. (DN15)	Union NPT	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM101-1LF/U	3/4 in. (DN20)	NPT	3.8 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM101C1070UCPVC1LF	3/4 in. (DN20)	Union CPVC	1.8 Cv	70°F to 120°F (21°C to 49°C)	1070/1017	Low lead Content <.25% by weighted average
AM101C1070-UP-1LF	3/4 in. (DN20)	Union ProPress	1.8 Cv	70°F to 145°F (21°C to 63°C)	1070/1017	Low lead Content <.25% by weighted average
AM101C1070-UPEX1LF	3/4 in. (DN20)	Union PEX	1.8 Cv	70°F to 120°F (21°C to 49°C)	1070/1017	Low lead Content <.25% by weighted average
AM101C1070-US-1LF	3/4 in. (DN20)	Union Sweat	1.8 Cv	70°F to 120°F (21°C to 49°C)	1070/1017	Low lead Content <.25% by weighted average

# Mixing Valves

Material Number	Pipe Size in/(DN)	Connection Type	Capacity (Cv)	Operating Temperature °F (°C)	Approvals, ASSE	Comments
AM101C1070-UT-1LF	3/4 in. (DN20)	Union NPT	1.8 Cv	70°F to 120°F (21°C to 49°C)	1070/1017	Low lead Content <.25% by weighted average
AM101C-1LF/U	3/4 in. (DN20)	NPT	3.8 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM101C-UP-1LF/U	3/4 in. (DN20)	Union ProPress	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM101C-UCPVC-1LF/U	3/4 in. (DN20)	Union CPVC	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM101C-UPEX-1LF/U	3/4 in. (DN20)	Union PEX	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM101C-US-1LF/U	3/4 in. (DN20)	Union Sweat	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM101C-UT-1LF/U	3/4 in. (DN20)	Union NPT	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM101R-UP-1/U	3/4 in. (DN20)	Union ProPress	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM101R-UPEX-1/U	3/4 in. (DN20)	Union PEX	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM101R-US-1/U	3/4 in. (DN20)	Union Sweat	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM101R-UT-1/U	3/4 in. (DN20)	Union NPT	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM101-UCPVC-1LF/U	3/4 in. (DN20)	Union CPVC	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM101-UPEX-1LF/U	3/4 in. (DN20)	Union PEX	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM101-US-1LF/U	3/4 in. (DN20)	Union Sweat	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM101-UT-1LF/U	3/4 in. (DN20)	Union NPT	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM102-1LF/U	1 in. (DN25)	NPT	4.3 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM102-UP-1LF/U	1 in. (DN25)	Union ProPress	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM102C1070-US-1LF	1 in. (DN25)	Union Sweat	1.8 Cv	70°F to 120°F (21°C to 49°C)	1070/1017	Low lead Content <.25% by weighted average
AM102C-1LF/U	1 in. (DN25)	NPT	4.3 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM102C-US-1LF/U	1 in. (DN25)	Union Sweat	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM102C-UT-1LF/U	1 in. (DN25)	Union NPT	3.9 Cv	70°F to 120°F (21°C to 49°C)	1017	Low lead Content <.25% by weighted average
AM102R-US-1/U	1 in. (DN25)	Union Sweat	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM102R-UT-1/U	1 in. (DN25)	Union NPT	3.9 Cv	70°F to 180°F (21°C to 82°C)	No Approval	Heating Only
AM102-US-1LF/U	1 in. (DN25)	Union Sweat	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average
AM102-UT-1LF/U	1 in. (DN25)	Union NPT	3.9 Cv	70°F to 145°F (21°C to 63°C)	1017	Low lead Content <.25% by weighted average


## Mixing Valve Accessories

Material Number	Pipe Size in/(DN)	Connection Type	Operating Temperature °F (°C)	Description	Comments	
AM08-024LF/U	1/2 in. (DN15)	Union NPT	140°F Maximum (60°C Maximum)	Three 1/2 in. NPT Lead-Free Tailpieces	Low lead Content <.25% by weighted average	
AM08-025LF/U	3/4 in. (DN20)	Union NPT	140°F Maximum (60°C Maximum)	Three 3/4 in. NPT Lead-Free Tailpieces	Low lead Content <.25% by weighted average	
AM08-026LF/U	1 in. (DN25)	Union NPT	140°F Maximum (60°C Maximum)	Three 1 in. Lead-free NPT Tailpieces	Low lead Content <.25% by weighted average	
AM09-061LF/U	1/2 in. (DN15)	Union Sweat	140°F Maximum (60°C Maximum)	Three 1/2 in. Lead-free Sweat Tailpieces	Low lead Content <.25% by weighted average	
AM09-062LF/U	3/4 in. (DN20)	Union Sweat	140°F Maximum (60°C Maximum)	Three 3/4 in. Lead-free Sweat Tailpieces	Low lead Content <.25% by weighted average	
AM09-063LF/U	1 in. (DN25)	Union Sweat	140°F Maximum (60°C Maximum)	Three 1 in. Lead-free Sweat Tailpieces	Low lead Content <.25% by weighted average	
AM206-003LF/U	1/2 in. (DN20)	Union PEX	140°F Maximum (60°C Maximum)	Three 1/2 in. Lead-free PEX Tailpieces	Low lead Content <.25% by weighted average	
AM206-004LF/U	3/4 in. (DN20)	Union PEX	140°F Maximum (60°C Maximum)	Three 3/4 in. Lead-free PEX Tailpieces	Low lead Content <.25% by weighted average	
AM206-039/U	1/2 in. (DN20)	Union CPVC	140°F Maximum (60°C Maximum)	1/2 inch CPVC union kit. Includes tailpiece, union nut and gasket		
AM206-040/U	3/4 in. (DN20)	Union CPVC	140°F Maximum (60°C Maximum)	3/4 inch CPVC union kit. Includes tailpiece, union nut and gasket		
AM206-041/U	1/2 in. (DN20)	PEX	140°F Maximum (60°C Maximum)	1/2 inch PEX union kit. Includes tailpiece, union nut and gasket		
AM206-042/U	3/4 in. (DN20)	PEX	140°F Maximum (60°C Maximum)	3/4 inch PEX union kit. Includes tailpiece, union nut and gasket		
CVT-050/U	1/2 in. (DN15)	NPT	140°F Maximum (60°C Maximum)	1/2 in. female NPT x 1/2 in. male NPT Check Adapter. For AM-1 NPT valves		
CVT-075/U	3/4 in. (DN20)	NPT	140°F Maximum (60°C Maximum)	3/4 in. female NPT x 3/4 in. Check Adapter. For AM-1 NPT valves		
TS205-064/U	Use with All Mixing Valves	Adhesive strip	110°F to 140°F (43°C to 60°C)	Thermal Temperature Indicator Strip for Mixing Valve Setup and Outlet Temperature Monitoring. Included in all AM-1 Series STD and C models and AMX Series. Available as separate item	Included in all AM-1 Series STD and C models and AMX Series. Available as separate item	
TS206-080/U	Use with All Mixing Valves	Adhesive strip	105°F to 180°F (41°C to 82°C)	Thermal Temperature Indicator Strip for Mixing Valve Setup and Outlet Temperature Monitoring. Included in all AM-1 Series R models. Available as separate item	Included in all AM-1 Series R models. Available as separate item	

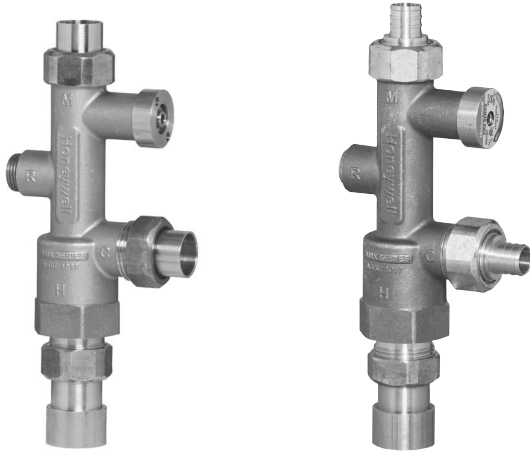


# Mixing Valves

## AM-1 Series Valves Replacement Parts

Material Number	Capacity (Cv)	Operating Temperature °F (°C)	Description	
AM-1-020RP/U		80°F to 120°F (C Range); 60°F to 100°F (B Range) (15°C to 38°C (C Range); 27°C to 49°C (B Range))	AM-1 Series B or C Range Element, Spring, Diffuser, and plug assembly	
AM-1-030RP/U		70°F to 120°F (21°C to 49°C)	AM-1 1070 Series element, spring diffuser and plug assembly; AM-1 1070 Series Element, Spring, Diffuser, and plug assembly; Standard and R range	
AMCU-001RP/U	8 Cv	70°F to 120°F (21°C to 49°C)	AM-1 Union model check valve kit. Contains one AMCU100 and O-ring for original AM1 and all AMX100 mixing valves. Contains one AMCU200 and two O-rings for newer AM-1 valves where the check valve fits flush with valve body.	
AMCU100/U	8 Cv	70°F to 120°F (21°C to 49°C)	AM-1 Union check valve for original AM-1 valves where the check valve does not fit flush with valve body. Also for all AMX100 mixing valves. Contains one O-ring	

## AMX Series DirectConnect™ Thermostatic Mixing Valves



Sweat, CPVC, NPT & PEX

Honeywell AMX series DirectConnect™ reduces water heater installation time as the cold and hot port position eliminates the need for typical elbows and tees. Designed for safety to prevent scalding, it also increases user comfort.

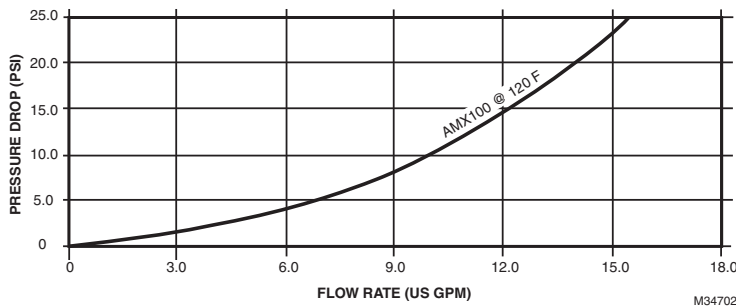
- Designed to be directly installed on water heater hot outlet port
- Offers constant water temperature under changing operating conditions
- Temperature is adjustable using 3/16 allen wrench and if cold water supply is interrupted, flow reduction occurs in seconds
- Features brass/stainless construction and Teflon coated wear surfaces
- Heat trapping not required and recirculation portion option allows for fast response
- Lead free products have products numbers end in LF

**Applications:** 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

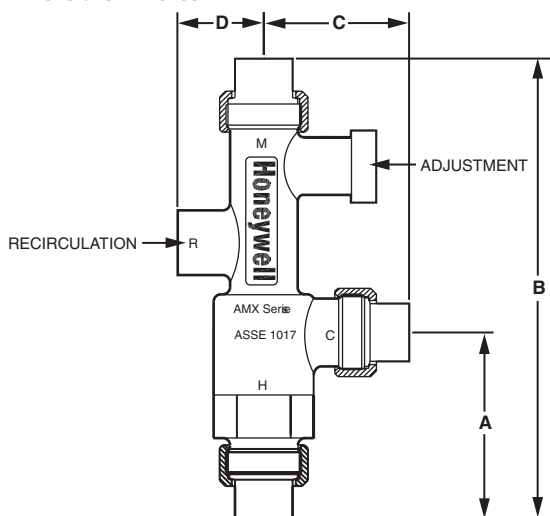
**Approvals, ASSE:** 1017

### Pressure Drop Chart

PRESSURE DROP VS. FLOW RATE



### Dimensions in inches

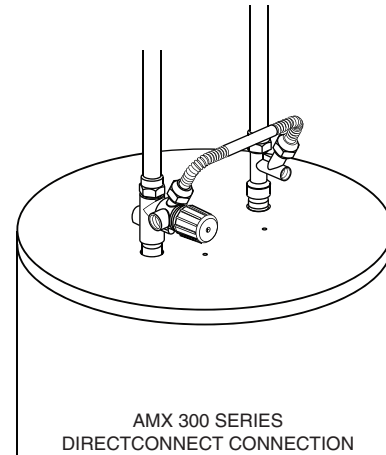
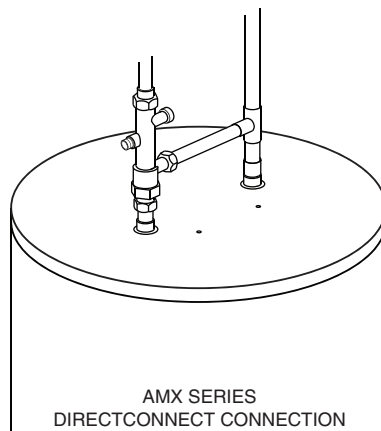
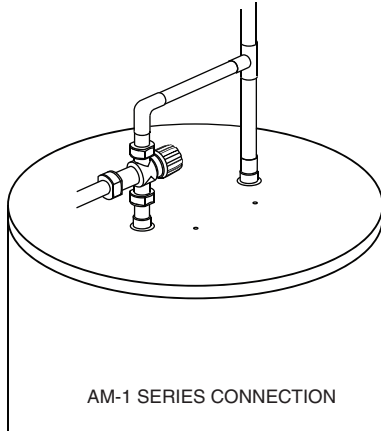


PRODUCT NUMBER	DIMENSIONS (INCHES)			
	A	B	C	D
AMX100-UCPVC-1-LF	3-1/2	8-7/16	2-11/16	1-1/2
AMX100-UPEX-1-LF	3-1/2	8-5/8	2-15/16	1-1/2
AMX100-US-1-LF	3-1/2	8-3/16	2-1/2	1-1/2
AMX100-UT-1-LF	3-1/2	8-1/2	2-13/16	1-1/2
AMX101-UCPVC-1-LF	4-3/16	9	2-1/2	1-1/2
AMX101-UPEX-1-LF	4-3/16	9-3/16	2-11/16	1-1/2
AMX101-US-1-LF	4-3/16	9	2-1/2	1-1/2
AMX101-UT-1-LF	4-3/16	9-11/16	3-1/2	1-1/2
AMX102-US-1-LF	4-1/2	10	3-1/2	1-1/2
AMX102-UT-1-LF	4-1/2	10.3	3-13/16	1-1/2

M27478B

# Mixing Valves

## Thermostatic Replacement Mixing Valve Installation



M31168

Material Number	Pipe Size in/(DN)	Connection Type	Capacity (Cv)	Operating Temperature °F (°C)	Comments	Includes
AMX100-UCPVC-1LF/U	1/2 in. (DN15)	Union CPVC, 3/4 in. Bottom	4 Cv	90°F to 130°F (32°C to 54°C)	Low lead Content <.25% by weighted average	Check valves on hot and cold ports
AMX100-UPEX-1LF/U	1/2 in. (DN15)	Union PEX, 3/4 in. Bottom	4 Cv	90°F to 130°F (32°C to 54°C)	Low lead Content <.25% by weighted average	3/4" FNPT Inlet, 2 1/2" Union Sweat fittings
AMX100-US-1LF/U	1/2 in. (DN15)	Union Sweat, 3/4 in. Bottom	4 Cv	90°F to 130°F (32°C to 54°C)	Low lead Content <.25% by weighted average	3/4" FNPT Inlet, 2 1/2" Union Sweat fittings
AMX101-UPEX-1LF/U	3/4 in. (DN20)	Union PEX, 3/4 in. Bottom	4 Cv	90°F to 130°F (32°C to 54°C)	Low lead Content <.25% by weighted average	3/4" FNPT Inlet, 2 3/4" Union Sweat fittings
AMX101-US-1LF/U	3/4 in. (DN20)	Union Sweat, 3/4 in. Bottom	4 Cv	90°F to 130°F (32°C to 54°C)	Low lead Content <.25% by weighted average	Check valves on hot and cold ports
AMX101-UT-1LF/U	3/4 in. (DN20)	Union NPT, 3/4 in. Bottom	4 Cv	90°F to 130°F (32°C to 54°C)	Low lead Content <.25% by weighted average	3/4" FNPT Inlet, 2 3/4" Union Threaded fittings
AMX102-US-1LF/U	1 in. (DN25)	Union Sweat, 1 in. Bottom	4 Cv	90°F to 130°F (32°C to 54°C)	Low lead Content <.25% by weighted average	1" FNPT Inlet, 2 1" Union Sweat fittings
AMX102-UT-1LF/U	1 in. (DN25)	Union NPT, 1 in. Bottom	4 Cv	90°F to 130°F (32°C to 54°C)	Low lead Content <.25% by weighted average	1" FNPT Inlet, 2 1" Union Threaded fittings

## AMX300 Series DirectConnect™ Thermostatic Mixing Valve and Kits



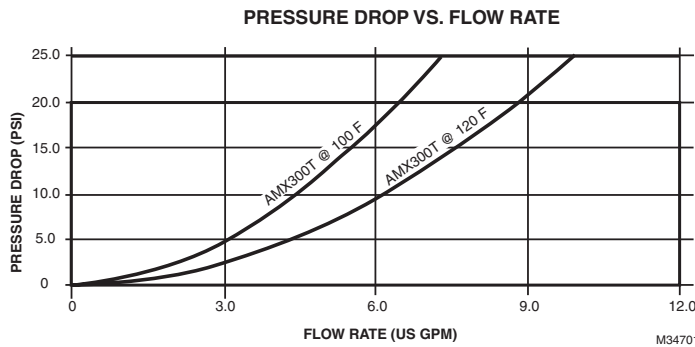
Honeywell AMX300 series DirectConnect™ kits reduce installation time while providing Honeywell's industry-leading mixing valve technology, which offers excellent temperature stability and control and minimizes scalding risk to building occupants.

- Temperature is adjustable using push-twist-release locking hand wheel design and if cold water supply is interrupted, flow reduction occurs in seconds
- Kit includes mixing valve, cold water tee fitting and flexible stainless steel connector
- Recirculation portion option offers fast delivery of heated water to the furthest fixtures, increasing user comfort with more available hot water
- The alternate hot port bypasses hot water directly from the tank to non-mixed temperature applications
- Fits most water heaters up to 1 in., with all necessary adapters included
- Brass/stainless construction with Teflon coated wear surfaces for extended surface
- Lead free products have products numbers end in LF

**Applications:** Domestic Hot Water  
**Fluid Temperature:** Mixed Water Supply — 100°F to 145°F (Mixed Water Supply — 38°C to 63°C)

**Minimum Flow Rate:** 0.95 lpm; Recirculation Port: 1/2 in. NPT; Alternate Hot Port: 1/2 in. NPT (0.25 gpm; Recirculation Port: 1/2 in. NPT; Alternate Hot Port: 1/2 in. NPT)  
**Maximum Safe Operating Pressure (psi):** 150 psi




### Pressure Drop Chart



Material Number	Pipe Size in/(DN)	Connection Type	Capacity (Cv)	Operating Temperature °F (°C)	Description	Comments
AMX300TLF/U	1/2 in. (DN15)	Hot Inlet - Female NPT; Mixed Outlet - Male NPT	2.3 Cv	33°F to 80°F (cold water inlet); 100°F to 212°F (hot water inlet) (0.5°C to 27°C (cold water inlet); 38°C to 100°C) (hot water inlet)	DirectConnect water heater kit with 3/4 in. mixing valve, 3/4 in. cold water tee, and 8-in. SS flex connector	Low lead Content <.25% by weighted average
AMX302TLF/U	1 in. (DN25)	Hot Inlet - Female NPT; Mixed Outlet - Male NPT	2.3 Cv	33°F to 80°F (cold water inlet); 100°F to 212°F (hot water inlet) (0.5°C to 27°C (cold water inlet); 38°C to 100°C) (hot water inlet)	DirectConnect water heater kit with 3/4-in. ASSE 1017 mixing valve, 3/4-in. cold water tee, and 11-in. SS flex connector	Low lead Content <.25% by weighted average

# Mixing Valves

## AMX Series DirectConnect Replacement Part

Material Number	Capacity (Cv)	Operating Temperature °F (°C)	Description	
AMX-001RP/U		90°F to 130°F (32°C to 54°C)	AMX element, spring, plug assembly. For AMX100 series valves.	
AMX300-008/U		90°F to 130°F (32°C to 54°C)	Replacement 8" flex connector for AMX300T	
AMX300-011/U		90°F to 130°F (32°C to 54°C)	Replacement 11" flex connector for AMX300T	
AM-1-025RP/U		90°F to 130°F (32°C to 54°C)	Thermal element, spring, and plug assembly; Rebuild kit for AM-1 "Standard" (70 -145°F; 21-49°C) series and AMX300 series valves	
AMX300LF/U	2.1 Cv	33°F to 80°F (cold water inlet); 100°F to 212°F (hot water inlet) (0.5°C to 27°C (cold water inlet); 38°C to 100°C) (hot water inlet)	3/4 in. mixing valve (Replacement valve for AMX300T and AMX302T DirectConnect mixing valve kits.)	



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



Threaded

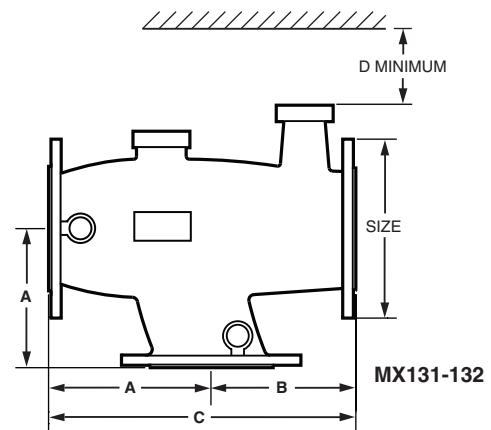
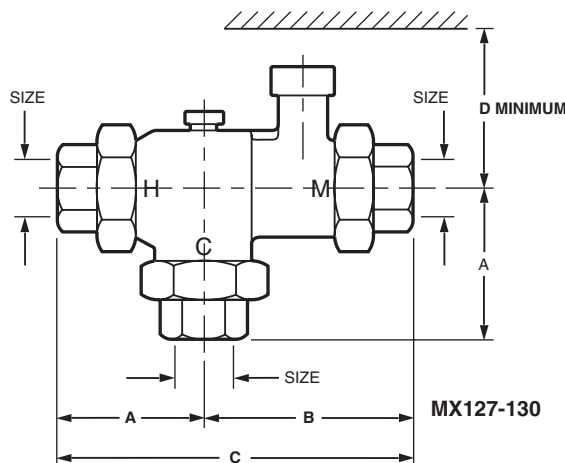
Flanged

The MX Series is a state-of-the-art mixing valve that manages the hot and cold supply based on control settings. Accurate control of temperature provides energy savings, increased comfort and safety. The Teflon wear surfaces prevent calcium buildup.

- 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)

**Applications:** 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 (lb):** 3.6 lb

Dimensions in inches (millimeters)



Product Number	Size NPT	Recir Port Size	Dimensions in inches (millimeters)			
			A	B	C	D
MX127	1"	1/2 (13)	2-51/64 (71)	3-45/64 (94)	6-1/2 (165)	6 (152)
MX128	1-1/4"	1/2 (13)	3-19/64 (84)	4-13/32 (112)	7-45/64 (196)	6-29/32 (175)
MX129	1-1/2"	1/2 (13)	3-19/32 (91)	5 (127)	8-19/32 (218)	7 (178)
MX130	2"	1/2 (13)	4-13/64 (107)	5-51/64 (147)	10 (254)	7-19/64 (211)
MX127LF	1"	1/2 (13)	2-51/64 (71)	3-45/64 (94)	6-1/2 (165)	6 (152)
MX128LF	1-1/4"	1/2 (13)	3-19/64 (84)	4-13/32 (112)	7-45/64 (196)	6-29/32 (175)
MX129LF	1-1/2"	1/2 (13)	3-19/32 (91)	5 (127)	8-19/32 (218)	7 (178)
MX130LF	2"	1/2 (13)	4-13/64 (107)	5-51/64 (147)	10 (254)	7-19/64 (211)

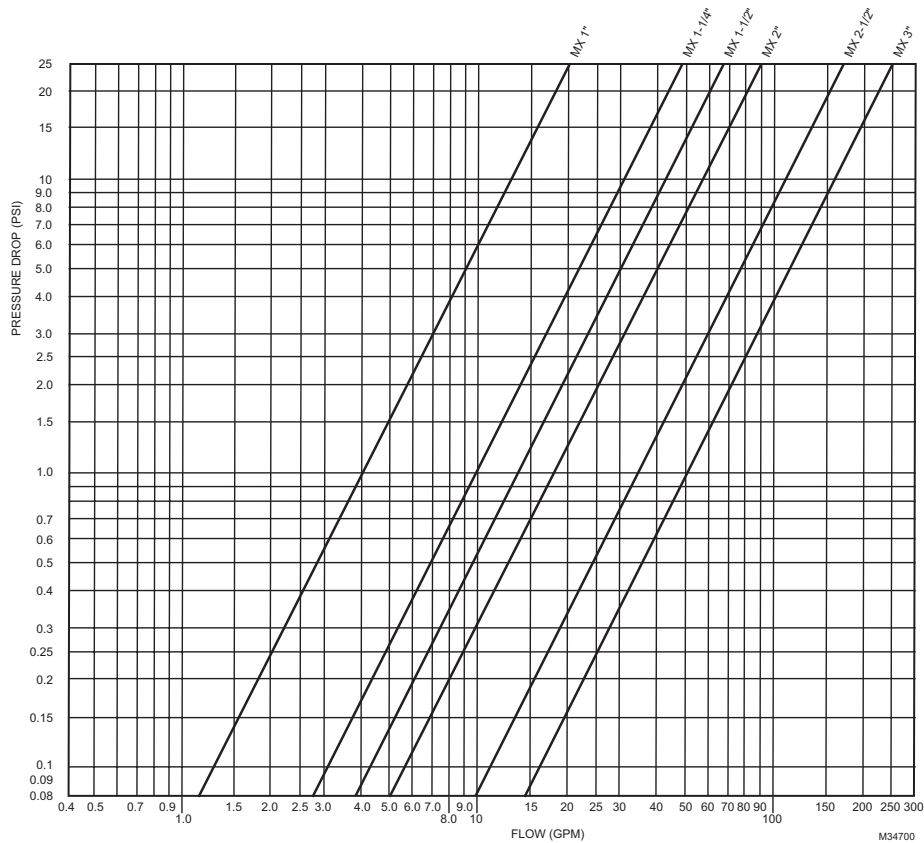
M23243E

Product Number	Size NPT	Recir Port Size	Dimensions Inches (mm)			
			A	B	C	D
MX131	2-1/2" Flange	1 (25)	5-45/64 (145)	5-45/64 (145)	11-13/32 (290)	4 (102)
MX132	3" Flange	1-1/4 (32)	6-7/64 (155)	6-7/64 (155)	12-13/64 (310)	4 (102)
MX131LF	2-1/2" Flange	1 (25)	5-45/64 (145)	5-45/64 (145)	11-13/32 (290)	4 (102)
MX132LF	3" Flange	1-1/4 (32)	6-7/64 (155)	6-7/64 (155)	12-13/64 (310)	4 (102)

M27479A

# Mixing Valves

Pressure Drop Chart



Material Number	Pipe Size in/(DN)	Connection Type	Capacity (Cv)	Operating Temperature °F (°C)	Description	Approvals, ASSE	Comments
MX127/U	1 in. (DN25)	NPT	4 Cv	113°F to 149°F (45°C to 65°C)	1 inch NPT MX Mixing Valves	1017	Heating Only
MX127LF/U	1 in. (DN25)	NPT	4 Cv	113°F to 149°F (45°C to 65°C)	1 inch NPT MX Mixing Valves Lead Free	1017	Low Lead Content <.25% by weighted average
MX128/U	1 1/4 in. (DN32)	NPT	9.3 Cv	113°F to 149°F (45°C to 65°C)	1 1/4 inch MX NPT Mixing Valves	1017	Heating Only
MX128LF/U	1 1/4 in. (DN32)	NPT	9.3 Cv	113°F to 149°F (45°C to 65°C)	1 1/4 inch NPT MX Mixing Valves Lead Free	1017	Low Lead Content <.25% by weighted average
MX129/U	1 1/2 in. (DN40)	NPT	13.5 Cv	113°F to 149°F (45°C to 65°C)	1 1/2 inch NPT MX Mixing Valves	1017	Heating Only
MX129LF/U	1 1/2 in. (DN40)	NPT	13.5 Cv	113°F to 149°F (45°C to 65°C)	1 1/2 inch NPT MX Mixing Valves Lead Free	1017	Low Lead Content <.25% by weighted average
MX130/U	2 in. (DN50)	NPT	18 Cv	113°F to 149°F (45°C to 65°C)	2 inch NPT MX Mixing Valves	1017	Heating Only
MX130LF/U	2 in. (DN50)	NPT	18 Cv	113°F to 149°F (45°C to 65°C)	2 inch NPT MX Mixing Valves Lead Free	1017	Low Lead Content <.25% by weighted average
MX131/U	2 1/2 in. (DN65)	Flanged	34 Cv	113°F to 149°F (45°C to 65°C)	2 1/2 inch Flanged MX Mixing Valves	1017	Heating Only
MX131LF/U	2 1/2 in. (DN65)	Flanged	34 Cv	113°F to 149°F (45°C to 65°C)	2 1/2 inch Flanged MX Mixing Valves Lead Free	1017	Low Lead Content <.25% by weighted average
MX132/U	3 in. (DN80)	Flanged	50 Cv	113°F to 149°F (45°C to 65°C)	3 inch Flanged MX Mixing Valves	1017	Heating Only
MX132LF/U	3 in. (DN80)	Flanged	50 Cv	113°F to 149°F (45°C to 65°C)	3 inch Flanged MX Mixing Valves Lead Free	1017	Low Lead Content <.25% by weighted average

## MX Series Valves Replacement Parts

Material Number	Pipe Size in/(DN)	Description
MX050-RP/U	1/2 in. (DN15)	1/2 in. Recirculation adapter kit MX127 mixing valves. Includes 1/2 in. MNPT union nut and gasket
MX100-RP/U	1 in. (DN25)	Replacement gasket kit for MX127 mixing valves. Includes 3, 1-in. gaskets
MX125-RP/U	1 1/4 in. (DN32)	Replacement gasket kit for MX128 mixing valves. Includes 3, 1-1/4-in. gaskets
MX150-RP/U	1 1/2 in. (DN40)	Replacement gasket kit for MX129 mixing valves. Includes 3, 1-1/2-in. gaskets
MX200-RP/U	2 in. (DN50)	Replacement gasket kit for MX130 mixing valves. Includes 3, 2-in. gaskets
MX250-RP/U	2 1/2 in. (DN65)	Replacement gasket kit for MX131 mixing valves. Includes 3, 2-1/2-in. gaskets
MX300-RP/U	3 in. (DN80)	Replacement gasket kit for MX132 mixing valves. Includes 3, 3-in. gaskets

## TX Series Expansion Tanks—Domestic Hot Water



The Honeywell Thermal Expansion Absorber is an expansion tank with a butyl diaphragm. 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.

**Operating Temperature Range:** 200°F Maximum (93°C Maximum)

**Comments:** Potable

**Maximum Safe Operating Pressure (psi):** 150 psi  
**Maximum Safe Operating Pressure (kPa):** 1034 kPa  
**Precharge (psi):** 40 psi

Material Number	Connection Size (in.)	Connection Type	Diameter	Height	Volume	Weight	Maximum Acceptance Volume	Materials
TX-5/U	3/4 in.	Male NPT	8 in. (203.2 mm)	12 5/8 in. (321 mm)	2.0 gal (7.6 L)	5 lb (2.27 kg)	0.9 gal (3.41 L)	Steel shell; Brass connection; Polypropylene liner; Butyl diaphragm
TX-12/U	3/4 in.	Male NPT	11 in. (279 mm)	12 5/8 in. (321 mm)	4.4 gal (16.7 L)	5 lb (2.27 kg)	3.2 gal (12.1 L)	Steel shell; Butyl diaphragm; Polypropylene liner; Brass connection
TX-25V/U	3/4 in.	Female NPT	15 3/8 in. (390.5 mm)	19 1/4 in. (489 mm)	10.3 gal (39 L)	23 lb (10.43 kg)	10.3 gal (39 L)	Steel shell; Butyl diaphragm; Brass connection; Polypropylene liner

# Pressure Regulating Valve

## DS06 “DialSet” Low Lead Pressure Regulating Valve



With the Honeywell DialSet Pressure Regulating Valve, you don't need a pressure gauge. The built-in adjustment dial eliminates the need for a gauge when adjusting the static pressure setting, but there is also an easily accessible gauge port on either side if you need it. This product has the capability to be installed by one individual and the reliability that helps to increase your profits through fewer callbacks. Plus, the DialSet PRV has the flexibility to work in a variety of applications.

- Built-In Dial-Set™ - no gauge is needed to install or set static pressure.
- Noncorroding Unitized Cartridge - contains all working parts and is easily replaceable
- Outlet adjustment range of 25 psi to 90 psi make it suitable for household, commercial, industrial and turf-and-irrigation applications.
- Install it just about anywhere. The internal and external threading allows for use in thread-by-thread, single-union or double-union configurations.
- 1/4" NPT tap accessible from both sides to validate output
- Built in strainer to simplify maintenance
- Approvals - ASSE 1003, IAPMO, CSA, Low Lead Compliant

**Materials:** Bronze (body), Fabric Reinforced Diaphragm, Stainless Steel and Engineered Thermoplastics.

**Outlet Pressure Adjustment Range (psi):** 25-90 psi

**Maximum Inlet Pressure Rating (psi):** 250 psi

**Gauge Tap:** 1/4 in. NPT (two, one on each side of body).

**Calibrated Adjustment Dial:** Yes

**Reducing Ratio:** 10:1 Maximum

**Union Fittings:** Double-Union Sweat

**Approvals, ASSE:** Certified 1003-2009

**Approvals, IAPMO:** Listed

**Approvals, CSA:** Certified (B356-10)

Material Number	Pipe Size in/(DN)	Connection Type	Operating Temperature °F (°C)	Description
DS06-100-DUS-LF/U	1/2 in. (DN15)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1/2 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - double union sweat
DS06-100-DUT-LF/U	1/2 in. (DN15)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1/2 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - double union NPT
DS06-100-LF/U	1/2 in. (DN15)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1/2 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - union body only
DS06-100-SUS-LF/U	1/2 in. (DN15)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1/2 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - single union sweat
DS06-100-SUT-LF/U	1/2 in. (DN15)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1/2 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - single union NPT
DS06-101-DUS-LF/U	3/4 in. (DN20)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	3/4 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - double union sweat
DS06-101-DUT-LF/U	3/4 in. (DN20)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	3/4 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - double union NPT
DS06-101-LF/U	3/4 in. (DN20)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	3/4 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - union body only
DS06-101-SUS-LF/U	3/4 in. (DN20)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	3/4 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - single union sweat
DS06-101-SUT-LF/U	3/4 in. (DN20)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	3/4 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - single union NPT
DS06-102-DUS-LF/U	1 in. (DN25)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - double union sweat
DS06-102-DUT-LF/U	1 in. (DN25)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - double union NPT
DS06-102-LF/U	1 in. (DN25)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - union body only
DS06-102-SUS-LF/U	1 in. (DN25)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - single union sweat
DS06-102-SUT-LF/U	1 in. (DN25)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - single union NPT
DS06-103-DUS-LF/U	1 1/4 in. (DN32)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 1/4 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - double union sweat
DS06-103-DUT-LF/U	1 1/4 in. (DN32)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 1/4 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - double union NPT
DS06-103-SUS-LF/U	1 1/4 in. (DN32)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 1/4 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - single union sweat
DS06-103-SUT-LF/U	1 1/4 in. (DN32)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 1/4 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - single union NPT
DS06-104-DUS-LF/U	1 1/2 in. (DN40)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 1/2 Inch DS06 “dialset” low lead pressure regulating valve (PRV) - double union sweat

# Pressure Regulating Valve

Material Number	Pipe Size in/(DN)	Connection Type	Operating Temperature °F (°C)	Description
DS06-104-DUT-LF/U	1 1/2 in. (DN40)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 1/2 Inch DS06 "dialset" low lead pressure regulating valve (PRV) - double union NPT
DS06-104-LF/U	1-1/2 in. (DN40)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1-1/2 Inch DS06 "dialset" low lead pressure regulating valve (PRV) - union body only
DS06-104-SUS-LF/U	1 1/2 in. (DN40)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 1/2 Inch DS06 "dialset" low lead pressure regulating valve (PRV) - single union sweat
DS06-104-SUT-LF/U	1 1/2 in. (DN40)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	1 1/2 Inch DS06 "dialset" low lead pressure regulating valve (PRV) - single union NPT
DS06-105-DUS-LF/U	2 in. (DN50)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	2 Inch DS06 "dialset" low lead pressure regulating valve (PRV) - double union sweat
DS06-105-DUT-LF/U	2 in. (DN50)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	2 Inch DS06 "dialset" low lead pressure regulating valve (PRV) - double union NPT
DS06-105-SUS-LF/U	2 in. (DN50)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	2 Inch DS06 "dialset" low lead pressure regulating valve (PRV) - single union sweat
DS06-105-SUT-LF/U	2 in. (DN50)	Female NPT Threaded Inlet & Outlet Externally threaded for Unions	140°F Maximum (60°C Maximum)	2 Inch DS06 "dialset" low lead pressure regulating valve (PRV) - single union NPT

## DS06LF Pressure Regulating Valves—Repair Parts

Material Number	Description
D06FA-1/2	DS06 Low-Lead Replacement Parts 1/2" & 3/4" Valve Insert without Filter
D06FA-11/2	DS06 Low-Lead Replacement Parts 1 1/2" & 2" Valve Insert without Filter
D06FA-1B	DS06 Low-Lead Replacement Parts 1" & 1 1/4" Valve Insert without Filter
ES06F-1/2A	DS06 Low-Lead Replacement Parts 1/2" & 3/4" Replacement Filter Insert
ES06F-11/2A	DS06 Low-Lead Replacement Parts 1 1/2" & 2" Replacement Filter Insert
ES06F-1B	DS06 Low-Lead Replacement Parts 1" & 1 1/4" Replacement Filter Insert
SB06T-1	DS06 Low-Lead Replacement Parts 1" & 1 1/4" Black Filter Bowl with O-Ring
SB06T-1/2	DS06 Low-Lead Replacement Parts 1/2" & 3/4" Black Filter Bowl with O-Ring
SB06T-11/2	DS06 Low-Lead Replacement Parts 1 1/2" & 2" Black Filter Bowl with O-Ring

## DS06 Pressure Reducing Valves- Union Kits

Material Number	Description
272840/U	Union gaskets for 1/2 in. (package of 2)
272841/U	Union gaskets for 3/4 in. (package of 2)
K06U1069/U	Union kit for 1/2-in. NPT valves. Includes union nut, threaded tailpiece, and gasket
K06U1077/U	Union kit for 3/4-in. NPT valves. Includes union nut, threaded tailpiece, and gasket
K06U1085/U	Union kit for 1-in. NPT valves. Includes union nut, threaded tailpiece, and gasket
K06U1093/U	Union kit for 1/2-in. sweat valves. Includes union nut, sweat tailpiece, and gasket
K06U1101/U	Union kit for 3/4-in. sweat valves. Includes union nut, sweat tailpiece, and gasket
K06U1119/U	Union kit for 1-in. sweat valves. Includes union nut, sweat tailpiece, and gasket
K06U1135/U	Union kit for 1-1/4-in. NPT valves. Includes union nut, threaded tailpiece, and gasket
K06U1143/U	Union kit for 1-1/4-in. sweat valves. Includes union nut, sweat tailpiece, and gasket
272858/U	Union Gasket for 1 1/2 in.
272859/U	Union Gasket for 2 in.
K06U1037/U	Union kit with threaded tailpiece for 1 1/2 in.
K06U1045/U	Union Kit with threaded tailpiece for 2in.
K06U5034/U	Union Kit for 1 1/2 in. Sweat
K06U5042/U	Union Kit for 2 in. Sweat



# Water Leak and Freeze Detector

## Lyric™ Water Leak and Freeze Detector



The average water leak causes \$7000 in damage\*. Be notified of a water leak while it's measured in drops. The Lyric™ Water Leak and Freeze Detector detects water with sensors on base of unit or has expanded coverage with included 4 ft. water sensing cable. Entire cable detects water.

- Conveniently place near sinks, washers, water heaters, sump pumps—anywhere leaks could happen. Battery life lasts up to 3 years without incident.
- Notification messages can alert you or your family/ friends, wherever you are, while audible (100 dB alarm) alerts sound when you are at home.
- Use to detect temperatures that can freeze pipes, and humidity that could damage valuables.
- Runs on WiFi - No Extra Hub or hardware purchase required.
- Daisy chain extra cable sensors and cover up to 500 feet of space with one leak detector.
- Reusable even after detecting an incident. After an alarm, simply wipe dry the detector and cable sensors and place them back into service.

\* American Insurance Association

Material Number	Description	Power Method
CHW3610W1001/U	Water Leak Detector and Cable Sensor with 3 AA Batteries	Battery Operated
CHWES41013/U	4ft Accessory Cable Sensor for Lyric Water Leak Detector	

## F76 Water Filters



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

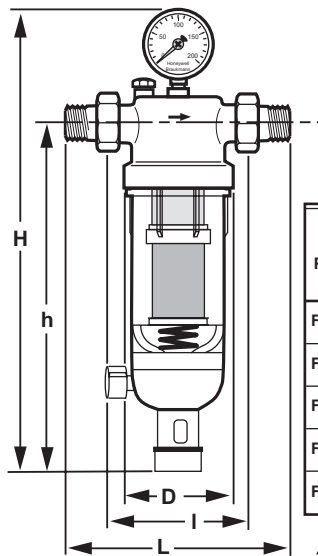
- Whole House Protection
- Ideally suited for sediment removal applications that would quickly plug and restrict the flow of normal filters.
- Used as a prefilter, the F76 protects elements of the water system, including specialized treatment devices or other common fixtures and appliances.
- The flow 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.

**Connection Type:** NPT External Threaded and Sweat

**Approximate Dimensions:** 17 11/16 in. high x 6 11/16 in. wide x 3 13/16 in. deep (449 mm high x 170 mm wide x 97 mm deep)

**Materials:** Body: Brass; Sump: Clear Plastic

**Screen Size:** 100 micron screen



PRODUCT NUMBER AND SIZE	DIMENSIONS IN INCHES (MM)					
	L	l	D	H	h	WEIGHT
F76S1007 1/2 IN.	6-11/16 (170)	4-5/16 (110)	3-13/16 (97)	17-11/16 (449)	13-13/16 (350)	6.4 (2.9)
F76S1015 3/4 IN.	7 (178)	4-5/16 (110)	3-13/16 (97)	17-11/16 (449)	13-13/16 (350)	6.4 (2.9)
F76S1023 1 IN.	8-1/4 (209)	5-1/8 (130)	3-13/16 (97)	17-7/8 (453)	13-13/16 (350)	6.8 (3.1)
F76S1031 1-1/4 IN.	8-3/4 (222)	5-1/8 (130)	3-13/16 (97)	17-7/8 (453)	13-13/16 (350)	7.3 (3.3)
F76S1049 1-1/2 IN.	9-11/16 (246)	5-5/16 (150)	4-3/4 (119)	20-15/16 (532)	16-7/16 (417)	8.8 (4.0)

WEIGHT IN POUNDS (KILOGRAMS)

M34737

Material Number	Pipe Size in/(DN)	Ambient Temperature Range	Maximum Safe Operating Pressure (psi)	Weight	Capacity (Cv)	Description	Includes
F76S1007	1/2 in. (DN15)	104°F Maximum (40°C Maximum)	230 psi	6.4 lb (2.9 kg)	5.6 Cv	1/2 inch Water filter	gauge and service wrench
F76S1015	3/4 in. (DN20)	104°F Maximum (40°C Maximum)	230 psi	6.4 lb (2.9 kg)	8.4 Cv	3/4 inch Water filter	gauge and service wrench
F76S1023	1 in. (DN25)	104°F Maximum (40°C Maximum)	230 psi	6.8 lb (3.1 kg)	11.4 Cv	1 inch Water filter	gauge and service wrench
F76S1031	1-1/4 in. (DN32)	104°F Maximum (40°C Maximum)	230 psi	7.3 lb (3.3 kg)	12.4 Cv	1-1/4 inch Water filter	gauge and service wrench
F76S1049	1-1/2 in. (DN40)	104°F Maximum (40°C Maximum)	230 psi	8.8 lb (4.0 kg)	24.4 Cv	1-1/2 inch Water filter	gauge and service wrench

# Water Sediment Filters

## 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.

- Bayonet 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 ensure completion of backwash cycle in spite of power loss.

**Backwash Intervals and Selection:** 16 intervals from 4 min to 3 months, field adjustable via keypad

**Display:** Digital

**Approximate Dimensions:** 6 in. high, 2-3/4 in wide, 6-5/16 in. deep (152 mm high, 70 mm wide, 160 mm deep)

**Electrical Ratings:** 24 Vac, 10 W

**Cycle Time (sec):** 20 sec

Material Number	Description
MV876B1018	Automatic backwash control, fits 1/2 in. to 2 in. F76S models and F74C models.

## Water Sediment Filter Parts and Accessories

Material Number	Description	Used With
901444	F76S Gasket 1/2-3/4"	F74C or F76S or FF06
901445	F76S Gasket 1"	F74C or F76S or FF06
901446	F76S Gasket 1-1/4"	F76S
901447	F76S Gasket 1-1/2"	F76S
901448	F76S Gasket 2"	F76S
AF11S-11/2A	Screen kit for F76S Water Filter 1-1/2 in. to 2 in.	F76S
AF11S-11/2B	Screen kit for F76S Water Filter 1-1/2 in. to 2 in.	F76S
AF11S-11/2C	Screen kit for F76S Water Filter 1-1/2 in. to 2 in.	F76S
AF11S-11/2D	Screen kit for F76S Water Filter 1-1/2 in. to 2 in.	F76S
AF11S-1A	Screen kit for F76S Water Filter 1/2 in. to 1-1/4 in.	F76S
AF11S-1B	Screen kit for F76S Water Filter 1/2 in. to 1-1/4 in.	F76S
AF11S-1C	Screen kit for F76S Water Filter 1/2 in. to 1-1/4 in.	F76S
AF11S-1D	Screen kit for F76S Water Filter 1/2 in. to 1-1/4 in.	F76S
AS06-1A	Filter mesh and sump O-ring (5 pcs)	

## AQ250 Electronic Relay Boiler Control Panel for Hydronic Zoning System



Honeywell AQ250 AQUATROL boiler controls for single temperature, residential hydronic heating systems ensure ample supply of hot water for space heating and domestic uses. Convert single zone heating systems or upgrade relay-logic zoning systems.

- Use with AQ1000 two-wire communicating thermostats, or most dry contact digital thermostats
- Offers zoning control for up to four zones and controls up to two stages of heat from a single thermostat
- Can expand up to 16 zones with AQ255 or AQ257 or up to 64 zones with AQ254 Add-A-Temp panels
- Line or low-voltage output for zoning equipment, including pumps or valves
- Features zone synchronization through the zone or Greatest Demand control
- Includes domestic hot water priority, priority override protection and boiler short cycling protection
- Automated test feature for quick start-up and simplified troubleshooting

**Application:** Boiler control for zoned hydronic systems

**Thermostat Compatibility:** AQ1000 Series 2-wire communicating thermostats and most digital thermostats

**User Interface:** DIP Switches

**Boiler Heat Post Purge:** 30 seconds (sent to DHW tank or Zone of Greatest Demand - selectable)

**Pump/Valve Exercise:** 30 seconds per 2 weeks of space heating inactivity

**R-C Output (on Transformer):** 38 VA, 24 Vac Class II

**R-C Input (on Control and Zoning Modules):** 24 Vac Class II

**Demand Input:** Heat Demand (Thermostat R-W) and DHW Demand – External dry contacts connection only

**B-B Communication Bus Terminals:** Low voltage, Class II, 2-wire polarity-insensitive, digital communicating link to other Control or Zoning modules.

**Zone Module Thermostat Input:** Low voltage, Class II, 2-wire polarity-insensitive, digital communicating with power link to AQ1000 series thermostat.

**ZR-ZC Contact Rating:** 120 to 240 Vac, 1/3 HP

**Output Ratings:** Boiler (T-T) – 24 Vac, 0.5A, 12VA; Boiler Pump – 120 Vac/250 Vac 5A, 1/3HP; DHW Pump/Valve – 120 Vac/250 Vac 5A, 1/3HP; Auxiliary Pump – Dry contact output, 120 Vac/250 Vac 5A, 1/3 HP

**Electrical Connections:** Wire-clamp screw terminals, Maximum 2 x 14 AWG each on line voltage terminals

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing  
**Sensor:** Supply/Return Sensor – 10 kilohm NTC thermistor at 25°C (77°F) ±0.5°F (±0.3°C) up to 500 ft (150 M) using 18 AWG or larger wire, Lead Length: 10 ft. (3050 mm); Outdoor Sensor – 10 kilohm NTC thermistor at 25°C (77°F) ± 0.5°F (±0.3°C) up to 500 ft (150 M) using 18 AWG or larger wire, beta=3892, Lead Length: 10 ft. (3050 mm)

**Approvals, CSA:** CSA C/US Certified to CSA and UL Standards, File No. LR76030

**Approximate, Dimensions:** 13 in. wide x 8 in. high x 3 3/8 in. deep (33 cm wide x 20.3 cm high x 8.5 cm deep)

**Weight:** 4.9 lbs (2.3 kg)

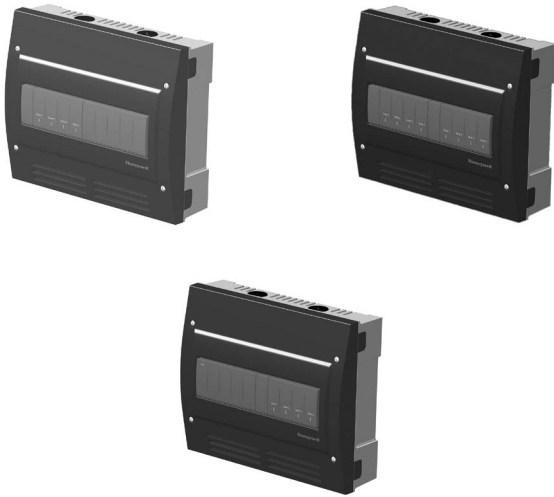
**Temperature Ratings:** Panel – 32°F to 130°F; Sensor – -58°F to +230°F (Panel – 0°C to 55°C; Sensor – -50°C to +110°C)

**Supply Voltage:** 120V 60 Hz

Material Number	Zoning Devices Controlled	Number of Zones	Zone Output Contact Rating	Replacement Parts
AQ25042B/U	Zone pumps or 2-wire valves (line voltage)	4	Pumps: 120 Vac/250 Vac, 5A, 1/3 HP, Valves: 24 Vac, 0.5 A, 12 VA	AQ10X38 24 Vac 38 VA transformer, AQ15540B 4-zone pump expansion module, AQ12C11 supply/return/mixed loop sensor, AQ15000B boiler control module
AQ25044B/U	Zone valves with end switches	4	Pumps: 120 Vac/250 Vac, 5A, 1/3 HP, Valves: 24 Vac, 0.5 A, 12 VA	AQ10X38 24 Vac 38 VA transformer, AQ12C11 supply/return/mixed loop sensor, AQ15000B boiler control module, AQ15740B 4-zone valve with end switch expansion module

# AQUATROL Zoning System

## AQ255 and AQ257 Zoning Expansion Panel for Hydronic Zoning System



Honeywell AQ255 AQUATROL expansion zoning panels work with AQ2000 boiler control panels and AQ1000 communicating thermostats to control up to four space heating zones, up to 16 zones with additional panels.

- Features AQ255 for zoning with pumps or zone valves without end switches
- Auto test function tests zones at system start up and allows for operator controlled testing of zones
- LED lights offer visual diagnostics of zone operation
- Adjacent zoning panels can operate different zone equipment
- Easily switch from zone valves to pumps with same zoning module
- R-C transformer and B-B data bus terminal connections (network communication) for easy expansion
- Zones can energize a group pump via Aux Out dry contacts
- Zone synchronization through Zone of Greatest Demand control

**Application:** Zoning control for hydronic zoning system

**Thermostat Compatibility:** AQ1000 Series 2-wire communicating thermostats and most digital thermostats

**User Interface:** DIP Switches

**R-C Input (on Control and Zoning Modules):** 24 Vac Class II (input on Control and Zoning Modules)

**B-B Communication Bus Terminals:** Low voltage, Class II, 2-wire polarity-insensitive, digital communicating link to other Control or Zoning modules.

**Zone Module Thermostat Input:** Low voltage, Class II, 2-wire polarity-insensitive, digital communicating with power link to AQ1000 series thermostat.

**Electrical Connections:** Wire-clamp screw terminals, Maximum 2 x 14 AWG each on line voltage terminals

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing  
**Approvals, CSA:** CSA C/US Certified to CSA and UL Standards, File No. LR76030

**Approximate, Dimensions:** 9 1/2 in. wide x 8 in. high x 3 3/8 in. deep (24 cm wide x 20.3 cm high x 8.5 cm deep)

**Temperature Ratings:** Panel – 32°F to 130°F (Panel – 0°C to 55°C)

Material Number	Zoning Devices Controlled	Number of Zones	Zone Output Contact Rating	Weight	Replacement Parts
AQ25542B/U	Zone pumps or 2-wire valves (line voltage)	4	120 Vac/250 Vac, 5A, 1/3 HP	2.1 lbs (1 kg)	AQ15540B 4-zone pump expansion module
AQ25742B/U	2-wire valve (24 Vac)	4	120 Vac/250 Vac, 0.5A, 12VA	3.9 lbs (1.8 kg)	AQ10X38 24 Vac 38 VA transformer, AQ15540B 4-zone pump expansion module
AQ25744B/U	Zone valves with end switches (24 Vac)	4	120 Vac/250 Vac, 0.5A, 12VA	3.9 lbs (1.8 kg)	AQ10X38 24 Vac 38 VA transformer, AQ15740B 4-zone valve with end switch expansion module



## AQ2000 Series Replacement Zoning Modules

Replacement Zoning Modules for AQ2000 panels








**Thermostat Compatibility:** AQ1000 Series 2-wire communicating thermostats and most digital thermostats  
**R-C Input (on Control and Zoning Modules):** 24 Vac Class II (input on Control and Zoning Modules)  
**B-B Communication Bus Terminals:** Low voltage, Class II, 2-wire polarity-insensitive, digital communicating link to other Control or Zoning modules.  
**Zone Module Thermostat Input:** Low voltage, Class II, 2-wire polarity-insensitive, digital communicating with power link to AQ1000 series thermostat.

**Electrical Connections:** Wire-clamp screw terminals, Maximum 2 x 14 AWG each on line voltage terminals  
**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing  
**Approvals, CSA:** CSA C/US Certified to CSA and UL Standards, File No. LR76030  
**Approximate, Dimensions:** 3 1/2 in. wide x 2 1/2 in. high x 4 1/4 in. deep (9 cm wide x 94 cm high x 10.09 cm deep)  
**Weight:** 0.6 lb (0.3 kg)  
**Temperature Ratings:** Panel – 32°F to 130°F (Panel – 0°C to 55°C)

Material Number	Application	Zoning Devices Controlled	User Interface	Number of Zones	Zone Output Contact Rating
AQ15540B/U	Replacement 4 zone pump expansion module for AQ25542	Zone pumps or 2-wire valves (line voltage)	DIP Switches	4	120 Vac/250 Vac, 5A, 1/3 HP

# AQUATROL Zoning System

## AQ2000 Series Accessories and Replacement Parts

Material Number	Description	
AQ10X38/U	This Replacement Transformer Module is used for AQ250, AQ25A, AQ251, AQ252, AQ254, AQ257 and AQ25742B series control and zoning panels. It can be used to add an additional 38 VA power per transformer to drive high VA devices.	
AQ11D15/U	This Replacement Enclosure, used for AQ25042B, AQ25044B, AQ25110B panels, includes; case, cover, and DIN rail. It can be used to add extra AQ10X38 transformers or hide system wiring and component.	
AQ11D20/U	This Replacement Enclosure, used for AQ25A42B, AQ25A44B, AQ25142B, AQ25144B, AQ25242B, and AQ25244B panels, includes; case, cover, and DIN rail. It can be used to add extra AQ10X38 transformers or hide system wiring and component.	
AQ12C10/U	This Outdoor Sensor, with 10 feet of lead wires and a plastic mounting bracket, is used with AQ2000 series programmable control panels.	
AQ12C11/U	This Supply/Return/Mixed Loop Pipe Sensor, with 10 feet of lead wires, is used with AQ2000 series control panels.	
AQ12C20/U	This Slab/Floor Sensor, with 15 feet lead length is used with AQ2000 series control panels and AQ1000 series thermostats, to control floor temperatures of in-floor radiant heating applications.	

## AQ1000TN2 Non-Programmable Communicating Thermostat



Honeywell AQ1000TN2 thermostat controls the ambient air or floor temperature in hydronic heating applications. To provide zoning control, it communicates with and is powered by a Honeywell AQ2000 series zoning module.

- Two-wire polarity-insensitive non-programmable network communicating thermostat
- User buttons feature liquid crystal display as well as outdoor, indoor and floor temperature displays
- Floor temperature sensing with minimum and maximum limits (when used with optional AQ12C20 Slab/Floor Sensor (sold separately))
- Selectable temporary and permanent backlight

**Application:** Hydronic single-stage zoning heat  
**Temperature Control Mode Selections:** "A" for Ambient Air; "F" for Floor; "AF" for Ambient & Floor.

**Mounting:** Vertical

**Color:** Premier White®

**Zones:** Single or Multi-zone; Network Zoning available

**Ambient Temperature Range:** 32°F to 158°F (0°C to 70°C)

**Shipping and Storage Temperature Range:** -30°C to 55°C (-20°F to 130°F)

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing

**Electrical Connections:** Wire-clamp screw terminals

**Approximate, Dimensions:** 2.8 in. wide x 4.6 in. high x 1.0 in. deep  
 (7 cm wide x 12 cm high x 2.5 cm deep)

**Sensor Element:** Thermistor

**Network Bus:** Low voltage, Class II, 2-wire polarity-insensitive, digital communicating link to AQ2000 series zoning modules.

**External Sensors Available:** Floor Sensor - 10 Kohm NTC thermistor at 25°C (77°F) +/- 0.5°F (+/-0.3°C) up to 500 ft (150 M) using 18 AWG or larger wire, beta=3892. Lead Length: 10 ft. (3050 mm) with rating 58°F to 230°F (-50°C to 110°C)

**Outdoor Temperature Display Range:** -58°F to 149°F (-5°C to 65°C)

**Weight:** 0.2 lb (0.1 kg)

**Tradeline Value:** Tradeline

**User Interface:** DIP Switches

Material Number	Setting Temperature Range	Differential Temperature	Terminal Designations	Display	Power Method
AQ1000TN2/U	Ambient and Floor -40°F to 100°F (Ambient and Floor -5°C to 38°C)	± 1°F (±0.5°C)	TH, TH, Sensor, Sensor	LCD Display; Icons in display: Heat On, Vacation Mode, Comfort/Unoccupied, Keypad Lock, Set point; Temperatures Displayed: Indoor, Setpoint, Outdoor	Powered (24 Vdc) by AQ zoning module

## AQ1000TP2 Programmable Heat/Cool Thermostat



Honeywell AQ1000TP2 thermostat controls the ambient air or floor temperature in hydronic heating applications. To providing zoning control, it communicates with and is powered by a Honeywell AQ2000 series zoning module.

- Single-stage heating and cooling with outdoor, indoor, and floor temperature display
- Two-wire polarity-insensitive non-programmable network communicating thermostat
- Seven-day programmable thermostat with liquid crystal display and seven user buttons for programming
- Selectable temporary and permanent backlight

**Application:** Hydronic single-stage zoning, heating and cooling  
**Temperature Control Mode Selections:** Air for Ambient Air; "Floor" for Floor; "Air/Floor" for Ambient & Floor

**Mounting:** Vertical

**Color:** Premier White®

**Programmability:** 7-day programmable

**Zones:** Single or Multi-zone; Network Zoning available

**Ambient Temperature Range:** 32°F to 158°F (0°C to 70°C)

**Shipping and Storage Temperature Range:** -30°C to 55°C (-20°F to 130°F)

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing

**Electrical Connections:** Wire-clamp screw terminals

**Approximate, Dimensions:** 3.0 in. wide x 4.9 in. high x 1.0 in. deep  
 (7.8 cm wide x 12.5 cm high 2.5 cm deep)

**Sensor Element:** Thermistor

**Network Bus:** Low voltage, Class II, 2-wire polarity-insensitive, digital communicating link to AQ2000 series zoning modules.

**External Sensors Available:** Floor Sensor - 10 Kohm NTC thermistor at 25°C (77°F) +/- 0.5°F (+/-0.3°C) up to 500 ft (150 M) using 18 AWG or larger wire, beta=3892. Lead Length: 10 ft. (3050 mm) with rating 58°F to 230°F (-50°C to 110°C)

**Outdoor Temperature Display Range:** -58°F to 149°F (-5°C to 65°C)

**Weight:** 0.3 lb (0.5 kg)

**Tradeline Value:** Tradeline

**User Interface:** DIP Switches

Material Number	Setting Temperature Range	Differential Temperature	Terminal Designations	Display	Power Method
AQ1000TP2/U	Ambient and Floor-40°F to 100°F (Ambient and Floor -5°C to 38°C)	± 1°F (±0.5°C)	TH, TH, Sensor, Sensor	LCD Display; Icons in display: Heat On, Cool On, Fan On, Comfort/Unoccupied, Keypad Lock, Set point, Vacation Mode; 7 user programming buttons; Temperatures Displayed: Indoor, Setpoint, Outdoor	Powered (24 Vdc) by AQ zoning module

# Programmable Thermostats

## Prestige® 2-Wire IAQ Thermostat



THX9421R5021WW/U

The Prestige® IAQ thermostat is a 2 wire high definition color touch screen thermostat, 7 day programmable and selectable for residential or light commercial use. Controls up to 4-stages of heat and 2-stages of cool in a heat pump system and up to 3-stages of heat and 2-stages of cool in a conventional system.

- Control heating, cooling and IAQ equipment with only 2 wires at the thermostat. Heating, cooling and IAQ equipment wires to the Equipment Interface Module.
- Smart Schedule - programs in seconds for any lifestyle
- Patented interview based programming and installer setup.
- RedLINK™ wireless communication.
- Increase profit per job by including RedLINK™ accessories that provide comfort and convenience. RedLINK™ accessories include the RedLINK™ Internet Gateway, Portable Comfort Control (PCC), Wireless Outdoor Sensor, Wireless Indoor Sensor, Wireless Entry/Exit Remote, Wireless Vent and Filter Boost Remote, TrueSTEAM™ humidifier with Wireless Adapter and TrueZONE® zoning panel with Wireless Adapter.
- Selectable for residential and light commercial applications. Meets commercial code and is title 24 compliant.
- Light commercial - commercial language (occupied and unoccupied), schedule holidays and custom events, remote setback, economizer and time of day.
- Delta T Alerts and Diagnostics informs customers when their system is not performing as expected with instructions to contact the dealer. Provides a sense of security and greater comfort while generating repeat business.
- All Prestige® IAQ kits come standard with a return and discharge air temperature sensor to measure Delta T.
- Alerts and User Interactions Log - Keeps a searchable history of alerts and setting changes to the thermostat to determine if there is a system malfunction or if the issue was caused by user error. Saves time in troubleshooting and points the technician in the right direction.
- Performance Logs - Keeps a history of heating and cooling performance. The performance log includes Minimum and Maximum Delta T, Minimum and Maximum Discharge Temperature, Minimum and Maximum Return Temperature, Minimum and Maximum Indoor Temperature/Humidity, Minimum and Maximum Outdoor Temperature/Humidity and Run Time. Quickly determine if the system is performing as expected and reduces service time on the job.

- Customizable Service Reminders allow dealers to remind their customers when it's time to call for service, when their warranty is expiring and to provide customized alerts.
- USB port for transferring Installer Setup, Customizable Reminders, Custom Events and Holidays to multiple thermostats.
- USB port for adding the dealer's full color business logo on the screen.
- 3 assignable outputs to control humidification, dehumidification, ventilation and a stage of heating or cooling.
- 4 assignable inputs on the Equipment Interface Module can be used with wired outdoor, indoor or discharge sensors, occupancy sensor for remote setback and dry contact devices to trip pre-packaged or custom alerts such as a full drain pan or water leak.
- Extend wireless range of the Equipment Interface Module by connecting a THM4000R1000 Wireless Adapter to the ABCD terminals.
- Tri-lingual - English, French and Spanish display options.
- Precise temperature control (+/- 1°F) for reliable and consistent temperature.
- Multiple staging options to provide comfort or energy savings.

**Applications:** Up to 4 Heat/2 Cool Heat Pumps; Up to 3 Heat/2 Cool Conventional Systems

**Display Size:** 8.06 sq in.

**Terminal Designations:** R, °C then RedLINK to Equipment Interface Module

**Changeover:** Auto or Manual

**Stages:** Up to 4 Heat/2 Cool Heat Pumps; Up to 3 Heat/2 Cool Conventional Systems, See Equipment Interface Module

**Programmability:** 7-Day Multiple Day Programming or Non-Programmable

**Switch Positions (System):** HEAT-OFF-COOL-AUTO-EM.HEAT

**Switch Positions (Fan):** AUTO-ON-CIRC-FOLLOW SCHEDULE

**Setting Temperature Range:** Heat: 40°F to 90°F; Cool 50°F to 99°F (Heat: 4.5°C to 32.0°C; Cool: 10°C to 37.0°C)

**Operating Temperature Range:** 32°F to 120°F (0°C to 48.9°C)

**Humidification Setting Range:** Cooling: 40 to 80% RH. Heating: 10 to 60% RH.

**Dehumidification Setting Range:** 40 to 80% RH.

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing

**Power Method:** Hardwired

**Supply Voltage:** 18 to 30 Vac

**Frequency:** 50 Hz; 60 Hz

**Electrical Connections:** Screw terminals

**Electrical Ratings:** 18 to 30 Vac

**Dimensions:** 3 1/2 in. High, 4 1/2 in. Wide, 7/8 in. Deep (88 mm. High, 115 mm. Wide, 22 mm. Deep)

**External Sensors Available:** N/A

**Comments:** Tri-Lingual Display (selectable for English, French or Spanish)



Wireless Technology

### Accessories:

**THP2400A1027B/U** – Black Coverplate assembly for use with the Prestige® 2-Wire IAQ Thermostat

**YTHM5421R1010/U** – Prestige® 2-Wire IAQ Equipment Interface Module Kit with 2 Duct Sensors

**THM5421R1021/U** – Prestige® 2-Wire IAQ Equipment Interface Module

**THM6000R1002/U** – RedLINK Internet Gateway

**THM4000R1000/U** – Wireless Adapter for use with RedLINK™ enabled thermostats and TrueZONE™ system

**REM5000R1001/U** – Portable Comfort Control

**REM1000R1003/U** – RedLINK Wireless Entry/Exit Remote

**HVC20A1000/U** – Wireless Vent and Filter Boost Remote

**C7089R1013/U** – Senses outdoor temperature and humidity

**C7189R1004/U** – Wireless Indoor Air Sensor. RedLINK™ enabled. Senses indoor temperature and humidity

Material Number	Color	Includes	Used With
THX9421R5021WW/U	Front: White, Side: White		THM5421R1021 Equipment Interface Module and RedLINK™ accessories
YTHX9421R5085WW/U	Front: White, Side: White	THX9421R5021WW Prestige® 2-Wire IAQ Thermostat, THM5421R1021 Equipment Interface Module and 2 Duct Sensors	RedLINK™ accessories
YTHX9421R5101WW/U	Front: White, Side: White	THX9421R5021WW Prestige® 2-Wire IAQ Thermostat, THM5421R1021 Equipment Interface Module, C7089R1013 Wireless Outdoor Sensor and 2 Duct Sensors	RedLINK™ accessories
YTHX9421R5127WW/U	Front: White, Side: White	THX9421R5021WW Prestige® 2-Wire IAQ Thermostat, THM5421R1021 Equipment Interface Module, THM6000R1002 RedLINK™ Internet Gateway and 2 Duct Sensors	RedLINK™ accessories

## VisionPRO® 8000 with RedLINK™ technology



**VisionPRO® 8000 with RedLINK™ technology is a touchscreen thermostat, 7 day programmable and selectable for residential or light commercial use. Controls up to 3-stages of heat and 2-stages of cool in a heat pump system and up to 2-stages of heat and 2-stages of cool in a conventional system.**

- Thermostat works standalone or with the THM5421R1021 Equipment Interface Module or with the TrueZONE Wireless Adapter.
- Smart Schedule - programs in seconds for any lifestyle.
- Patented interview based programming and installer setup.
- RedLINK™ wireless communication.
- Increase profit per job by including RedLINK™ accessories that provide comfort and convenience. RedLINK™ accessories include the RedLINK™ Internet Gateway, Portable Comfort Control (PCC), Wireless Outdoor Sensor, Wireless Indoor Sensor, Wireless Entry/Exit Remote, Wireless Vent and Filter Boost Remote, TrueSTEAM™ humidifier with Wireless Adapter and TrueZONE® zoning panel with Wireless Adapter.
- Selectable for residential and light commercial applications. Meets commercial code and is title 24 compliant.
- Light commercial - commercial language (occupied and unoccupied), schedule holidays and custom events, remote setback, economizer and time of day. Remote Setback requires the THM5421R1021 Equipment Interface Module.

**Applications:** Up to 1 Heat/1 Cool heat pump or up to 1 Heat/1 Cool conventional

**Display Size:** 10 sq in.

**Color:** Arctic White

**Changeover:** Auto or Manual

**Stages:** Up to 4 Heat / 2 Cool Heat Pump or Up to 3 Heat / 2 Cool Conventional when used with the Equipment Interface Module.

**Programmability:** 7-Day Multiple Day Programming or Non-Programmable

**Switch Positions (System):** HEAT-OFF-COOL-AUTO

**Switch Positions (Fan):** AUTO-ON-CIRC-FOLLOW SCHEDULE

**Setting Temperature Range:** Heat: 40°F to 90°F; Cool 50°F to 99°F (Heat: 4.5°C to 32.0°C; Cool: 10°C to 37.0°C)

**Operating Temperature Range:** 32°F to 120°F (0°C to 48.9°C)

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing

**Power Method:** Battery or Hardwired (must be battery powered when used on a millivolt system)

**Supply Voltage:** 18 to 30 Vac

**Frequency:** 50 Hz; 60 Hz

**Electrical Connections:** Screw terminals

**Electrical Ratings:** 18 to 30 Vac or 750 mV

**Dimensions:** 4 5/8 in. High, 4 15/16 in. Wide, 1 1/8 in. Deep (118 mm. High, 126 mm. Wide, 29 mm. Deep)

**Used With:** Works standalone or with optional THM5421R1021 Equipment Interface Module and RedLINK™ accessories

- Plain language setup, no manual needed.
- Alerts and User Interactions Log - Keeps a searchable history of alerts and setting changes to the thermostat to determine if there is a system malfunction or if the issue was caused by a user error. Saves time in troubleshooting and points the technician in the right direction. The Alert and User Interaction Logs are viewable on a computer after you download them from the thermostat to a microSD card.
- Customizable Service Reminders allow dealers to remind their customers when it's time to call for service, when their warranty is expiring and to provide customized alerts.
- MicroSD port for copying the Installer Setup, Customizable Reminders, Custom Events and Holidays to multiple thermostats.
- MicroSD port for adding the dealer's contact information on the screen.
- 1 assignable output on the TH8321 model to control humidification, dehumidification, ventilation or a stage of heating/cooling.
- 3 assignable outputs on the Equipment Interface Module to control humidification, dehumidification, ventilation or a stage of heating/cooling. The TH8110 and TH8320 models require the use of a Wireless Indoor Sensor to control humidification and dehumidification.
- 1 assignable input can be used with a wired outdoor, indoor or discharge sensor.
- 4 assignable inputs on the Equipment Interface Module can be used with wired outdoor, indoor or discharge sensors, occupancy sensor for remote setback and dry contact devices to trip pre-packaged or custom alerts such as a full drain pan or water leak.
- Extend wireless range of the Equipment Interface Module by connecting a THM4000R1000 Wireless Adapter to the ABCD terminals.
- Dual powered - battery or hardwired (C wire).
- Precise temperature control (+/- 1°F) for reliable and consistent temperature.
- Multiple staging options to provide comfort or energy savings.



### Accessories:

**YTHM5421R1010/U** – Prestige® 2-Wire IAQ Equipment Interface Module Kit with 2 Duct Sensors

**THM5421R1021/U** – Prestige® 2-Wire IAQ Equipment Interface Module

**THM6000R1002/U** – RedLINK Internet Gateway

**THM4000R1000/U** – Wireless Adapter for use with RedLINK™ enabled thermostats and TrueZONE™ system

**REM1000R1003/U** – RedLINK Wireless Entry/Exit Remote

**HVC20A1000/U** – Wireless Vent and Filter Boost Remote

**C7089R1013/U** – Senses outdoor temperature and humidity

**C7189R1004/U** – Wireless Indoor Air Sensor. RedLINK™ enabled.

Senses indoor temperature and humidity

**THP2400A1019/U** – Coverplate assembly for use with the RedLINK™ VisionPRO®

**REM5000R1001/U** – Portable Comfort Control

Material Number	Terminal Designations	Stages (when used standalone)	Humidification Setting Range	Dehumidification Setting Range	Includes
TH8110R1008/U	R, RC, C, W-O/B, Y, G, K, S1 S1	Up to 1 Heat / 1 Cool Heat Pump or Up to 1 Heat / 1 Cool Conventional			VisionPRO® 8000 thermostat
TH8320R1003/U	R, RC, C, W-O/B, W2-AUX/E, Y, Y2, G, A-L/A, K, S1 S1	Up to 3 Heat / 2 Cool Heat Pump or Up to 2 Heat / 2 Cool Conventional			VisionPRO® 8000 thermostat
TH8321R1001/U	R, RC, C, W-O/B, W2-AUX/E, Y, Y2, G, A-L/A, K, U1 U1, S1 S1	Up to 3 Heat / 2 Cool Heat Pump or Up to 2 Heat / 2 Cool Conventional	Cooling: 40 to 80% RH. Heating: 10 to 60% RH.	40 to 80% RH.	VisionPRO® 8000 thermostat
YTH8321R1002/U	R, RC, C, W-O/B, W2-AUX/E, Y, Y2, G, A-L/A, K, U1 U1, S1 S1	Up to 3 Heat / 2 Cool Heat Pump or Up to 2 Heat / 2 Cool Conventional	Cooling: 40 to 80% RH. Heating: 10 to 60% RH.	40 to 80% RH.	TH8321R1001 VisionPRO® 8000 thermostat and THM6000R1002 RedLINK™ Internet Gateway



# Programmable Thermostats

## THM5421 Prestige® 2-Wire IAQ Comfort System Equipment Interface Module



THM5421 Equipment Interface Module for Prestige® IAQ and VisionPRO® 8000 with RedLINK™. Equipment Interface Module controls up to 4-stages of heat and 2-stages of cool in a heat pump system and up to 3-stages of heat and 2-stages of cool in a conventional system. Three sets of Universal IAQ contacts to control humidification, dehumidification, and ventilation. Four sensor inputs for wired sensors or dry contact devices.

**Applications:** Gas, oil, electric, heat pump, forced warm air, hot water, steam or gravity

**Mounting:** Vertical

**Color:** Gray

**Operating Temperature Range:** -40°F to 165°F (-40°C to 73.9°C)

**Operating Humidity Range (% RH):** 5 to 95% RH, non-condensing

**Power Method:** Hardwired

**Supply Voltage:** 18 to 30 Vac

**Frequency:** 50 Hz; 60 Hz

**Electrical Connections:** Screw terminals

**Electrical Ratings:** 18 to 30 Vac

**Dimensions:** 9 5/16 in. High, 4 13/16 in. Wide, 1 5/8 in. Deep (237.4 mm High, 122.5 mm Wide, 40.6 mm Deep)

**Cool Current:** 1.0 A running

**Heat Current:** 1.0 A running

**Fan Current:** 0.5A running



Material Number	Terminal Designations	Stages	Includes	Used With
THM5421R1021/U	R, RC, RH, C, W-O/B, W2-AUX1, W3-AUX2, Y, Y2, G, A-L/A, U1, U1, U2, U2, U3, U3, S1, S1, S2, S2, S3, S3, S4, S4, A, B, C, D	Up to 4 Heat / 2 Cool Heat Pump or Up to 3 Heat / 2 Cool Conventional	THM5421R1021 Equipment Interface Module	All THX9421R5021 Prestige® 2-Wire IAQ Thermostats and all versions of Prestige® IAQ Thermostats and the VisionPRO® Thermostats with RedLINK™ technology.
YTHM5421R1010/U	R, RC, RH, C, W-O/B, W2-AUX1, W3-AUX2, Y, Y2, G, A-L/A, U1, U1, U2, U2, U3, U3, S1, S1, S2, S2, S3, S3, S4, S4, A, B, C, D	Up to 4 Heat / 2 Cool Heat Pump or Up to 3 Heat / 2 Cool Conventional	THM5421R1021 Equipment Interface Module and 2 Duct Sensors	All THX9421R5021 Prestige® 2-Wire IAQ Thermostats and all versions of Prestige® IAQ Thermostats and the VisionPRO® Thermostats with RedLINK™ technology.

## ERM5220R Equipment Remote Module



ERM5220R Equipment Remote Module provides wireless RedLINK™ communication between condensing unit/compressor or boiler and thermostat. Use it whenever it's too costly or time-consuming to run wires from a condensing unit or boiler to control devices. Suitable for outdoor use. Temperature sensor terminals for outdoor temp sensors or indoor freeze protection. LEDs for easy installation checkout.

**Applications:** Gas, oil, electric, heat pump, forced warm air, hot water, steam or gravity

**Mounting:** Vertical

**Color:** Gray

**Operating Temperature Range:**

Compressor: -40°F to +155°F (-40°C to +68°C)

Boiler: 30°F to +130°F (-1°C to +54°C)

**Operating Humidity Range (% RH):** 5 to 99% RH, non-condensing

**Power Method:** Hardwired

**Supply Voltage:** 24 Vac

**Frequency:** 50 Hz; 60 Hz

**Electrical Connections:** Screw terminals

**Electrical Ratings:** 24 Vac

**Dimensions:** 6-39/64 in. High, 6-7/8 in. Wide, 1-31/64 in. Deep (168 mm High, 175 mm Wide, 38 mm Deep)



Material Number	Terminal Designations	Stages	Includes	Used With
ERM5220R1018	J, R, C, Y, Y2, O/B, D, L, S1, S1	Up to 2 Heat / 2 Cool Heat Pump or Up to 2 Stage Conventional	ERM5220R Equipment Remote Module	THX9421R5021, TH8321R1001 and EIM (when EIM is required).
YERM5220R8321	ERM-J, R, C, Y, Y2, O/B, D, L, S1, S1	Up to 2 Heat / 2 Cool Heat Pump or Up to 2 Stage Conventional	ERM5220R1018 Equipment Remote Module and TH8321R1001 VisionPRO 8000	
YERM5220RVPEIM	ERM-J, R, C, Y, Y2, O/B, D, L, S1, S1	Up to 2 Heat / 2 Cool Heat Pump or Up to 2 Stage Conventional	ERM5220R1018 Equipment Remote Module, TH8321R1001 VisionPRO 8000, and THM5421R1021 Equipent Interface Module	

## RedLINK Internet Gateway



The RedLINK™ Internet Gateway provides remote access to any RedLINK™ enabled thermostat through the internet, smartphone or tablet.

- RedLINK™ enabled to communicate with compatible wireless devices.
- Control any RedLINK™ enabled thermostat.
- 3 foot ethernet cable included.
- Simple installation to home or business router.
- Easily change system modes and indoor temperature through the web portal or mobile app.
- Multiple HOLD options allows modification of schedule as needed.
- High/Low temperature and humidity messaging alerts the user when the indoor conditions are too high or too low.
- Will accept a maximum of 4 thermostats on one single Gateway.

**Applications:** Internet control of RedLINK thermostats; Up to 4 Heat/2 Cool Heat Pumps

**Color:** Black

**Operating Temperature Range:** 32°F to 120°F (0°C to 48.9°C)

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing

**Power Method:** A 5 Vdc, 1000 mA power adapter

**Electrical Connections:** 24 Volt Plug In Transformer

**Electrical Ratings:** 20 to 30 Vac

**Dimensions:** Unit: 5 in. tall x 5 1/2 in. wide x 1 3/8 in. deep; Foot base: 6 in. x 2 1/2 in. (Unit: 127 mm tall x 140 mm wide x 35 mm deep; Foot base: 152 mm x 64 mm)

Material Number	Description	Used With	Includes
THM6000R1002/U	RedLINK Internet Gateway	RedLINK™ enabled thermostats and accessories	3 Foot Ethernet Cable and Plug in Power Adapter

## C7089 Wireless Outdoor Sensor



Senses outdoor temperature and humidity to display on RedLINK™ enabled thermostats and accessories.

- Powered by RedLINK™ reliability
- No interference with other wireless devices in the home
- Reliable performance in all climates
- Installs in minutes
- Up to 5 year battery life
- 2 month low battery warning
- Battery warning displayed on RedLINK™ enabled thermostats
- Includes 2 AA Lithium batteries and mounting hardware

**Applications:** Outdoor Sensor

**Mounting:** Vertical mounting with supplied bracket and mounting hardware

**Color:** Gray

**Operating Temperature Range:** -40°F to 140°F (-40°C to +60°C)

**Operating Humidity Range (% RH):** 0 to 100% RH, condensing

**Power Method:** Battery

**Dimensions:** (with mounting bracket) 5 in. high x 3 1/2 in. wide x 1 11/16 in. deep ([with mounting bracket] 127 mm high x 89 mm wide x 43 mm deep)

**Sensor Element:** Thermistor

Material Number	Comments	Used With	Includes
C7089R1013/U	Wireless Outdoor Sensor is also available in kits	RedLINK™ enabled thermostats and accessories	2 AA Lithium Batteries and mounting hardware



# RedLINK™ Accessories

## C7189 Wireless Indoor Air Sensor



**The Remote Indoor Sensor works with RedLINK enabled thermostats.**

- Used to sense temperature if the thermostat is installed in a poor temperature sensing location.
- Small remote temperature sensor to match any room decor.
- Easy to install and use.
- Factory calibrated; no field calibration required.

**Applications:** Wireless Indoor Air Sensor

**Mounting:** Mounts on a vertical wall with supplied bracket and mounting hardware

**Color:** Arctic White

**Operating Temperature Range:** 0°F to 120°F (35°F to 114°F for optimal battery life) -17.8°C to 48.9°C (1.7°C to 45.6°C for optimal battery life)

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing

**Power Method:** Battery

**Dimensions:** 2 7/8 in. high x 1 7/8 in. wide x 15/16 in. deep (73 mm high x 48 mm wide x 24 mm deep)

Material Number	Description	Used With	Includes
C7189R1004/U	Senses indoor temperature and humidity for control with RedLINK thermostats	Redesigned Prestige IAQ, Prestige IAQ 2.0, Prestige 2.0, All New RedLINK VisionPRO 8000	2 AAA alkaline batteries and mounting hardware

## REM1000 RedLINK Wireless Entry/Exit Remote



**Applications:** Heating and Cooling systems, RedLINK Thermostat Accessory

**Color:** White

**Operating Temperature Range:** 35°F to 114°F for optimal battery life (1.7°C to 45.6°C for optimal battery life)

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing

**Power Method:** Battery, Lithium Coin Cell

**Dimensions:** 6 1/4 in. high x 3 1/8 in. wide x 1 5/8 in. deep (159 mm high x 79 mm wide x 41 mm deep)

**Sensor Element:** Thermistor

**Used With:** RedLINK™ enabled thermostats and accessories

Material Number	Description
REM1000R1003/U	RedLINK Wireless Entry/Exit Remote

## REM5000 Portable Comfort Control



Use the Portable Comfort Control anywhere in the home to experience a new level of comfort and convenience. Works in both zoned and non-zoned applications.

- Powered by RedLINK™ reliability
- No interference with other wireless devices in the home
- Works with compatible RedLINK™ enabled thermostats and accessories
- Installs in minutes
- Touchscreen interface with backlit display
- Can display outdoor temperature and humidity
- Built-in pager with an audible noise helps locate the device in the home
- Screen-lock feature helps prevent accidental changes
- 1 year battery life
- 2 month low battery warning
- In Non-Zoned Applications: Bring it with you anywhere in the home to sense and control temperature from the room that you are in
- In Zoned Applications: View and adjust all RedLINK™ enabled thermostats from a single control
- Controls up to 16 thermostats

**Applications:** Zoned and Non-Zoned Applications

**Changeover:** Auto or Manual

**Differential Temperature:** ± 1°F (±0.5°C)

**Operating Temperature Range:** 32°F to 120°F (0°C to 48.9°C)

**Operating Humidity Range (% RH):** 5 to 90% RH, non-condensing

**Power Method:** Battery

**Dimensions:** 6 1/4 in. high x 3 1/8 in. wide x 1 5/8 in. deep (159 mm high x 79 mm wide x 41 mm deep)

**Sensor Element:** Thermistor

**Used With:** RedLINK™ enabled thermostats and accessories

**Comments:** Portable Comfort Control is also available in kits.

Material Number	Description
REM5000R1001/U	Use the Personal Comfort Station™ anywhere in the home to experience a new level of comfort and convenience. Works in both zoned and non-zoned applications.

## Wireless Adapter



Wireless Adapters allows easy addition of RedLINK™ enabled thermostats to TrueZONE™ systems. Use with a RedLINK™-enabled TrueSTEAM™ Humidification System to communicate & control humidity. It also controls dehumidifiers like the Honeywell TrueDRY™.

- Powered by RedLINK™ reliability.
- No interference with other wireless devices in the home.
- Communicates with Wireless Outdoor Sensor to automatically control humidity.

**Terminal Designations:** A, B, C, D

**Mounting:** Mount Wireless Adapter on wall near HVAC equipment or on the duct.

**Color:** Gray

**Operating Temperature Range:** -40°F to 165°F (-40°C to 73.9°C)

**Operating Humidity Range (% RH):** 5 to 95% RH, non-condensing

**Dimensions:** 5 9/16 in. high x 4 3/8 in. wide x 1 1/4 in. deep (141 mm high x 112 mm wide x 32 mm deep)

**Operation:** One adapter per zone control panel, HZ322 or HZ432 TrueZONE panel

Material Number	Description
THM4000R1000/U	Wireless Adapter allows you to easily add RedLINK™ enabled thermostats to a TrueZONE™ system without running new wires.

# Electric Heat Thermostats

## LineVoltPRO® 8000 7-Day Programmable Hydronic Thermostat



The TL8100 Hydronic Thermostat offers the energy savings of a programmable control for a wide variety of applications without a need to carry multiple thermostats for different applications. Controls 2-way and 3-way zone valves or circulator pumps.

**Applications:** Central Heating (Conventional); Baseboards; Convectors; Fan-forced Heaters; Radiant Ceilings

**Mounting:** Vertical

**Color:** White

**Programmability:** 7-Day Program

**Setting Temperature Range:** 40°F to 85°F (5°C to 30°C)

**Differential Temperature:** 0.1°F (0.1°C)

**Operating Temperature Range:** 32°F to 122°F (0°C to 50°C)

**Operating Humidity Range (% RH):** 0% to 95%, non-condensing

**Power Method:** 2 AA (LR6) batteries

**Supply Voltage:** 24 Vac; 30 Vdc; 120 Vac; 240 Vac

**Electrical Connections:** Screw terminals

**Electrical Ratings:** Maximum Load: 5 A (resistive), 2 A (inductive) @ 24 Vac, 120 Vac, 240 Vac; Compatible with millivolt systems

**Dimensions:** 4.9 in. X 3.8 in. X 1 in. (126 mm X 97 mm X 26 mm)

**Sensor Element:** Thermistor

**Switch Type:** Relay

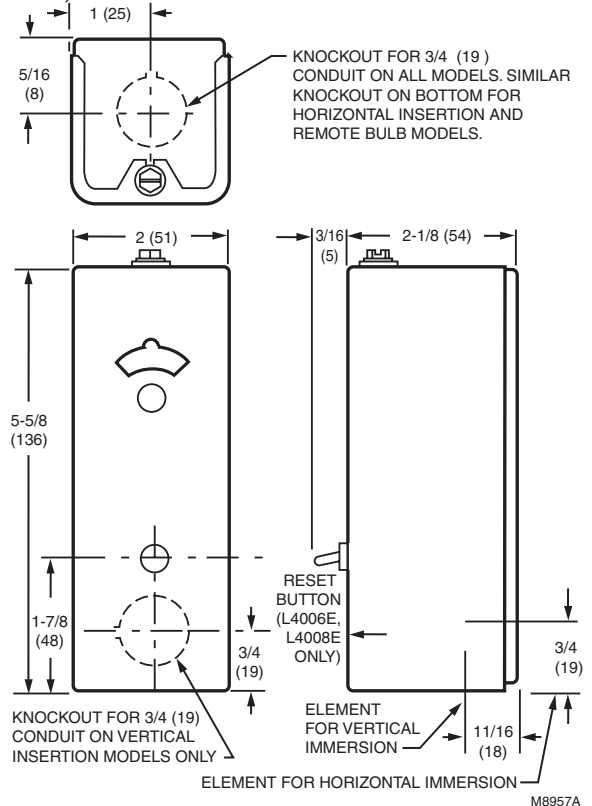
**Approvals, Underwriters Laboratories Inc.:** Approved

Material Number	Description	Stages	Accuracy	Terminal Designations	Comments	Used With
TL8100A1008/U	TL8100A1008 - Multi-Application 7-Day Programmable Electronic Thermostat	1 Heat	0.5°C	R, W, (X, C, optional remote input)	Pump Protection (for hot water heating)	Aube CT240-01 Telephone Controller

## L4006; L6006 Aquastat Controller



Approvals, CSA: File No. 095329



**Aquastat® Controllers are immersion type devices for limiting or regulating the temperature of liquids in boilers, storage tanks, and other applications where temperature control is required.**

- Totally enclosed Micro Switch™ snap-acting switches operate on temperature rise to setpoint.
- Visible control point scale and external adjustment screw permit easy setting.
- Horizontal or vertical insertion of the sensing element.
- Direct or well immersion of the sensing element.
- Models available for strap-on mounting.
- Remote bulb model may be used to sense air temperature in ducts and in outside air sensing applications.
- Select models have wells.
- UL limit rated device.

**Temperature Range:** Maximum – 150°F (Maximum – 66°C)

**Bulb Size:** 3/8 in. x 2 7/8 in. copper (10 mm x 73 mm copper)

**Electrical Ratings:**

- At Full Load – 8 A @ 120 Vac; 5.1 A @ 240 Vac;
- At Locked Rotor – 48 A @ 120 Vac; 30.6 A @ 240 Vac
- Millivolt – 0.25 A @ 0.25 to 12 Vdc

**Dimensions:** Case – 5 5/8 in. high x 2 in. wide x 2 1/8 in. deep (Case – 143 mm high x 51 mm wide x 54 mm deep)

**Approvals, Underwriters Laboratories Inc.:** UL Component  
Recognized: File No. MP466, Vol. 6, Sec.1, Guide No. MBPR2

Material Number	Application	Switching Action	Operating Temperature Range	Differential Temperature	Well Spud Size	Capillary Length	Mounting	Includes
L4006A1009/U	High or Low limit	SPST, contacts break on temperature rise.	100°F to 240°F (38°C to 116°C)	5°F Fixed (3°C fixed)	1/2 in. NPT (13 mm NPT)	1 1/2 in. (38 mm)	Horizontal or Vertical	1/2 in. well - 123869A
L4006A1017/U	High or Low limit	SPST, contacts break on temperature rise.	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	1/2 in. NPT (13 mm NPT)	1 1/2 in. (38 mm)	Horizontal or Vertical	1/2 in. well - 123869A
L4006A1132/U	High or Low limit	SPST, contacts break on temperature rise.	100°F to 240°F (38°C to 116°C)	5°F Fixed (3°C fixed)	3/4 in. NPT (19 mm NPT)	3 in. (76 mm)	Horizontal or Vertical	Stop factory-set at 160°F (71°C); 3/4 in. well - 123871A
L4006A1678/U	High or Low limit	SPST, contacts break on temperature rise.	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	–	3 in. (76 mm)	Horizontal or Vertical	Stop factory-set at 240°F (116°C); Heat-conductive compound
L4006A1959/U	High or Low limit	SPST, contacts break on temperature rise.	40°F to 180°F (4°C to 82°C)	5°F Fixed (3°C fixed)	–	3 in. (76 mm)	Horizontal or Vertical	Heat-conductive compound
L4006A1967/U	High or Low limit	SPST, contacts break on temperature rise.	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	1/2 in. (13 mm)	1 1/2 in. (38 mm)	Horizontal or Vertical	1/2 in. well - 123869A; Stop factory-set at 240°F (116°C)
L4006A2007/U	High or Low limit	SPST, contacts break on temperature rise.	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	–	3 in. (76 mm)	Horizontal	–

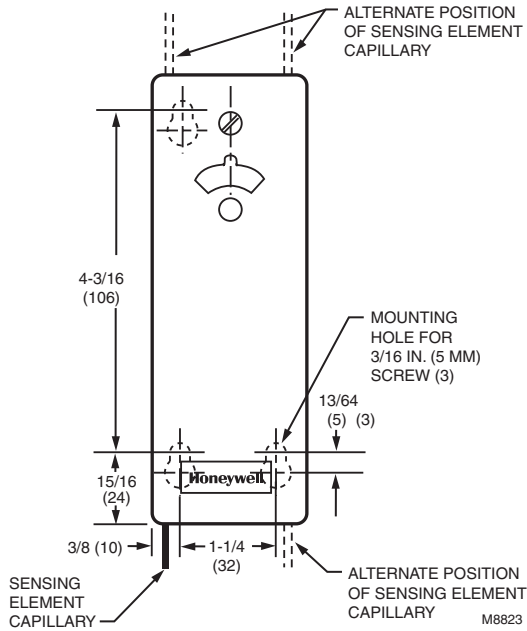
# Aquastat Controllers

Material Number	Application	Switching Action	Operating Temperature Range	Differential Temperature	Well Spud Size	Capillary Length	Mounting	Includes
L4006B1007/U	Circulator	SPST, contacts make on temperature rise.	100°F to 240°F (38°C to 116°C)	5°F Fixed (3°C fixed)	1/2 in. (13 mm)	1 1/2 in. (38 mm)	Horizontal or Vertical	1/2 in. well - 123869A
L4006B1155/U	Circulator	SPST, contacts make on temperature rise.	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	—	3 in. (76 mm)	Horizontal or Vertical	Stop factory-set at 240°F (116°C); Heat-conductive compound
L4006B1163/U	Circulator	SPST, contacts make on temperature rise.	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	—	3 in. (76 mm)	Horizontal or Vertical	—
L4006E1067/U	High Limit; Manual Reset	SPST, contacts break on temperature rise.	130°F to 270°F (54°C to 132°C)	Manual Reset	—	3 in. (76 mm)	Horizontal or Vertical	Heat-conductive compound; Stop factory-set at 250°F (121°C); Well adapter
L4006E1091/U	High Limit; Manual Reset	SPST, contacts break on temperature rise.	130°F to 270°F (54°C to 132°C)	Manual Reset	—	3 in. (76 mm)	Horizontal or Vertical	—
L4006E1109/U	High Limit; Manual Reset	SPST, contacts break on temperature rise.	130°F to 270°F (54°C to 132°C)	Manual Reset	—	1 1/2 in. to 3 in. (38 mm to 76 mm)	Horizontal or Vertical	—
L4006E1117/U	High Limit; Manual Reset	SPST, contacts break on temperature rise.	100°F to 240°F (38°C to 116°C)	Manual Reset	3/4 in. - 14 NPT (19 mm - 14 NPT)	1 1/2 in. (38 mm)	Horizontal or Vertical	3/4 in. well - 123870A
L4006E1125/U	High Limit; Manual Reset	SPST, contacts break on temperature rise.	100°F to 200°F (38°C to 93°C)	Manual Reset	—	3 in. (76 mm)	Horizontal or Vertical	—
L4006H1004/U	High Limit; strap-on mounting on well mount.	SPST, contacts break on temperature rise.	100°F to 240°F (38°C to 116°C)	Manual Reset	—	1 1/2 in. (38 mm)	Horizontal or Vertical	Bracket for strap-on mounting; Heat-conductive compound; Stop factory-set at 240°F (116°C)
L6006A1012/U	Circulator Control and High Limit or Low Limit	SPDT	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	1/2 in. (13 mm)	1 1/2 in. (38 mm)	Horizontal or Vertical	1/2 in. well - 123869A
L6006A1145/U	Circulator Control and High Limit or Low Limit	SPDT	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	—	3 in. (76 mm)	Horizontal	Stop factory-set at 240°F (116°C); Heat-conductive compound
L6006A1244/U	Circulator Control and High Limit or Low Limit	SPDT	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	—	3 in. (76 mm)	Horizontal or Vertical	—
L6006C1018/U	Circulator Control and High Limit and Low Limit	SPDT	65°F to 200°F (18°C to 93°C)	5°F to 30°F adj. (3°C to 17°C adj.)	—	—	Horizontal or Vertical Surface mounting	Stop factory-set at 200°F (93°C)
L6006C1034/U	Circulator and High and Low Limit	SPDT	65°F to 200°F (18°C to 93°C)	5°F to 30°F adj. (3°C to 17°C adj.)	—	—	Horizontal or Vertical Surface mounting	—

## L4008; L6008 Remote Bulb Controller



Dimensions in inches (millimeters)



**For limiting or regulating temperature of liquids in boilers or tanks. Can also sense duct or outside air temperature.**

- Remote temperature sensing element detects and responds rapidly to temperature changes.
- Totally enclosed Micro Switch™ snap-acting switch.
- Visible control point scale and external adjustment screw permit easy setting.
- Horizontal and/or vertical mounting of the remote element into boiler, tank, or other container unless otherwise noted.
- UL and CSA listed limit device.

**Bulb Size:** 3/8 in. x 2 7/8 in. copper (10 mm x 73 mm copper)

**Electrical Ratings:**

- At Full Load – 8 A @ 120 Vac; 5.1 A @ 240 Vac;
- At Locked Rotor – 48 A @ 120 Vac; 30.6 A @ 240 Vac
- Millivolt – 0.25 A @ 0.25 to 12 Vdc

**Temperature Range:** Maximum Ambient – 150°F (66°C)

**Mounting:** Horizontal or Vertical

**Dimensions:** Case – 5 5/8 in. high x 2 in. wide x 2 1/8 in. deep (Case – 143 mm high x 51 mm wide x 54 mm deep)

**Approvals, Underwriters Laboratories Inc.:** UL Component  
Recognized: File No. MP466, Vol. 6, Sec.1, Guide No. MBPR2

**Approvals, CSA:** File No. 095329

Material Number	Application	Operating Temperature Range	Differential Temperature	Capillary Length	Switching Action	Includes
L4008A1015/U	High or Low limit	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	66 in.	SPST, contacts break on temperature rise.	–
L4008A1130/U	High or Low limit	130°F to 270°F (54°C to 132°C)	5°F to 30°F adj. (3°C to 17°C adj.)	120 in.	SPST, contacts break on temperature rise.	Stop factory-set at 200°F (93°C)
L4008B1013/U	Circulator	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	66 in.	SPST, contacts make on temperature rise.	–
L4008E1156/U	High Limit; Manual Reset	130°F to 270°F (54°C to 132°C)	Manual Reset	66 in.	SPST, contacts break on temperature rise.	Stop factory-set at 250°F (121°C); Heat-conductive compound
L4008E1305/U	High Limit; Manual Reset	100°F to 240°F (38°C to 116°C)	Manual Reset	66 in.	SPST, contacts break on temperature rise.	Stop factory-set at 240°F (116°C)
L4008E1313/U	High Limit; Manual Reset	100°F to 200°F (38°C to 116°C)	Manual Reset	66 in.	SPST, contacts break on temperature rise.	–
L6008A1192/U	Circulator Control and Low Limit	100°F to 240°F (38°C to 116°C)	5°F to 30°F adj. (3°C to 17°C adj.)	66 in.	SPDT	Stop factory-set at 240°F (116°C)
L6008A1242/U	Circulator Control and Low Limit	100°F to 200°F (38°C to 93°C)	5°F to 30°F adj. (3°C to 17°C adj.)	66 in.	SPDT	–

# Aquastat Controllers

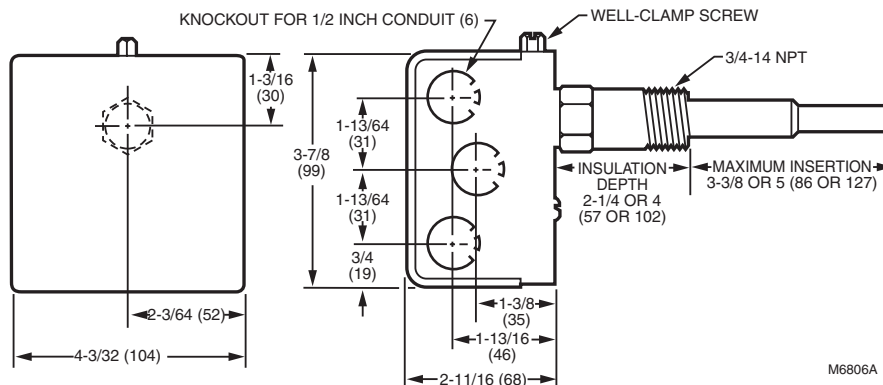
## L4103 Combination Aquastat® and High Limit Controller



An immersion-type control the Aquastat® Controller senses water temperature, cycles the burner through the oil primary, or provides water temperature regulation for gas systems. The controller breaks the circuit on a temperature rise past setpoint.

- L4103A,B,C have a sensing element and a high limit sensor with automatic reset.
- Mounts on a horizontal immersion well in water heater wall.
- Adjustable temperature setting scale.
- Fluid-filled element operates SPST, Micro Switch™ snap-acting switch.
- Integral, nonadjustable high limit. L4103C is an immersion controller for gas systems.
- L4103A,B is an immersion controller for oil systems.

Dimensions in inches (millimeters)



**Operating Temperature Range:** 100°F to 240°F stop set at 150°F  
(Scale marked- Hot-Normal-Warm) (38°C to 116°C stop set at 66°C  
(scale marked- Hot-Normal-Warm))

**Electrical Ratings:**  
At Full Load – 8 A @ 120 Vac; 5 A @ 240 Vac;  
At Locked Rotor – 48 A @ 120 Vac; 30 A @ 240 Vac  
**Approvals, Underwriters Laboratories Inc.:** UL Component  
Recognized: File No. MP466, Guide No. MBPR2.

Material Number	Application	Differential Temperature	Well Spud Size	Insulation Depth	Switching Action	Mounting
L4103A1019/U	High Limit	7°F ± 4°F (3.9°C ± 2°C)	3/4 in. NPT (19 mm NPT)	4 in. (102 mm)	SPST, contacts break on temperature rise.	Mounts on a horizontal immersion well in water heater wall.
L4103A1100/U	High Limit	7°F ± 4°F (3.9°C ± 2°C)	3/4 in. NPT (19 mm NPT)	2 1/4 in. (57 mm)	SPST, contacts break on temperature rise.	Mounts on a horizontal immersion well in water heater wall.



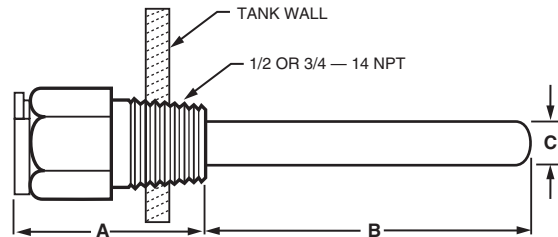
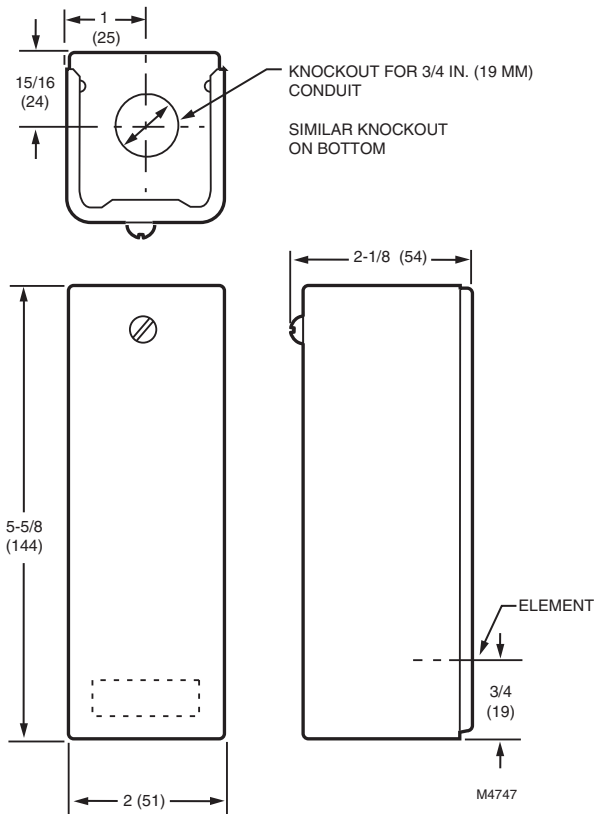
## L8100 Aquastat® Controller



**L8100 are immersion type controllers for regulating and limiting the tank temperature in water heater and hydronic systems. As the water temperature rises past the setpoint, the controller switches off the gas valve.**

- Regulates temperature and provides energy cutoff (ECO) action on a temperature rise past the setpoint.
- Includes a second sensing element that senses average water temperature to minimize stacking.
- Fluid-filled element operates Micro Switch™ SPST snap-acting switch.
- ECO switch interrupts the thermocouple circuit or main valve before tank reaches 210°F (99°C) maximum temperature.
- Includes factory-installed immersion well on controller.
- Internal adjustment screw.
- Special switch terminal provides three-wire hookup from Aquastat® controller to gas valve.

### Dimensions in inches (millimeters)



	CONTROLLER WELL		REMOTE WELL	
	IN.	MM	IN.	MM
<b>A INSULATION DEPTH</b>	2-1/4	57	1-1/2 OR 2-1/2	38 OR 64
<b>B INSERTION DEPTH</b>	5	127	3	76
<b>C WELL DIAMETER</b>	7/16	11	7/16	11

M4746

**Operating Temperature Range:** 100°F to 180°F (38°C to 82°C)

**Differential Temperature:**

**Controller:** 5°F (3°C), fixed.

**Energy Cutoff Switch:** 20°F (11°C), fixed.

**Electrical Ratings:** Millivolt – 2A maximum at 24 Vac

**Mounting:** Immersion Well

**Temperature Range:**

**(ECO) Energy Cutoff:** 190°F (88°C);

**Tank Maximum:** 210°F (99°C)

**Dimensions:** Case – 5 5/8 in. high x 2 in. wide x 2 1/8 in. deep (Case – 143 mm high x 51 mm wide x 54 mm deep)

**Approvals, Underwriters Laboratories Inc.:** UL Component

Recognized: File No. MP466, Guide No. MBPR2

**Approvals, CSA:** File No. 112491

Material Number	Application	Bulb Size	Capillary Length	Insulation Depth	Switching Action	Includes
L8100B1037/U	High Limit	3/8 in. (10 mm)	42 in.	controller well: 2 1/4 in. (57 mm) remote well: 1 1/2 or 2 1/2 in. (38 mm or 64 mm)	SPST, contacts break on temperature rise.	–
L8100B1094/U	High Limit	3/8 in. (10 mm)	54 in.	controller well: 2 1/4 in. (57 mm) remote well: 1 1/2 or 2 1/2 in. (38 mm or 64 mm)	SPST, contacts break on temperature rise.	Two zinc plated wells and one well clamp for remote well.
L8100B1128/U	High Limit	3/8 in. (10 mm)	39 in.	1 1/2 in. (38 mm)	SPST, contacts break on temperature rise.	–

# Aquastat Controllers

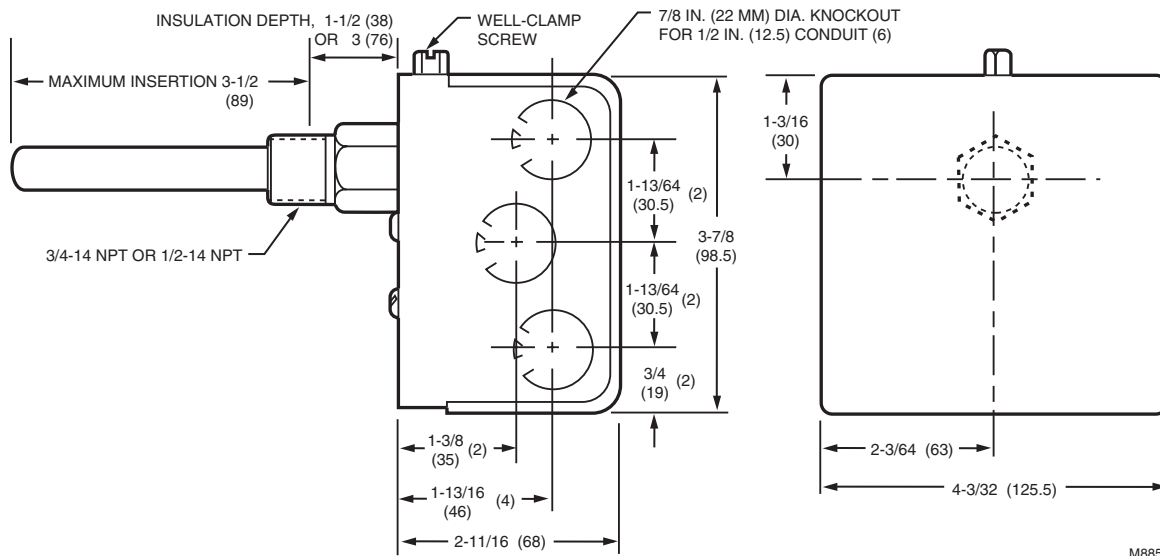
## L4081; L6081 Multiple Aquastat® Controllers



**High limit, low limit and/or circulator controllers used to regulate boiler water temperature in gas- or oil-fired hydronic heating systems.**

- An immersion type liquid-filled sensing element actuates two snap switches.
- One switch operates as a high limit control.
- The other switch operates as a low limit and/or circulator control, depending on the model.
- Controller may be mounted in any positioning and needs no leveling.
- Separate, easy-to-read, calibrated dial and setpoint adjustments for each switch.
- Differential adjustment on low limit or circulator switch on select models.
- All adjustments accessible inside front cover.
- Push-in terminals for quick connecting.
- Single sensing element for easy installation.
- Two SPST snap switches act independently at respective temperature settings.

### Dimensions in inches (millimeters)



M8854

**Temperature Range:** Maximum – 150°F (66°C) at switches; 265°F (129°C) at sensing element

### Operating Temperature Range:

High Limit – 130°F to 240°F (54°C to 116°C);  
Low Limit – 110°F to 220°F (43°C to 104°C)

**Electrical Ratings:** 0.25 A @ 0.25 to 12 Vdc;  
At Full Load – 8A @ 120 Vac; 5.1A @ 240 Vac;  
At Locked Rotor – 48A @ 120 Vac; 30.6A @ 240 Vac

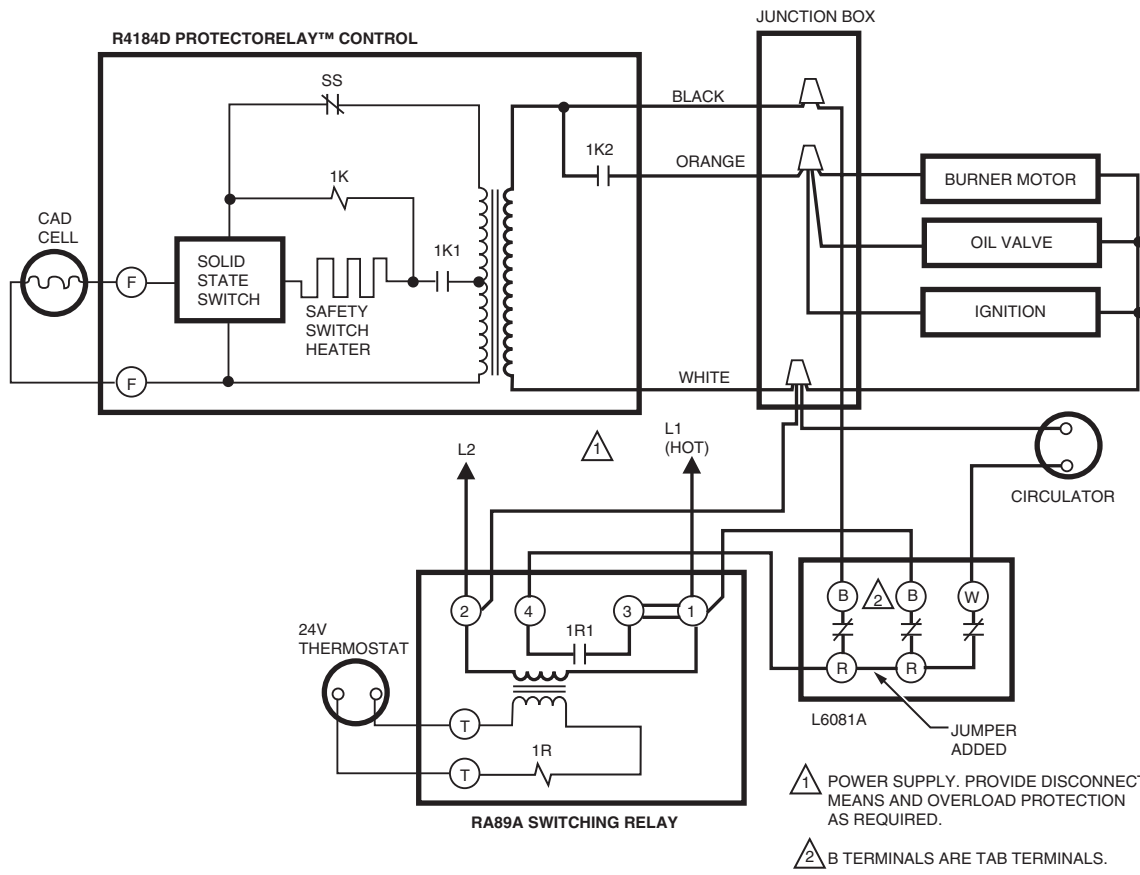
**Electrical Ratings, Ignition:** Transformer Load: 360 VA  
**Mounting:** Horizontal

**Dimensions:** 3 7/8 in. high x 4 1/8 in. wide x 2 3/4 in. deep. (98 mm high x 105 mm wide x 70 mm deep.)

**Operating Humidity Range (% RH):** 0 to 95% RH, non-condensing  
**Approvals, Underwriters Laboratories Inc.:** UL Listed: File No. MP466, Vol. 12, Sec. 4, Guide No. MBPR2

**Approvals, CSA:** Certified: File No. LR95329-1

Material Number	Application	Differential Temperature	Well Spud Size	Insulation Depth	Switching Action
L4081A1023/U	High and Low limit	High limit : 10°F fixed; low limit: 10-25°F adj.	3/4 in. - 14 NPT (19 mm - 14 NPT)	1 1/2 in. (38 mm)	SPST: High & Low Limit
L4081B1047/U	High Limit and Circulator	High limit : 10°F fixed; low limit: 10-25°F adj.	3/4 in. - 14 NPT (19 mm - 14 NPT)	1 1/2 in. (38 mm)	SPST: High Limit & Circulator
L4081B1096/U	High Limit and Circulator	10°F Fixed	–	3 in. (76 mm)	SPST: High Limit & Circulator
L6081A1036/U	High and Low Limit and Circulator	High limit : 10°F fixed; low limit: 10-25°F adj.	3/4 in. - 14 NPT (19 mm - 14 NPT)	1 1/2 in. to 4 in. (38 mm)	SPST: High Limit SPDT: Low Limit and Circulator



# Aquastat Controllers

## L7224U Oil Electronic Aquastat Controller



Universally compatible and easy to install the L7224U allows for quick diagnostics updates through an easy-to-read LED display enhanced with a system of flashing lights. It's like an express checkout service for every installation. For quality circulator, oil burner and boiler control for today's systems and tomorrow's, the L7224U Aquastat is a state-of-the-art solution. Make the switch from electromechanical to electronic with the universally compatible L7224U.

- Complies with 2012 Department of Energy Standards
- Diagnostic updates through easy-to-read LED displays
- $\pm 2^\circ\text{F}$  accuracy and faster response times
- Adjustable high- and low-limit differential
- Outdoor reset functionality available with W8735S1000 and W8735Y1000
- Provides multizone control
- Thermowell horizontal or vertical and flush mounting
- EnviraCOM™ communications enabled
- Compatible with W8735S3000 Alarm Module

**Voltage:** 120 Vac

**Power Consumption:** 7 VA

**Frequency:** 60 Hz

**Temperature Range:** -30°F to 150°F (-34°C to 66°C)

**Operating Temperature Range:**

High Limit – 130°F to 240°F (54°C to 116°C);

Low Limit – 110°F to 220°F (43°C to 104°C)

**Dimensions:** 7 1/8 in. high x 4 1/4 in. wide x 2 5/8 in. deep (181 mm high x 109 mm wide x 67 mm deep)

**Operating Humidity Range (% RH):** 0 to 95% RH, non-condensing  
**Approvals, Underwriters Laboratories Inc.:** Recognized

### Accessories:

**120650/U** – Heat Conductive Grease 1/2 oz.

**121371AA/U** – Well clamp assembly with clamp capillary 21371 (1) screws 804644 and nuts 60156

**123869A/U** – Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 1 1/2 in. (38 mm) insulation, 1/2 in. NPT.

**123870A/U** – Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 1 1/2 in. (38 mm) insulation, 3/4 in. NPT.

**C7089R1013/U** – Senses outdoor temperature and humidity to display on RedLINK™ enabled thermostats and accessories.

**C7089U1006/U** – Outdoor Sensor used to measure the outdoor temperature for use with VisionPro and VisionPRO IAQ.

**W8735ER1000/U** – Wireless Outdoor Reset Module for use with L7224/L7248 series 2.

**W8735S1000/U** – Outdoor Reset Module for use with L7224/L7248 series 2. Includes outdoor sensor.

**W8735S1008/U** – Domestic Hot Water Module for use with L7224/L7248 series 2. Includes water pipe temperature sensor.

**W8735Y1000/U** – Outdoor Reset Module for use with L7224/L7248 series 2. Includes outdoor sensor C7089R1013.

Material Number	Application	Differential Temperature	Mounting	Electrical Ratings, Burner	Electrical Ratings, Circulator
L7224U1002/U	Oil Aquastat Controller	High limit : 5-20°F adj.; low limit: 10-25°F adj.	Well mount, horizontal or vertical position, or flush mounted remote from the well.	At Full Load – 7.4 A @ 120 Vac; At Locked Rotor – 44.4 A inrush	At Full Load – 7.4 A @ 120 Vac; At Locked Rotor – 44.4 A inrush

## L8124 Triple Aquastat® Relay



**Immersion-type controllers that combine high limit protection with low limit and circulator control in forced hydronic heating systems, including domestic hot water service.**

- Provide multizone control by using a separate circulator and R845 Relay for each zone.
- Include diaphragm powerhead and Micro Switch™ assembly that respond to temperature changes in boiler water.
- Mount directly to boiler.
- Select models include large transformers and extra terminals for supplying power to low voltage zone valves.
- Require 24 Vac thermostat with heat anticipator set at 0.2 A (plus current draw of gas valve on L8124E).

**Differential Temperature:** High limit: 10°F fixed; low limit: 10-25°F adj.

**Frequency:** 60 Hz

**Electrical Connections:** Quick Connect/Screw

**Switching Action:** SPST: High Limit

SPDT: Low Limit and Circulator Control

**Maximum Safe Operating Pressure (psi):** 200 psi on outside of immersion well, 100 psi on capsule if inserted directly.

**Maximum Safe Operating Pressure (kPa):** 1378 kPa on outside of immersion well, 690 kPa on capsule if inserted directly.

**Electrical Ratings, Circulator:**

At Full Load – 7.4 A @ 120 Vac; 3.7 A @ 240 Vac;

At Locked Rotor – 44.4 A @ 120 Vac; 22.2 A @ 240 Vac

**Electrical Ratings, Burner:**

At Full Load – 7.4 A @ 120 Vac; 3.7 A @ 240 Vac;

At Locked Rotor – 44.4 A @ 120 Vac; 22.2 A @ 240 Vac

**Operating Humidity Range (% RH):** 0 to 95% RH, non-condensing

**Operating Temperature Range:**

High Limit – 130°F to 240°F (54°C to 116°C) adjustable;

Low Limit – 110°F to 220°F (43°C to 104°C) adjustable

**Temperature Range:** Maximum Ambient temp case: 150°F (66°C);

Maximum Sensing element 265°F (129°C)

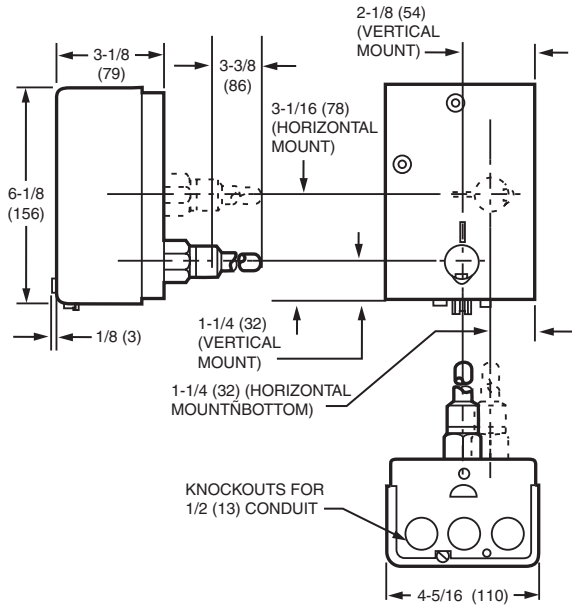
**Approvals, Underwriters Laboratories Inc.:** UL Listed (models with well): File No. MP466, Guide No. MBPR; UL Component Recognized (models without well): File No. MP466, Guide No. MBPR2

**Approvals, CSA:** File No. 095329

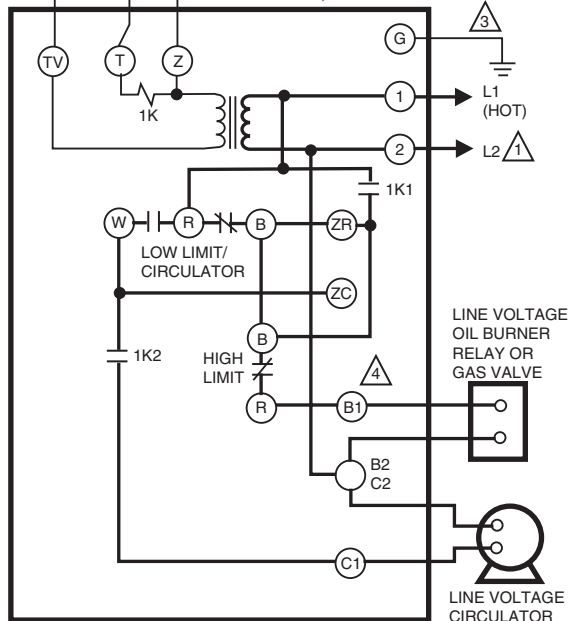
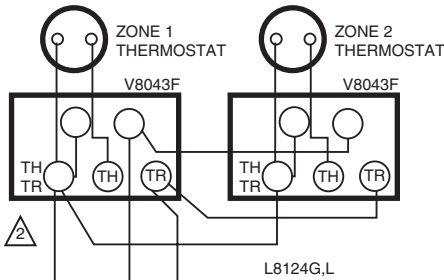
Material Number	Application	Burner Control Voltage	Insulation Depth	Mounting
L8124A1007/U	High Limit Protection, Low Limit and Circulation Control	120 Vac; 60 Hz	1 1/2 in. (38 mm)	Vertical Mount
L8124A1015/U	High Limit Protection, Low Limit and Circulation Control	120 Vac; 60 Hz	3 in. (76 mm)	Vertical Mount
L8124C1003/U	Triple Aquastat Relay with High limit	120 Vac; 60 Hz	1-1/2 in (38 mm)	Horizontal
L8124E1016/U	Triple Aquastat Relay with High limit	120 Vac; 60 Hz	–	Vertical Mount
L8124G1020/U	Triple Aquastat Relay with High limit	120 Vac; 60 Hz	–	Vertical Mount
L8124L1011/U	Triple Aquastat Relay with High limit	120 Vac; 60 Hz	–	Horizontal

# Aquastat Controllers

Dimensions in inches (millimeters)

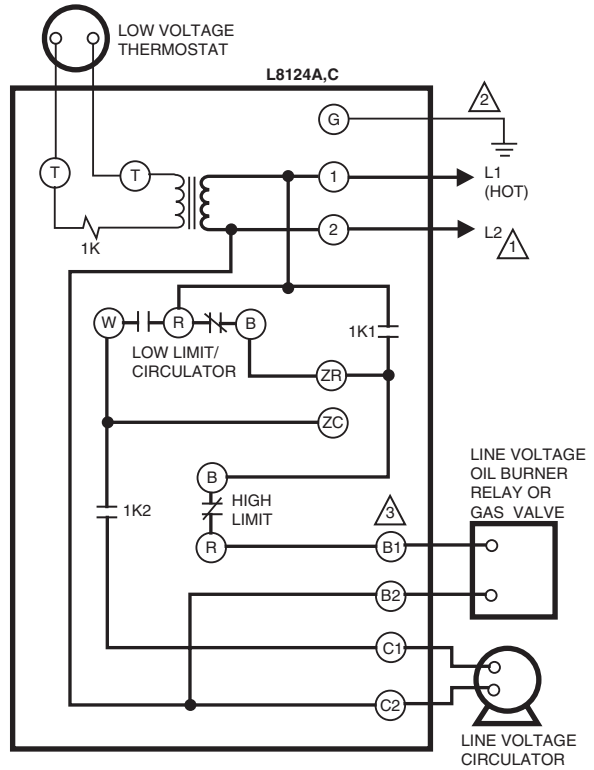


M8925



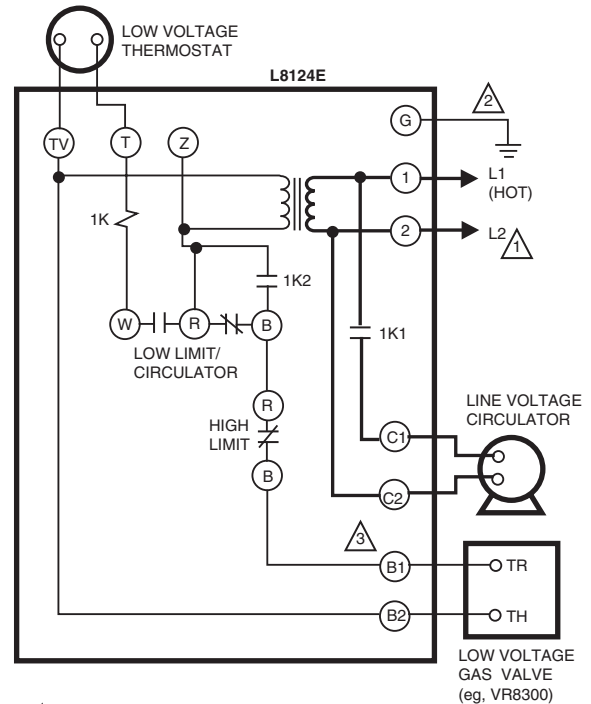
- 1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
- 2 UP TO TWO V8043F ZONE VALVES CAN BE POWERED WITH L8124G,L. ADD ADDITIONAL TRANSFORMER FOR EVERY TWO OR LESS VALVES.
- 3 CONTROL CASE MUST BE CONNECTED TO EARTH GROUND. USE GROUNDING SCREW PROVIDED.
- 4 B1 IS 1/4 IN. TAB TERMINAL.

M1795B



- 1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
- 2 CONTROL CASE MUST BE CONNECTED TO EARTH GROUND. USE GROUNDING SCREW PROVIDED.
- 3 B1 IS 1/4 IN. TAB TERMINAL.

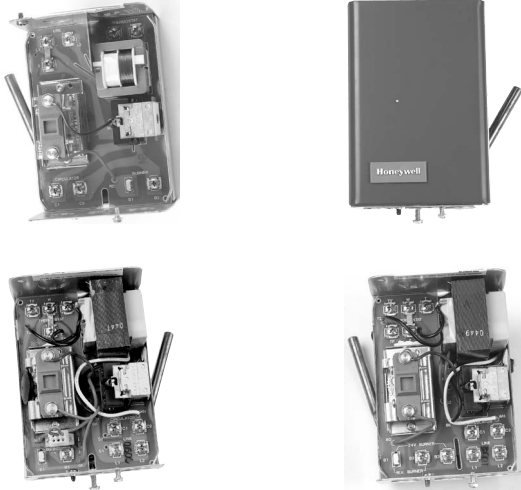
M8802



- 1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
- 2 CONTROL CASE MUST BE CONNECTED TO EARTH GROUND. USE GROUNDING SCREW PROVIDED.
- 3 B1 IS 1/4 IN. TAB TERMINAL.

M8803

## L8148 Aquastat Relay



**Immersion-type controllers that combine high limit protection with switching relay control of burner and circulator motors.**

- High limit opens burner circuit only.
- Select models include transformer and accessory terminals for adding a remote low limit controller.
- Case available for horizontal or vertical mounting.
- Requires a 24 Vac thermostat with heat anticipator set at 0.2A.

**Application:** High Limit

**Voltage:** 120 Vac

**Frequency:** 60 Hz

**Temperature Range:** Maximum – 150°F (66°C) with 1.2 A 24 V load;  
77°F (25°C) with 1.4 A 24 V load

**Capillary Length:** 4 1/2 in. (114 mm)

**Electrical Connections:** Quick-Connect / Screw

**Switching Action:** SPST: High Limit & Circulator

**Anticipator Setting:** 0.2 A

**Maximum Safe Operating Pressure (psi):** Immersion Well: 255 psi

**Maximum Safe Operating Pressure (kPa):** Immersion Well: 1757 kPa

**Electrical Ratings, Circulator:**

At Full Load – 7.4 A @ 120 Vac: 3.7 A @ 240 Vac;

At Locked Rotor – 44.4 A @ 120 Vac: 22.2 A @ 240 Vac

**Electrical Rating, Burner:**

At Full Load – 7.4 A @ 120 Vac: 3.7 A @ 240 Vac;

At Locked Rotor – 44.4 A @ 120 Vac: 22.2 A @ 240 Vac

Low Voltage – 0.8 A maximum @ 24 Vac

Millivoltage – 0.25 A @ 1/4 to 12 Vdc

**Operating Humidity Range (% RH):** 0 to 95% RH, non-condensing

**Approvals, Underwriters Laboratories Inc.:** UL Listed: File No.

MP466, Vol. 13, Sec. 2, Guide No. MBPR2.

**Approvals, CSA:** L8148A, E - File No. 095329

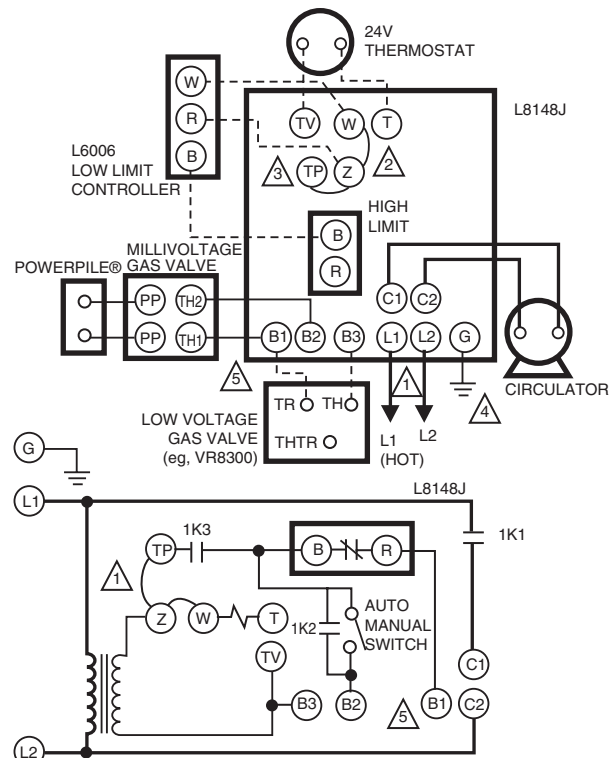
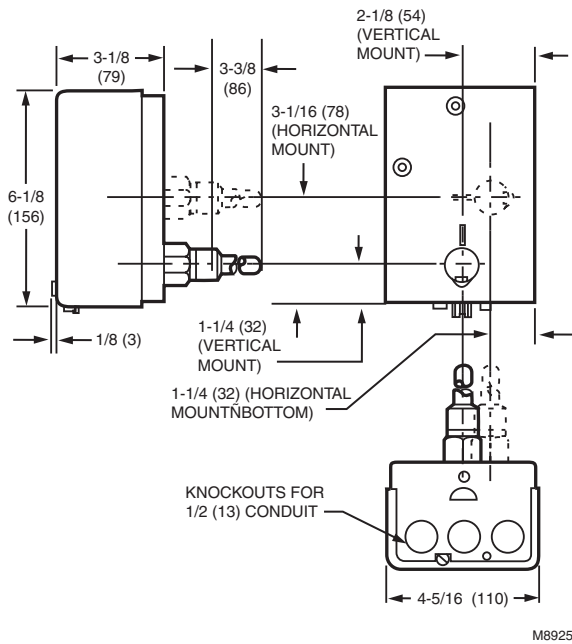
L8148 J - File No. LR1620, Guide No. 400-E-O

Material Number	Insulation Depth	Operating Temperature Range	Differential Temperature	Mounting	Includes
L8148A1017/U	1 1/2" to 3" Insulation	High Limit – 140°F (60°C) to 240°F (116°C)	8°F fixed	Horizontal	Heat Conductive Compound
L8148E1265/U	1 1/2" to 3" Insulation	High Limit – 180°F (82°C) to 240°F (116°C)	15°F fixed	Vertical Mount	Molex® plug for use with vent damper, includes heat-conductive compound.
L8148E1299/U	1 1/2" to 3" Insulation	High Limit – 180°F (82°C) to 240°F (116°C)	15°F fixed	Vertical Mount	50 VA transformer and heat conductive compound. Molex® plug for use with vent damper
L8148J1009/U	1 1/2" to 3" Insulation	High Limit – 120°F (54°C) to 240°F (116°C)	8°F fixed	Horizontal or Vertical	Heat Conductive Compound



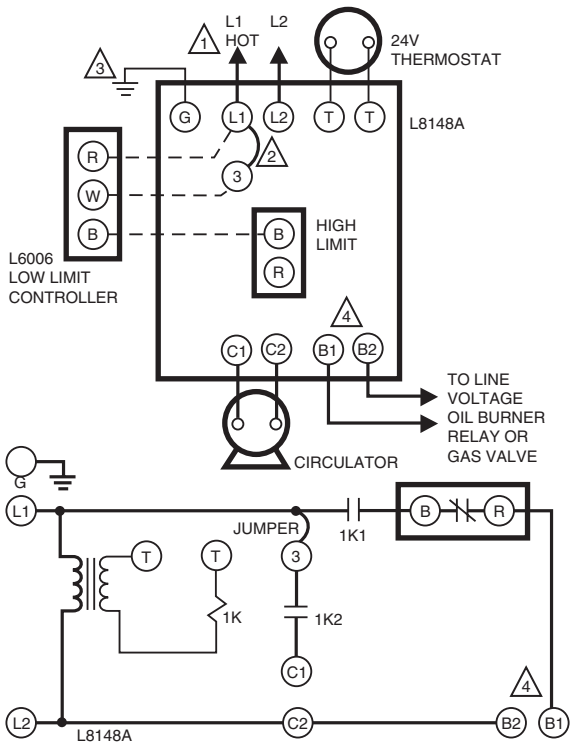
# Aquastat Controllers

Dimensions in inches (millimeters)



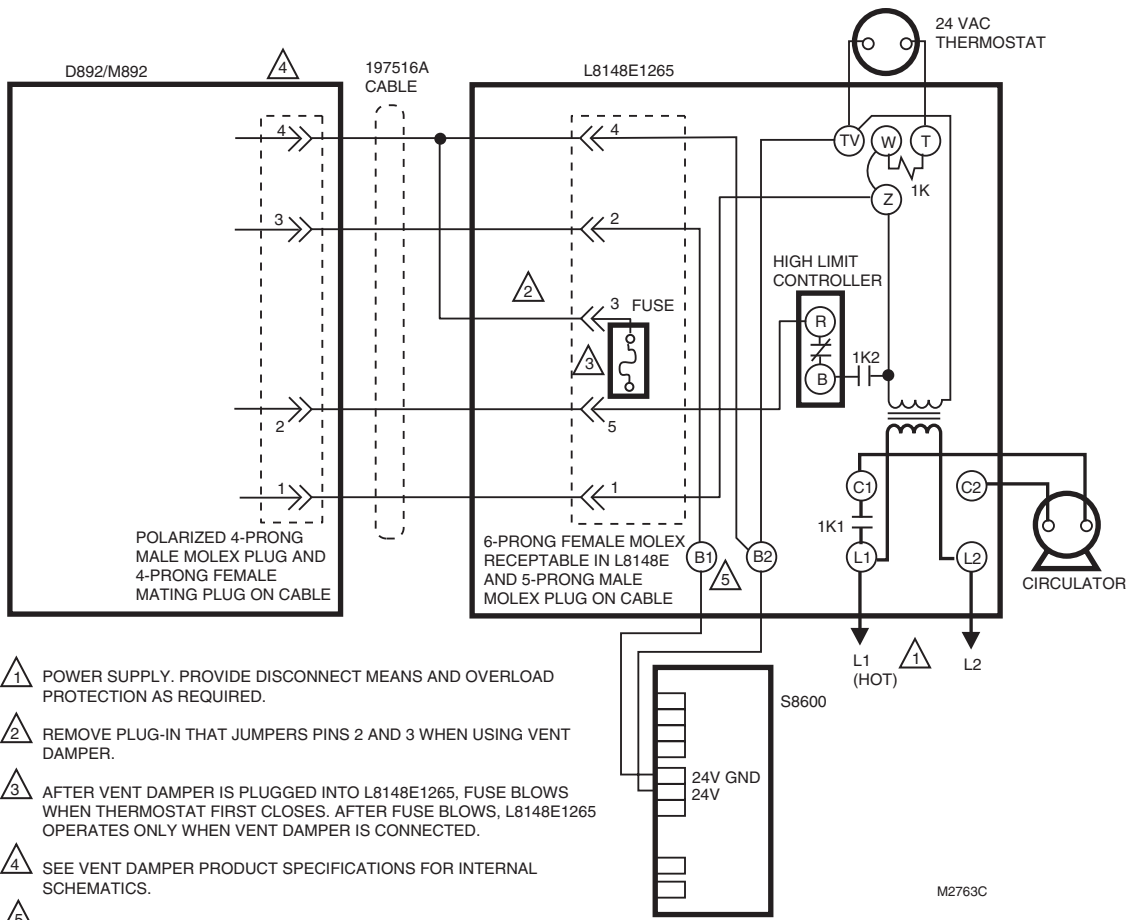
- ⚠️ 1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
- ⚠️ 2 REMOVE Z-W JUMPER IF SERIES 60 LOW LIMIT IS USED. WIRE LOW LIMIT CONTROLLER OR ZONE VALVES AS SHOWN. USE WITH 24V (B1-B3) CIRCUIT ONLY.
- ⚠️ 3 FOR 24V BURNER, WIRE B1-B3 AND USE JUMPER Z-W AND TP-Z. FOR POWERPILE® (MILLIVOLTAGE) GAS VALVES, REMOVE JUMPER TP-Z AND WIRE BURNER B1-B2. JUMPER Z-W REMAINS IN POSITION.
- ⚠️ 4 CONTROL CASE MUST BE CONNECTED TO EARTH GROUND. USE GROUNDING SCREW PROVIDED.
- ⚠️ 5 B1 IS 1/4 IN. TAB TERMINAL.

M1793B



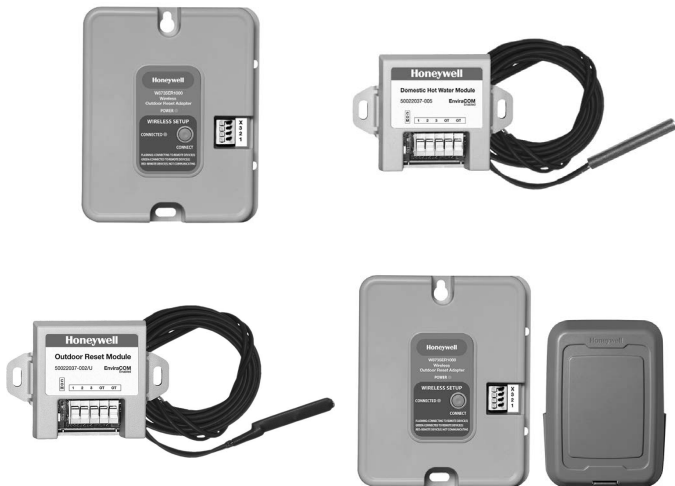
- ⚠️ 1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.
- ⚠️ 2 REMOVE JUMPER WHEN ADDING L6006 LOW LIMIT CONTROLLER.
- ⚠️ 3 CONTROL CASE MUST BE CONNECTED TO EARTH GROUND. USE GROUNDING SCREW PROVIDED.
- ⚠️ 4 B1 IS 1/4 IN. TAB TERMINAL.

M2842A



# Aquastat Controllers

## Outdoor Reset and Domestic Hot Water Priority



Outdoor reset saves energy by optimizing a boiler's settings based on the actual outdoor temperature. We offer wired and wireless AquaReset® Outdoor Reset solutions. While both versions offer the same incredible energy savings, the Wireless AquaReset® solution installs in only 30 minutes thanks to RedLINK® wireless communication. Compatible with Outdoor Reset-Ready L7224/L7248 Aquastat®s, S93 Integrated Boiler Controls, and R7910 SOLA Controls.

Domestic Hot Water Priority Kits are used with AquaReset® and available for applications when domestic hot water priority override is needed.

**Voltage:** 24 Vac

**Frequency:** 60 Hz

**Temperature Range:** -30°F to 150°F (-34°C to 66°C)

**Mounting:** Wall Mounted in any orientation

**Operating Temperature Range:** -30°F to 150°F (-9°C to 66°C)

**Electrical Ratings:** 24 Vac, 60 Hz

**Operating Humidity Range (% RH):** 0 to 95% RH Non-Condensing

**Accessories:**

**C7089R1013/U** – Wireless outdoor sensor

**C7089U1006/U** – Wired outdoor sensor for use in W8735S1000/U

Material Number	Description	Application	Dimensions	Used With	Includes
W8735ER1000/U	Wireless Outdoor Reset Module for use with L7224/L7248 series 2.	Wireless Outdoor Reset Module	5.56 in. high x 4.56 in. wide x 1.25 in deep	L7224; L7248; S9360, S9361, S9380; R7910	–
W8735S1000/U	Outdoor Reset Module for use with L7224/L7248 series 2. Includes outdoor sensor	Wireless Outdoor Reset Module	2.410 in. high x 3.385 in. wide x .920 in deep	L7224; L7248; S9360, S9361, S9380; R7910	C7089U1006 Outdoor Sensor; Outdoor Reset Module
W8735S1008/U	Domestic Hot Water Module for use with L7224/L7248 series 2. Includes water pipe temperature sensor	Domestic Hot Water Priority Kit	2.410 in. high x 3.385 in. wide x .920 in deep	L7224; L7248	–
W8735Y1000/U	Outdoor Reset Module for use with L7224/L7248 series 2. Includes outdoor sensor C7089R1013	Wireless Outdoor Reset Kit	5.56 in. high x 4.56 in. wide x 1.25 in deep	L7224; L7248; S9360, S9361, S9380; R7910	C7089R1013

## R8182 Combination Protectorelay® and Hydronic Heating Controllers



**Voltage:** 120 Vac  
**Power Consumption:** 9 W  
**Frequency:** 60 Hz  
**Temperature Range:** Maximum – 250°F (121°C) at element  
**Operating Temperature Range:**  
 High Limit – 130°F to 240°F (54°C to 116°C);  
 Low Limit – 110°F to 220°F (43°C to 104°C)  
**Anticipator Setting:** 0.2 A  
**Maximum Safe Operating Pressure (psi):** 200 psi on immersion well;  
 100 psi direct immersion.  
**Maximum Safe Operating Pressure (kPa):** 1378 kPa on immersion well;  
 90 kPa direct immersion.

**Immersion type Aquastat controller and oil burner primary control provides high limit and low limit/circulator control for oil-fired hydronic heating systems.**

- Use in intermittent ignition applications.
- Capable of zone control with zone valves.
- Circulator zone control with ZC and ZR terminals on R8182D,E,H,J.
- Flame failure during the running cycle results in a 45 second attempt to restart.
- If unsuccessful, safety shutoff occurs, requiring manual reset before burner can be restarted.
- R8182D,E,F mount directly on burner; R8182H,J mount on 4 x 4 in. junction box and include 5 ft (1.5 m) armored capillary with remote sensor.
- C554A Cadmium Sulfide Flame Detector and a 24 Vac thermostat required.
- Auxiliary ZC and ZR terminals may be used to provide circulator zone control through an R845A Switching Relay.

**Electrical Ratings, Ignition:** 360 VA

**Electrical Ratings, Burner:**

At Full Load – 4.4 A @ 120 Vac;

At Locked Rotor – 26.4 A @ 120 Vac

**Timing:** Safety Switch – 45 sec

**Dimensions:** 7 1/8 in. high x 5 1/4 in. wide x 3 7/16 in. deep. (181 mm high x 133 mm wide x 87 mm deep.)

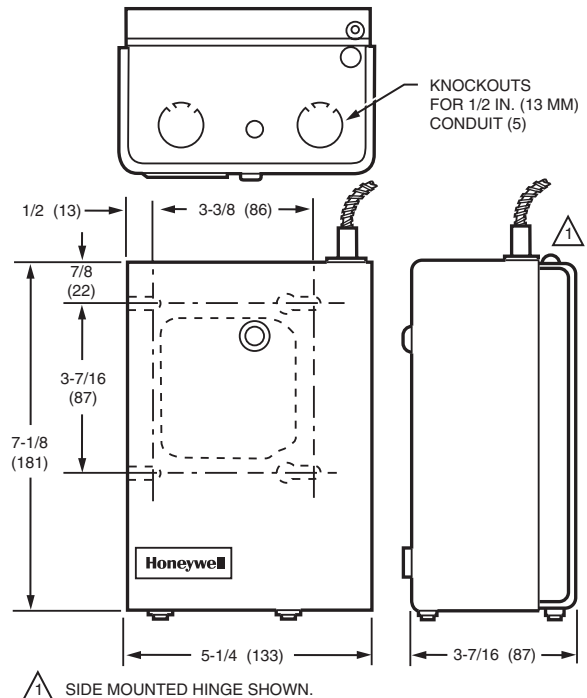
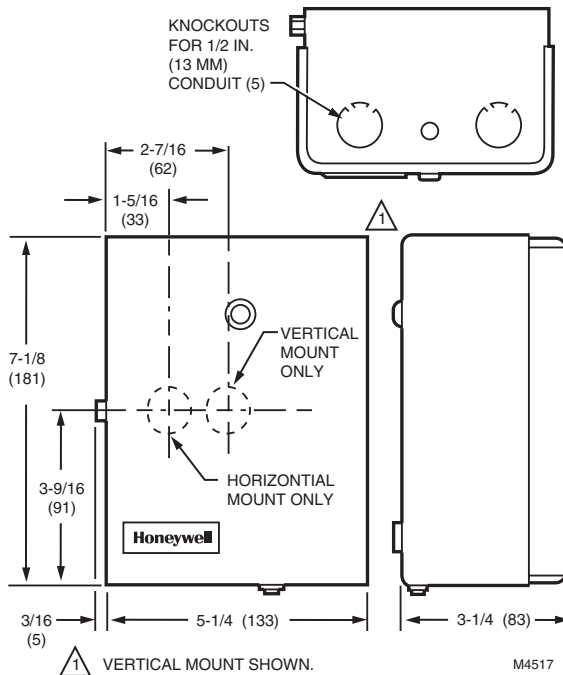
**Operating Humidity Range (% RH):** 0 to 95% RH, non-condensing

**Approvals, Underwriters Laboratories Inc.:** UL Listed: File No. listed: MP268, Vol. 3,4 (R8182D,E,F), Vol. 37 (R8182H,J), Sec. 1.

**Approvals, CSA:** File No. 095329



Material Number	Differential Temperature	Mounting	Insulation Depth	Includes
R8182D1079/U	High limit: 10°F fixed; Low limit/circulator: 10°F to 25°F adj.	Vertical Mount	1 1/2 in. (38 mm)	Stop dial; Heat Conductive Compound
R8182D1111/U	High limit: 10°F fixed; Low limit/circulator: 10°F to 25°F adj.	Horizontal	1 1/2 in. (38 mm)	Stop dial; Heat Conductive Compound
R8182H1070/U	High limit: 10°F fixed; Low limit/circulator: 10°F to 25°F adj.	Junction box mount	1 1/2 in. (38 mm)	Stop dial; Heat Conductive Compound

### Dimensions in inches (millimeters)

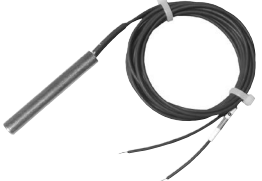


# Well Assemblies

## Well Assemblies

Material Number	Materials	Capillary Diameter	Insertion Length	Shell (internal diameter)	Well Spud Size	Insulation Depth	Description	Includes	Used With	
121371A/U	Copper	5/64 in.	3 in.	3/8 in.	1/2 in. - 14 NPT (13 mm - 14 NPT)	1 1/2 in.	Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 1 1/2 in. NPT. Includes mounting clamp.	Mounting Clamp	-	
121371B/U	Copper	5/64 in.	3 in.	3/8 in.	3/4 in. - 14 NPT (19 mm - 14 NPT)	1 1/2 in.	Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 1 1/2 in. (38 mm) insulation, 3/4 in. NPT. Includes mounting clamp.	Mounting Clamp	-	
121371L/U	Copper	5/64 in.	3 in.	3/8 in.	1/2 in. - 14 NPT (13 mm - 14 NPT)	3 in.	Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 3 in. (76 mm) insulation, 1/2 in. NPT. Includes mounting clamp.	Mounting Clamp	-	
121371M/U	Copper	5/64 in.	3 in.	3/8 in.	3/4 in. - 14 NPT (19 mm - 14 NPT)	3 in.	Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 1 1/2 in. (38 mm) insulation, 3/4 in. NPT. Includes mounting clamp.	Mounting Clamp	-	
123869A/U	Copper	-	3 in.	3/8 in.	1/2 in. - 14 NPT (13 mm - 14 NPT)	1 1/2 in.	Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 1 1/2 in. (38 mm) insulation, 1/2 in. NPT.	-	-	
123870A/U	Copper	-	3 in.	3/8 in.	3/4 in. - 14 NPT (19 mm - 14 NPT)	1 1/2 in.	Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 1 1/2 in. (38 mm) insulation, 3/4 in. NPT.	-	L4006; L4081	
123871A/U	Copper	-	3 in.	3/8 in.	3/4 in. - 14 NPT (19 mm - 14 NPT)	3 in.	Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 3 in. (76 mm) insulation, 3/4 in. NPT.	-	-	
123872A/U	Copper	-	3 in.	3/8 in.	1/2 in. NPT	3 in.	Copper. Bulb size: 3/8 in. x 3 in. (10 mm x 76 mm). Well size: 3 in. (76 mm) insertion, 3 in. (76 mm) insulation, 1/2 in. NPT	-	-	

## Single and Multi-function Aquastat Replacement Parts

Material Number	Description	Used With	
120650/U	Heat Conductive Grease 1/2 oz.	Well Assembly	
198799Z/U	Outdoor or Supply sensor with 42 in. lead for AQ475, AQ675 or AQ775	-	
121371AA/U	Well clamp assembly with clamp capillary 21371 (1) screws 804644 and nuts 60156	-	

## T775 Series 2000 Stand-Alone Controllers



**Application:** On/off or analog controller for applications where electronic accuracy and remote sensing of temperature is required.

**Voltage:** 24 Vac or 120/240 Vac

**Frequency:** 50 Hz; 60 Hz

**Relay Contact Ratings:** 24 Vac – 10.0A resistive; 120 Vac – 1/2 hp; 9.8 AFL, 58.8 ALR, 125 VA Pilot Duty; 240 Vac – 1/2 hp; 4.9 AFL, 29.4 ALR, 125 VA Pilot Duty

**Approximate, Dimensions:** 8 5/32 in. high x 4 13/32 in. wide x 2 15/16 in. deep (207.1 mm high x 112.1 mm wide x 74 mm deep)

**Sensor Element:** 1097 ohms PTC at 77°F (25°C)

**Maximum distance to sensor:** Up to 1,000 ft (up to 304 m)

**Bulb Size:** 1/4 in. diameter x 2 in. long (6.35 mm diameter x 50.8 mm)

**Setpoint Temperature Range:** -40°F to 248°F (-40°C to 120°C)

**Operating Temperature Range:** Ambient – -40°F to 125°F @ 50 Hz; -40°F to 140°F @ 60 Hz (Ambient – -40°C to 52°C @ 50 Hz; -40°C to 60°C @ 60 Hz)

**Accuracy:** ±1°F at 77°F (±1°C at 25°C)

The T775 electronic remote temperature controllers are the next generation of commercial and agricultural controls capable of remote sensing of temperature and providing switched and/or proportional outputs to various types of loads.

- Save time on installations with the easy-to-use graphical Interface, large display, and the intuitive programming.
- Use the time clock scheduler or digital input to control the setback and disable output options to help save energy.
- Protect equipment from freezing or overheating on models with the modulating high or low limit control option.
- Get pinpoint control on modulating outputs by setting the integral and derivative times (PI or PID).
- Configure models with reset in a few easy steps.
- Control floating actuators with floating outputs on select models.
- Eliminate the need for a separate time delay device and protect equipment with the minimum off time option.
- Sensor 50021579-001 included with non-NEMA 4X models.
- Sensor T775-SENS-WR included with NEMA-4X models.

**Throttling Range:** 1°F to 150°F (0.5°C to 66°C)

**Differential Temperature:** 1°F to 150°F (0.5°C to 66°C)

**Approvals, Canadian Underwriters Laboratories Inc.:** Approved

**Approvals, Underwriters Laboratories Inc.:** Approved

**Approvals, CE:** Approved

**Approvals, C-Tick:** Approved

**Accessories:**

**107324A/U** – Capillary Holder Assembly, 8 3/8 in. long

**50001774-001/U** – Immersion Well, stainless steel 304, 1/2 in. threading

**C7031D2003/U** – PT1000 Immersion Temperature Sensor, 5 in.

immersion, operating range -40°F to 350°F

**C7031J2009/U** – PT1000 Electronic Duct Temperature Sensor, 12 ft

**C7100D1001/U** – PT1000 Duct Averaging Temperature Sensor, 13 in., 40°F to 150°F

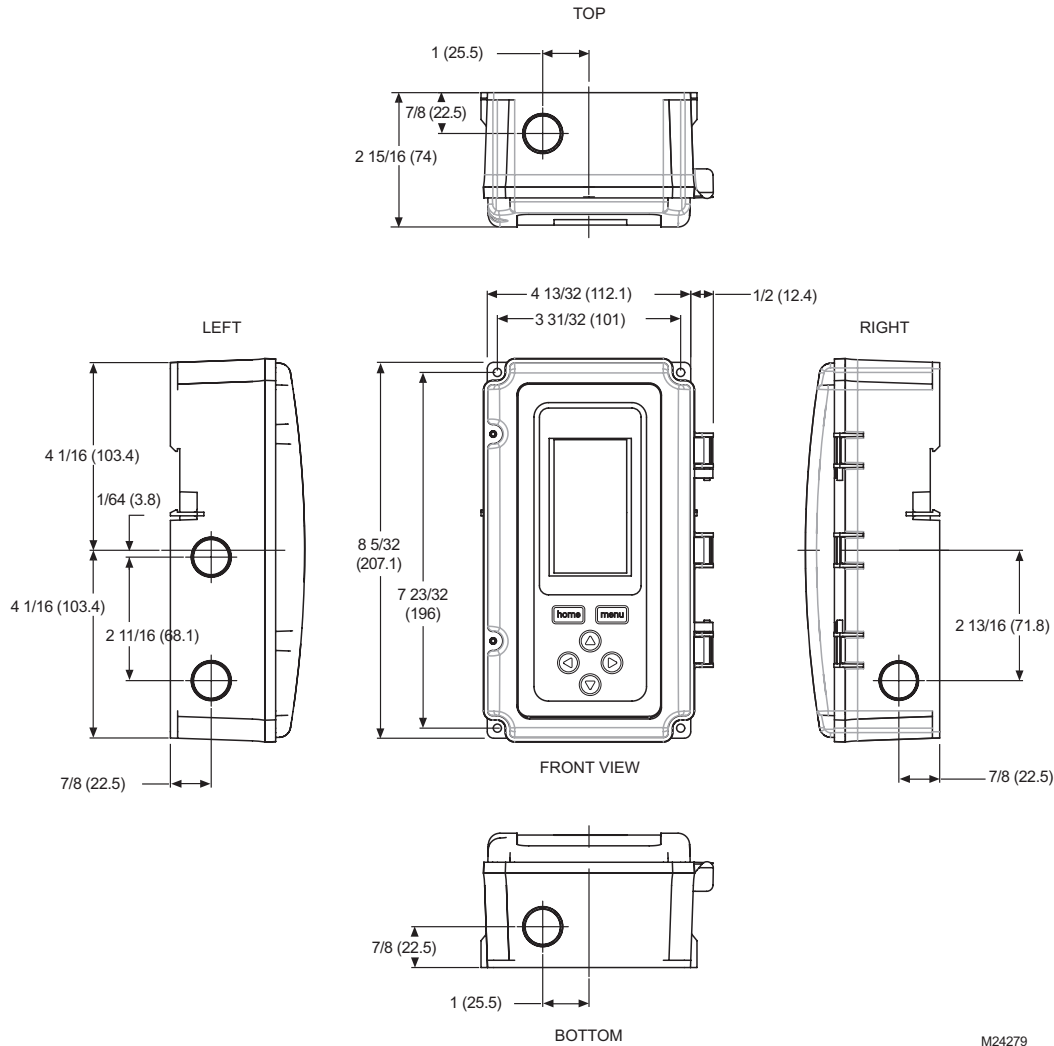
**C7130B1009/U** – Wall mount Room Sensor

Material Number	Type	Output	Sensor Inputs	Analog Output	Relay Outputs	Sensors Included	Replaces	High/Low Mod Limit	Approvals, Others
T775A2009/U	Standard-NEMA 1		1		1 SPDT	50021579-001 (1)	T775A1001		
T775B2016/U	Standard-NEMA 4X		2		2 SPDT	T775-SENS-WR (1)			IP65: Approved
T775B2024/U	Standard-NEMA 4X		2		4 SPDT	T775-SENS-WR (1)	T775C1009; T775D1008		IP65: Approved
T775B2032/U	Standard-NEMA 1		2		2 SPDT	50021579-001 (1)	T775A1019; T775B1000		
T775B2040/U	Standard-NEMA 1		2		4 SPDT	50021579-001 (1)	T775A1027; T775A1035; T775B1018; T775B1026; T775B1042		
T775M2006/U	Modulating-NEMA 1		2	2, Electronic Series 90; 4-20 mA; 0-10 Vdc; 2-10 Vdc	None	50021579-001 (1)			
T775M2014/U	Modulating-NEMA 4X		2	Electronic Series 90; 4-20 mA; 0-10 Vdc; 2-10 Vdc,2	4 SPDT	T775-SENS-WR (1)	T775G1005; T775G1013; T775G1021; T775G1039	Yes	IP65: Approved
T775M2022/U	Modulating-NEMA 4X		2	2, Electronic Series 90; 4-20 mA; 0-10 Vdc; 2-10 Vdc	2 SPDT	T775-SENS-WR (1)		Yes	IP65: Approved
T775M2030/U	Modulating-NEMA 1		2	2, Electronic Series 90; 4-20 mA; 0-10 Vdc; 2-10 Vdc	4 SPDT	50021579-001 (1)	T775E1114; T775F1022; T775F1055; T775F1089	Yes	IP65: Approved
T775M2048/U	Modulating-NEMA 1		2	2, Electronic Series 90; 4-20 mA; 0-10 Vdc; 2-10 Vdc	2 SPDT	50021579-001 (1)	T775E1015; T775E1023; T775E1056; T775E1064; T775E1098	Yes	
T775R2001/U	Reset option-NEMA 1	relay w/ RESET	2		4 SPDT	50021579-001 (2)			
T775R2019/U	Reset option-NEMA 1	relay w/ RESET	2	2, Electronic Series 90; 4-20 mA; 0-10 Vdc; 2-10 Vdc	4 SPDT	50021579-001 (2)			

# Temperature Controllers

Material Number	Type	Output	Sensor Inputs	Analog Output	Relay Outputs	Sensors Included	Replaces	High/Low Mod Limit	Approvals, Others
T775R2027/U	Reset option-NEMA 1	relay w/ RESET	2	2, Electronic Series 90; 4-20 mA; 0-10 Vdc; 2-10 Vdc	2 SPDT	50021579-001 (2)	T775J1043; T775J1050; T775J1068		
T775R2035/U	Reset option-NEMA 1	relay w/ RESET	2		2 SPDT	50021579-001 (2)	T775J1001; T775J1076		
T775R2043/U	Reset option-NEMA 1	relay w/ RESET	2	2, Electronic Series 90; 4-20 mA; 0-10 Vdc; 2-10 Vdc		50021579-001 (2)	T775J1019; T775J1027; T775J1035	Yes	

## Dimensions in inches (millimeters)



M24279



## T775 Series 2000 Special Stand-Alone Controllers



**T775 electronic remote temperature controller, is the next generation in commercial/agricultural control - capable of remote sensing temperature, humidity, pressure, etc., and providing switched and/or proportional outputs to various types of loads.**

- Universal model (T775U) can control pressure, humidity, or any variable analog input.
- Special boiler model (T775P) for boiler control.
- Special Staged Sequencing Model (T775L) for sequence staging of relays with one or two setpoints.
- Special Expansion Model (T775S) for staging up to 12 relays with two setpoints (each T775S provides 4 relays).
- Save time on installations with the easy-to-use graphical Interface, large display, and the intuitive programming.
- Use the time clock scheduler or digital input to control the setback and disable output options to help save energy.
- Provide very fast or very fast response times on modulating outputs by adjusting the integral and derivative times (PI or PID).
- Configure models with reset in a few easy steps.
- Eliminate the need for a separate time delay device and protect equipment with the minimum off time option.
- Use the T775L and T775P to stage up to 12 relays (with optional T775S) from two independent heat or cool setpoints.
- Support for digital output alarm on the T775P configurable based on minimum, maximum, or differential temperature.

**Analog Output:** 4-20 mA; 0-10 Vdc; 2-10 Vdc; Electronic Series 90

**Voltage:** 24 Vac or 120/240 Vac

**Frequency:** 50 Hz; 60 Hz

**Relay Contact Ratings:** 24 Vac – 10.0A resistive; 120 Vac – 1/2 hp; 9.8 AFL, 58.8 ALR, 125 VA Pilot Duty; 240 Vac – 1/2 hp; 4.9 AFL, 29.4 ALR, 125 VA Pilot Duty

**Approximate, Dimensions:** 8 5/32 in. high x 4 13/32 in. wide x

2 15/16 in. deep (207.1 mm high x 112.1 mm wide x 74 mm deep)

**Sensor Element:** 1097 ohms PTC at 77°F (25°C)

**Setpoint Temperature Range:** -40°F to 248°F (-40°C to 120°C)

**Operating Temperature Range:** Ambient – -40°F to 125°F @ 50 Hz; -40°F to 140°F @ 60 Hz (Ambient – -40°C to 52°C @ 50 Hz; -40°C to 60°C @ 60 Hz)

**Accuracy:** ±1°F at 77°F (±1°C at 25°C)

**Throttling Range:** 1°F to 150°F (0.5°C to 66°C)

**Differential Temperature:** 1°F to 150°F (0.5°C to 66°C)

**Expandable:** T775L or T775P - Add 1 or 2 T775Ss (4 relays ea)

**Replaces:** T775U2006/U can be used to replace H775A1006;

H775A1022; H775A1048; H775A1063; H775B1005; H775C1004;

H775D1003; or H775E1002

**Approvals, Canadian Underwriters Laboratories Inc.:** Approved

**Approvals, Underwriters Laboratories Inc.:** Approved

**Approvals, Others:** IP65: Approved

**Approvals, CE:** Approved

**Approvals, C-Tick:** Approved

### Accessories:

**107324A/U** – Capillary Holder Assembly, 8 3/8 in. long

**H7655A1001/U** – Wall Humidity Sensor, 5% RH, 0-10 Vdc fixed output

**H7655B2014/U** – Duct Humidity Sensor, 5% RH, Selectable 4-20mA or 0-5/10Vdc, with 20K ohm temp

**P7640A1000/U** – Panel Differential Pressure Transmitter, 0-.1", 0-.25", 0-.5", 0-1" Selectable

**P7640A1018/U** – Panel Differential Pressure Transmitter, 0-.1", 0-.25", 0-.5", 0-1" Selectable

**P7640A1026/U** – Panel Differential Pressure Transmitter, 0-1", 0-2.5", 0-5", 0-10" Selectable

**P7640A1034/U** – Panel Differential Pressure Transmitter, 0-1", 0-2.5", 0-5", 0-10" Selectable

**P7640B1008/U** – Duct Differential Pressure Transmitter, 0-.1", 0-.25", 0-.5", 0-1" Selectable

**P7640B1016/U** – Duct Differential Pressure Transmitter, 0-.1", 0-.25", 0-.5", 0-1" Selectable

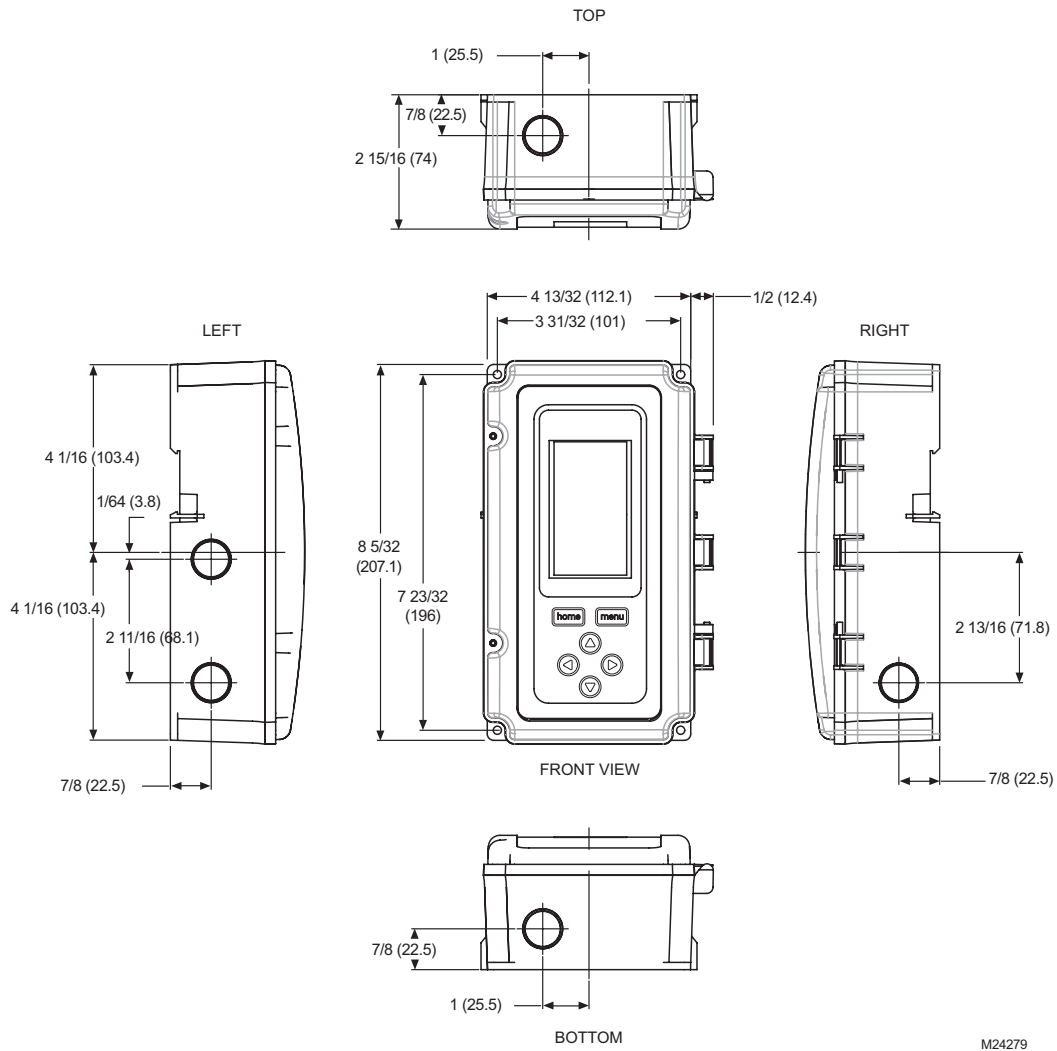
**P7640B1024/U** – Duct Differential Pressure Transmitter, 0-1", 0-2.5", 0-5", 0-10" Selectable

**P7640B1032/U** – Duct Differential Pressure Transmitter, 0-1", 0-2.5", 0-5", 0-10" Selectable

Material Number	Application	Type	Stages Loop Control	Output	Bulb Size	Relay Outputs	Sensor Included	Digital Output Alarm Ratings	Sensor Inputs
T775L2007/U	Sequence staging of relays with one or two setpoints	Stage Sequencer with Reset Option-NEMA 1	Yes	relay w/ RESET	1/4 in. diameter x 2 in. long (6.35 mm diameter x 50.8 mm)	4 SPDT	50021579-001 (1)		2 (max distance 1,000 ft [304 m])
T775P2003/U	Boiler Control	Special Boiler with Reset-NEMA 1	Yes	relay w/ RESET	1/4 in. diameter x 2 in. long (6.35 mm diameter x 50.8 mm)	4 SPDT	50021579-001 (3)	AC – 30 Vac RMS; 1.5 A steady 3A inrush P.F. 0.45 N.C.; 20 Vac RMS; 100 mA minimum load on N.O. and N.C. contacts, DC – 1 mA at 100 mV DC minimum load	3 (max distance 1,000 ft [304 m])
T775S2008/U	Staging up to 12 relays with two setpoints	Relay Expansion Module-NEMA 1				4 SPDT	None		
T775U2006/U	Control pressure, humidity, or any medium with an analog input	Universal - Humidity, Pressure, etc.-NEMA 1		relay w/ RESET		2 SPDT	None		2 (Sensor B used for reset only) (max distance 1,000 ft [304 m])
T775U2016/U	Control pressure, humidity, or any medium with an analog input	Universal - Humidity, Pressure, etc.-NEMA 1		relay w/ RESET		2 SPDT	None		2 (Control to Sensor A (Universal Input) or Sensor B (temp) Independently) (max distance 1,000 ft [304 m])

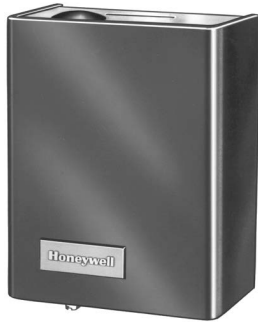
# Temperature Controllers

Dimensions in inches (millimeters)



M24279

## R847 Heavy Duty Relay



**Designed for control of relatively heavy duty 120 or 240 Vac electrical loads such as cooling compressors.**

- Internal, flexible leads permit SPST or DPST switching.

**Application:** Enclosed heavy duty DPST or SPST switching relay for 24 volt 2-wire thermostat control of high-current loads such as cooling compressors. 120 volt primary power supply.

**Electrical Connections:** Main- 2-Wire; Control Circuit- 2-Wire

**Coil Ratings Voltage:** 24 Vac; Maximum Pull-in Voltage-2.0 A

**Coil Ratings:** 8.4 VA (Sealed); 21.4 VA (inrush)

**Coil Ratings Current:** 0.4A

**Contact Ratings (AFL):** 22A @ 120 Vac; 10A @ 240 Vac

**Contact Ratings (ALR):** 120 Vac – 100A; 240 Vac – 50A

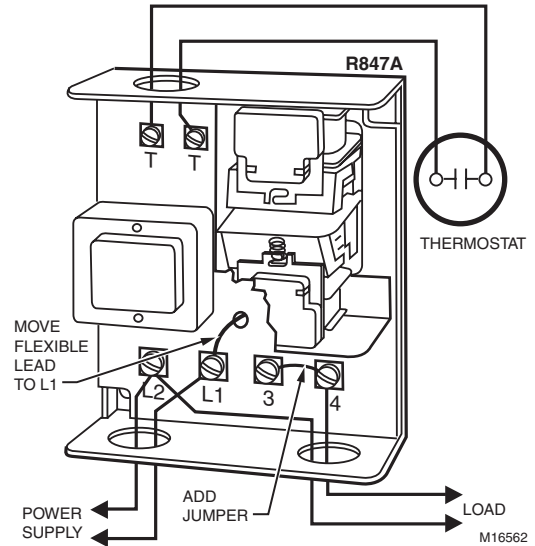
**Approximate, Dimensions:** 5 1/4 in. high x 4 1/4 in. wide x 2 3/4 in. deep (133 mm high x 108 mm wide x 70 mm deep)

**Approvals, CSA:** Certified: File No. LR1620

**Approvals, Underwriters Laboratories Inc.:** Listed: File No. SA481, Guide No. SDF4

**Tradeline Value:** Tradeline

R847A wired to break one side of the circuit with SPST switching.



Material Number	Input Voltage	Frequency	Switching	Description	Includes
R847A1085/U	120V	50 Hz; 60 Hz	DPST or SPST	This 120V, 50 Hz or 60 Hz Heavy Duty Switching Relay with integral transformer, and DPST or SPST line voltage relays, is used for 24 volt 2-wire thermostat control of high-current loads such as cooling compressors.	Integral transformer, enclosure

## R856 Control Center



**Provides 24 volt control of line voltage motors, fans, blowers, or pumps up to 1 hp.**

- Integral 45 VA transformer to supply low voltage power for the system.
- Low voltage terminal strip for easy thermostat and panel connections.

**Application:** Enclosed fan center for 24 volt control of a line voltage motor, evaporator fan, or pump up to 1 horsepower. Includes wiring terminal board and 45 VA transformer.

**Input Voltage:** 120V

**Frequency:** 60 Hz

**Coil Ratings:** 6 VA (Sealed); 11 VA (inrush)

**Coil Ratings Current:** 0.22A

**Electrical Ratings, Contacts:** Horsepower – 3/4 hp N.O.; 1/2 hp N.C.

**Contact Ratings (AFL):** 14.0A N.O.; 10.0A N.C. @ 120 Vac

**Contact Ratings (ALR):** 120 Vac – 84.0A N.C., 80.0A N.C.

**Approximate, Dimensions:** 7 1/8 in. high x 4 1/2 in. wide x 3 5/16 in. deep (181 mm high x 114 mm wide x 84 mm deep)

**Approvals, CSA:** Certified: File No. LR95329-1

**Approvals, Underwriters Laboratories Inc.:** Listed: File No. E4436, Vol. 6 Sec. 9

**Includes:** External transformer, enclosure

Material Number	Coil Ratings Voltage	Switching
R856B1002/U	24 Vac	SPST

# Hydronic Switching Relays

## RA89; RA832; R845 Hydronic Switching Relay



Provides intermediate switching of a line voltage device from a low voltage controller.

- Integral transformer provides low voltage power for control circuit

**Input Voltage:** 120V

**Electrical Connections:** Control Circuit- 2-Wire

**Frequency:** 50 Hz; 60 Hz

**Coil Ratings Voltage:** 24 Vac

**Coil Ratings Current:** 0.4A

**Electrical Ratings:** Maximum Input-5.0 W

**Contact Ratings (resistive):** At 120 Vac –10A; 240 Vac – 6.0A

**Temperature Ratings:** 115°F maximum ambient for 60 Hz. 105°F

Max. Ambient for 50 Hz. (46°C maximum ambient for 60 Hz. 41°C maximum ambient for 50 Hz.)

**Approximate, Dimensions:** 5 1/4 in. high x 4 1/4 in. wide x 2 5/16 in. deep (133 mm high x 108 mm wide x 59 mm deep)

**Approvals, CSA:** Certified: File No. LR1620

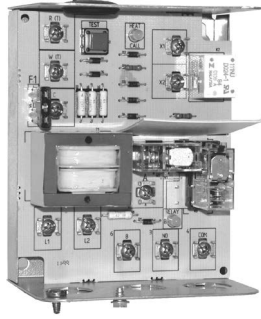
**Approvals, Underwriters Laboratories Inc.:** Listed: File No. E4436, Guide No. XAPX

**Includes:** Integral transformer, enclosure

**Tradeline Value:** Tradeline

Material Number	Application	Switching	Electrical Ratings, Contacts	Contact Ratings (AFL)	Contact Ratings (ALR)	Pilot Duty Ratings	Description	Comment
RA845A1030/U	Enclosed intermediate DPST switching relay for 24 volt 2 wire thermostat control of one line voltage and one line or low voltage devices. 120 volt primary power supply.	DPST; one pole line voltage, the other line or low voltage	Maximum connected load is 2000 VA (120 Vac to 240 Vac)	At 120 Vac – 7.4A; 240 Vac – 3.7A; Secondary – at 120 Vac 3A; at 240 Vac 2A	At 120 Vac – 44.4A; 240 Vac –22.2A; Secondary – at 120 Vac 18A; at 240 Vac 12A	Secondary – 50 VA @ 24V	This 120V, 60 Hz Switching relay with internal transformer, provides DPST switching for hot water zone control systems, or SPST control of two separate loads.	Thermostat Compatibility – Low voltage (Class 2) 2-wire
RA832A1066/U	Provide intermediate DPST switching of a line voltage device from a low voltage controller.	DPST; one pole line voltage, the other low voltage or millivolt	Maximum connected load is 2000 VA (120 Vac to 240 Vac); Secondary DC Rating – 1A @ 12 Vdc; Secondary millivolt Rating – 300 mA min. @ 750 mV	At 120 Vac – 7.4A AFL; 240 Vac – 3.7A	At 120 Vac – 44.4A; 240 Vac – 22.2A	Secondary – 50 VA @ 24V	This 120V Switching Relay with internal transformer is used for DPST switching of two line voltage loads having a common power source.	
RA89A1074/U	Provide intermediate SPST switching of a line voltage device from a low voltage controller.	SPST		At 120 Vac – 10.2A; 240 Vac – 5.1A	At 120 Vac – 61.2A; 240 Vac – 30.6A		This 120V Switching Relay with internal transformer, provides intermediate SPST switching of a line voltage device from a low voltage controller.	

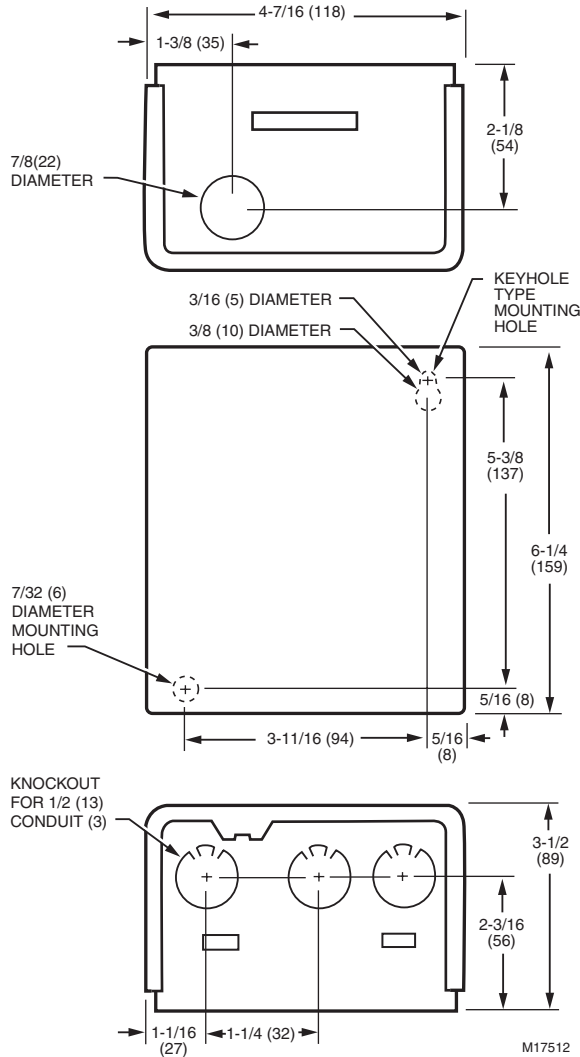
## R8845U Universal Switching Relay



The R8845U Universal Switching Relay with 24 V transformer provides intermediate switching of line- and low-voltage devices from a line- or low-voltage controller and is typically applied in Hydronic heating systems.

- Replaceable socketed relays.
- Two troubleshooting LED.
- Push-to-test button.
- Replaceable transformer fuse.
- Low-voltage contact rating for PowerPile applications.
- Long-life DC relay drive control technology.
- Relay for use with external 24 Vac or 24 Vdc supply, with line-voltage control, or with internal 24 V transformer supply.
- One model replaces many competitor models.
- One model may replace many Honeywell models: R182A,B,C,J; R482A,B,C,J; R845; R882A,B,C,J and RA832.

### Dimensions in inches (millimeters)



**Application:** Enclosed Universal switching relay with internal transformer for 24 volt 2 or 3 wire thermostat control of line voltage devices. Two line voltage SPST relays and one low voltage SPST relay with PowerPile rating.

**Electrical Connections:** Control Circuit- 2 or 3-wire

**Coil Ratings Voltage:** 24 Vac

**Coil Ratings Current:** 0.4A

**Electrical Ratings, Contacts:** Maximum connected load is 2000 VA  
**Contact Ratings (AFL):** 7.4A AFL, 44.4A @ 120 Vac on each set of line-voltage contacts

**Transformer:** Secondary Rating- 24 Vac, 12 VA max., 9 VA available for external load. Secondary protected by replaceable 1A automotive fuse.

**Operating Humidity Range (% RH):** 0 to 90% RH, non-condensing  
**Temperature Ratings:** Ambient: -20°F to +120°F (Ambient: -29°C to +49°C)

**Approximate, Dimensions:** 6 1/4 in. high x 4 7/16 in. wide x 3 1/2 in. deep (159 mm high x 118 mm wide x 89 mm deep)

**Approvals, Underwriters Laboratories Inc.:** Listed: File No. E4436, Guide No. XAPX

**Approvals, Canadian Underwriters Laboratories Inc.:** Listed: Guide No. XAPX7.

**Comments:** Thermostat Compatibility – Honeywell electromechanical and electronic 2- or 3-wire; Thermostat Heat Anticipator Setting – 0.12A

Material Number	Input Voltage	Frequency	Switching	Description	Includes
R8845U1003/U	120V	60 Hz	Two SPST, plus PowerPile® rated low voltage SPST relay. (If normally closed contacts are needed, use RA889A).	This 120V, 60 Hz Universal Switching Relay with internal transformer, Provides intermediate switching of line and low voltage devices from a line or low voltage controller	Integral transformer, enclosure

# Hydronic Switching Relays

## RA889A Switching Relay



The RA889A Switching Relay with 24 V controller provides intermediate switching of line- and low-voltage devices from a line- or low-voltage controller and is typically applied in Hydronic heating systems.

- High load switching capability.
- Troubleshooting LED.
- Push-to-test button.
- Replaceable transformer fuse.
- Long-life DC relay drive control technology.
- Relay for use with external 24 Vac or 24 Vdc supply, with line-voltage control, or with internal 24 V transformer supply.
- One model replaces many Honeywell models.
- Secondary of transformer protected by replaceable 1A automotive fuse.

**Application:** Provide intermediate SPDT and SPST switching of line- and low-voltage devices from a line- or low-voltage controller.

**Electrical Ratings, Contacts:** Maximum connected load is 2000 VA

**Contact Ratings (AFL):** 15A@ 120 Vac

**Contact Ratings (ALR):** 120 Vac – 30A

**Transformer:** Secondary Rating- 24 Vac, 12 VA max., 9 VA available for external load. Secondary protected by replaceable 1A automotive fuse.

**Operating Humidity Range (% RH):** 0 to 90% RH, non-condensing  
**Temperature Ratings:** Ambient: -20°F to +120°F (Ambient: -29°C to +49°C)

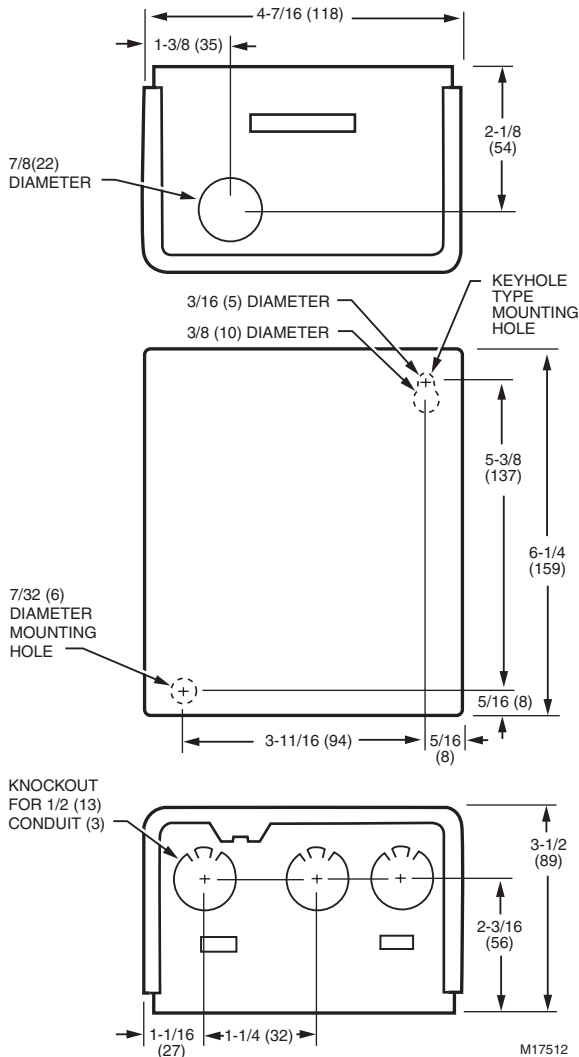
**Approximate, Dimensions:** 6 1/4 in. high x 4 7/16 in. wide x 3 1/2 in. deep (159 mm high x 118 mm wide x 89 mm deep)

**Approvals, Underwriters Laboratories Inc.:** Listed: File No. E4436, Guide No. XAPX

**Approvals, Canadian Underwriters Laboratories Inc.:** Listed: Guide No. XAPX7.

**Comments:** Thermostat Compatibility – Honeywell electromechanical and electronic 2- or 3-wire; Thermostat Heat Anticipator Setting – 0.12A

Dimensions in inches (millimeters)



Material Number	Input Voltage	Frequency	Switching	Description	Includes
RA889A1001/U	120V	60 Hz	SPDT, plus PowerPile® rated low voltage SPST relay	This Enclosed 120V, 60 Hz switching relay with internal transformer, Provides intermediate SPDT and SPST switching of line- and low-voltage devices from a line- or low-voltage controller.	Integral transformer, enclosure

# Transformers for Hydronic Controls

## AT140 General Purpose Transformer for Hydronic Heating Controls



Honeywell 40 VA general purpose transformers power 24 Vac circuits. Although typically used in heating/cooling control systems, they can be used in any application that doesn't exceed the load ratings.

- Color-coded lead wires for primary connections and screw terminals for secondary connections
- Includes fixed 1/4 inch (6mm) male quick-connects (AT140A models only) or color-coded lead wires for primary and secondary connections
- Meets NEC Class 2 requirements and Underwriters Laboratories Standard UL 1585
- Identified Class 2 not wet, Class 3 wet

**Frequency:** 60 Hz

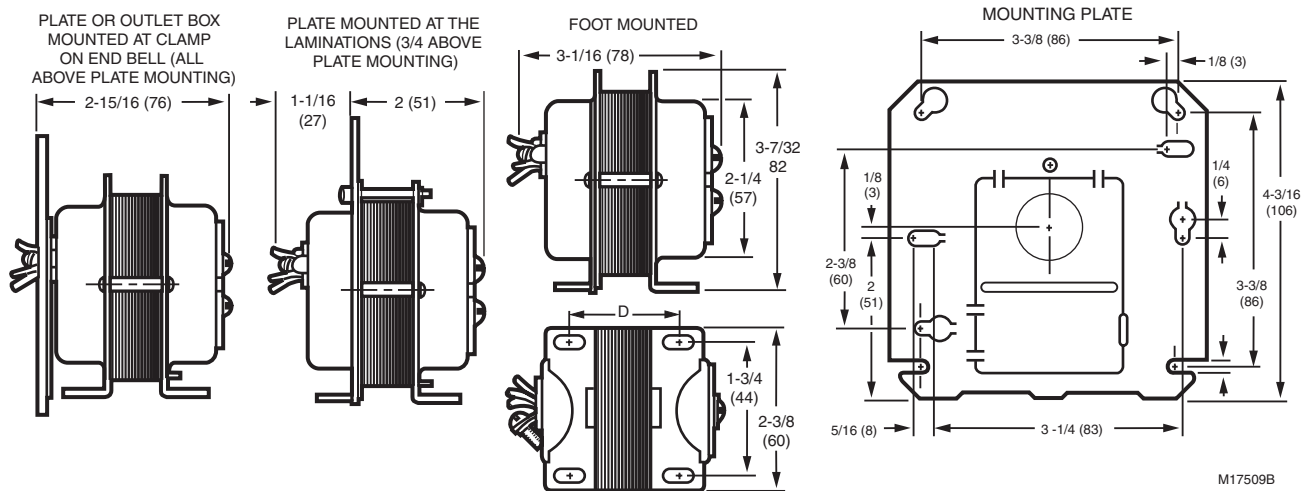
**Mounting:** Foot mounted, plate mounted on 2x4 in. or 4x4 in. outlet box, clamp mounted using outlet box knockout, or panel mounted

**Approvals, Underwriters Laboratories Inc.:** UL Listed: A,C,F models. File # E14881

**Approvals, CSA:** CSA Certified: A & B models.

**Temperature Range:** -20°F to +105°F (-29°C to +41°C)

**Dimensions in inches (millimeters)**



Material Number	Approximate, Dimensions	Electrical Ratings	Electrical Ratings, Output	Electrical Connections (Primary) (in.)	Electrical Connections (Primary) (mm)	Electrical Connections (Secondary) (in.)	Electrical Connections (Secondary) (mm)
AT140A1034/U	3 3/16 in. high x 2 3/8 in. wide x 3 1/8 in. deep (81 mm high x 60 mm wide x 79 mm deep)	Primary voltage - 120 Vac; Secondary voltage - 27 V.O.C.	24 Vac at 20 VA	9 in. leadwires	229 mm leadwires	(2) screw terminals	(2) screw terminals



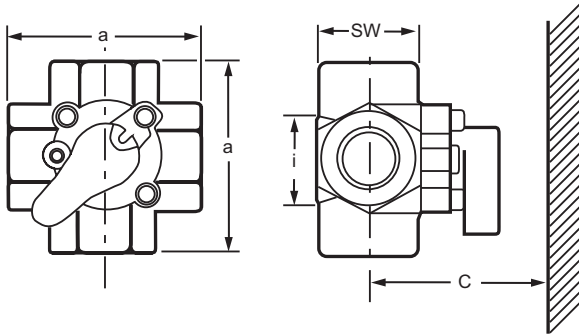
# Residential Heating Valves and Actuators

## V5442N Rotary 4-way Valve



The Corona series of Compact Rotary Valves and Actuators provide integrated mixing of boiler supply, boiler return, loop supply, and loop return water in hydronic heating systems. The V5442 valve can mix both loop supply water and boiler return

Dimensions in inches (millimeters)



Size [i]	[a]	[SW]	[C]	[C] with actuator
3/4"	3 3/8"	1 5/8"	13 3/8"	13 3/4"
1"	(85 mm)	(41 mm)	(304 mm)	
1 1/4"	4 1/8"	1 13/16"	13 9/16"	
	(105 mm)	(46 mm)	(345 mm)	(350 mm)

M23253

water simultaneously to control loop supply temperature and boiler shock or flue gas condensation protection. They may be plumbed in either a direct mixing or injection configuration. The effective Cv of the valves is increased when piped in an injection configuration.

**NOTE:** Valve cannot be used in open systems such as Combo heating where fresh water is present. Valve will corrode.

- Valves can be automated with M6063 actuator.
- 4-way mixing action for closed hydronic heating systems.
- Mixes loop supply with boiler supply and loop return.
- Mixes boiler return with boiler supply and loop return.
- Optimized mixing characteristics for most accurate control.
- Cast iron body; chrome plated plug.
- NPT threads.
- Suitable for manual or automatic control.
- Universal body orients either to the left or right to match piping.
- Functional replacement for Centra ZRK-series of compact 4-way mixing valves.

**Coupling Controller:** M6063A

**Inlet Size:** 1 1/2 in. (DN40)

**Differential (close-off) Pressure Rating:** 15 psi (1Bar)

**Static Pressure Rating:** 90 psi (6 Bar)

**Median Temperature Range:** 36 F to 230 F (2 C to 110 C)

**Shipping Temperature Range:** -40 F to +140 F (-40 C to +60 C)

**Leakage:** Less than 1% of Cv.

**Comments:** Valve cannot be used in open systems such as Combo heating where fresh water is present. Valve will corrode. Use with max. 50% glycol in water solution

**Materials**

**(Body):** Cast Iron

**(Interior Parts):** Chrome-plated cast iron

**(Seal):** Double O-rings

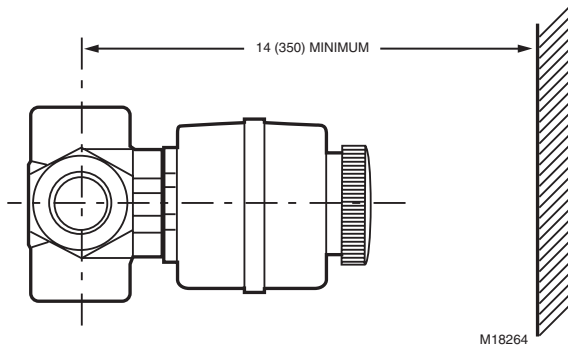
Material Number	Capacity		Pipe Size		Pipe Connection	Median Temperature Range		Used With	Body Pattern
	(Cv)	(Kvs)	DN	inch		(F)	(C)		
V5442N1031	18.7 Cv	16 kvs	DN32	1 1/4 in.	NPT (Internal Thread)	36 F to 230 F	2 C to 110 C	Must be used with M6063 actuator.	Rotary

## M6063 Rotary Actuator



**Actuator Type:** Rotary  
**Frequency:** 50 Hz; 60 Hz  
**Torque Rating (lb-in.):** 60 lb-in. Manual declutch  
**Torque Rating (Nm):** 7 Nm Manual declutch  
**Auxiliary Switch Ratings:** 24 Vac, 3A, 24 VA pilot duty, Class 2, normally closed, Gray cable. S1 (black/gray pair) opens at left (CCW) end stop. S2 (brown/pink pair) opens at right (CW) end stop.  
**Electrical Connections:** Color-coded 40 in. (1 meter) cable  
**Cable:** Blue=Common; Brown=Clockwise rotation; Black=Counter-clockwise rotation  
**Timing:** 100 seconds for 90 degrees (full) stroke  
**Environmental, Electrical, or Ingress Protection Rating:** Double insulated. IP44 according to 60529 Standard (exceeds NEMA 3).

**Dimensions in inches (millimeters)**



The Corona series of M6063 Actuator and V5442 Compact Rotary Valves provide integrated mixing of boiler supply, boiler return, loop supply, and loop return water in hydronic heating systems. The M6063 actuator enables automatic mixing operation.

- 24 Vac floating input for automatic control.
- Single screw attachment to V5442 valve body.
- Multi-poise mounting.
- Color-coded position indicator.
- Manual valve operator.
- Auxiliary end switch for cascade control outputs.
- Sealed assembly; flylead electrical connections.

**Approximate, Dimensions:** Approximately 3 5/16 in. high x 4 in. wide x 3 3/16 in. deep (Approximately 97 mm high x 101 mm wide x 81 mm deep)

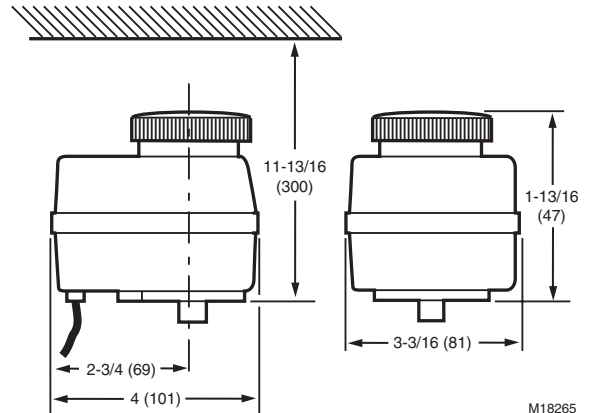
**Ambient Temperature Range:** 32°F to 140°F (0°C to 60°C)

**Shipping and Storage Temperature Range:** -40°F to +140°F (-40°C to +60°C)

**Operating Humidity Range (% RH):** Less than 90% RH, non-condensing

**Supply Voltage:** 24V, Power Supply Rating – 3VA, SPDT or SP3T (tri-state) for proportional control

**Distance for installation**



Material Number	Controller Compatibility	Control Signal	Comments	Used With
M6063A4007	PI or PID tri-state control signal for proportional control action, such as supplied by AQ252 and AQ254 Aquatrol modules	24 Vac Floating	Cross Reference: M6063 functionally replaces Centra VRK10-24 valve actuator when used with V5442 valve body.	V5442 Four-way mixing valve

# Motorized Zone Valves

## VC Series Cartridge Cage 3-way Mixing



Control central heating and/or cooling systems, fan coil systems, radiators and convectors. Depending on the model selected, it can be controlled by either a low voltage SPST or SPDT or floating controller such as a room thermostat, Aquastat control, or flow switch.

- Three-way valves.
- Minimal actuator power consumption.
- Double insulated actuator.
- Quick-connect or one-meter cable electrical connections available.
- Safe for use with potable water.
- Quick and easy replacement of moving parts.
- Actuator head installation does not require draining the system.
- On/Off models with six second nominal timing (floating/modulating models available with 120 second timing).

**Approximate, Dimensions:** 3 9/16 in. high x 2 3/4 in. wide x 3 3/4 in. long (111 mm high x 68 mm wide x 89 mm long)

**Coupling Controller:** Integral

**Aux Switch Ratings:** 24 Vac, 2.2A pilot duty, Class 2, SPDT

**Timing:** 120 sec

**Control Signal:** 24 Vac Floating

**Electrical Connections:** Color-coded 40 in. (1 meter) cable

**Voltage:** 24V

**Frequency:** 50 Hz; 60 Hz

**Power Supply Rating:** 6 VA, SPDT, or SP3T (tri-state) for proportional control.

**Differential (close-off) Pressure Rating:** 60 psi (4 Bar)

**Static Pressure Rating:** 300 psi (20 Bar)

**Median Temperature Range:** 34°F to 203°F (1°C to 95°C)

**Ambient Temperature Range:** 32°F to 140°F (0°C to 60°C)

**Shipping Temperature Range:** -40°F to +150°F (-40°C to +65°C)

**Materials (Body):** Bronze

### Valve and Actuator Kit

Material Number	Body Pattern	Pipe Size		Pipe Connection	Capacity	Flow Characteristic	Comments
		Inch	DN				
VC6831ML6111/U	Three-way	3/4 in.	DN20	Sweat	5.9 Cv	Linear	Comes with Valve VCZNB7100 and Actuator VC6831ZZ11; Use with max 50% glycol in water solution
VC6831MS6111/U	Three-way	1 in.	DN25	Sweat	6.6 Cv	Linear	Comes with Valve VCZMA7100 and Actuator VC6831ZZ11; Use with max 50% glycol in water solution

### A La Carte Option

#### Actuators

Material Number	Voltage	Frequency	Power Consumption	Stroke Timing	End Switch	Cable Length
VC6834ZZ11/U	24 Vac	50 Hz; 60 Hz	6 VA	120 seconds	2-Position SPDT	60 inches

#### Valves

Material Number	Body Pattern	Pipe Size		Pipe Connection	Capacity	Flow Characteristic	Comments
		Inch	DN				
VCZMA7100/U	Three-way	1/2 in.	DN15	Sweat	3.7 Cv	Linear	Use with max 50% glycol in water solution
VCZML7100/U	Three-way	3/4 in.	DN20	Sweat	6.6 Cv	Linear	Use with max 50% glycol in water solution
VCZMR7100/U	Three-way	1 in.	DN25	NPT	8.3 Cv	Linear	Use with max 50% glycol in water solution
VCZMS7100/U	Three-way	1 in.	DN25	Sweat	8.3 Cv	Linear	Use with max 50% glycol in water solution
VCZND7100/U	Three-way	1-1/4 in.	DN32	NPT	9 Cv	Linear	Use with max 50% glycol in water solution
VCZNE7100/U	Three-way	1-1/4 in.	DN32	Sweat	9 Cv	Linear	Use with max 50% glycol in water solution

## VC Series Quick Open Cartridge Cage 2-way Zone Valve



**Approximate, Dimensions:** 3 9/16 in. high x 2 3/4 in. wide x 3 3/4 in. long (111 mm high x 68 mm wide x 89 mm long)

**Coupling Controller:** Integral

**Aux Switch Ratings:** 24 Vac, 2.2A pilot duty, Class 2, SPDT

**Timing:** 6 sec

**Control Signal:** 24 Vac Floating

**Electrical Connections:** Color-coded 40 in. (1 meter) cable

**Voltage:** 24V

**Frequency:** 50 Hz; 60 Hz

Control central heating and/or cooling systems, fan coil systems, radiators and convectors. Depending on the model selected, it can be controlled by either a low voltage SPST or SPDT or floating controller such as a room thermostat, Aquastat control, or flow switch.

- Two-way valves.
- Minimal actuator power consumption.
- Double insulated actuator.
- Quick-connect or one-meter cable electrical connections available.
- Safe for use with potable water.
- Quick and easy replacement of moving parts.
- Actuator head installation does not require draining the system.
- On/Off models with six second nominal timing (floating/modulating models available with 120 second timing).

**Power Supply Rating:** 6 VA, SPDT, or SP3T (tri-state) for proportional control.

**Differential (close-off) Pressure Rating:** 60 psi (4 Bar)

**Static Pressure Rating:** 300 psi (20 Bar)

**Median Temperature Range:** 34°F to 203°F (1°C to 95°C)

**Ambient Temperature Range:** 32°F to 140°F (0°C to 60°C)

**Shipping Temperature Range:** -40°F to +150°F (-40°C to +65°C)

**Materials (Body):** Bronze

### Valve and Actuator Kit

Material Number	Body Pattern	Pipe Size		Pipe Connection	Capacity	Flow Characteristic	Comments
		Inch	DN				
VC8715AM1000/U	Two-way	3/4 in.	DN20	Sweat	5.8 Cv	Quick Open; 6 Seconds	Comes with Valve VCZAM1100 and Actuator VC8715ZZ11; Use with max 50% glycol in water solution
VC8715AS1000/U	Two-way	1 in.	DN25	Sweat	7.0 Cv	Quick Open; 6 Seconds	Comes with Valve VCZAS1100 and Actuator VC8715ZZ11; Use with max 50% glycol in water solution

### A La Carte Option

#### Actuators

Material Number	Voltage	Frequency	Power Consumption	Stroke Timing	End Switch	Cable Length
VC8715ZZ11/U	24 Vac	60 Hz	6 VA	6 seconds	–	60 inches
VC8714ZZ11/U	24 Vac	60 Hz	6 VA	6 seconds	2-Position SPST	60 inches

#### Valves

Material Number	Body Pattern	Pipe Size		Pipe Connection	Capacity	Flow Characteristic	Comments
		Inch	DN				
VCZBB1100/U	Two-way	1/2 in.	DN15	NPT	3.5 Cv	Quick Open	Use with max 50% glycol in water solution
VCZAA1100/U	Two-way	1/2 in.	DN15	Sweat	3.5 Cv	Quick Open	Use with max 50% glycol in water solution
VCZAL1100/U	Two-way	3/4 in.	DN20	NPT	4.7 Cv	Quick Open	Use with max 50% glycol in water solution
VCZAM1100/U	Two-way	3/4 in.	DN20	Sweat	4.7 Cv	Quick Open	Use with max 50% glycol in water solution
VCZAR1100/U	Two-way	1 in.	DN25	NPT	6.6 Cv	Quick Open	Use with max 50% glycol in water solution
VCZAS1100/U	Two-way	1 in.	DN25	Sweat	6.6 Cv	Quick Open	Use with max 50% glycol in water solution
VCZBD1100/U	Two-way	1-1/4 in.	DN32	NPT	7 Cv	Quick Open	Use with max 50% glycol in water solution
VCZBE1100/U	Two-way	1-1/4 in.	DN32	Sweat	7 Cv	Quick Open	Use with max 50% glycol in water solution

# Motorized Zone Valves

## VC Series Linear/Modulating Cartridge Cage 2-way Zone Valve



Control central heating and/or cooling systems, fan coil systems, radiators and convectors. Depending on the model selected, it can be controlled by either a low voltage SPST or SPDT or floating controller such as a room thermostat, Aquastat control, or flow switch.

- Two-way valves.
- Minimal actuator power consumption.
- Double insulated actuator.
- Quick-connect or one-meter cable electrical connections available.
- Safe for use with potable water.
- Quick and easy replacement of moving parts.
- Actuator head installation does not require draining the system.
- On/Off models with six second nominal timing (floating/modulating models available with 120 second timing).

**Approximate, Dimensions:** 3 9/16 in. high x 2 3/4 in. wide x 3 3/4 in. long (111 mm high x 68 mm wide x 89 mm long)

**Coupling Controller:** Integral

**Aux Switch Ratings:** 24 Vac, 2.2A pilot duty, Class 2, SPDT

**Timing:** 120 sec

**Control Signal:** 24 Vac Floating

**Electrical Connections:** Color-coded 40 in. (1 meter) cable

**Voltage:** 24V

**Frequency:** 50 Hz; 60 Hz

**Power Supply Rating:** 6 VA, SPDT, or SP3T (tri-state) for proportional control.

**Differential (close-off) Pressure Rating:** 60 psi (4 Bar)

**Static Pressure Rating:** 300 psi (20 Bar)

**Median Temperature Range:** 34°F to 203°F (1°C to 95°C)

**Ambient Temperature Range:** 32°F to 140°F (0°C to 60°C)

**Shipping Temperature Range:** -40°F to +150°F (-40°C to +65°C)

**Materials (Body):** Bronze

### Valve and Actuator Kit

Material Number	Body Pattern	Pipe Size		Pipe Connection	Capacity	Flow Characteristic	Comments
		Inch	DN				
VC6831AA1111/U	Two-way	1/2 in.	DN15	Sweat	3.2 Cv	Linear	Comes with Valve VCZAA3100 and Actuator VC6831ZZ11; Use with max 50% glycol in water solution
VC6831AM1111/U	Two-way	3/4 in.	Dn20	Sweat	4.6 Cv	Linear	Comes with Valve VCZAM3100 and Actuator VC6831ZZ11; Use with max 50% glycol in water solution

### A La Carte Option

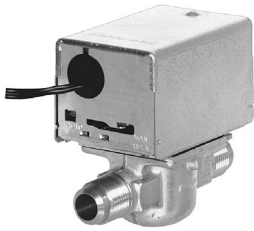
#### Actuators

Material Number	Voltage	Frequency	Power Consumption	Stroke Timing	End Switch	Cable Length
VC6834ZZ11/U	24 Vac	50 Hz; 60 Hz	6 VA	120 seconds	2-Position SPDT	60 inches

#### Valves

Material Number	Body Pattern	Pipe Size		Pipe Connection	Capacity	Flow Characteristic	Comments
		Inch	DN				
VCZBB3100/U	Two-way	1/2 in.	DN15	NPT	3.5 Cv	Linear	Use with max 50% glycol in water solution
VCZAA3100/U	Two-way	1/2 in.	DN15	Sweat	3.5 Cv	Linear	Use with max 50% glycol in water solution
VCZAL3100/U	Two-way	3/4 in.	DN20	NPT	4.7 Cv	Linear	Use with max 50% glycol in water solution
VCZAR3100/U	Two-way	1 in.	DN25	NPT	6.6 Cv	Linear	Use with max 50% glycol in water solution
VCZAS3100/U	Two-way	1 in.	DN25	Sweat	6.6 Cv	Linear	Use with max 50% glycol in water solution
VCZBD3100/U	Two-way	1-1/4 in.	DN32	NPT	7 Cv	Linear	Use with max 50% glycol in water solution
VCZBE3100/U	Two-way	1-1/4 in.	DN32	Sweat	7 Cv	Linear	Use with max 50% glycol in water solution

## V4043 Line Voltage Zone Valves



Flare Connection



Sweat Connection



NPT Connection

Two way on-off line voltage valves consist of an actuator motor and valve assembly for controlling the flow of hot or chilled water.

- Manual opener (on all models, except straight-through, normally open valves) for valve operation on power failure; valve returns to automatic position when power is restored.
- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- Motor may be replaced without removing the valve body or draining the system.
- Suitable for heating and cooling applications.

**Application:** Hydronic Control

**Valve Type:** Zone Valve

**Body Pattern:** Two-way, Straight-through

**Frequency:** 60 Hz

**Actuation:** Two position

**Electrical Connections:** 18 in. leads (457 mm leads)

**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)

**Fluid Temperature:** 40°F to 200°F (5°C to 93°C)

**Static Pressure Rating (psi):** 125 psi

**Static Pressure Rating (kPa):** 862 kPa

**Materials (Body):** Brass

**Materials (Seat):** Brass

**Materials (Stem):** Stainless Steel

**Materials (Plug / Ball / Disc):** Buna-N (NBR) Rubber Ball

**Materials (Packing):** EPDM rubber

**Timing:** Nominal Open – 15 sec

**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

**Approvals, Underwriters Laboratories Inc.:** UL Component Listed: File MH11826 Vol. 1

**Approvals, CSA:** CSA Certified: File 1322

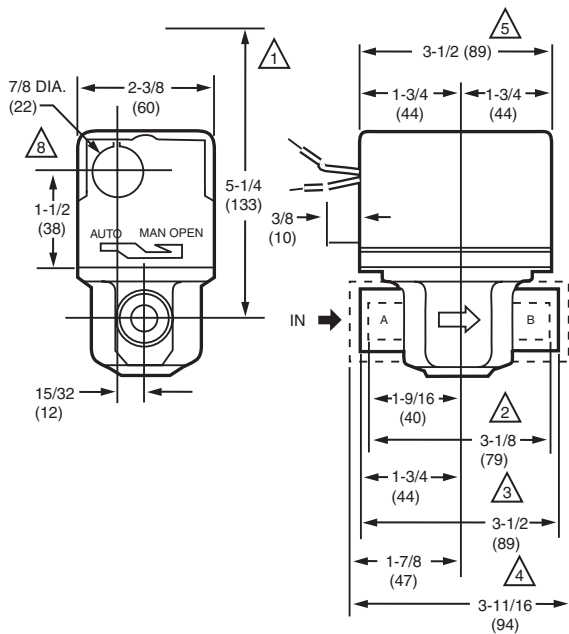
**Comments:** Use this valve in closed loop hydronic systems that do not contain dissolved oxygen in system water, such as fresh water from frequent source of makeup water. Valve designed for cycling (not constantly powered on) applications.

Material Number	Capacity (Cv)	Capacity (Kv)	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Maximum Differential Pressure Ratings (Close-off) (psi)	Maximum Differential Pressure Ratings (Close-off) (kPa)	De-energized Position	Valve Action	Voltage	Current Draw	Manual Opener
V4043A1002/U	3.5 Cv	3 Kv	1/2 in.	DN15	Flare	20 psi	138 kPa	Normally Closed	Spring return to close	120 Vac; Power Consumption – 9.6 VA	0.08A	Yes
V4043A1010/U	3.5 Cv	3 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa	Normally Closed	Spring return to close	120 Vac; Power Consumption – 9.6 VA	0.08A	Yes
V4043A1184/U	1 Cv	0.9 Kv	1/2 in.	DN15	Sweat	50 psi	345 kPa	Normally Closed	Spring return to close	120 Vac; Power Consumption – 9.6 VA	0.08A	Yes
V4043A1259/U	8 Cv	6.9 Kv	3/4 in.	DN20	Sweat	8 psi	55 kPa	Normally Closed	Spring return to close	120 Vac; Power Consumption – 9.6 VA	0.08A	Yes
V4043A1317/U	8 Cv	6.9 Kv	1 in.	DN25	Sweat	8 psi	55 kPa	Normally Closed	Spring return to close	120 Vac; Power Consumption – 9.6 VA	0.08A	Yes
V4043A1689/U	3.5 Cv	3 Kv	1/2 in.	DN15	NPT	20 psi	138 kPa	Normally Closed	Spring return to close	120 Vac; Power Consumption – 9.6 VA	0.08A	Yes
V4043A1697/U	10 Cv	8.6 Kv	1 in.	DN25	NPT	6.5 psi	45 kPa	Normally Closed	Spring return to close	120 Vac; Power Consumption – 9.6 VA	0.08A	Yes
V4043A1705/U	3.5 Cv	3 Kv	3/4 in.	DN20	NPT	20 psi	138 kPa	Normally Closed	Spring return to close	120 Vac; Power Consumption – 9.6 VA	0.08A	Yes
V4043B1018/U	3.5 Cv	3 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa	Normally Open	Spring return to open	120 Vac; Power Consumption – 9.6 VA	0.08A	No

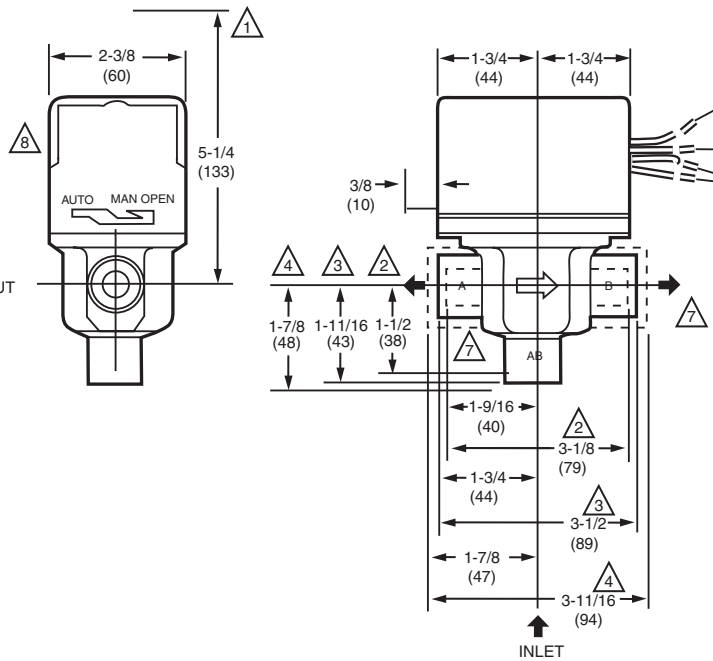
# Motorized Zone Valves

Dimensions in inches (millimeters)

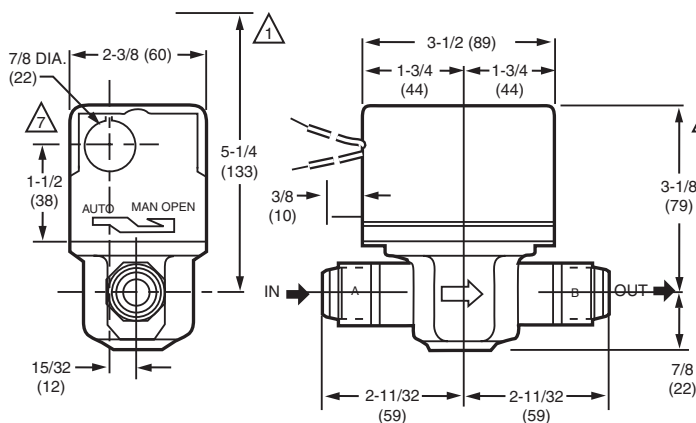
V4043, V8043 SWEAT COPPER CONNECTION MODELS <sup>8</sup>



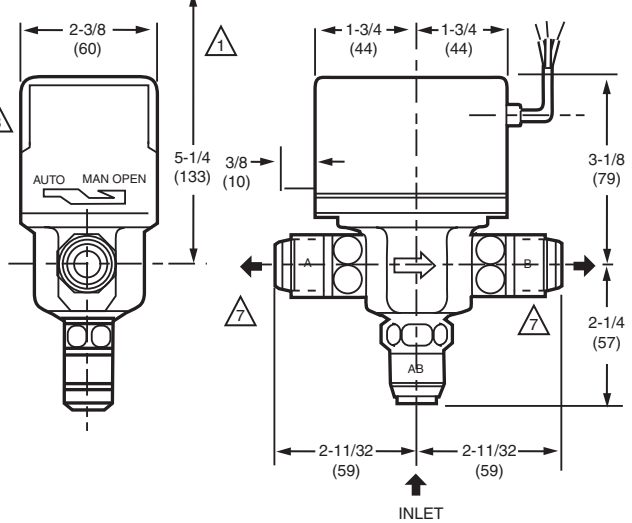
V4044, V8044 SWEAT COPPER CONNECTION MODELS



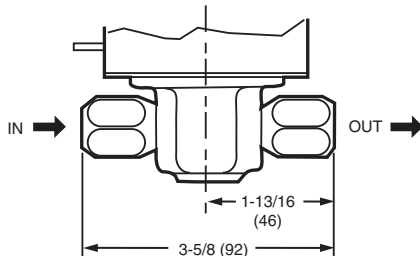
V4043, V8043 FLARE-FITTING MODELS <sup>6</sup>



V4044, V8044 FLARE-FITTING MODELS



V8043 INVERTED FLARE MODELS



- <sup>1</sup> HEIGHT NEEDED TO REMOVE COVER.
- <sup>2</sup> DIMENSIONS FOR 1/2 IN. COPPER TUBING.
- <sup>3</sup> DIMENSIONS FOR 3/4 IN COPPER TUBING.
- <sup>4</sup> DIMENSIONS FOR 1 IN. COPPER TUBING.
- <sup>5</sup> 4-7/8 IN. (124) MAX ON V8034F WITH TERMINAL BOARD ENCLOSURE.
- <sup>6</sup> V4034B AND V8043B VALVES THAT ARE NORMALLY OPEN IN THE DE-ENERGIZED POSITION HAVE NO MANUAL LEVER. THE VALVES ALSO HAVE A REVERSED POWERHEAD WHERE THE LEADWIRES EXIT THE POWERHEAD ABOVE THE B (OUTLET) PORT RATHER THAN ABOVE THE A (INLET) PORT.
- <sup>7</sup> REFER TO MOUNTING INSTRUCTIONS.
- <sup>8</sup> OPENING FOR 1/2 IN. CONDUIT ON MANUAL LEVER SIDE FOR V4043, V8043; OPENING ON OPPOSITE SIDE FOR V4044, V8044.

M10175



## V4043 Line Voltage Zone Valves for Steam



Flare Connection



Sweat Connection

**Application:** Steam (low pressure) Control  
**Valve Type:** Zone Valve  
**Pipe Size (inch):** 1/2 in.  
**Pipe Size (DN):** DN15  
**Body Pattern:** Two-way, Straight-through  
**Capacity (Cv):** 3.5 Cv  
**Capacity (Kv):** 3 Kv  
**Frequency:** 60 Hz  
**Actuation:** Two position  
**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)  
**Fluid Temperature:** 40°F to 240°F (5°C to 116°C)  
**Pressure Range (psi):** Steam – 15 psi  
**Pressure Range (kPa):** Steam – 103 kPa  
**Static Pressure Rating (psi):** 125 psi

**Two way on-off line voltage valves consist of an actuator motor and valve assembly for controlling the flow of low pressure steam.**

- Manual opener (on all models, except straight-through, normally open valves) for valve operation on power failure; valve returns to automatic position when power is restored.
- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- Motor may be replaced without removing the valve body or draining the system.
- Suitable for heating applications.

**Static Pressure Rating (kPa):** 862 kPa

**Materials (Body):** Brass

**Materials (Seat):** Brass

**Materials (Stem):** Stainless Steel

**Materials (Plug / Ball / Disc):** EPDM Rubber Ball

**Materials (Packing):** EPDM rubber

**Timing:** Nominal Open – 15 sec

**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

**Approvals, Underwriters Laboratories Inc.:** UL Component Listed: File MH11826 Vol. 1

**Approvals, CSA:** CSA Certified: File 1322

**Comments:** For low pressure (15 psi) steam application

**Dimensions in inches (millimeters).** See page 60.

Material Number	Electrical Connections	Connection Type	Maximum Differential Pressure Ratings (Close-off) (psi)	Maximum Differential Pressure Ratings (Close-off) (kPa)	De-energized Position	Valve Action	Voltage	Current Draw	Manual Opener
V4043E1003/U	18 in. leads (457 mm leads)	Sweat	20 psi	138 kPa	Normally Closed	Spring return to close	120 Vac; Power Consumption – 9.6 VA	0.08A	Yes
V4043E1011/U	18 in. leads (457 mm leads)	Sweat	20 psi	138 kPa	Normally Closed	Spring return to close	208 Vac; Power Consumption – 9.6 VA	0.04A	Yes
V4043E1029/U	18 in. leads (457 mm leads)	Sweat	20 psi	138 kPa	Normally Closed	Spring return to close	240 Vac; Power Consumption – 9.6 VA	0.04A	Yes

# Motorized Zone Valves

## V4044 Line Voltage Diverting Valves



Flare Connection



Sweat Connection

**Application:** Hydronic Control  
**Valve Type:** Zone Valve  
**Body Pattern:** Three-way, Diverting  
**Valve Action:** Spring Return to port A  
**Voltage:** 120 Vac; Power Consumption – 9.6 VA  
**Frequency:** 60 Hz  
**Actuation:** Two position  
**De-energized Position:** Port A Normally Closed  
**Electrical Connections:** 18 in. leads (457 mm leads)  
**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)  
**Fluid Temperature:** 40°F to 200°F (5°C to 93°C)  
**Static Pressure Rating (psi):** 125 psi  
**Static Pressure Rating (kPa):** 862 kPa  
**Materials (Body):** Brass  
**Materials (Seat):** Brass

**On-off and diverting line voltage valves consist of an actuator motor and valve assembly for controlling the flow of hot or chilled water.**

- Manual opener (on all models, except straight-through, normally open valves) for valve operation on power failure; valve returns to automatic position when power is restored.
- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- Motor may be replaced without removing the valve body or draining the system.
- Suitable for heating and cooling applications.

**Materials (Stem):** Stainless Steel

**Materials (Plug / Ball / Disc):** Buna-N (NBR) Rubber Ball

**Materials (Packing):** EPDM rubber

**Timing:** Nominal Open – 30 sec

**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

**Manual Opener:** Yes

**Approvals, Underwriters Laboratories Inc.:** UL Component Listed: File MH11826 Vol. 1

**Comments:** Use this valve in closed loop hydronic systems that do not contain dissolved oxygen in system water, such as fresh water from frequent source of makeup water. Valve designed for cycling (not constantly powered on) applications.

**Current Draw:** 0.08A

**Dimensions in inches (millimeters).** See page 60.

Material Number	Capacity (Cv)	Capacity (Kv)	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Maximum Differential Pressure Ratings (Close-off) (psi)	Maximum Differential Pressure Ratings (Close-off) (kPa)	Changeover Aquastat
V4044A1001/U	4 Cv	3.4 Kv	1/2 in.	DN15	Flare	20 psi	138 kPa	
V4044A1019/U	4 Cv	3.4 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa	
V4044A1191/U	7.0 Cv	6 Kv	3/4 in.	DN20	Sweat	10 psi	69 kPa	
V4044B1017/U	4 Cv	3.4 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa	Yes, SPDT

## V8043 Low Voltage Normally Closed Zone Valves



Flare Connection



Sweat Connection



NPT Connection



Sweat Connection with terminal block



Inverted Flare

**Two-way on-off low voltage valves consist of an actuator and valve assembly for controlling the flow of hot water.**

- Manual opener (on all models, except straight-through, normally open valves) for valve operation on power failure; valve returns to automatic position when power is restored.
- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- Actuator motor may be replaced without removing the valve body or draining the system.

**Application:** Hydronic Control

**Valve Type:** Zone Valve

**Body Pattern:** Two-way, Straight-through

**Valve Action:** Spring return to close

**Voltage:** 24 Vac; Power Consumption – 7.7 VA

**Frequency:** 50 Hz; 60 Hz

**Actuation:** Two position

**De-energized Position:** Two position

**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)

**Fluid Temperature:** 50°F to 200°F (10°C to 93°C)

**Static Pressure Rating (psi):** 125 psi

**Static Pressure Rating (kPa):** 862 kPa

**Materials (Body):** Brass

**Materials (Seat):** Brass

**Materials (Stem):** Stainless Steel

**Materials (Plug / Ball / Disc):** Buna-N (NBR) Rubber Ball

**Materials (Packing):** EPDM rubber

**Timing:** Nominal Open – 15 sec

**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

**Manual Opener:** Yes

**Approvals, Underwriters Laboratories Inc.:** UL Listed: File MH11826

**Approvals, CSA:** CSA Certified: File 1322

**Comments:** Use this valve in closed loop hydronic systems that do not contain dissolved oxygen in system water, such as fresh water from frequent source of makeup water. Valve designed for cycling (not constantly powered on) applications.

**Current Draw:** 0.32A

**Dimensions in inches (millimeters):** See page 60.

**Replacement Parts:**

**802360JA/U** – 24V Replacement motor for V8043/44

**802360UA/U** – 24V, 50/60 Hz Replacement motor for steam and heating Zone Valves

Material Number	Capacity (Cv)	Capacity (Kv)	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Maximum Differential Pressure Ratings (Close-off) (psi)	Maximum Differential Pressure Ratings (Close-off) (kPa)	End Switch Rating	Electrical Connections	Auxiliary End Switch
V8043A1003/U	3.5 Cv	3 Kv	1/2 in.	DN15	Flare	20 psi	138 kPa		18 in. (457 mm) leads	
V8043A1011/U	3.5 Cv	3 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa		18 in. (457 mm) leads	
V8043A1029/U	3.5 Cv	3 Kv	3/4 in.	DN20	Sweat	20 psi	138 kPa		18 in. (457 mm) leads	
V8043A1037/U	3.5 Cv	3 Kv	1 in.	DN25	Sweat	20 psi	138 kPa		18 in. (457 mm) leads	
V8043A1185/U	8 Cv	6.9 Kv	3/4 in.	DN20	Sweat	8 psi	55 kPa		18 in. (457 mm) leads	
V8043A1219/U	3.5 Cv	3 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa		18 in. (457 mm) leads	
V8043A1227/U	3.5 Cv	3 Kv	1/2 in.	DN15	NPT	20 psi	138 kPa		18 in. (457 mm) leads	
V8043E1004/U	3.5 Cv	3 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	18 in. (457 mm) leads	N.O. SPST
V8043E1012/U	3.5 Cv	3 Kv	3/4 in.	DN20	Sweat	20 psi	138 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	18 in. (457 mm) leads	N.O. SPST
V8043E1020/U	3.5 Cv	3 Kv	1 in.	DN25	Sweat	20 psi	138 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	18 in. (457 mm) leads	N.O. SPST
V8043E1061/U	8 Cv	6.9 Kv	3/4 in.	DN20	Sweat	8 psi	55 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	18 in. (457 mm) leads	N.O. SPST

# Motorized Zone Valves

Material Number	Capacity (Cv)	Capacity (Kv)	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Maximum Differential Pressure Ratings (Close-off) (psi)	Maximum Differential Pressure Ratings (Close-off) (kPa)	End Switch Rating	Electrical Connections	Auxiliary End Switch
V8043E1079/U	8 Cv	6.9 Kv	1 in.	DN25	Sweat	8 psi	55 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	18 in. (457 mm) leads	N.O. SPST
V8043E1137/U	10 Cv	8.6 Kv	1 in.	DN25	NPT	6.5 psi	45 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	18 in. (457 mm) leads	N.O. SPST
V8043E1145/U	3.5 Cv	3 Kv	3/4 in.	DN20	NPT	20 psi	138 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	18 in. (457 mm) leads	N.O. SPST
V8043F1028/U	3.5 Cv	3 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	screw terminal block	N.O. SPST
V8043F1036/U	3.5 Cv	3 Kv	3/4 in.	DN20	Sweat	20 psi	138 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	screw terminal block	N.O. SPST
V8043F1051/U	3.5 Cv	3 Kv	1 in.	DN25	Sweat	20 psi	138 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	screw terminal block	N.O. SPST
V8043F1093/U	8 Cv	6.9 Kv	3/4 in.	DN20	Sweat	8 psi	55 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	screw terminal block	N.O. SPST
V8043F1101/U	8 Cv	6.9 Kv	1 in.	DN25	Sweat	8 psi	55 kPa	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	screw terminal block	N.O. SPST

## V8043 Low Voltage Normally Closed Zone Valves for Canada



Flare Connection



Sweat Connection



NPT Connection



Sweat Connection with terminal block



Inverted Flare

**Two-way on-off low voltage valves consist of an actuator and valve assembly for controlling the flow of hot water.**

- Manual opener (on all models, except straight-through, normally open valves) for valve operation on power failure; valve returns to automatic position when power is restored.
- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- Actuator motor may be replaced without removing the valve body or draining the system.

**Application:** Hydronic Control

**Valve Type:** Zone Valve

**Body Pattern:** Two-way, Straight-through

**Valve Action:** Spring return to close

**Voltage:** 24 Vac; Power Consumption – 7.7 VA

**Actuation:** Two position

**De-energized Position:** Normally Closed

**Electrical Connections:** 18 in. (457 mm) leads (except for V8043F1135/U which has screw terminals)

**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)

**Fluid Temperature:** 50°F to 200°F (10°C to 93°C)

**Materials (Body):** Brass

**Materials (Seat):** Brass

**Materials (Stem):** Stainless Steel

**Materials (Plug / Ball / Disc):** Buna-N (NBR) Rubber Ball

**Materials (Packing):** EPDM rubber

**Timing:** Nominal Open – 15 sec

**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

**Manual Opener:** Yes

**Approvals, Underwriters Laboratories Inc.:** UL Listed: File MH11826

**Approvals, CSA:** CSA Certified: File 1322

**Comments:** Use this valve in closed loop hydronic systems that do not contain dissolved oxygen in system water, such as fresh water from frequent source of makeup water. Valve designed for cycling (not constantly powered on) applications.

**Current Draw:** 0.32A

**Dimensions in inches (millimeters).** See page 60.

**Replacement Parts:**

**802360JA/U** – 24V Replacement motor for V8043/44

**802360UA/U** – 24V, 50/60 Hz Replacement motor for steam and heating Zone Valves

Material Number	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Frequency	Capacity (Cv)	Capacity (Kv)	Auxiliary End Switch	Maximum Differential Pressure Ratings Closeoff (psi [kPa])	Static Pressure Rating (psi [kPa])	End Switch Rating	Includes
V8043C1033/U	3/8 in.	DN10	Flare	50 Hz; 60 Hz	3.5 Cv	3 Kv		20 psi (138 kPa)	125 psi (862 kPa)		With 2 straight 3/4 in. sweat adapters.
V8043C1058/U	3/4 in.	DN20	Sweat	50 Hz; 60 Hz	3.5 Cv	3 Kv		20 psi (138 kPa)	125 psi (862 kPa)		
V8043C1066/U	1 in.	DN25	Sweat	50 Hz; 60 Hz	3.5 Cv	3 Kv		20 psi (138 kPa)	125 psi (862 kPa)		
V8043C1116/U	3/8 in.	DN10	Flare	50 Hz; 60 Hz	3.5 Cv	3 Kv		20 psi (138 kPa)	125 psi (862 kPa)		Less Adapters
V8043C1124/U	1/2 in.	DN15	Inverted Flare	50 Hz; 60 Hz	3.5 Cv	3 Kv		20 psi (138 kPa)	125 psi (862 kPa)		Less Adapters
V8043C3302/U	3/8 in.	DN10	Flare	50 Hz; 60 Hz	3.5 Cv	3 Kv		20 psi (138 kPa)	300 psi (2068 kPa)		With 2 straight 3/4 in. sweat adapters.
V8043C3310/U	1/2 in.	DN15	Inverted Flare	60 Hz	3.5 Cv	3 Kv		20 psi (138 kPa)	300 psi (2068 kPa)		Less Adapters
V8043F1135/U	3/4 in.	DN20	Sweat	50 Hz; 60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	End Switch enclosure.
V8043G1000/U	1/2 in.	DN15	Sweat	50 Hz; 60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	
V8043G1018/U	3/4 in.	DN20	Sweat	50 Hz; 60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	

# Motorized Zone Valves

Material Number	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Frequency	Capacity (Cv)	Capacity (Kv)	Auxiliary End Switch	Maximum Differential Pressure Ratings Closeoff (psi [kPa])	Static Pressure Rating (psi [kPa])	End Switch Rating	Includes
V8043G1026/U	1 in.	DN25	Sweat	50 Hz; 60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	
V8043G1034/U	3/8 in.	DN10	Flare	50 Hz; 60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	With 2 straight 3/4 in. sweat adapters.
V8043G1109/U	3/4 in.	DN20	NPT	50 Hz; 60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	
V8043G1125/U	1/2 in.	DN15	Inverted Flare	50 Hz; 60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	Less Adapters
V8043G1133/U	3/8 in.	DN10	Flare	50 Hz; 60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	Less Adapters
V8043G1158/U	1 in.	DN25	Sweat	50 Hz; 60 Hz	8 Cv	6.9 Kv	N.O. SPST	8 psi (55 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	
V8043G1182/U	1 in.	DN25	NPT	50 Hz; 60 Hz	10 Cv	8.5 Kv	N.O. SPST	6.5 psi (45 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	
V8043G1216/U	3/4 in.	DN20	Sweat	60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	125 psi (862 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	
V8043G3311/U	1/2 in.	DN15	Inverted Flare	60 Hz	3.5 Cv	3 Kv	N.O. SPST	20 psi (138 kPa)	300 psi (2068 kPa)	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	Less Adapters

## V8043 Low Voltage Normally Open Valves for Steam



NPT Connection

**Application:** Steam (low pressure) Control  
**Valve Type:** Zone Valve  
**Body Pattern:** Two-way, Straight-through  
**Valve Action:** Spring return to open  
**Voltage:** 24 Vac; Power Consumption – 7.7 VA  
**Frequency:** 50 Hz; 60 Hz  
**Actuation:** Two position  
**Electrical Connections:** 18 in. leads (457 mm leads)  
**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)  
**Fluid Temperature:** 50°F to 240°F (10°C to 116°C)  
**Static Pressure Rating (psi):** 125 psi  
**Static Pressure Rating (kPa):** 862 kPa  
**Materials (Body):** Brass

**On-off and two way low voltage valves consist of an actuator and valve assembly for controlling the flow of low pressure steam.**

- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- Actuator motor may be replaced without removing the valve body or draining the system.
- Suitable for use 15 psi low pressure steam application.

**Materials (Seat):** Brass  
**Materials (Stem):** Stainless Steel  
**Materials (Plug / Ball / Disc):** EPDM Rubber Ball  
**Materials (Packing):** EPDM rubber  
**Timing:** Nominal Open – 15 sec  
**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.  
**Approximate, Dimensions:** 4 in. high x 3 23/32 in. wide x 2 3/8 in. deep (102 mm high x 94 mm wide x 60 mm deep)  
**Approvals, Underwriters Laboratories Inc.:** UL Component Listed: File MH11826 Vol. 1  
**Comments:** For low pressure (15 psi) steam application  
**Dimensions in inches (millimeters).** See page 60.

Material Number	Capacity (Cv)	Capacity (Kv)	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Maximum Differential Pressure Ratings (Close-off) (psi)	Maximum Differential Pressure Ratings (Close-off) (kPa)	De-energized Position	Current Draw	Manual Opener
V8043J1029/U	3.5 Cv	3 Kv	1/2 in.	DN15	NPT	20 psi	138 kPa	Normally Open	0.42A	No
V8043J1037/U	3.5 Cv	3 Kv	3/4 in.	DN20	NPT	20 psi	138 kPa	Normally Open	0.42A	No

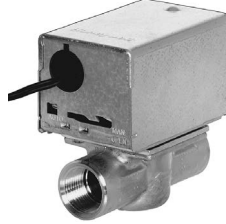


# Motorized Zone Valves

## V8043 Low Voltage Normally Open Zone Valves



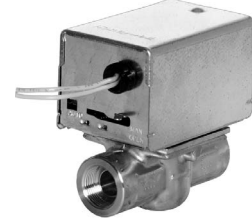
Sweat Connection



Inverted Flare



Flare Connection



NPT Connection

**On-off and two-way low voltage valves consist of an actuator and valve assembly for controlling the flow of hot water.**

- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- Actuator motor may be replaced without removing the valve body or draining the system.
- No Manual opener

**Application:** Hydronic Control

**Valve Type:** Zone Valve

**Body Pattern:** Two-way, Straight-through

**Valve Action:** Spring return to open

**Voltage:** 24 Vac; Power Consumption – 7.7 VA

**Capacity (Cv):** 3.5 Cv

**Capacity (Kv):** 3 Kv

**Actuation:** Two position

**De-energized Position:** Normally Open

**Electrical Connections:** 18 in. leads (457 mm leads)

**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)

**Fluid Temperature:** 40°F to 200°F (5°C to 93°C)

**Maximum Differential Pressure Ratings (Close-off) (psi):** 20 psi  
**Maximum Differential Pressure Ratings (Close-off) (kPa):** 138 kPa

**Static Pressure Rating (psi):** 125 psi

**Static Pressure Rating (kPa):** 862 kPa

**Materials (Body):** Brass

**Materials (Seat):** Brass

**Materials (Stem):** Stainless Steel

**Materials (Plug / Ball / Disc):** Buna-N (NBR) Rubber Ball

**Materials (Packing):** EPDM rubber

**Timing:** Nominal Open – 15 sec

**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

**Manual Opener:** No

**Approvals, Underwriters Laboratories Inc.:** UL Component Listed: File MH11826 Vol. 1

**Approvals, CSA:** CSA Certified: File 1322

**Comments:** Use this valve in closed loop hydronic systems that do not contain dissolved oxygen in system water, such as fresh water from frequent source of makeup water. Valve designed for cycling (not constantly powered on) applications.

**Current Draw:** 0.32A

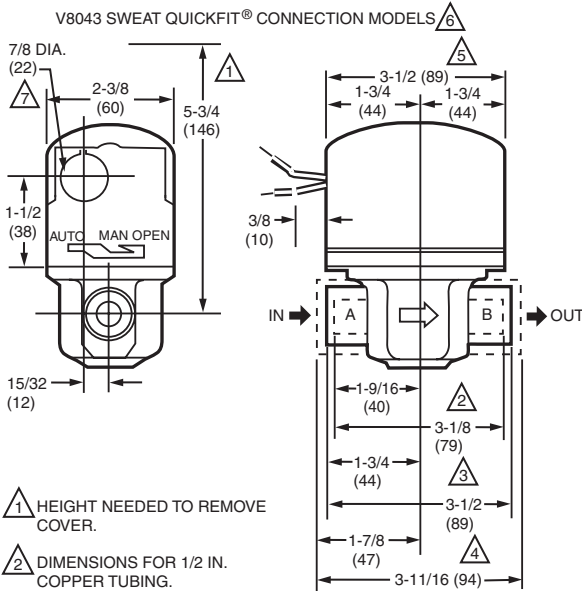
**Dimensions in inches (millimeters).** See page 60.

Material Number	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Frequency	Auxiliary End Switch	End Switch Rating	Includes
V8043B1019/U	1/2 in.	DN15	Sweat	60 Hz			
V8043B1027/U	3/4 in.	DN20	Sweat	60 Hz			
V8043B1076/U	3/4 in.	DN20	NPT	50 Hz; 60 Hz			
V8043D1031/U	3/4 in.	DN20	NPT	50 Hz; 60 Hz			
V8043D1049/U	3/4 in.	DN20	Sweat	50 Hz; 60 Hz			With 1/16 in. bypass hole
V8043D1064/U	3/4 in.	DN20	Sweat	50 Hz; 60 Hz			
V8043D1080/U	3/8 in.	DN10	Flare	50 Hz; 60 Hz			With 2 straight 3/4 in. sweat adapters.
V8043D1156/U	1/2 in.	DN15	Sweat	50 Hz; 60 Hz			
V8043D1197/U	3/8 in.	DN10	Flare	50 Hz; 60 Hz			Less Adapters Order separately - 272704A (1/2 in. sweat), 272704B (3/4 in. sweat)
V8043D1205/U	1/2 in.	DN15	Inverted Flare	50 Hz; 60 Hz			Less Adapters Order separately - 272704A (1/2 in. sweat), 272704B (3/4 in. sweat)
V8043D1239/U	1/2 in.	DN15	Inverted Flare	50 Hz; 60 Hz	N.C. SPST	2.2 A @ 120Vac 60Hz	Less Adapters

## V8043 Low Voltage Series 5000 QuickFit® Zone Valves



### Dimensions in inches (millimeters)



1 HEIGHT NEEDED TO REMOVE COVER.

2 DIMENSIONS FOR 1/2 IN. COPPER TUBING.

3 DIMENSIONS FOR 3/4 IN COPPER TUBING.

4 DIMENSIONS FOR 1 IN. COPPER TUBING.

5 4-7/8 IN. (124) MAX ON V8034F WITH TERMINAL BOARD ENCLOSURE.

6 V8043B VALVES THAT ARE NORMALLY OPEN IN THE DE-ENERGIZED POSITION HAVE NO MANUAL LEVER. THE VALVES ALSO HAVE A REVERSED POWERHEAD WHERE THE LEADWIRES EXIT THE POWERHEAD ABOVE THE B (OUTLET) PORT RATHER THAN ABOVE THE A (INLET) PORT.

7 OPENING FOR 1/2 IN. CONDUIT ON MANUAL LEVER SIDE FOR V8043 M23257

**Two-way on-off low voltage valves consist of an actuator and valve assembly for controlling the flow of hot water.**

- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Manual opener (on all models, except straight-through, normally open valves) for valve operation on power failure; valve returns to automatic position when power is restored.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- “Quick Fit” pushbutton powerhead makes it easy to remove for service.
- Series 5000 replacement powerhead is backward compatible with series 1000 zone valves.
- Innovative motor technology offers silent operation, water hammer resist and longer life.

**Application:** Hydronic Control

**Valve Type:** Zone Valve

**Body Pattern:** Two-way, Straight-through

**Valve Action:** Spring return to close

**Connection Type:** Sweat

**Voltage:** 24 Vac; Power Consumption – 7.2 VA

**Frequency:** 60 Hz

**Actuation:** Two position

**De-energized Position:** Normally Closed

**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)

**Fluid Temperature:** 50°F to 200°F (10°C to 93°C)

**Static Pressure Rating (psi):** 300 psi

**Static Pressure Rating (kPa):** 2068 kPa

**Materials (Body):** Brass

**Materials (Seat):** Brass

**Materials (Stem):** Stainless Steel

**Materials (Plug / Ball / Disc):** Buna-N (NBR) Rubber Ball

**Materials (Packing):** EPDM rubber

**Timing:** Nominal Open – 15 sec

**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

**Manual Opener:** Yes

**Approvals, CSA:** CSA Certified: File 1322

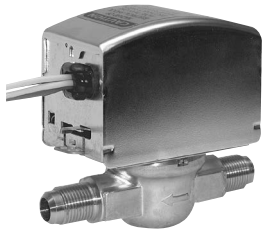
**Comments:** Use this valve in closed loop hydronic systems that do not contain dissolved oxygen in system water, such as fresh water from frequent source of makeup water. Valve designed for cycling (not constantly powered on) applications.

**Current Draw:** 0.32A

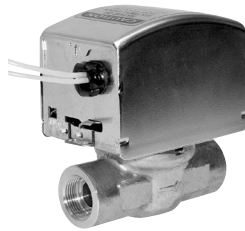
Material Number	Capacity (Cv)	Capacity (Kv)	Pipe Size (inch)	Pipe Size (DN)	Auxiliary End Switch	Electrical Connections	End Switch Rating	Maximum Differential Pressure Ratings (Close-off) (psi)	Maximum Differential Pressure Ratings (Close-off) (kPa)
V8043A5029/U	3.5 Cv	3 Kv	3/4 in.	DN20		18 in. (457 mm) leads		20 psi	138 kPa
V8043E5004/U	3.5 Cv	3 Kv	1/2 in.	DN15	N.O. SPST	18 in. (457 mm) leads	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	20 psi	138 kPa
V8043E5012/U	3.5 Cv	3 Kv	3/4 in.	DN20	N.O. SPST	18 in. (457 mm) leads	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	20 psi	138 kPa
V8043E5020/U	3.5 Cv	3 Kv	1 in.	DN25	N.O. SPST	18 in. (457 mm) leads	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	20 psi	138 kPa
V8043E5061/U	8 Cv	6.9 Kv	3/4 in.	DN20	N.O. SPST	18 in. (457 mm) leads	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	8 psi	55 kPa
V8043E5079/U	8 Cv	6.9 Kv	1 in.	DN25	N.O. SPST	18 in. (457 mm) leads	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	8 psi	55 kPa
V8043F5036/U	3.5 Cv	3 Kv	3/4 in.	DN20	N.O. SPST	screw terminal block	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	20 psi	138 kPa
V8043F5051/U	3.5 Cv	3 Kv	1 in.	DN25	N.O. SPST	screw terminal block	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	20 psi	138 kPa
V8043F5093/U	8 Cv	6.9 Kv	3/4 in.	DN20	N.O. SPST	screw terminal block	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	8 psi	55 kPa

# Motorized Zone Valves

## V8043 Low Voltage Series 5000 QuickFit® Zone Valves for Canada

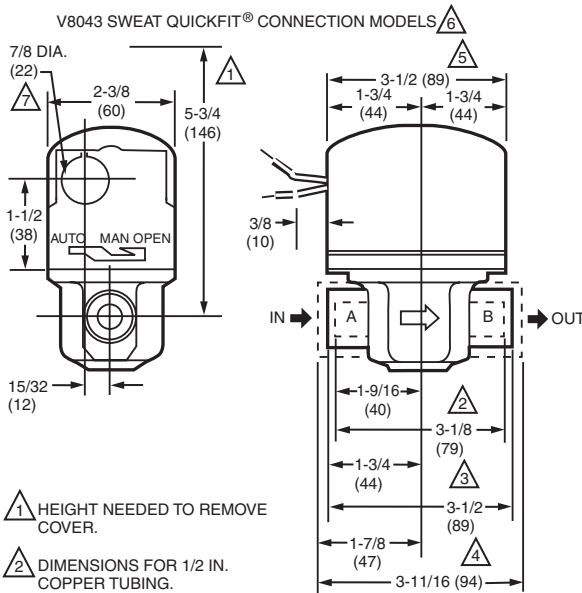


Flare Connection



Inverted Flare

**Dimensions in inches (millimeters)**



- 1 HEIGHT NEEDED TO REMOVE COVER.
- 2 DIMENSIONS FOR 1/2 IN. COPPER TUBING.
- 3 DIMENSIONS FOR 3/4 IN COPPER TUBING.
- 4 DIMENSIONS FOR 1 IN. COPPER TUBING.
- 5 4-7/8 IN. (124) MAX ON V8034F WITH TERMINAL BOARD ENCLOSURE.
- 6 V8043B VALVES THAT ARE NORMALLY OPEN IN THE DE-ENERGIZED POSITION HAVE NO MANUAL LEVER. THE VALVES ALSO HAVE A REVERSED POWERHEAD WHERE THE LEADWIRES EXIT THE POWERHEAD ABOVE THE B (OUTLET) PORT RATHER THAN ABOVE THE A (INLET) PORT.
- 7 OPENING FOR 1/2 IN. CONDUIT ON MANUAL LEVER SIDE FOR V8043

M23257

**Two-way on-off low voltage valves consist of an actuator and valve assembly for controlling the flow of hot water.**

- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Manual opener (on all models, except straight-through, normally open valves) for valve operation on power failure; valve returns to automatic position when power is restored.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- “Quick Fit” pushbutton powerhead makes it easy to remove for service.
- Series 5000 replacement powerhead is backward compatible with series 1000 zone valves.
- Innovative motor technology offers silent operation, water hammer resist and longer life.

**Application:** Hydronic Control

**Valve Type:** Zone Valve

**Body Pattern:** Two-way, Straight-through

**Valve Action:** Spring return to close

**Voltage:** 24 Vac; Power Consumption – 7.2 VA

**Frequency:** 50 Hz; 60 Hz

**Capacity (Cv):** 3.5 Cv

**Capacity (Kv):** 3 Kv

**Actuation:** Two position

**De-energized Position:** Normally Closed

**Auxiliary End Switch:** N.O. SPST

**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)

**Fluid Temperature:** 50°F to 200°F (10°C to 93°C)

**Maximum Differential Pressure Ratings (Close-off) (psi):** 20 psi

**Maximum Differential Pressure Ratings (Close-off) (kPa):** 138 kPa

**Static Pressure Rating (psi):** 300 psi

**Static Pressure Rating (kPa):** 2068 kPa

**Materials (Body):** Brass

**Materials (Seat):** Brass

**Materials (Stem):** Stainless Steel

**Materials (Plug / Ball / Disc):** Buna-N (NBR) Rubber Ball

**Materials (Packing):** EPDM rubber

**Timing:** Nominal Open – 15 sec

**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

**End Switch Rating:** 50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V

**Manual Opener:** Yes

**Approvals, CSA:** CSA Certified: File 1322

**Comments:** Use this valve in closed loop hydronic systems that do not contain dissolved oxygen in system water, such as fresh water from frequent source of makeup water. Valve designed for cycling (not constantly powered on) applications.

**Current Draw:** 0.32A

Material Number	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Includes
V8043C5058/U	3/4 in.	DN20	Sweat	
V8043G5000/U	1/2 in.	DN15	Sweat	
V8043G5018/U	3/4 in.	DN20	Sweat	
V8043G5034/U	3/8 in.	DN10	Flare	With 2 straight 3/4 in. sweat adapters.
V8043G5125/U	1/2 in.	DN15	Inverted Flare	Less Adapters

## V8044 Low Voltage Diverting Valves



Flare Connection



Sweat Connection



NPT Connection



Inverted Flare

**On-off and diverting low voltage valves consist of an actuator and valve assembly for controlling the flow of hot water.**

- Manual opener (on all models, except straight-through, normally open valves) for valve operation on power failure; valve returns to automatic position when power is restored.
- All models may be installed without disassembling the valve.
- Compact construction for easy installation.
- Complete powerhead may be removed or replaced without breaking plumbing line connections or draining the system.
- Actuator motor may be replaced without removing the valve body or draining the system.

**Application:** Hydronic Control

**Valve Type:** Zone Valve

**Body Pattern:** Three-way, Diverting

**Valve Action:** Spring Return

**Voltage:** 24 Vac; Power Consumption – 7.7 VA

**Frequency:** 50 Hz; 60 Hz

**Actuation:** Two position

**De-energized Position:** Port A Normally Closed

**Electrical Connections:** 18 in. leads (457 mm leads)

**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)

**Fluid Temperature:** 40°F to 200°F (5°C to 93°C)

**Static Pressure Rating (psi):** 125 psi

**Static Pressure Rating (kPa):** 862 kPa

**Materials (Body):** Brass

**Materials (Seat):** Brass

**Materials (Stem):** Stainless Steel

**Materials (Plug / Ball / Disc):** Buna-N (NBR) Rubber Ball

**Materials (Packing):** EPDM rubber

**Timing:** Nominal Open – 30 sec

**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

**Manual Opener:** Yes

**Approvals, Underwriters Laboratories Inc.:** UL Component Listed: File MH11826 Vol. 1

**Approvals, CSA:** CSA Certified: File 1322

**Comments:** Use this valve in closed loop hydronic systems that do not contain dissolved oxygen in system water, such as fresh water from frequent source of makeup water. Valve designed for cycling (not constantly powered on) applications.

**Current Draw:** 0.32A

**Dimensions in inches (millimeters).** See page 60.

Material Number	Capacity (Cv)	Capacity (Kv)	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Maximum Differential Pressure Ratings (Close-off) (psi)	Maximum Differential Pressure Ratings (Close-off) (kPa)	Auxiliary End Switch	End Switch Rating	Includes
V8044A1002/U	4 Cv	3.4 Kv	1/2 in.	DN15	Flare	20 psi	138 kPa			
V8044A1010/U	4 Cv	3.4 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa			
V8044A1044/U	7.0 Cv	6 Kv	3/4 in.	DN20	Sweat	10 psi	69 kPa			
V8044A1135/U	4 Cv	3.4 Kv	1/2 in.	DN15	NPT	20 psi	138 kPa			
V8044A1143/U	4 Cv	3.4 Kv	3/4 in.	DN20	NPT	20 psi	138 kPa			
V8044E1003/U	4 Cv	3.4 Kv	1/2 in.	DN15	Sweat	20 psi	138 kPa	N.O. SPST	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	
V8044E1011/U	7.0 Cv	6 Kv	3/4 in.	DN20	Sweat	10 psi	69 kPa	N.O. SPST	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	
V8044E1078/U	3.5 Cv	3 Kv	1/2 in.	DN15	Inverted Flare	20 psi	138 kPa	N.C. SPST	50 VA pilot duty @ 24 V; 4.4 A running with 26.4 A inrush @ 120 V	With normally closed SPST end switch.

# Motorized Zone Valves

## Y496 Zone Control Builder Packs



Contain devices necessary for temperature control of a single zone in a hydronic heating system.

- Include thermostat with special heat anticipator designed for best performance when used with the V8043 Zone Valve.
- Require 24 V power source.
- Custom packed with 10 Valves and 10 thermostats per carton.

**Color:** Thermostat – Premier White®

**Body Pattern:** Two-way

**Pipe Connection:** Sweat

**Voltage:** Valve – 24 Vac; Thermostat – 24V

**Frequency:** Valve – 50 Hz or 60 Hz; Thermostat – 50 Hz or 60 Hz

**Valve Action:** Spring return to close

**Approvals, Underwriters Laboratories Inc.:** UL Listed: Models V8043A,B,E,J & V8044A,B,E; UL Component Recognized: V8043F

**Tradeline Value:** Tradeline






**Auxiliary Switch Ratings:** 4.4 A running @ 120 V; 50 VA pilot duty @ 24 V

Material Number	Application	Y-Pack Includes	Mounting
Y496A1074/U	Single Stage Heating Only	V8043E1012, T822K1018	Thermostat – Vertical
Y496A1082/U	Single Stage Heating Only	V8043E1004, T822K1018	Thermostat – Vertical
Y496A1090/U	Single Stage Heating Only	V8043E1061, T822K1018	Thermostat – Vertical
Y496B1024/U	Single Stage Heating/ Cooling	V8043E1012, T87K1007	Thermostat – Round
Y496B1040/U	Single Stage Heating/ Cooling	V8043F1036, T87K1007	Thermostat – Round

Material Number	Pipe Size (inch)	Maximum Differential Pressure Ratings (Close-off) (kPa)	Maximum Differential Pressure Ratings (Close-off) (psi)	Capacity (Cv)	Capacity (Kv)	Temperature Range	Electrical Connections	Thermostat Anticipator Setting	Includes	Comments
Y496A1074/U	3/4 in.	138 kPa	20 psi	3.5 Cv	3 Kv	55 to 95°F (13 to 35°C)	Valve – 18 in. leads; Thermostat – Screw Terminals			See V8043, T822K for more details
Y496A1082/U	1/2 in.	138 kPa	20 psi	3.5 Cv	3 Kv	55 to 95°F (13 to 35°C)	Valve – 18 in. leads; Thermostat – Screw Terminals			See V8043, T822K for more details
Y496A1090/U	3/4 in.	55 kPa	8 psi	8 Cv	6.9 Kv	55 to 95°F (13 to 35°C)	Valve – 18 in. leads; Thermostat – Screw Terminals			See V8043, T822K for more details
Y496B1024/U	3/4 in.	138 kPa	20 psi	3.5 Cv	3 Kv	40 to 90°F (4 to 32°C)	Valve – 18 in. leads; Thermostat – Screw Terminals	Heating – 0.1 to 1.2 A; Cooling – 0.0 to 1.5 A	104456B Wallplate	See V8043, T87K for more details
Y496B1040/U	3/4 in.	138 kPa	20 psi	3.5 Cv	3 Kv	40 to 90°F (4 to 32°C)	Valve – Screw Terminal Block; Thermostat – Screw Terminals	Heating – 0.1 to 1.2 A; Cooling – 0.0 to 1.5 A	104456B Wallplate	See V8043, T87K for more details





## Zone Valve Replacement Parts

Material Number	Description	
272704A/U	Two 3/8 in. flare to 1/2 in. sweat adapters	
272704B/U	Two 3/8 in. flare to 3/4 in. sweat adapters	
272708A/U	Two 1/2 in. inverted flare to 1/2 in. sweat adapters	
272708B/U	Two 1/2 in. inverted flare to 3/4 in. sweat adapters	
272708C/U	Two 1/2 in. inverted flare to 1 in. sweat adapters	
272748AB/U	24V Replacement motor (international)	
272748ABP/U	24V, 50/60Hz replacement motor for V8043 zone valves	
272752DBP/U	120V, 60Hz replacement motor for V4043, V4044 zone valves	
40003918-001/U	Adaptor kit for converting three-way non-removable head style zone valves to removable head style	
40003918-002/U	Adaptor kit for converting straight-through (two-way) non-removable head style zone valves to removable head style	
40003918-006/U	Adaptor kit for V4043, V8043, 2-way hydronic valves	
40003918-007/U	Adaptor kit for V4044, V8044, 3-way diverting valves	
40003918-008/U	Adaptor kit for V4043E, J, V8043J, low pressure steam valves	
40004705-001/U	Compression Olive, 28 mm for valve fittings	
40004750-001/U	Replacement kit for 300 PSI rated Zone Valve including Adaptor plate, O-ring, Ball and Shaft, and 4 screws	
40004781-001/U	Resistor (1W) 470ohms	
40007008-0ML/U	3/4 in. Sweat 3-Way Valve Body	
40007028-0ME/U	1/2 in. BSPP 3-Way Valve Body	
40007035-003/U	Cable harness	
40007035-004/U	Cable harness	
40007142-001/U	Strain relief molex	
40007441-001/U	LV2000 actuator (ML7300A1004)	
40007442-211/U	VU12A1017, 2-way valve, 22mm compression	
40007442-221/U	VU12A1009, 2-way valve, 22mm sweat	
40007443-311/U	VU13A1015, 3-way valve, 22mm compression	
40007443-321/U	VU13A1007, 3-way valve, 22mm sweat	
802360JA/U	24V, 50/60Hz replacement motor for V8043 zone valves	
802360LA/U	120V, 60Hz replacement motor for V4043, V4044 zone valves	
802360NA/U	220V/50Hz; 240V/60Hz replacement motor for V4043, V4044 zone valves	
802360QA/U	277V, 60Hz replacement motor for V4043, V4044 zone valves	
802360UA/U	24V, 50/60 Hz Replacement motor for steam and heating Zone Valves	

# Motorized Zone Valves


## Zone Valves Replacement Heads

Ambient Temperature Range: 125°F Maximum (52°C Maximum)

Material Number	Description	Electrical Connections	Voltage	Frequency	Auxiliary Switch Ratings	Used With	
40003916-001/U	240V, 50 Hz Replacement actuator for V4043	1 m	240V	50 Hz			
40003916-002/U	240V, 50 Hz Replacement actuator for V4044	1 m	240V	50 Hz			
40003916-003/U	240V, 50 Hz Replacement actuator for V4073	1 m	240V	50 Hz			
40003916-011/U	24V, 60 Hz Replacement actuator for V8043C	18 in. (457 mm) leads on same side of manual lever	24V	60 Hz			
40003916-012/U	24V, 60 Hz Replacement actuator for V8043G	18 in. (457 mm) leads on same side of manual lever	24V	60 Hz			
40003916-013/U	24V, 60 Hz Replacement actuator for V8043F		24V	60 Hz			
40003916-014/U	24V, 60 Hz Replacement actuator for V8043D	18 in. (457 mm) leads on same side of manual lever	24V	60 Hz		Valves with Action of Spring return to open	
40003916-021/U	24 Vac, 50/60 Hz Replacement head for V8043A	18 in. (457 mm) leads on same side of manual lever	24 Vac	50 Hz; 60 Hz		Valves with Action of Spring return to close	
40003916-023/U	240 Vac, 50 Hz Replacement head for V4043A, 240V, 50Hz	18 in. (457 mm) leads on same side of manual lever	240 Vac	50 Hz		Two-way valves; Valves with Action of Spring return to close	
40003916-024/U	120 Vac, 60 Hz Replacement head for V4043A	18 in. (457 mm) leads on same side of manual lever	120 Vac	60 Hz		Two-way valves; Valves with Action of Spring return to close	
40003916-025/U	24 Vac, 50/60 Hz Replacement head with End Switch for V8044E	18 in. (457 mm) leads on same side of manual lever	24 Vac	50 Hz; 60 Hz	4.4 A running @ 120 V; 50 VA pilot duty @ 24 V	Diverting Valves; Valves with Action of Spring return to close "A" port	
40003916-026/U	24 Vac, 50/60 Hz Replacement head with End Switch for V8044E	18 in. (457 mm) leads on same side of manual lever	24 Vac	50 Hz; 60 Hz	4.4 A running @ 120 V; 50 VA pilot duty @ 24 V	Two-way valves; Valves with Action of Spring return to close	
40003916-027/U	24 Vac, 50/60 Hz, N.O. Replacement head for V8043B	18 in. (457 mm) leads on same side of manual lever	24 Vac	50 Hz; 60 Hz		Two-way valves; Valves with Action of Spring return to open	
40003916-031/U	120 Vac, 60 Hz, N.O. Replacement head for V4043B	18 in. (457 mm) leads on same side of manual lever	120 Vac	60 Hz		Two-way valves; Valves with Action of Spring return to open	
40003916-032/U	24 Vac, 50/60 Hz Replacement head for V8044A	18 in. (457 mm) leads on opposite side of manual lever	24 Vac	50 Hz; 60 Hz		Diverting Valves; Valves with Action of Spring return to close "A" port	
40003916-036/U	120 Vac, 60 Hz Replacement head for V4044	18 in. (457 mm) leads on opposite side of manual lever	120V	60 Hz		Diverting Valves; Valves with Action of Spring return to close "A" port	
40003916-041/U	120 Vac, 60 Hz Replacement head for V4043E, Steam Valve	18 in. (457 mm) leads on same side of manual lever	120 Vac	60 Hz		Two-way valves; Valves with Action of Spring return to close	
40003916-048/U	24 Vac, 50/60 Hz Replacement head for V8043F, With End Switch	screw terminal block on same side of manual lever	24 Vac	50 Hz; 60 Hz	4.4 A running @ 120 V; 50 VA pilot duty @ 24 V	Two-way valves; Valves with Action of Spring return to close	
40003916-511/U	24V, 60 Hz Replacement actuator for V8043C "5000" series	18 in. (457 mm) leads on same side of manual lever	24V	60 Hz			
40003916-512/U	24V, 60 Hz Replacement actuator for V8043C "5000" series	18 in. (457 mm) leads on same side of manual lever	24V	60 Hz			
40003916-521/U	24 Vac, 50/60 Hz Replacement head for V8043A 5000 series	18 in. (457 mm) leads on same side of manual lever	24 Vac	50 Hz; 60 Hz		Two-way valves; Valves with Action of Spring return to close	
40003916-526/U	24 Vac, 50/60 Hz Replacement head with End Switch, for V8043E 5000 series	18 in. (457 mm) leads on same side of manual lever	24 Vac	50 Hz; 60 Hz	4.4 A running @ 120 V; 50 VA pilot duty @ 24 V	Two-way valves; Valves with Action of Spring return to close	
40003916-526/Z	24 Vac, 50/60 Hz Replacement head with End Switch, for V8043E 5000 series	18 in. (457 mm) leads on same side of manual lever	24 Vac	50 Hz; 60 Hz	4.4 A running @ 120 V; 50 VA pilot duty @ 24 V	Two-way valves; Valves with Action of Spring return to close	



# Motorized Zone Valves

Material Number	Description	Electrical Connections	Voltage	Frequency	Auxiliary Switch Ratings	Used With	
40003916-548/U	24 Vac, 50/60 Hz Replacement head for V8043F, With End Switch	screw terminal block on same side of manual lever	24 Vac	50 Hz; 60 Hz	4.4 A running @ 120 V; 50 VA pilot duty @ 24 V	Two-way valves; Valves with Action of Spring return to close	
802343/U	small o-ring; .114 inside dia.; .070 thickness; material: rubber						

# Motorized Zone Valves

## MZV Series Motorized Zone Valves



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

- Rack and pinion linear design.
- Fast acting, 15 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.
- 30 mm collar (valve/actuator interface)

**Application:** Residential or Commercial Zoning for hot water heating or chilled water air conditioning systems, fan coil units or indirect water heater service.

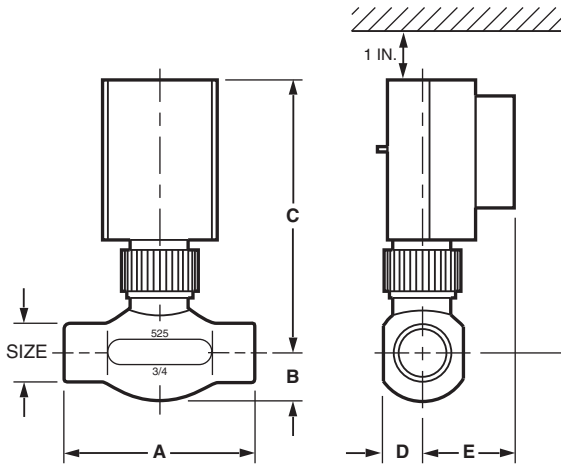
**Valve Type:** Zone Valve

**Body Pattern:** Two-way

**Voltage:** 24 Vac

**Frequency:** 60 Hz

**Dimensions in inches (millimeters)**



MZV SERIES	VALVE SIZE	DIMENSIONS IN INCHES (MM)				
		A	B	C	D	E
524	1/2 IN.	3-5/16 (84)	1 (25)	4-13/16 (122)	11/16 (17)	1-5/8 (41)
525	3/4 IN.	3-5/16 (84)	13/16 (21)	4-13/16 (122)	11/16 (17)	1-5/8 (41)
526	1 IN.	3-13/16 (97)	1 (25)	4-13/16 (122)	13/16 (21)	1-5/8 (41)
527	1-1/4 IN.	3-13/16 (97)	1 (25)	4-13/16 (122)	13/16 (21)	1-5/8 (41)

M23259B

**Auxiliary End Switch:** SPST

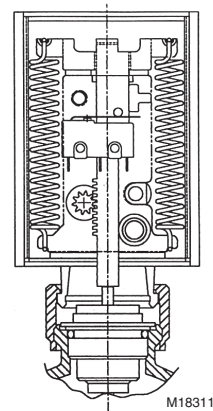
**Ambient Temperature Range:** 125°F Maximum (52°C Maximum)

**Pressure Range (psi):** Maximum Water – 125 psi

**Pressure Range (kPa):** Maximum Water – 862 kPa



**Operating Humidity Range (% RH):** 5 to 95% relative humidity, non-condensing.

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



Material Number	Capacity (Cv)	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Maximum Differential Pressure Ratings (Close-off) (psi)
MZV524E-T/U	5.8 Cv	1/2 in.	DN15	NPT	20 psi
MZV525E/U	5.8 Cv	3/4 in.	DN20	Sweat	20 psi
MZV525E-T/U	5.8 Cv	3/4 in.	DN20	NPT	20 psi
MZV526E/U	7.0 Cv	1 in.	DN25	Sweat	17.5 psi
MZV526E-T/U	7.0 Cv	1 in.	DN25	NPT	17.5 psi
MZV527E/U	7.0 Cv	1 1/4 in.	DN32	Sweat	17.5 psi

## MZV Series Replacement Parts

Material Number	Description	Voltage	Frequency	Auxiliary End Switch	Maximum Differential Pressure Ratings (Close-off) (psi)	Pressure Range (psi)	Pressure Range (kPa)	Ambient Temperature Range	
MZV520-RP/U	Replacement operator for MZV 524/525/526/527 with end switch	24 Vac	60 Hz	SPST				240°F Maximum (115°C Maximum)	
MZV521-RP/U	Replacement operator for MZV 524/525/526/527 without end switch	24 Vac	60 Hz	No				240°F Maximum (115°C Maximum)	
MZV525-RP/U	Replacement valve cartridge for 1/2 in. (MZV524, MZV524E) and 3/4 in. (MZV525, MZV525E) valves	24 Vac	60 Hz		20 psi	Maximum Water – 125 psi	Maximum Water – 862 kPa	240°F Maximum (115°C Maximum)	
MZV526-RP/U	Replacement valve cartridge for 1 in. (MZV526, MZV526E) and 1 1/4 in. (MZV527, MZV527E) valves	24 Vac	60 Hz		17.5 psi	Maximum Water – 125 psi	Maximum Water – 862 kPa	240°F Maximum (115°C Maximum)	

# AquaPUMP Hydronic Circulating Pump

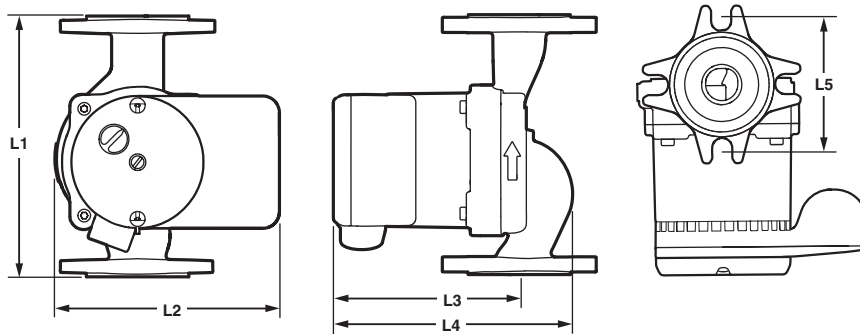
## AquaPUMP™ Hydronic Circulating Pumps



The PC3F in-line, wet rotor circulator with universal flange is designed for applications in closed-loop hydronic heating and cooling systems, as well as in solar systems. The pump is non-submersible and for use in dry, frost-free, well-ventilated installations.

- Twist-To-Fit Universal Flange, Rotates 90° to fit most installations with a single product
- Three pump sizes cover every application
- 3-Speed Versatility maximizes efficiency and provides sufficient flow rates with a single pump
- Universal Design replaces wide range of competitive models with just one brand
- Check valves included with each pump

Dimensions in inches (millimeters)



MATERIAL NUMBER	L1	L2	L3	L4	L5
PC3F1558IUF00	6.5 (165.5)	5.5 (140)	4.7 (118)	6.6 (167)	3.2 (80.2)
PC3F2699IUF00	6.5 (165.5)	6.1 (155)	6.5 (165.5)	7.75 (197)	3.2 (80.2)
PC3F4344IUF00	8.5 (216)	6.1 (155)	6.9 (174)	8.9 (227)	3.4 (87.3)

M34725

**Voltage:** 115V at 60 Hz

**Maximum Water Pressure (psi):** 145 psi

**Ambient Temperature Range:** 32°F to 104°F (0°C to 40°C)

**Materials:** Housing – Cast Iron; Bearings and Shaft – Ceramic

**Fluid Temperature:** 230°F Maximum (110°C Maximum)

**Maximum Noise Rating:** Driving (dB(A) @ 1m) – 43

**Common Product Name:** AquaPUMP

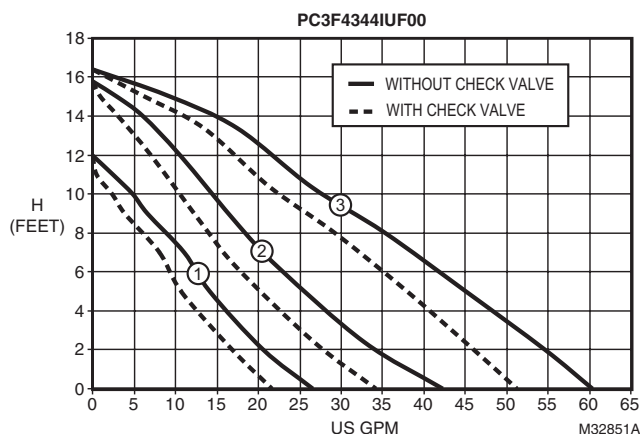
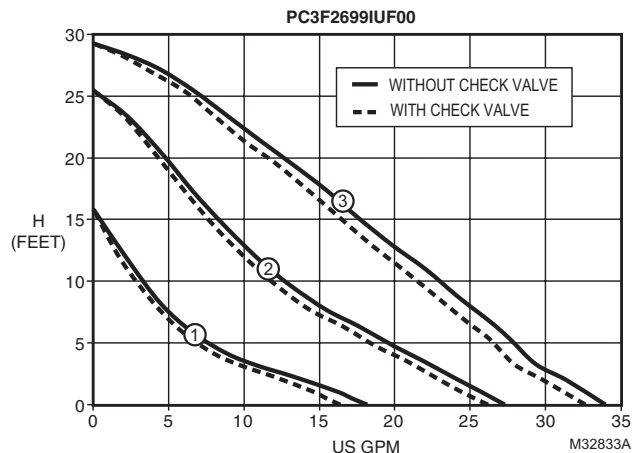
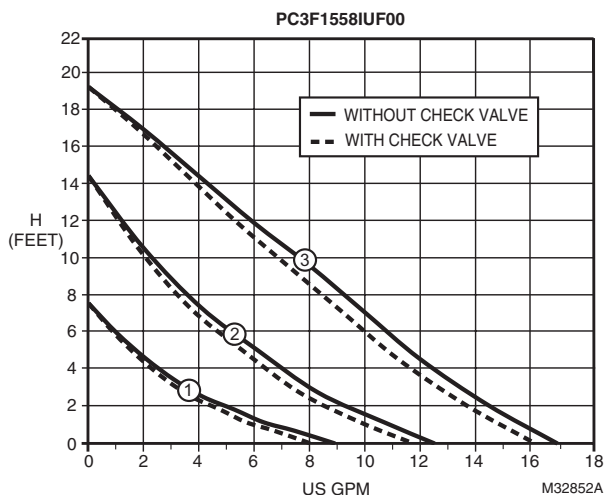
Material Number	Maximum Flow Rate (gpm)	Pressure Head	Approximate, Dimensions (in.)	Current Draw	Description
PC3F1558IUF00/U	15 gpm	19	6-1/2 in. A to B ports End to End	Nominal (minimum speed) – 0.3; Nominal (maximum speed) – 0.75	3-Speed Circulation Pump
PC3F2699IUF00/U	25 gpm	31	6-1/2 in. A to B ports End to End	Nominal (minimum speed) – 1.1; Nominal (maximum speed) – 1.7	3-Speed Circulation Pump
PC3F4344IUF00/U	45 gpm	17	8-1/2 in. A to B ports End to End	Nominal (minimum speed) – 1.1; Nominal (maximum speed) – 1.7	3-Speed Circulation Pump

## AquaPUMP™ Accessories

Material Number	Fluid Temperature	Approximate, Dimensions (in.)	Description	
PCG100/U	230°F Maximum (110°C Maximum)	1 in.	1 inch Circulating Pump Flange Gasket	
PCG125/U	230°F Maximum (110°C Maximum)	1-1/4 in.	1-1/4 inch Circulating Pump Flange Gasket	
PCG150/U	230°F Maximum (110°C Maximum)	1-1/2 in.	1-1/2 inch Circulating Pump Flange Gasket	
PCV100/U	200°F Maximum (93°C Maximum)	1 in.	1 inch Circulating Pump Check Valve	
PCV125/U	200°F Maximum (93°C Maximum)	1-1/4 in.	1-1/4 inch Circulating Pump Check Valve	
PCV150/U	200°F Maximum (93°C Maximum)	1-1/2 in.	1-1/2 inch Circulating Pump Check Valve	

# AquaPUMP Hydronic Circulating Pump

## Flow Curves



## AquaPUMP™ cross-reference

Use this tool to meet your installation needs. Each Honeywell circulator replaces both regular and rotated flange models.

Honeywell				Grundfos		Taco		Bell & Gossett	Armstrong	Wilo	
Material Number	Pump Length	Max Flow	Speed	Single Speed	3-Speed	Single Speed	3-Speed			Single Speed	3-Speed
PC3F1558IUF00	6.5 in.	15 gpm	High	UP-42F UP-42F-FC	UPS15-58 High UPS15-58-FC High	005F 007F 008F 008F-IFC	00R High 00R Med	NRF-22 LR-20WR	Astro 30 Astro 30-3 Astro 50-3 Astro 230C1	Star 16	Star S16 High
			Medium	UP15-42FC	UPS15-58 Low UPS15-58-FC Low	005F-IFC 006F 006F-IFC 007F-IFC	00R Low	NRF9F/LW NRF-25 Med		Star S16 Med	
			Low	UP15-18F UP15-18F-FC						Star 5 S16 Low	
PC3F2699IUF00	6.5 in.	34 gpm	High	UP26-96F UP26-96F-FC UP26-116F UP26-116F-FC	UPS26-99 High UPS26-99-FC High	0011F 0011F-IFC 0013F 0013F-IFC		NRF-36 Med NRF-45 Med H-41	E7 Astro 50 Astro 50-3	Star 30F Star 32F	S21 High
			Medium	UP26-64F UP26-99FC	UPS26-99 Low UPS26-99-FC Low	0014F 0014F-IFC			Star 17 FX	S21 Med	
			Low					NRF-33		Star S21 Low	
PC3F4344IUF00	8.5 in.	59 gpm	High	UP43-44F UP43-44F-FC	UPS43-44 High UPS43-44-FC High			HV H-32	E16		
			Medium		UPS43-44 Med UPS43-44-FC Med	0010F 0012F-IFC	0010 Med	NRF-33	H32		
			Low		UPS43-44 Low UPS43-44-FC Low	0010F-IFC	0010 Low				

The information in this table is based on publicly available information as of the date of this publication. Honeywell is not liable if information is found to be incorrect.

If the cross referenced model uses a flow check valve, then use a flow check with the Honeywell model as well.

# Differential Pressure Regulators

## D146 Differential Pressure Regulators



The differential pressure regulator eliminates excessive pump head pressure, when most radiator valves are closed due to reduced demand, by controlling flow through a bypass line when the difference between supply/return exceeds the setpoint.

- 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.

**Valve Type:** Pressure Regulating Valve

**Connection Type:** Angle type, female threaded NPT

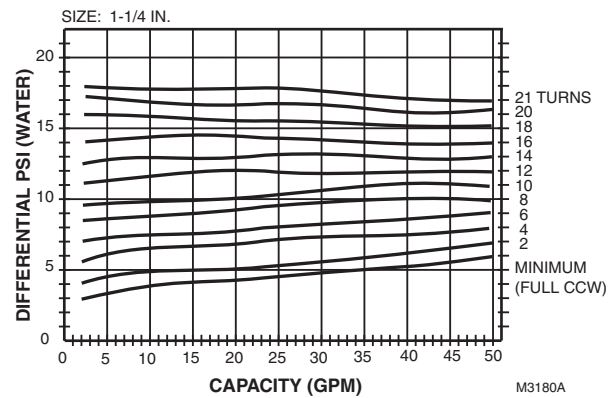
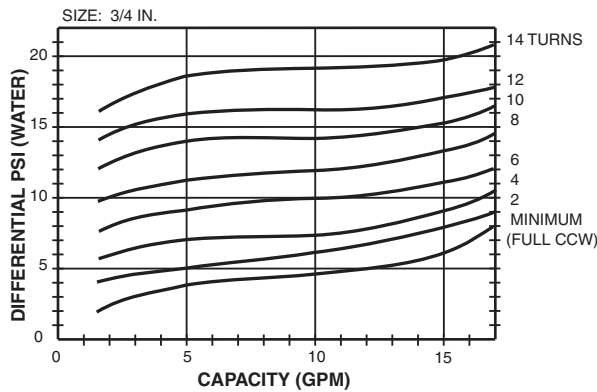
**Materials (Body):** Brass (body), Stainless steel and engineered thermoplastics. EPDM diaphragm.

**Outlet Pressure Adjustment Range (psi):** 0-17 psi

**Max. Inlet Pressure Rating (psi):** 85 Psi

**Operating Temperature Range:** 230°F Maximum (110°C Maximum)

### D146 Capacities



Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity	Approximate, Dimensions	Description	Includes
D146M1032	3/4 in.	DN20	120,000 Btu/hr; 18 gpm	6 1/4 in. high x 3 3/8 in. wide (160 mm high x 86 mm wide)	Differential Pressure Regulator, 3/4 in.	Built-in differential pressure indicator
D146M1040	1 1/4 in.	DN32	395,000 Btu/hr; 50 gpm	8 1/2 in. high x 4 1/4 in. wide (213 mm high x 109 mm wide)	Differential Pressure Regulator, 1 1/4 in.	Built-in differential pressure indicator

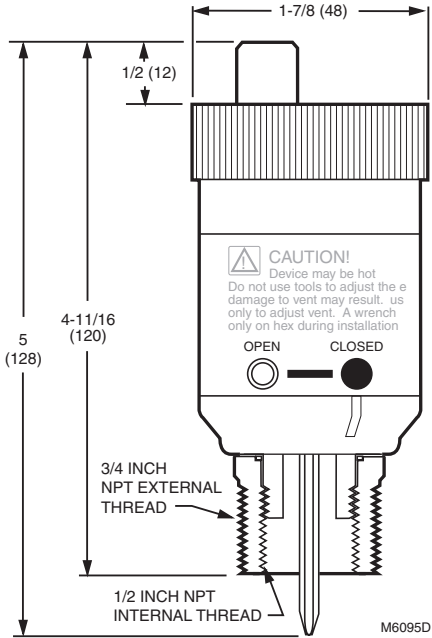
## EA79 Industrial Air Vents



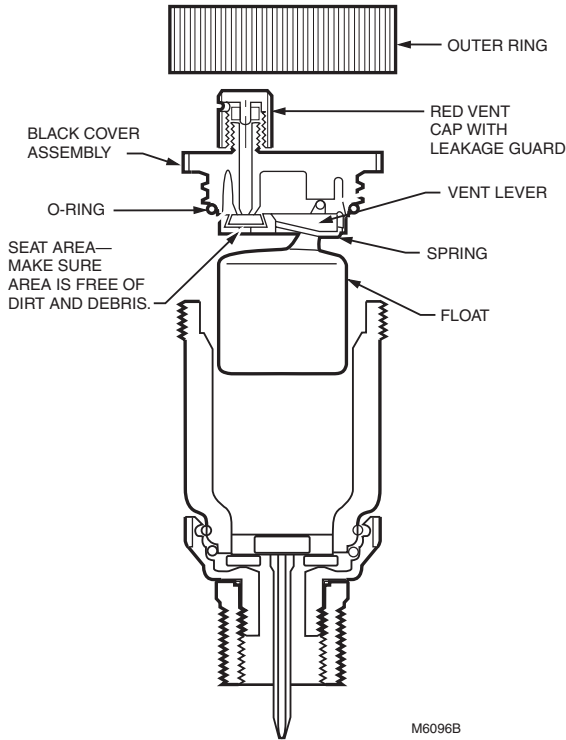
The Honeywell EA79 Industrial Air Vent purges air from high pressure mains and equipment in hot or cold closed water systems.

- 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.

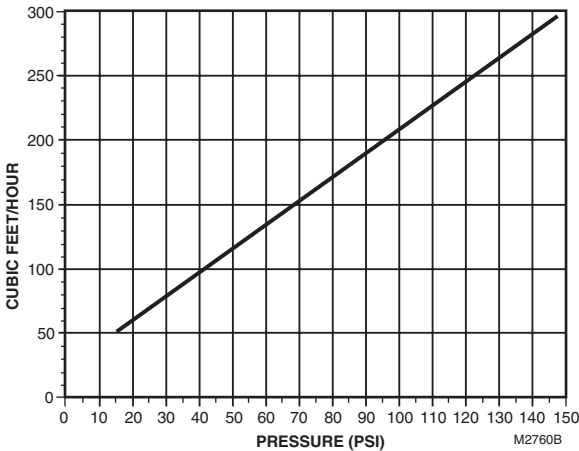
Dimensions in inches (millimeters)



EA79 construction



EA79 capabilities



**Application:** Hydronics  
**Operating Temperature Range:** 250°F Maximum (120°C Maximum)  
**Maximum Safe Operating Pressure (psi):** 150 psi  
**Maximum Safe Operating Pressure (kPa):** 1034 kPa  
**Approximate Dimensions:** 5 in. long x 1 7/8 in. diameter (128 mm long x 48 mm diameter)  
**Comments:** Internal parts made of corrosion-resistant and chemical-resistant materials for use with hydronic systems that may contain concentrations of propylene or ethylene glycol.

Material Number	Connection Type	Connection Size (in.)	Description
EA79A1004	3/4 in. male NPT pipe thread with 1/2 in. female NPT pipe thread	3/4 in.	Industrial automatic air vent



# Air Vents and Eliminators

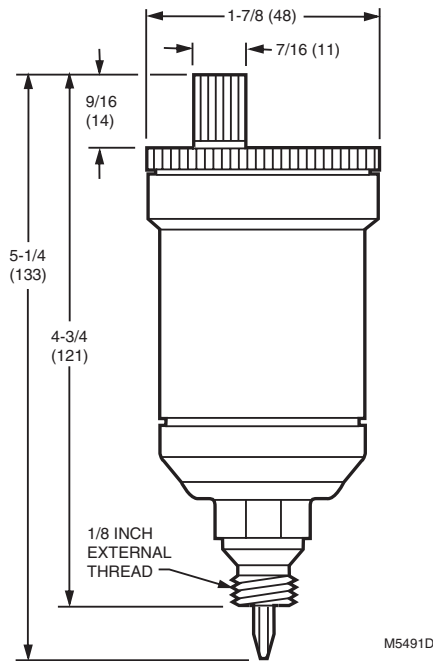
## EA122A Automatic Air Vent for Non-Heating System Applications



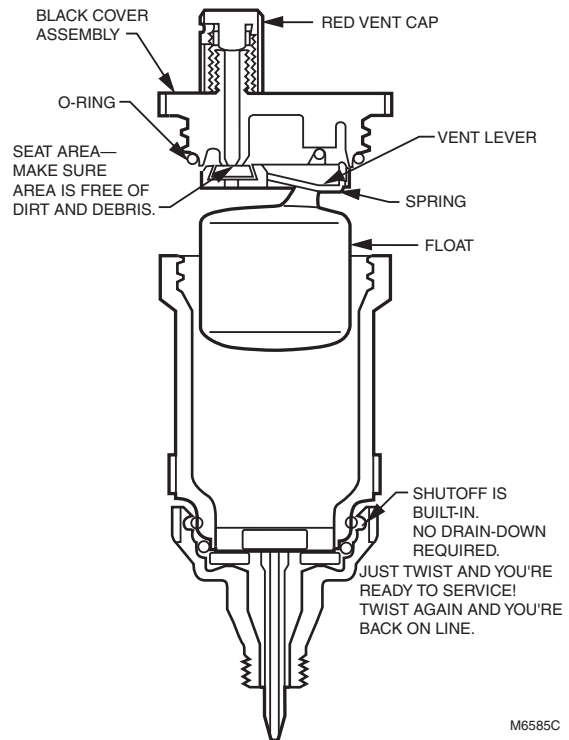
The Honeywell EA122A Automatic Air Vent purges air from high pressure mains and equipment in hot or cold potable water systems.

- 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 in inches (millimeters)



EA122A construction



**Application:** Potable water installations

**Operating Temperature Range:** 212°F Maximum (100°C Maximum)

**Maximum Safe Operating Pressure (psi):** 90 psi

**Maximum Safe Operating Pressure (kPa):** 620 kPa

**Approximate Dimensions:** 5 1/4 in. long x 1 7/8 in. diameter (133 mm long x 48 mm diameter)

**Comments:** Internal parts made of corrosion-resistant and chemical-resistant materials for use with hydronic systems that may contain concentrations of propylene or ethylene glycol.

Material Number	Connection Type	Connection Size (in.)	Description
EA122A1028	Male NPT	1/8 in.	Automatic air vent with built-in shut off valve; includes EPDM seat disc and O-ring.
EA122B117	Male NPT	1/8 in.	Automatic Air vent without build-in shutoff valve or leakage guard; includes EPDM seat disc and O-ring.

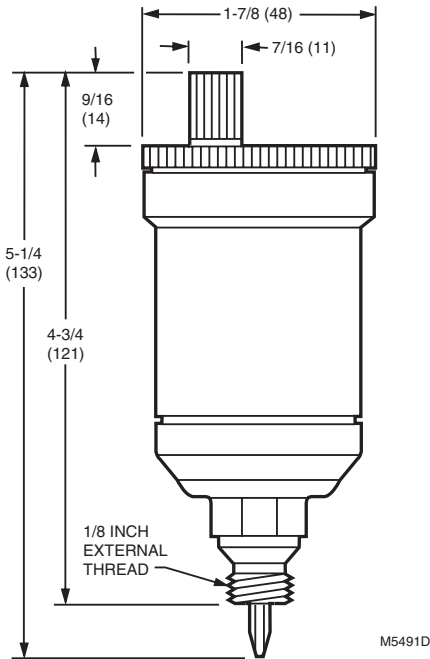
## EA122A Automatic Air Vent for Heating System Applications



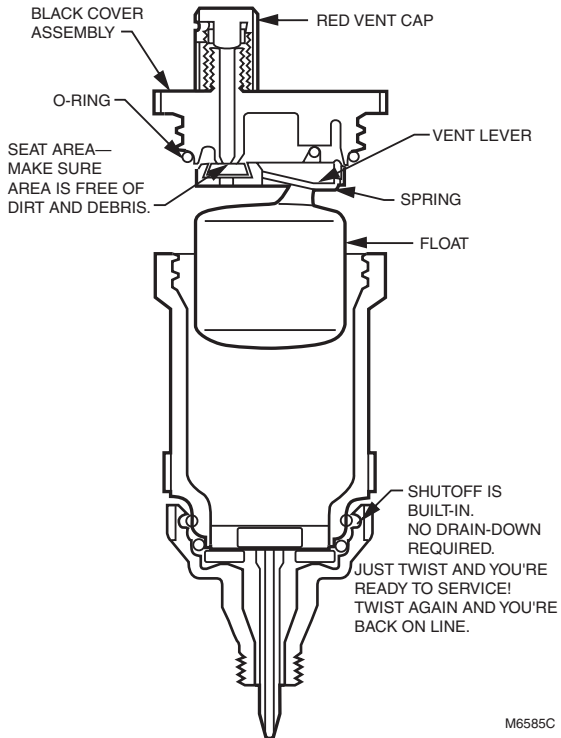
The Honeywell EA122A Automatic Air Vent purges air from high pressure mains and equipment in hot or cold closed water systems.

- 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 in inches (millimeters)



EA122A construction



**Application:** Hydronic heating and cooling  
**Operating Temperature Range:** 212°F Maximum (100°C Maximum)  
**Maximum Safe Operating Pressure (psi):** 90 psi  
**Maximum Safe Operating Pressure (kPa):** 620 kPa

**Approximate, Dimensions:** 5 1/4 in. long x 1 7/8 in. diameter (133 mm long x 48 mm diameter)  
**Comments:** Internal parts made of corrosion-resistant and chemical-resistant materials for use with hydronic systems that may contain concentrations of propylene or ethylene glycol.

Material Number	Connection Type	Connection Size (in.)	Description
EA122A1002	Male NPT	1/8 in.	Automatic air vent with built-in shutoff valve and leakage guard, oil resistant

## Air Vents and Eliminators

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



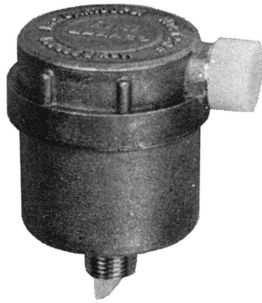
The GoldTop offers a convenient, one-fits-all concept, to stock one vent for all your venting needs, between 1 and 150 psi systems. Honeywell's revolutionary patented fulcrum design offers a venting rate of 3-4 times that of other products.

- Patent No. 5,988,201.

**Application:** Residential or commercial heating and cooling systems  
**Operating Temperature Range:** 240°F Maximum (115°C Maximum)  
**Maximum Safe Operating Pressure (psi):** 150 psi  
**Maximum Safe Operating Pressure (kPa):** 1034 kPa  
**Approximate, Dimensions:** 1 27/32 in. diameter x 3 1/4 in. long  
 (24 mm diameter x 83 mm long)  
**Materials:** Brass

Material Number	Connection Type	Connection Size (in.)	Weight	Description
FV180/U	Male NPT	1/8 in.	0.4 lb (0.18 kg)	1/8 in. NPT Goldtop Universal Air Vent for heating and cooling systems
FV180A/U	Male NPT	1/4 in.	0.4 lb (0.18 kg)	1/4 in. NPT Goldtop Universal Air Vent for heating and cooling systems

### 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 and cooling systems  
**Operating Temperature Range:** 240°F Maximum (115°C Maximum)  
**Maximum Safe Operating Pressure (psi):** 150 psi  
**Maximum Safe Operating Pressure (kPa):** 1034 kPa  
**Approximate, Dimensions:** 2 in. high x 1 5/32 in. diameter (51 mm high x 29 mm diameter)  
**Materials:** Brass

Material Number	Connection Type	Connection Size (in.)	Weight	Description
FV147/U	Male NPT	1/8 in.	0.12 lb (0.06 kg)	1/8 in. NPT Air Vent for heating and cooling systems
FV147A/U	Male NPT	1/4 in.	0.12 lb (0.06 kg)	1/4 in. NPT Air Vent for heating and cooling systems

### AP400 Air Purger



#### Replacement Parts - Old Style AM Series (Aquamix)

- Heavy Duty cast iron construction
- 1 inch, 1 1/4 and 1 1/2 inch models (inlet and outlet)
- 1/2 inch bottom tapping for expansion tank mount
- 1/8 inch top tapping for air vent mount
- Directional flow arrow for correct installation

**Application:** Closed heating systems  
**Operating Temperature Range:** 275°F Maximum (135°C Maximum)  
**Maximum Safe Operating Pressure (psi):** 125 psi  
**Maximum Safe Operating Pressure (kPa):** 862 kPa  
**Approximate, Dimensions:** 6 in. long x 3-3/4 in. high x 2-3/8 in. wide  
 (152 mm long x 95 mm high x 60 mm wide)  
**Materials:** Cast Iron

Material Number	Connection Type	Pipe Size (inch)	Connection Size (in.)	Weight	Description
AP400/U	Female NPT	1 in.	Bottom: 1/2 in.; Top: 1/8 in.	4.2 lb (1.9 kg)	1 in. NPT Air Purger for closed heating systems
AP401/U	Female NPT	1 1/4 in.	Bottom: 1/2 in.; Top: 1/8 in.	3.8 lb (1.7 kg)	1 1/4 in. NPT Air Purger for closed heating systems
AP402/U	Female NPT	1 1/2 in.	Bottom: 1/2 in.; Top: 1/8 in.	8.6 lb (3.9 kg)	1 1/2 in. NPT Air Purger for closed heating systems

# SuperVent® Air Eliminator — Eliminates Air from Hydronic Heating Systems without Bleeding

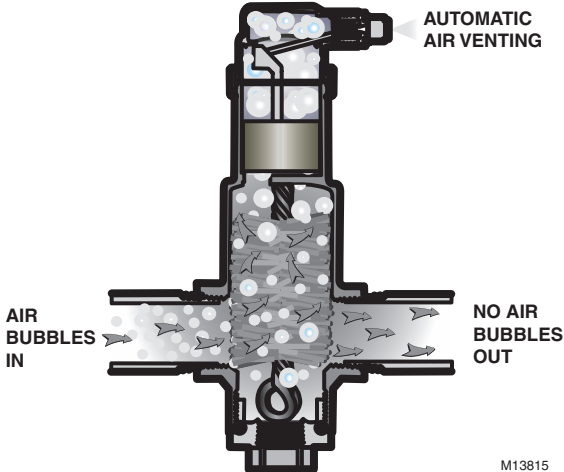


The Honeywell SuperVent, purges air through a no clog vent assembly, to control dirt and debris and minimize air vent fouling in Hydronic heating systems, while eliminating the need for bleeding.

- 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.

**Application:** Residential or Commercial closed loop hydronic heating or chilled water systems  
**Operating Temperature Range:** 240°F Maximum (115°C Maximum)  
**Maximum Safe Operating Pressure (psi):** 125 psi  
**Maximum Safe Operating Pressure (kPa):** 862 kPa  
**Materials:** Bronze

How it works

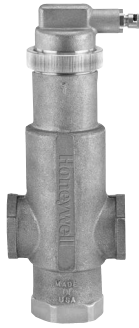


M13815

Material Number	Pipe Size (inch)	Approximate, Dimensions	Connection Type	Connection Size (in.)	Capacity (Cv)	Weight
PV075/U	3/4 in.	6 29/32 in. high x 2 11/16 in. wide; Maximum diameter: 1 13/16 in. (176 mm high x 68 mm wide; Maximum diameter: 46 mm)	Female NPT	1/2 in.	13 Cv	2 lb (0.9 kg)
PV075S/U	3/4 in.	6 29/32 in. long x 3 3/16 in. wide; Maximum diameter: 1 13/16 in. (176 mm high x 81 mm long; Maximum diameter: 46 mm)	Sweat	1/2 in.	13 Cv	2 lb (0.9 kg)
PV100/U	1 in.	6 1/2 in. high x 3 3/32 in. wide; Maximum diameter: 2 3/32 in. (192 mm high x 79 mm long; Maximum diameter: 53 mm)	Female NPT	1/2 in.	22 Cv	2.75 lb (1.2 kg)
PV100S/U	1 in.	6 1/2 in. high x 3 11/16 in. wide; Maximum diameter: 2 3/32 in. (192 mm long x 94 mm wide; Maximum diameter: 53 mm)	Sweat	1/2 in.	22 Cv	2.75 lb (1.2 kg)
PV125/U	1 1/4 in.	7 27/32 in. high x 3 11/16 in. wide; Maximum diameter: 2 1/2 in. (199 mm high x 94 mm wide; Maximum diameter: 64 mm)	Female NPT	1/2 in.	38 Cv	3.5 lb (1.6 kg)
PV125S/U	1 1/4 in.	7 27/32 in. high x 4 13/32 in. wide; Maximum diameter: 2 1/2 in. (199 mm high x 112 mm wide; Maximum diameter: 64 mm)	Sweat	1/2 in.	38 Cv	3.5 lb (1.6 kg)
PV150/U	1 1/2 in.	9 5/32 in. high x 4 5/16 in. long; Maximum diameter: 3 3/32 in. (233 mm high x 110 mm long; Maximum diameter: 79 mm)	Female NPT	1/2 in.	50 Cv	5.2 lb (2.4 kg)
PV150S/U	1 1/2 in.	9 5/32 in. high x 4 5/16 in. long; Maximum diameter: 3 3/32 in. (233 mm high x 110 mm long; Maximum diameter: 79 mm)	Sweat	1/2 in.	50 Cv	5.2 lb (2.4 kg)
PV200/U	2 in.	10 9/32 in. high x 5 3/16 in. long; Maximum diameter: 4 in. (261 mm high x 132 mm long; Maximum diameter: 102 mm)	Female NPT	1/2 in.	95 Cv	8 lb (3.6 kg)
PV200S/U	2 in.	10 9/32 in. high x 5 3/16 in. long; Maximum diameter: 4 in. (261 mm high x 132 mm long; Maximum diameter: 102 mm)	Sweat	1/2 in.	95 Cv	8 lb (3.6 kg)

# Air Vents and Eliminators

## SuperVent® Air Eliminator Universal Models — Eliminate Air from Hydronic Heating Systems without Bleeding



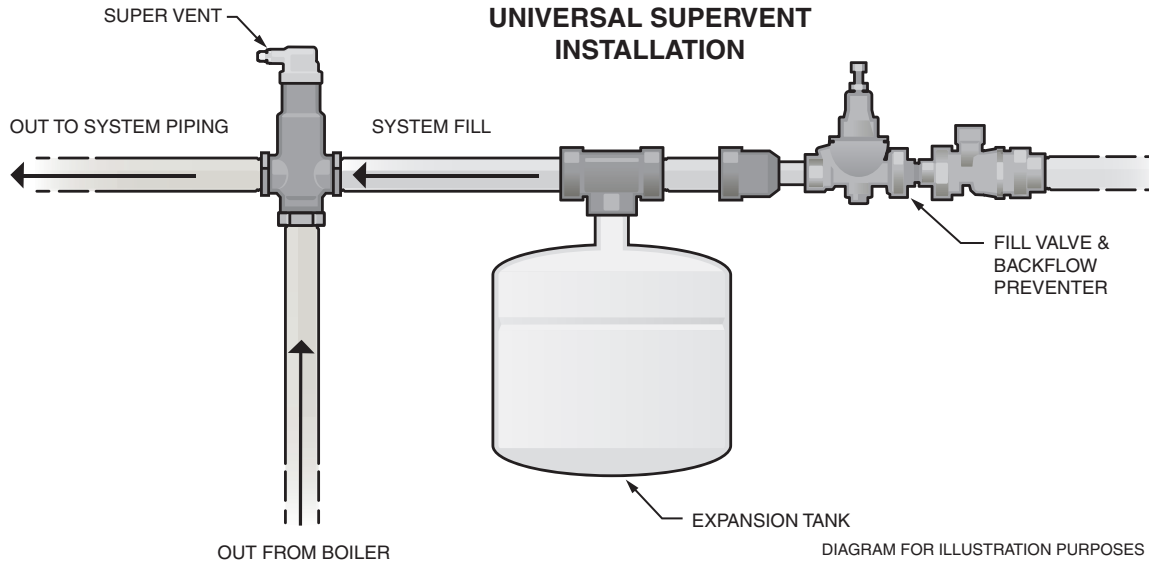
The Honeywell SuperVent, purges air through a no clog vent assembly, to control dirt and debris and minimize air vent fouling in Hydronic heating systems, while eliminating the need for bleeding.

- 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.

**Application:** Residential or Commercial closed loop hydronic heating or chilled water systems  
**Connection Type:** Female NPT  
**Operating Temperature Range:** 240°F Maximum (115°C Maximum)

**Maximum Safe Operating Pressure (psi):** 125 psi  
**Maximum Safe Operating Pressure (kPa):** 862 kPa  
**Materials:** Bronze

### Typical Installation



M13834

Material Number	Pipe Size (inch)	Connection Size (in.)	Capacity (Cv)	Approximate, Dimensions	Weight
PVU100/U	1 in.	1 in. bottom inlet	6.2 Cv	7 27/32 in. high x 4 13/32 in. wide; Maximum diameter: 2 3/32 in. (199 mm high x 112 mm wide; Maximum diameter: 53 mm)	2.8 lb (1.3 kg)
PVU125/U	1 1/4 in.	1 1/4 in. bottom inlet	10.5 Cv	8 1/4 in. high x 3 11/16 in. wide; Maximum diameter: 2 1/2 in. (212 mm high x 94 mm long; Maximum diameter: 64 mm)	3.6 lb (1.6 kg)
PVU150/U	1 1/2 in.	1 1/2 in. bottom inlet	14.3 Cv	9 13/32 in. high x 4 5/16 in. wide; Maximum diameter: 3 3/32 in. (239 mm high x 110 mm long; Maximum diameter: 79 mm)	5.2 lb (2.4 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  
**Operating Temperature Range:** 240°F Maximum (115°C Maximum)  
**Maximum Safe Operating Pressure (psi):** 150 psi

**Maximum Safe Operating Pressure (kPa):** 1034 kPa  
**Materials:** Brass

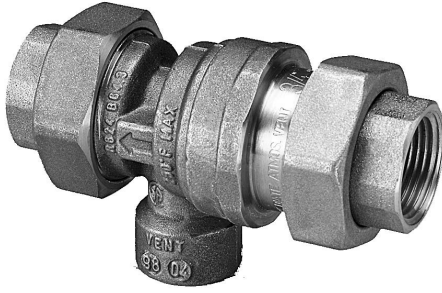
Material Number	Connection Type	Pipe Size (inch)	Pipe Size (DN)	Connection Size (in.)	Weight	Approximate, Dimensions
SV173/U	NPT	3/8 in.	DN10	3/8 in.	0.43 lb (0.19 kg)	3 in. high x 2 in. diameter; Maximum diameter: 2 in. (76 mm high x 51 mm diameter; Maximum diameter: 51 mm)
SV175/U	NPT	1/2 in.		1/2 in.	0.43 lb (0.19 kg)	3 in. high x 2 in. diameter; Maximum diameter: 2 in. (76 mm high x 51 mm diameter; Maximum diameter: 51 mm)

**SuperVent Replacement Parts**

Material Number	Description
PV-001RP/U	Replacement Air Vent Assembly for PowerVent (pre 2004) size 3/4 in., 1 in., 1 1/4 in., 1 1/2 in. and 2 in.
PV-020RP/U	PV SuperVent Vent Top Replacement (New Style 90 Degree)

# Backflow Preventers

## Backflow Preventers with Intermediate Atmospheric Vent for Heating Systems



Honeywell BP900 backflow preventer is designed for continuous pressure applications on small supply lines. It uses an intermediate vacuum breaker to protect against backflow and back siphonage of contaminated water into portable water supplies.

- Ideal for boiler feed lines, livestock drinking fountains, trailer park water hook-ups, laboratory equipment and numerous other applications
- Suitable for hot or cold water service
- Designed for non-continuous backflow temperatures up to 250°F and working supply pressures up to 175 psi

**Application:** Backflow Preventer

**Connection Type:** NPT

**Ambient Temperature Range:** 250°F Maximum (121°C Maximum)

**Maximum Safe Operating Pressure (psi):** 175 psi

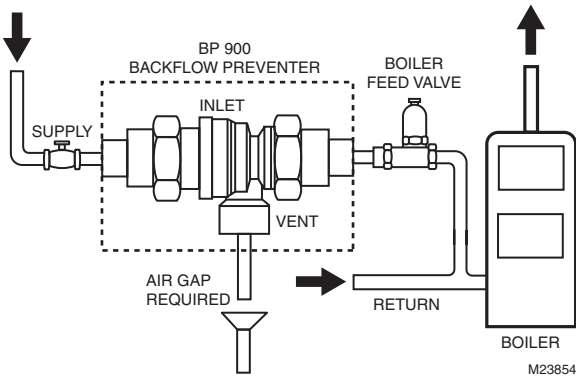
**Maximum Safe Operating Pressure (kPa):** 1207 kPa

**Approximate, Dimensions:** 4 7/8 in. long x 2 1/2 in. wide (124 mm long x 63 mm wide)

**Approvals, CSA:** Certified

**Approvals, Others:** ASSE Certified

### Typical Installation



Material Number	Pipe Size (inch)	Pipe Size (DN)	Connection Size (in.)	Description	Weight
BP900/U	1/2 in.	DN15	1/2 in.	Double check intermediate vacuum breaker - 1/2 in. NPT	1.2 lb (0.54 kg)



## “DialSet” Boiler Fill Valves



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

- DialSet Fill Valve.
- Built in check valve.

**Valve Type:** DialSet Fill Valve

**Pipe Size (inch):** 1/2 in. Inlet Size – 1/2 in.

**Connection Type:** NPT; Inlet – Sweat or Threaded

**Ambient Temperature Range:** 212°F Maximum (100°C Maximum)

**Pressure Range (psi):** 8 psi to 50 psi

**Materials (Body):** Brass

Material Number	Application	Maximum Safe Operating Pressure (psi)	Maximum Safe Operating Pressure (kPa)	Weight	Description
FM911/U	DialSet boiler fill valve pressure reducing valve 15 psi preset and backflow preventer (VF06-100-SUSUT and BP900 assembly)	150 psi	1034 kPa	4 lb (1.8 kg)	1/2 in. NPT Backflow preventer and DialSet boiler fill assembly, includes union nut and both sweat and NPT tailpiece
VF06-100-SUSUT/U	DialSet Fill Valve pressure regulating boiler feed valve with check valve.	150 psi	1034 kPa	1.8 lb (0.8 kg)	1/2 in. sweat union pressure reducing valve, DialSet boiler fill valve, includes union nut and both sweat and NPT tailpiece

# Thermometers and Gauges

## Sweat and Threaded Thermometers with Thermowells



### 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.

**Application:** Brass thermowell is included to allow the thermometer to be removed without draining the system.

**Temperature Range:** 32°F to 250°F (0°C to 121°C)

**Materials:** Case: steel; Well: brass

**Comments:** Brass thermowell is included to allow the thermometer to be removed without draining the system.

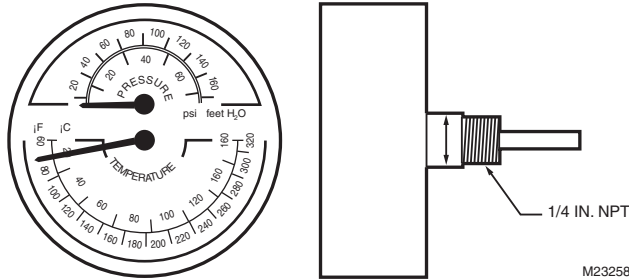
Material Number	Connections	Approximate, Dimensions	Weight
GS200/U	1/2 in. Sweat	Dial Size – 2 in.; Stem length – 1 1/4 in. (Dial Size – 51 mm; Stem length – 51 mm)	0.21 lb (0.095 kg)
GS250/U	1/2 in. Sweat	Dial Size – 2 1/2 in.; Stem length – 1 1/4 in. (Dial Size – 63.5 mm; Stem length – 51 mm)	0.25 lb (0.114 kg)
GT161/U	1/2 in. NPT	Dial Size – 2 in.; Stem length – 1 1/2 in. (Dial Size – 51 mm; Stem length – 51 mm)	0.21 lb (0.095 kg)
GT162/U	1/2 in. NPT	Dial Size – 2 1/2 in.; Stem length – 1 1/2 in. (Dial Size – 63.5 mm; Stem length – 51 mm)	0.25 lb (0.114 kg)

## Tridicators



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

### Dimensions Diagram



**Application:** Pressure/temperature gauge with relief set point indicator

**Maximum Safe Operating Pressure (psi):** 75 psi

**Temperature Range:** 60°F to 320°F (15°C to 160°C)

Material Number	Connections	Approximate, Dimensions	Weight	Comments
TD-090/U	1/4 in. NPT	Dial Size – 3 1/8 in.; Stem length – 1 21/32 in. (Dial Size – 79.4 mm; Stem length – 23 mm)	0.3 lb (0.14 kg)	Pressure/temperature gauge with relief set point indicator
TD-165/U	1/4 in. NPT	Dial Size – 3 1/8 in.; Stem length – 2 in. (Dial Size – 79.4 mm; Stem length – 42.1 mm)	0.3 lb (0.14 kg)	Pressure/temperature gauge with relief set point indicator
TDV-040/U	1/2 in. NPT	Dial Size – 3 1/8 in.; Stem length – 29/32 in. (Dial Size – 79.4 mm; Stem length – 23.02 mm)	0.4 lb (0.18 kg)	Pressure/temperature gauge with relief set point indicator and shut off valve

# Residential Expansion Tanks

## TK300 Series Expansion Tanks—Heating



Honeywell Expansion Tanks absorb hot water expansion in closed heating systems. They are equipped with butyl diaphragms to separate the air from the system water. Pre-pressurized, the tank keeps fluids circulating and maintains minimum pressure.

- 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 Safe Operating Pressure (psi):** 100 psi  
**Maximum Safe Operating Pressure (kPa):** 689 kPa

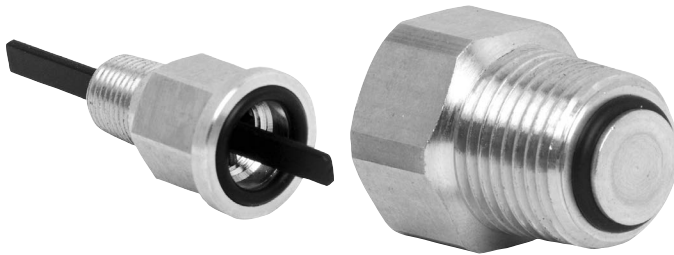
**Operating Temperature Range:** 240°F Maximum (115°C Maximum)  
**Comments:** Heating

Material Number	Connection Size (in.)	Connection Type	Diameter	Height	Volume	Weight	Maximum Acceptance Volume	Materials
TK300-15/U	1/2 in.	Male NPT	8 in. (203.2 mm)	12 5/8 in. (321 mm)	2.0 gal (7.6 L)	5 lb (2.3 kg)	1 gal (3.8 L)	Steel shell; Heavy duty Butyl diaphragm
TK300-30/U	1/2 in.	Male NPT	11 in. (279 mm)	15 1/2 in. (394 mm)	4.4 gal (16.7 L)	9 lb (4.1 kg)	2.5 gal (9.5 L)	Steel shell; Heavy duty Butyl diaphragm
TK300-60/U	1/2 in.	Male NPT	11 in. (279 mm)	23 in. (584 mm)	7.6 gal (28.8 L)	14 lb (6.4 kg)	2.5 gal (9.5 L)	Steel shell; Heavy duty Butyl diaphragm
TK300-90/U	1/2 in.	Male NPT	15 3/8 in. (390.5 mm)	21 in. (533 mm)	14.0 gal (53.1 L)	23 lb (10.4 kg)	11.5 gal (40.1 L)	Steel shell; Heavy duty Butyl diaphragm

## Expansion Tank Sizing based on BTU's

Boiler	Type of Radiation			
	Finned Tube Baseboard or Radiant Panel	Convectors or Unit Heaters	Radiators Cast Iron	Baseboard Cast Iron
Net Output in 1000's of BTU/Hr	Use Model	Use Model	Use Model	Use Model
25	TK300-15	TK300-15	TK300-15	TK300-15
50	TK300-15	TK300-15	TK300-30	TK300-30
75	TK300-30	TK300-30	TK300-30	TK300-60
100	TK300-30	TK300-30	TK300-60	TK300-60
125	TK300-30	TK300-60	TK300-60	TK300-90
150	TK300-30	TK300-60	TK300-90	TK300-90
175	TK300-60	TK300-60	XPS-030V	XPS-030V
200	TK300-60	TK300-60	XPS-030V	XPS-030V
250	TK300-60	TK300-90	XPS-030V	XPS-040V
300	TK300-90	XPS-030V	XPS-030V	XPS-040V
350	XPS-030V	XPS-030V	XPS-040V	XPS-060V
400	XPS-030V	XPS-040V	XPS-040V	XPS-060V

## Service Check Valves



**Service Check Valves for air vents and expansion tanks allow easy field service without draining system.**

**CAUTION:** Reduce system temperature to ambient and pressure to 0 psi before servicing component. Failure to do so may result in injuries.

**Maximum Safe Operating Pressure (psi):** 100 psi  
**Maximum Safe Operating Pressure (kPa):** 689 kPa  
**Operating Temperature Range:** 240°F Maximum (115°C Maximum)

Material Number	Connection Size (in.)	Connection Type
SCV-0125/U	1/8 in.	Inlet FNPT, Outlet MNPT
SCV-050/U	1/2 in.	Inlet FNPT, Outlet MNPT

# Boiler Trim Kits

## Boiler Trim Kit with SuperVent



Honeywell TK Series Combo Boiler Trim kits are a quick way to purchase boiler trim when doing a boiler change out. All kits with SuperVent include expansion tank and a high performance air eliminator.

**Maximum Safe Operating Pressure (psi):** 100 psi  
**Maximum Safe Operating Pressure (kPa):** 689 kPa  
**Operating Temperature Range:** 240°F Maximum (115°C Maximum)  
**Diameter:** 11 in. (279 mm)

Material Number	Connection Size (in.)	Connection Type	Height	Volume	Weight	Maximum Acceptance Volume	Includes
TK30PV100FM/U	SuperVent: 1 in.; Tank: 1/2 in.	Tank: Male NPT; SuperVent: Female NPT	15 1/2 in. (394 mm)	4.4 gal. (16.7 L)	16 lb (7.3 kg)	2.5 gal. (9.5 L)	TK300-30, PV100, SCV-050, FM911
TK30PV100SFM/U	SuperVent: 1 in.; Tank: 1/2 in.	Tank: Male NPT; SuperVent: Sweat	15 1/2 in. (394 mm)	4.4 gal. (16.7 L)	16 lb (7.3 kg)	2.5 gal. (9.5 L)	TK300-30, PV100S, SCV-050, FM911
TK30PV125FM/U	SuperVent: 1 1/4 in.; Tank: 1/2 in.	SuperVent: Female NPT; Tank: Male NPT	15 1/2 in. (394 mm)	4.4 gal. (16.7 L)	16.8 lb (7.6 kg)	2.5 gal. (9.5 L)	TK300-30, PV125, SCV-050, FM911
TK30PV125SFM/U	SuperVent: 1 1/4 in.; Tank: 1/2 in.	Tank: Male NPT; SuperVent: Sweat	15 1/2 in. (394 mm)	4.4 gal. (16.7 L)	16.8 lb (7.6 kg)	2.5 gal. (9.5 L)	TK300-30, PV125S, SCV-050, FM911
TK60PV100SFMNC/U	SuperVent: 1 1/4 in.; Tank: 1/2 in.	Tank: Male NPT; SuperVent: Female NPT	23 in. (584 mm)	4.4 gal. (16.7 L)	15.3 lb (6.9 kg)	2.5 gal. (9.5 L)	TK300-60, PV100S, FM911
TK60PV125FMNC/U	SuperVent: 1 1/4 in.; Tank: 1/2 in.	Tank: Male NPT; SuperVent: Female NPT	23 in. (584 mm)	7.5 gal. (28.8 L)	17.5 lb (7.95 kg)	2.5 gal. (9.5 L)	TK300-60, PV125, FM911
TK60PV125SFMNC	Sweat: 1 1/4 in.; Tank: 1/2 in.	Tank: Male NPT; Sweat: Female NPT	23 in. (584 mm)	7.5 gal. (28.8 L)	17.5 lb (7.95 kg)	2.5 gal. (9.5 L)	TK300-60, PV125S, FM911

## Boiler Trim Kit with Air Purger



Honeywell TK Series Boiler Trim kits are convenient when doing a boiler change out. They include expansion tank, air purger and air vent; selected models include FM911 combination boiler fill valve/backflow preventer and/or service check valves.

**Maximum Safe Operating Pressure (psi):** 100 psi  
**Maximum Safe Operating Pressure (kPa):** 689 kPa  
**Operating Temperature Range:** 240°F Maximum (115°C Maximum)  
**Diameter:** 11 in. (279 mm)

Material Number	Connection Size (in.)	Connection Type	Height	Volume	Weight	Maximum Acceptance Volume	Includes
TK300-30A-1FM/U	Tank: 1/2 in.; Air Purger: 1 in.	Tank: Male NPT; Air Purger: Female NPT	15 1/2 in. (394 mm)	4.4 gal. (16.7 L)	16.6 lb (7.5 kg)	2.5 gal. (9.5 L)	TK300-30, AP400, FV180, SCV-0125, SCV-050, FM911
TK300-30A-2FM/U	Air Purger: 1 1/4 in.; Tank: 1/2 in.	Tank: Male NPT; Air Purger: Female NPT	15 1/2 in. (394 mm)	4.4 gal. (16.7 L)	16.6 lb (7.5 kg)	2.5 gal. (9.5 L)	TK300-30, AP401, FV180, SCV-0125, SCV-050, FM911

# Thermostatic Radiator Valves and Actuators

## 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.**

- Includes plastic handle for manual operation.
- Knurled ring on T100R control head for easy attachment to V135.

**Application:** Thermostatic mixing/diverting valve for use in hydronic heating systems. Controls loop temperature in radiant heating systems.

**Capacity:** Standard

**Temperature Range:** 248°F Maximum (120°C Maximum)

**Collar Diameter:** 1 3/16 in. (30 mm)

**Materials (Body):** Bronze

**Pressure Ratings (psi):** Steam – 232 psi maximum

**Pressure Ratings (kPa):** Steam – 1601 kPa

**Maximum Differential Pressure Ratings (Close-off) (psi):** 17 psi maximum

Material Number	Approximate, Dimensions	Pipe Size (inch)	Pipe Size (DN)	Body Pattern	Capacity (Cv)	Connection Type	Used With
V135A1006	2 9/16 in. x 5 1/8 in. (64 mm x 128 mm)	3/4 in.	DN20	Three-way	3.7 Cv	Sweat	T100R
V135A1014	2 15/16 in. x 5 13/16 in. (74 mm x 148 mm)	1 in.	DN25	Three-way	5.8 Cv	Sweat	T100R
V135A1063	3 3/8 in. x 6 3/8 in. (86 mm x 162 mm)	1 1/4 in.	DN32	Three-way	5.8 Cv	Sweat	T100R

## T100R Thermostatic Mixing or Diverting Valve Actuator



**For use in hydronic heating systems with V135 Valves in a three-way mixing or diverting application. 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.

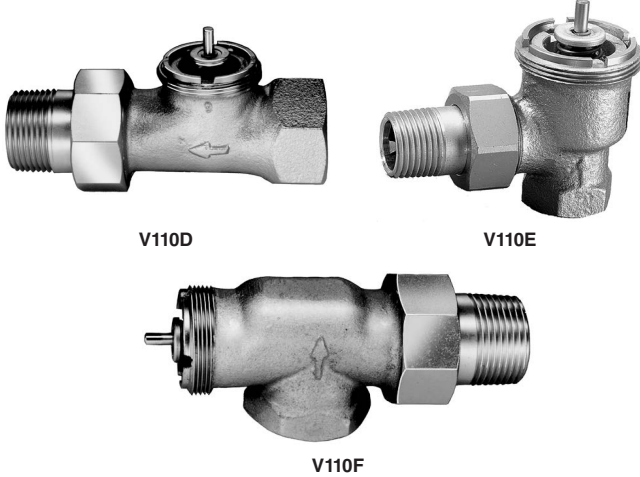
**Collar Diameter:** 1 3/16 in. (30 mm)

**Used With:** V135

Material Number	Application	Capillary Length	Temperature Range	Sensor (Integral or Remote)	Setpoint (Integral or Remote)
T100R1004	Thermostatic Radiator Controller for use with V135 valve body for diverting or mixing applications.	6 ft. 8 in. (2 m)	50°F to 122°F (10°C to 50°C)	Remote	Remote
T100R1012	Thermostatic Radiator Controller for use with V135 valve body for diverting or mixing applications.	6 ft. 8 in. (2 m)	86°F to 158°F (30°C to 70°C)	Remote	Remote

# Thermostatic Radiator Valves and Actuators

## V110 High Capacity Thermostatic Radiator Valves



**High Capacity Thermostatic Radiator Valves with T104 Actuators provide control of temperature by modulating the flow of hot water or steam through free-standing radiators, convectors and other heating units with high capacity requirements.**

- Designed with the higher capacity normally required by North American 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.
- All working parts are replaceable using service tool (MT110C1011) while valve remains in service, in-line, under pressure.
- Valves normally open without control mounted.
- Valves may be used with T104 Thermostatic Actuators.
- Meet ASHRAE Standard 102-1989.

**Capacity:** high

**Temperature Range:** 248°F Maximum (120°C Maximum)

**Used With:** T104

**Pressure Ratings (psi):** Hot Water – 150 psi maximum; Steam – 15 psi maximum

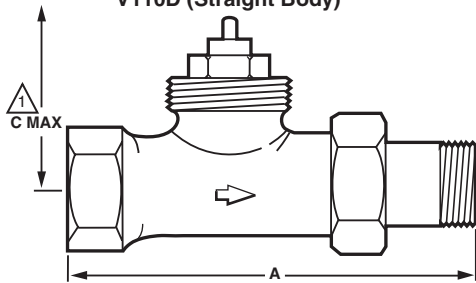
**Pressure Ratings (kPa):** Hot Water – 1034 kPa maximum; Steam – 103 kPa

**Maximum Differential Pressure Ratings (Close-off) (psi):** 17 psi maximum

Material Number	Application	Pipe Size (inch)	Pipe Size (DN)	Body Pattern	Capacity (Cv)	Capacity (Btu / hr - steam)	Connection Type	Materials (Body)	Cartridge Change Tool
V110D1000/U	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	Nickel Plated Bronze	Yes - Use MT110C1011
V110D1008/U		3/4 in.	DN20	Straight	5.8 Cv	162,000 Btu/hr	Threaded	Nickel Plated Bronze	Yes - Use MT110C1011
V110D1016/U		1 in.	DN25	Straight	7.0 Cv	193,000 Btu/hr	Threaded	Nickel Plated Bronze	Yes - Use MT110C1011
V110D1024/U		1 1/4 in.	DN32	Straight	8 Cv	193,000 Btu/hr	Threaded	Nickel Plated Bronze	Yes - Use MT110C1011
V110E1004/U	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 when used with T104 Thermostatic Actuators	1/2 in.	DN15	Angle	4.6 Cv	127,000 Btu/hr	Threaded	Bronze	
V110E1012/U		3/4 in.	DN20	Angle	5.8 Cv	162,000 Btu/hr	Threaded	Bronze	
V110E1020/U		1 in.	DN25	Angle	7.0 Cv	193,000 Btu/hr	Threaded	Bronze	
V110E1028/U		1 1/4 in.	DN32	Angle	8 Cv	193,000 Btu/hr	Threaded	Bronze	
V110F1002/U		1/2 in.	DN15	Horizontal Angle	4.6 Cv	127,000 Btu/hr	Threaded	Bronze	
V110F1010/U		3/4 in.	DN20	Horizontal Angle	5.8 Cv	162,000 Btu/hr	Threaded	Bronze	
V110F1018/U		1 in.	DN25	Horizontal Angle	7.0 Cv	193,000 Btu/hr	Threaded	Bronze	

Dimensions in inches (millimeters)

V110D (Straight Body)



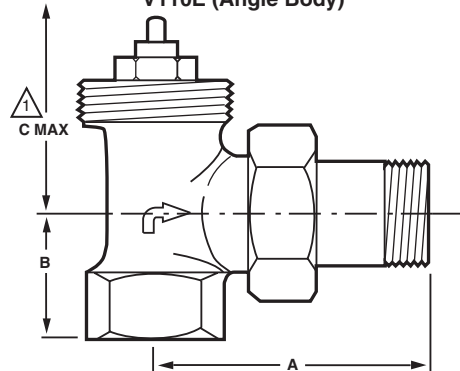
PIPE SIZE	A IN. (MM)	C MAX IN. (MM)
1/2 INCH	3-3/4 (95)	4-3/4 (121)
3/4 INCH	4-1/8 (105)	4-3/4 (121)
1 INCH	4-15/16 (125)	4-3/4 (121)
1-1/4 INCH	5-7/8 (149)	5 (127)

$\Delta$  C MAX DIMENSION IS WITH T104 CONTROL INSTALLED.

M18959A

Dimensions in inches (millimeters)

V110E (Angle Body)



PIPE SIZE	A IN. (MM)	B IN. (MM)	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)

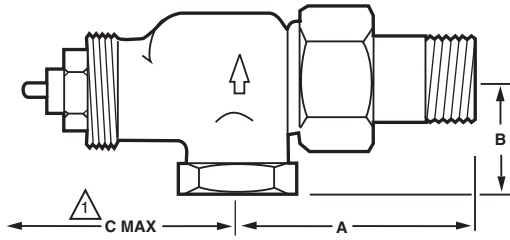
$\Delta$  C MAX DIMENSION IS WITH T104 CONTROL INSTALLED.

M18960A

# Thermostatic Radiator Valves and Actuators

Dimensions in inches (millimeters)

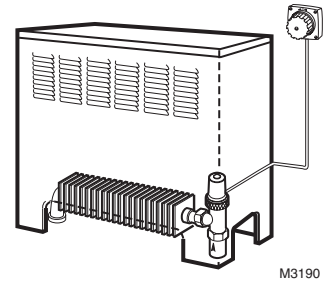
## V110F (Horizontal Angle Body)



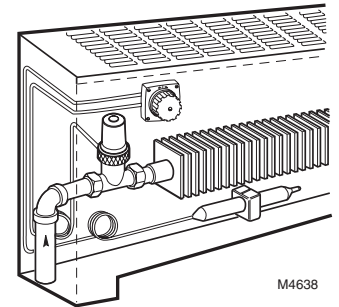
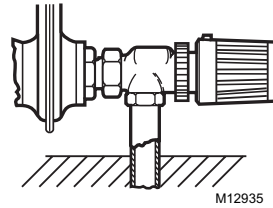
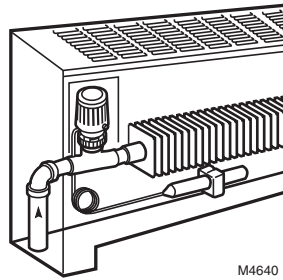
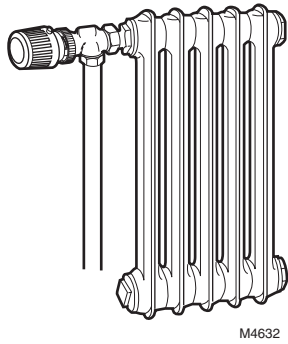
PIPE SIZE	A IN. (MM)	B IN. (MM)	$\triangle$ C MAX IN. (MM)
1/2 INCH	2-1/4 (57)	1 (25)	5-1/8 (130)
3/4 INCH	2-9/16 (65)	1-1/8 (29)	5-1/4 (133)
1 INCH	2-15/16 (74)	1-3/16 (30)	5-1/4 (133)
1-1/4 INCH	3-1/2 (89)	2-3/16 (56)	5-1/4 (133)

$\triangle$  C MAX DIMENSION IS WITH T104 CONTROL INSTALLED. M18961A

Typical Installation



Typical Installations





# Thermostatic Radiator Valves and Actuators

## T104 High Capacity Thermostatic Radiator Valve Actuators



T104A



T104B



T104C



T104F



T104V

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 under-heating and overheating.
- Designed with the higher capacity normally required by North American heating systems.
- Valve seat disc, which is made of resilient material (EPDM), ensures tight shutoff on steam or hot water systems.

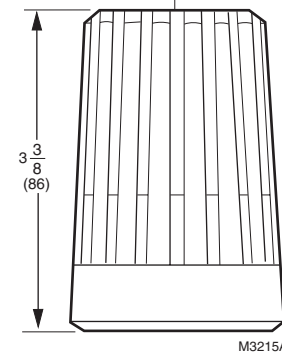
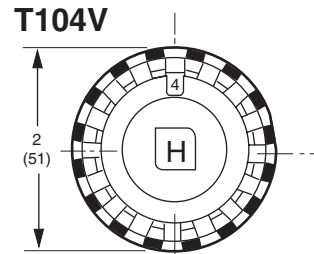
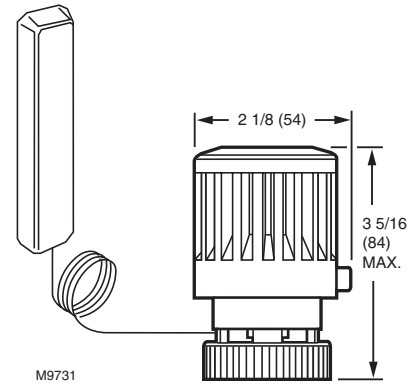
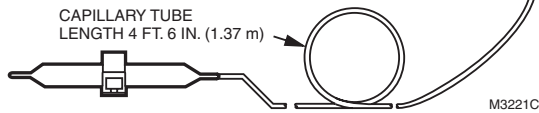
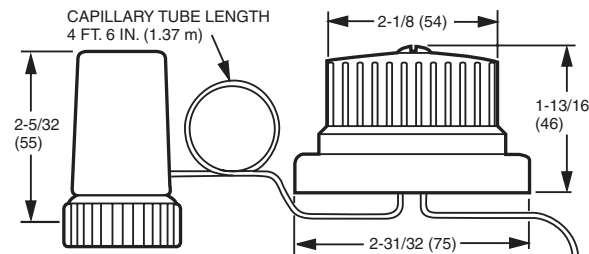
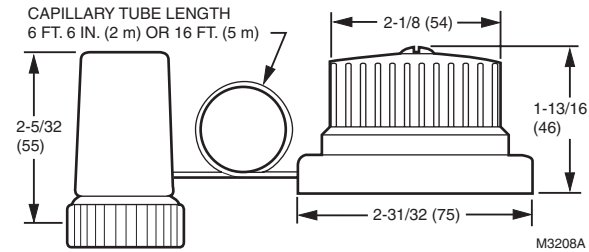
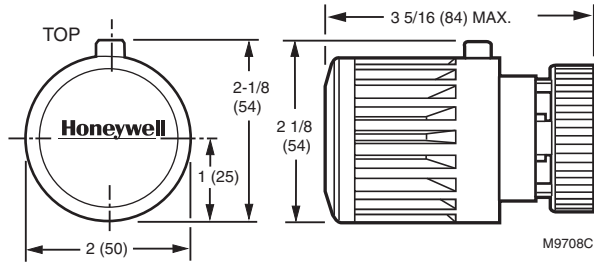
- Nickel-plated bronze casted body with working parts in cartridge insert for ease of service.
- Controls include sensor, setpoint dial and valve actuator; components may be integral or connected by capillary tubes.
- Require no electrical connections.
- Meet ASHRAE Standard 102-1989.
- 40 mm collar diameter.

**Collar Diameter:** 1 19/32 in. (40 mm)  
**Used With:** V110

Material Number	Application	Capillary Length	Temperature Range	Sensor (Integral or Remote)	Setpoint (Integral or Remote)	Comments
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	Adjustable Limits
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	
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	
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	
T104F1512	Thermostatic radiator valve controller for use with V110 series valves. With remote temperature sensing and integral setpoint. Adjustable limits.	6 ft. 8 in. (2 m)	43°F to 79°F (6°C to 26°C)	Remote	Integral	Adjustable Limits

# Thermostatic Radiator Valves and Actuators

Dimensions in inches (millimeters)



## V2000 Series Valve Bodies Cross Reference to V100 Series

Use T100 Actuators With New V2000 Series Valve Bodies

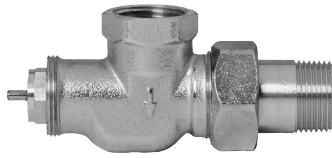
V2000 Series (Current)	V100 Series (Obsolete)	Product Description
V2040DSL15	V100D1056	1/2 in. TRV Straight Body, Female NPT Inlet, Male NPT Tail-piece Outlet
V2040DSL20	V100D1064	3/4 in. TRV Straight Body, Female NPT Inlet, Male NPT Tail-piece Outlet
V2040DSL25	V100D1072	1 in. TRV Straight Body, Female NPT Inlet, Male NPT Tail-piece Outlet
V2040ESL15	V100E1055	1/2 in. TRV Vertical Body, Female NPT Inlet, Male NPT Tail-piece Outlet
V2040ESL20	V100E1063	3/4 in. TRV Vertical Body, Female NPT Inlet, Male NPT Tail-piece Outlet
V2040ESL25	V100E1071	1 in. TRV Vertical Body, Female NPT Inlet, Male NPT Tail-piece Outlet
V2040ASL15	V100F1054	1/2 in. TRV Horizontal, Female NPT Inlet, Male NPT Tail-piece Outlet
V2040ASL20	V100F1062	3/4 in. TRV Horizontal, Female NPT Inlet, Male NPT Tail-piece Outlet
V2040ASL25	V100F1070	1 in. TRV Horizontal, Female NPT Inlet, Male NPT Tail-piece Outlet
V200LDSL15	V100G5054	1/2 in. TRV Straight Body, Sweat Inlet, Sweat Outlet No Tail-piece
V200LDSL20	V100G5062	3/4 in. TRV Straight Body, Sweat Inlet, Sweat Outlet No Tail-piece
V2042HSL10	V100P1046	1/8 in. TRV (1/2 in. Body With 1/8 in. Adapter) Male NPT Inlet, Female NPT Outlet. One Pipe Steam
V2043HSL10	Y100P1001	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

# Thermostatic Radiator Valves and Actuators

## V200; V2000 Series Standard Capacity Thermostatic Radiator Valves Body



V200LD



V2040D



V2040A, V2040E  
(Straight body)



V2040E  
(Angle body)

**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.**

- 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 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.

**Capacity:** Standard

**Temperature Range:** 248°F Maximum (120°C Maximum)

**Materials (Body):** Nickel Plated Bronze

**Cartridge Change Tool:** Yes - Use VA8200A001

**Pressure Ratings (psi):** Hot Water – 150 psi maximum; Steam – 15 psi maximum

**Pressure Ratings (kPa):** Hot Water – 1034 kPa maximum; Steam – 103 kPa

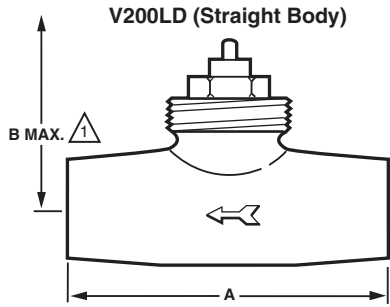
**Maximum Differential Pressure Ratings (Close-off) (psi):** With T100 or T200: 15 psi, With MV100: 36 psi, For low noise: 3 psi

**Maximum Differential Pressure Ratings (Close-off) (kPa):** With T100 or T200: 103 kPa, With MV100: 248 kPa, For low noise: 20 kPa

Material Number	Application	Pipe Size (inch)	Pipe Size (DN)	Body Pattern	Capacity (Cv)	Capacity (Btu / hr - steam)	Connection Type	Connection Size	Used With
V200LDSL15	For baseboards and other installations with copper tubing.	1/2 in.	DN15	Straight	2.5 Cv	59,100 Btu/hr	Inlet – NPT; Outlet – Sweat both ends, no union	1/2 in.	T100
V200LDSL20		3/4 in.	DN20	Straight	2.7 Cv	63,800 Btu/hr	Inlet – NPT; Outlet – Sweat both ends, no union	3/4 in.	T100
V2040ASL15	Replaces most manual valves with minimum piping changes.	1/2 in.	DN15	Horizontal Angle	2.5 Cv	59,100 Btu/hr	Inlet – NPT; Outlet – Threaded	1/2 in.	T100A, M and V controls to conform to horizontal mounting requirements
V2040ASL20		3/4 in.	DN20	Horizontal Angle	2.7 Cv	63,800 Btu/hr	Inlet – NPT; Outlet – Threaded	3/4 in.	T100A, M and V controls to conform to horizontal mounting requirements
V2040ASL25		1 in.	DN25	Horizontal Angle	2.7 Cv	70,500 Btu/hr	Inlet – NPT; Outlet – Threaded	1 in.	T100A, M and V controls to conform to horizontal mounting requirements
V2040DSL15	Especially suited for baseboards and straight runs where manual valves were not originally installed.	1/2 in.	DN15	Straight	2.5 Cv	59,100 Btu/hr	Inlet – NPT; Outlet – Threaded	1/2 in.	
V2040DSL20		3/4 in.	DN20	Straight	2.7 Cv	63,800 Btu/hr	Inlet – NPT; Outlet – Threaded	3/4 in.	
V2040DSL25		1 in.	DN25	Straight	2.7 Cv	70,500 Btu/hr	Inlet – NPT; Outlet – Threaded	1 in.	
V2040ESL15	Use where installation space is limited	1/2 in.	DN15	Angle	2.5 Cv	59,100 Btu/hr	Inlet – NPT; Outlet – Threaded	1/2 in.	T100C, T100B, T100F
V2040ESL20		3/4 in.	DN20	Angle	2.7 Cv	63,800 Btu/hr	Inlet – NPT; Outlet – Threaded	3/4 in.	T100C, T100B, T100F
V2040ESL25		1 in.	DN25	Angle	2.7 Cv	70,500 Btu/hr	Inlet – NPT; Outlet – Threaded	1 in.	T100C, T100B, T100F

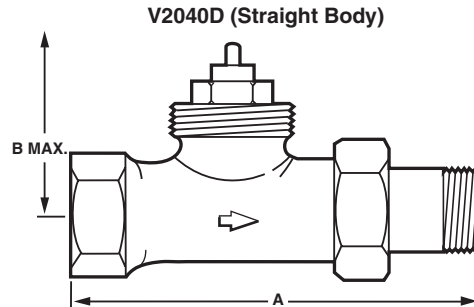
# Thermostatic Radiator Valves and Actuators

Dimensions in inches (millimeters)



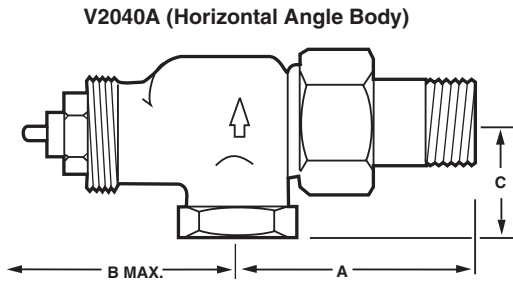
PIPE SIZE	A IN. (MM)	$\triangle 1$ B MAX IN. (MM)
1/2 INCH	2-5/8 (66)	4-1/16 (104)
3/4 INCH	2-15/16 (74)	4-1/16 (104)

$\triangle 1$  B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.  
M12933C



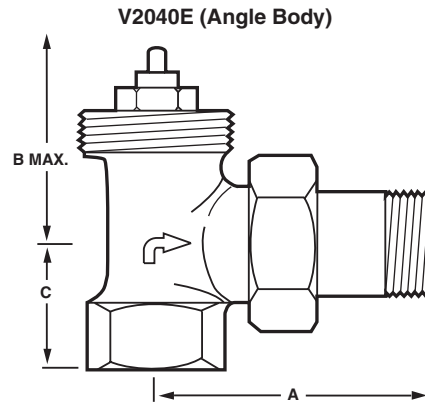
PIPE SIZE	A IN. (MM)	$\triangle 1$ B MAX IN. (MM)
1/2 INCH	3-3/4 (95)	4-1/6 (104)
3/4 INCH	4-3/16 (106)	4-1/6 (104)
1 INCH	4-1/2 (114)	4-1/2 (114)

$\triangle 1$  B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.  
M12930D



PIPE SIZE	A IN. (MM)	$\triangle 1$ 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)

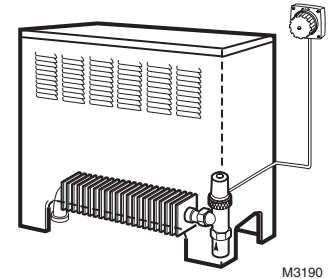
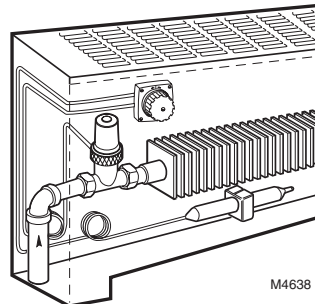
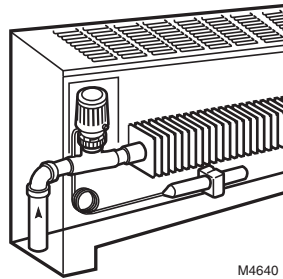
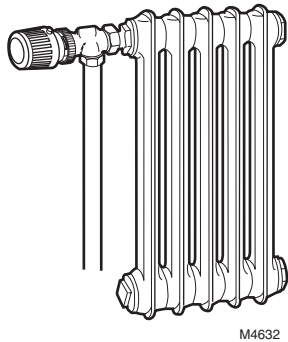
$\triangle 1$  B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.  
M12932C



PIPE SIZE	A IN. (MM)	$\triangle 1$ 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)

$\triangle 1$  B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.  
M12931D

## Typical Installation



# Thermostatic Radiator Valves and Actuators

## HR90 TheraPro Electronic Radiator Controller



Honeywell TheraPro HR90 is an electronic radiator controller with a modern design and provides features for convenience and energy saving. It is used as stand-alone controller for radiator heating control applications. For optimized readability of the backlight display the display position can be adjusted as well. The display is switched on as soon as a button is pressed or the wheel is rotated. Fast installation due to the simple lock mechanism closing the device at the radiator valve. Up to 3 pre-set standard time programs are selectable. After the installation the HR90 operates immediately to the factory set program.

- With the auto-window function, the radiator valve is closed when ventilating the room.
- In ECO mode, the room temperature is lowered by 6°F.
- Optimized control of the room temperature by start/stop the radiator controller calculates when to open or closing the valve in order to achieve the desired room temperature at the set time.
- Works with V2040 valves and Danfoss RA valve.

**Application:** For use on radiators

**Controlled Fluid:** Water

**Temperature Range (F):** 32°F to 122°F

**Temperature Range (C):** 0°C to 50°C

**Scale Markings:** Screen

**Approximate, Dimensions (in.):** 2.4 x 2.1 x 3.8

**Approximate, Dimensions (mm):** 60 x 54 x 96

**Connection Type:** M30x1.5

**Materials (Body):** Polycarbonate

**Sensor Range:** 40°F to 86°F (5°C to 30°C)

**Electrical Ratings:** 2 batteries 1,5V: LR6, AA, AM3, Lithium, or 2 rechargeable batteries 1,2V NiMH

**Comments:** IP30 Protection Class

Material Number	Description	Includes
HR90	Honeywell TheraPro HR90 is an electronic radiator controller with a modern design and provides features for convenience and energy saving.	Controller, Base plate, Display holder, Batteries, Screws, Adapter(s)

# Thermostatic Radiator Valves and Actuators

## T2040 UNIVERSAL Thermostatic Radiator Actuator



A Radiator Thermostat is installed onto a Thermostatic Radiator Valve Body (TRV body). The combination of both, the Thermostatic Radiator Valve (TRV), controls the room temperature by adjusting the flow of hot water through a radiator.

- TRVs are installed in water-based heating systems on the supply or, less commonly on the return connection of radiators. Radiator thermostats of this type fulfill the European Standard EN215 when used with certified Honeywell TRV bodies.
- Honeywell radiator thermostats with Honeywell (HW) M30x1.5 connection are suitable for all TRV body and radiator inserts with M30x1.5 connection and 11.5mm closing dimension.
- Radiator Thermostats of this type with snapping (DA) type connection are suitable for TRV bodies and valve inserts with Danfoss (RA) type compatible snap connection.

**Connection Type:** M30x1.5 + Danfoss RA adapter (included)

**Temperature Range:** 43°F to 82°F (6°C to 28°C)

**Collar Diameter:** 1-3/16 in. (30 mm)

**Used With:** V2040, V100 + Danfoss RA2000 valves

Material Number	Application	Sensor (Integral or Remote)	Setpoint (Integral or Remote)	Replaces	Comments
T2040NA	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.	Integral	Integral	American Steam - 02-100-00. Taco - 5202. Danfoss RA2000 - 013G8200. Ammark - 72. TM Macon - TM B22000. NT Macon - NTB B24000.(in combination with V2000)	Designer Look

# Thermostatic Radiator Valves and Actuators

## T100 Standard Capacity Thermostatic Radiator Actuators



T100B



T100C



T100F

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.

- Continually monitor and adjust room temperature for consistent comfort and relief from under-heating 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.
- Valves normally open without control mounted.
- Valves may also be used with MV100 Electric Zone Valve Actuator.

**Collar Diameter:** 1 3/16 in. (30 mm)

**Used With:** V100, V2000

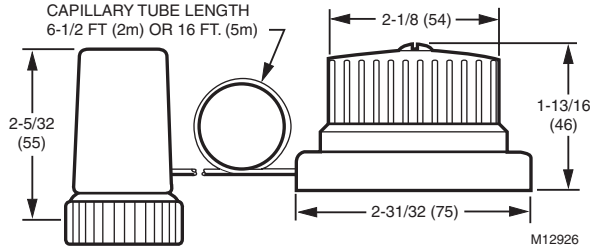
Material Number	Application	Capillary Length	Temperature Range	Sensor (Integral or Remote)	Setpoint (Integral or Remote)	Replaces	Comments
T1002WONA	A self-contained control with sensor, setpoint dial and valve actuator in one unit. Mounts horizontal. Not for use inside enclosures or where airflow around sensor is restricted. Adjustable limits.		43°F to 79°F (6°C to 26°C)	Integral	Integral	American Steam - 02-100-00. Taco - 5202. Danfoss RA2000 - 013G8200. Ammark - 72. TM Macon - TM B22000. NT Macon - NTB B24000. (in combination with V2000)	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.	6 1/2 ft (2 m)	48°F to 79°F (9°C to 26°C)	Remote	Remote	American Steam - 02-300-00. Taco - 5206. Danfoss RA2000 - 013G8262. Ammark - 76. TM Macon - TML B42000. NT Macon - NTL B45000. in combination with V2000	
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.	16 ft (5 m)	48°F to 79°F (9°C to 26°C)	Remote	Remote	Taco - 5207. Danfoss RA2000 - 013G8265. Ammark - 76L. (in combination with V2000)	
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.	Two 4 1/2 ft (Two 1.4 m)	48°F to 79°F (9°C to 26°C)	Remote	Remote	American Steam - 02-320-00. Taco - 5211. Danfoss RA2000 - 013G8233. Ammark - 74. TM Macon - TMLZ B52000. NT Macon - NTL B55000. (in combination with V2000)	
T100F1395	A control with remote temperature sensing and integral setpoint. Adjustable limits.	6 ft. 8 in. (2 m)	43°F to 79°F (6°C to 26°C)	Integral	Integral	American Steam - 02-120-00. Taco - 5203. Danfoss RA2000 - 013G8202. Ammark - 73. TM Macon - TMZ B32000. NT Macon - NTZ B35000. (in combination with V2000)	Adjustable Limits



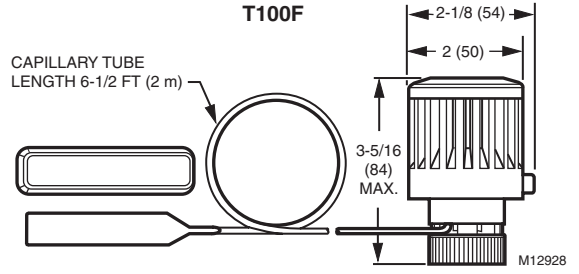
# Thermostatic Radiator Valves and Actuators

Dimensions in inches (millimeters)

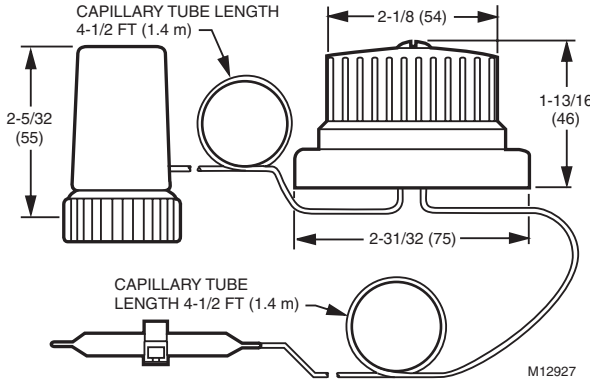
**T100B**



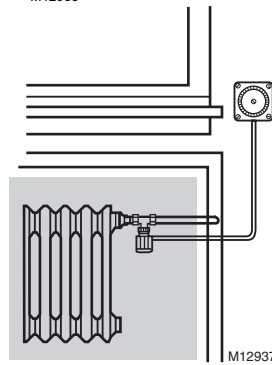
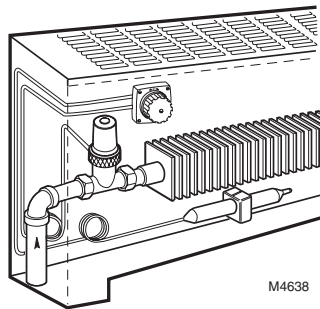
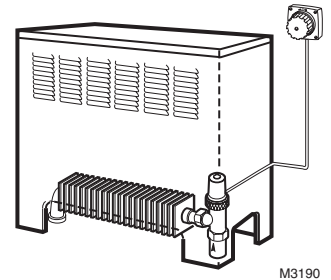
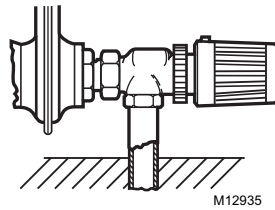
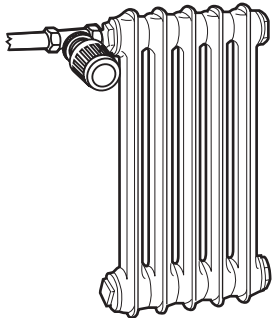
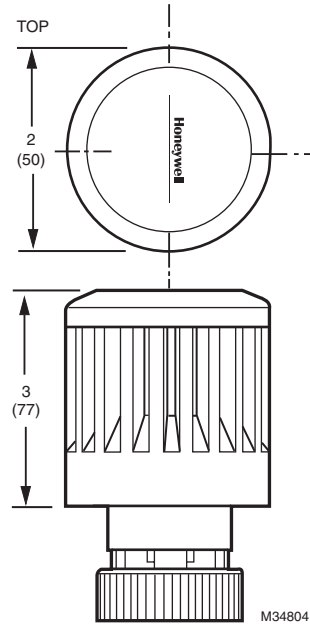
**T100F**



**T100C**



**T1002W**



# Thermostatic Radiator Valves and Actuators

## 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.**

- 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 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.

**Application:** Use for one pipe steam applications.

**Pipe Size (inch):** 1/8 in.

**Body Pattern:** Angle

**Capacity:** Standard

**Temperature Range:** 248°F Maximum (120°C Maximum)

**Connection Type:** Inlet – NPT; Outlet – Threaded

**Connection Size (in.):** 1/8 in.

**Materials (Body):** Nickel Plated Bronze

**Cartridge Change Tool:** Yes - Use VA8200A001

**Used With:** T100

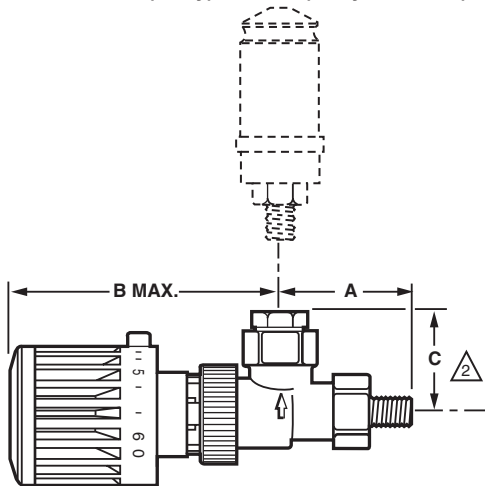
**Maximum Differential Pressure Ratings (Close-off) (psi):** With T100 or T200: 15 psi, With MV100: 36 psi, For low noise: 3 psi

**Maximum Differential Pressure Ratings (Close-off) (kPa):** With T100 or T200: 103 kPa, With MV100: 248 kPa, For low noise: 20 kPa

Material Number	Pressure Ratings (psi)	Pressure Ratings (kPa)	Includes
V2042HSL10	Steam – 15 psi maximum	Steam – 103 kPa maximum	
V2043HSL10	Steam – Valve: 15 psi maximum; Vent: 6 psi maximum	Steam – Valve: 103 kPa maximum; Vent: 41 kPa maximum	V2042HSL10 plus steam/air vent

Dimensions in inches (millimeters)

V2042H (Body)/V2043H (Body with Vent)



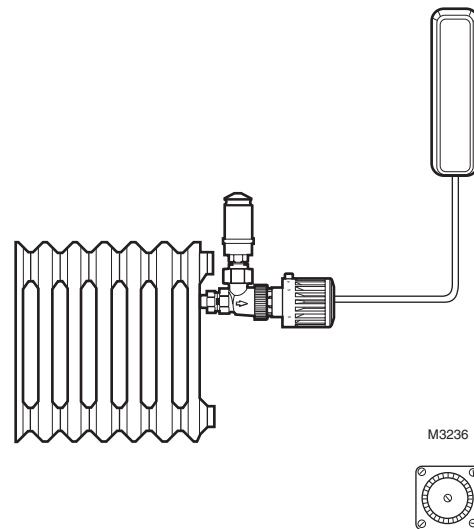
PIPE SIZE	A IN. (MM)	B MAX IN. (MM)	C IN. (MM)
3/8 INCH	1-11/16 (43)	3-13/16 (97)	1-3/16 (31)

$\triangle 1$  B MAX DIMENSION IS WITH T100A CONTROL INSTALLED.

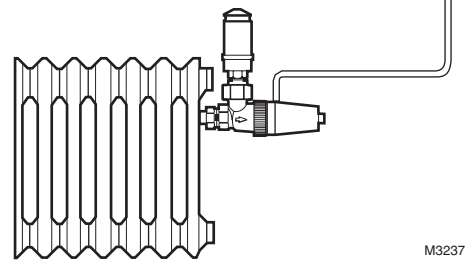
$\triangle 2$  C DIMENSION IS WITHOUT THE STEAM/AIR VENT INSTALLED.

M17016B

Typical Installation

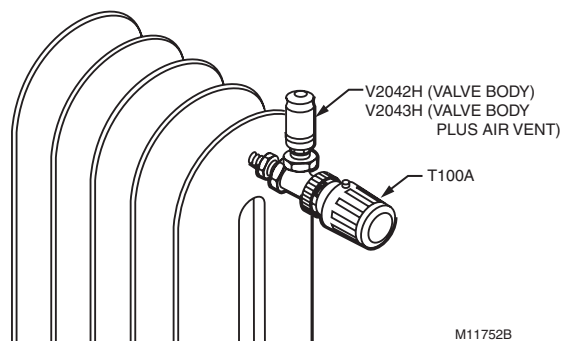


M3236



M3237

Typical Installation



M11752B

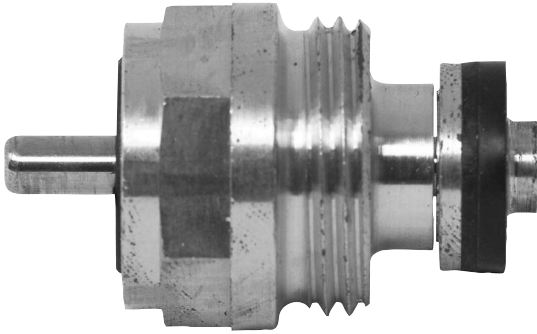
# Thermostatic Radiator Valves and Actuators

## V2000 Series Thermostatic Radiator Valve Accessories

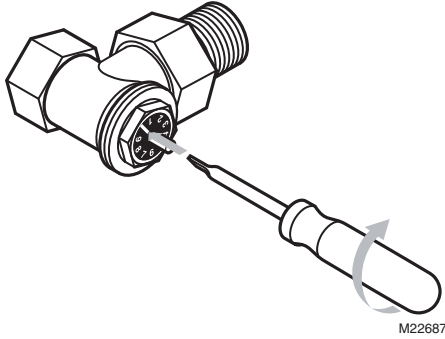
Approximate, Dimensions: (95 mm length)

Materials (Body): Bronze

Cartridge Change Tool: VA8200A001

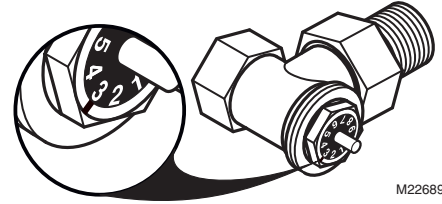


V2000 Series Cartridge Balancing Procedure Step 1



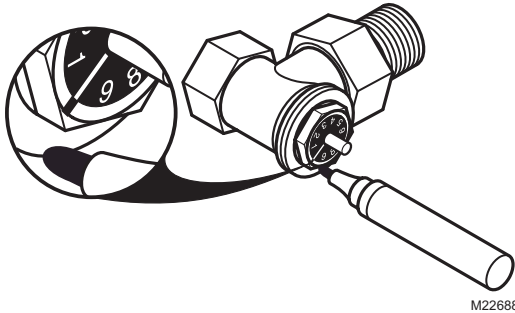
M22687

V2000 Series Cartridge Balancing Procedure Step 3



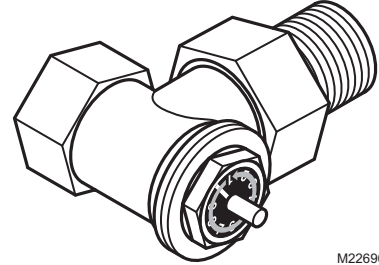
M22689

V2000 Series Cartridge Balancing Procedure Step 2



M22688

V2000 Series Cartridge Balancing Procedure Step 4



M22690

Material Number	Application	Description	Used With
VS1200SL01	Accessory or Replacement Part	Replacement cartridge for NEW V2000 (adjustable cartridge)	T100

# Commercial Expansion Tanks

## MT100; MT110 Cartridge Changing Tool

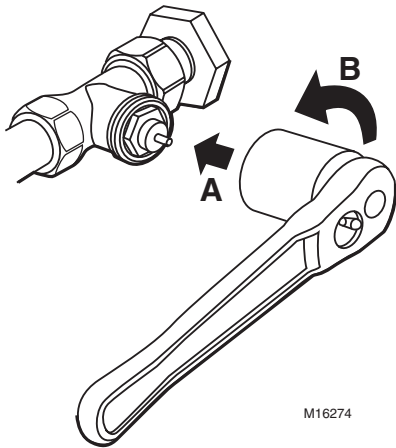


The MT110 Valve Cartridge Changing Tool enables the user to remove, and clean or replace the valve cartridge while the valve remains pressurized. Boiler shutdown is not required.

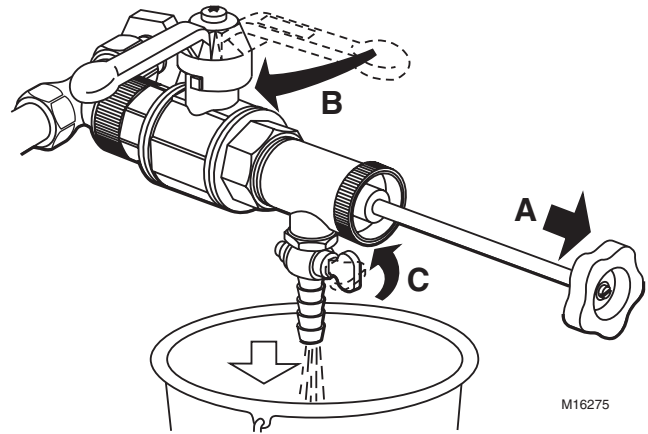
- MT110 for V110 Series valves.

Collar Diameter: 1 19/32 in. (40 mm)

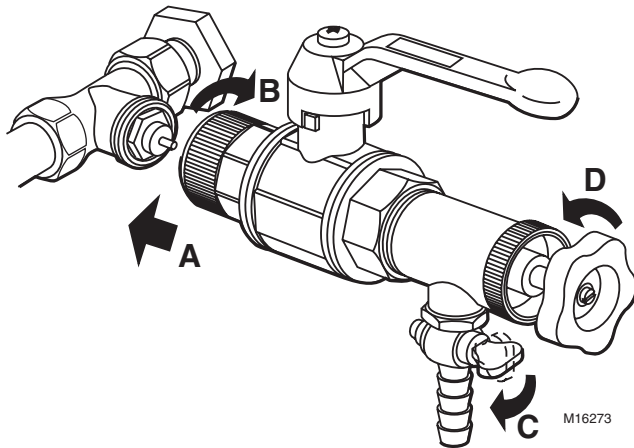
Remove control and loosen valve cartridge slightly.



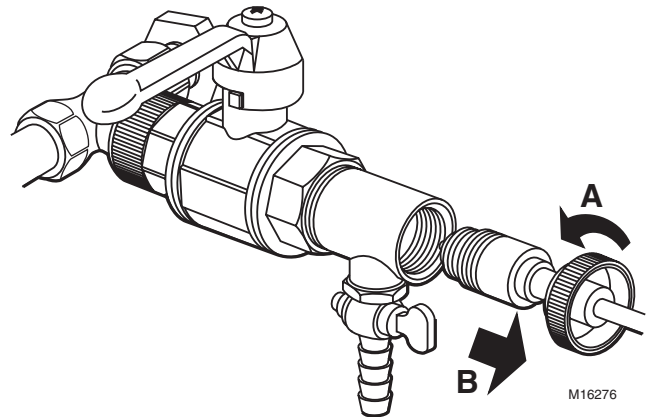
Open shut-off on drain cock, removing excess water and steam from chamber.



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



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



Material Number	Application	Description	Used With
MT110C1011/U	Cartridge changing tool, in service, in line, under pressure for V110 series valve.	Cartridge Changing Tool for in-line service of V110 valves	V100

## Thermostatic Valve Accessories

Used With: V100 Series

Material Number	Description	Used With
CA100B1008	Replacement cartridge for old style V100 (metal cartridge body)	V100 Series
CA110C1007/U	Replacement Cartridge for V110	V110 Series

## Expansion Tank Sizing based on BTU's

Boiler Net Output in 1000's of BTU/Hr	Type of Radiation			
	Finned Tube Baseboard or Radiant Panel	Convectors or Unit Heaters	Radiators Cast Iron	Baseboard Cast Iron
MBH	Use Model	Use Model	Use Model	Use Model
25	TK300-15	TK300-15	TK300-15	TK300-15
50	TK300-15	TK300-15	TK300-30	TK300-30
75	TK300-30	TK300-30	TK300-30	TK300-60
100	TK300-30	TK300-30	TK300-60	TK300-60
125	TK300-30	TK300-60	TK300-60	TK300-90
150	TK300-30	TK300-60	TK300-90	TK300-90
175	TK300-60	TK300-60	XPS-030V	XPS-030V
200	TK300-60	TK300-60	XPS-030V	XPS-030V
250	TK300-60	TK300-90	XPS-030V	XPS-040V
300	TK300-90	XPS-030V	XPS-030V	XPS-040V
350	XPS-030V	XPS-030V	XPS-040V	XPS-060V
400	XPS-030V	XPS-040V	XPS-040V	XPS-060V

## TAXV Series Expansion Tanks—Commercial Usage



**TAX Series (commercial) Expansion Tanks** are designed to absorb hot water expansion in closed heating systems of large installations. TAX tanks are equipped with butyl diaphragms to separate the air from the system water (glycol).

- ASME construction: Horizontal TAX Series tanks.

**Maximum Safe Operating Pressure (psi):** 125 psi

**Maximum Safe Operating Pressure (kPa):** 862 kPa

**Precharge (psi):** 12 psi

**Materials:** Steel shell; Heavy duty Butyl diaphragm

**Operating Temperature Range:** 240°F Maximum (115°C Maximum)

**Comments:** ASME Construction

Material Number	Connection Size (in.)	Diameter	Height	Volume	Weight	Maximum Acceptance Volume
TAXV-015/U	1/2 in.	12 in. (304.8 mm)	19 1/4 in. (489 mm)	7.8 gal (29.6 L)	48 lb (21.8 kg)	2.5 gal (9.5 L)
TAXV-020/U	1/2 in.	12 in. (304.8 mm)	26 in. (660 mm)	10.9 gal (40.2 L)	61 lb (27.7 kg)	2.5 gal (9.5 L)
TAXV-040/U	1/2 in.	16 1/4 in. (412.7 mm)	29 1/2 in. (749 mm)	21.7 gal (82.2 L)	116 lb (52.7 kg)	11.3 gal (42.8 L)
TAXV-060/U	1/2 in.	16 1/4 in. (412.7 mm)	45 1/8 in. (1146 mm)	33.6 gal (127.3 L)	145 lb (65.9 kg)	11.3 gal (42.8 L)
TAXV-080/U	1/2 in.	16 1/4 in. (412.7 mm)	56 in. (1422 mm)	44.4 gal (168.3 L)	70 lb (89.1 kg)	22.6 gal (85.6 L)
TAXV-100/U	1/2 in.	16 1/4 in. (412.7 mm)	68 1/4 in. (1734 mm)	55.7 gal (211 L)	231 lb (105 kg)	22.6 gal (85.6 L)
TAXV-120/U	1 in.	24 in. (609.6 mm)	44 1/4 in. (1124 mm)	68 gal (257.7 L)	233 lb (105.9 kg)	34 gal (128.9 L)
TAXV-144/U	1 in.	24 in. (609.6 mm)	49 1/8 in. (1247.8 mm)	77.0 gal (291.8 L)	256 lb (116.4 kg)	34 gal (128.9 L)
TAXV-180/U	1 in.	24 in. (609.6 mm)	56 1/2 in. (1435 mm)	90 gal (341.1 L)	286 lb (130 kg)	34 gal (128.9 L)
TAXV-200/U	1 in.	24 in. (609.6 mm)	63 in. (1600 mm)	110 gal (416.9 L)	326 lb (148.2 kg)	34 gal (128.9 L)
TAXV-240/U	1 in.	30 in. (762 mm)	49 1/8 in. (1368.4 mm)	132.0 gal (500.3 L)	456 lb (207.3 kg)	46 gal (174.3 L)
TAXV-260/U	1 in.	30 in. (762 mm)	49 1/8 in. (1247.8 mm)	158.0 gal (500.3 L)	435 lb (207.3 kg)	56 gal (174.3 L)
TAXV-280/U	1 in.	30 in. (762 mm)	49 1/8 in. (1247.8 mm)	211.0 gal (500.3 L)	435 lb (207.3 kg)	84 gal (174.3 L)

# Commercial Expansion Tanks

## XPS Series Honeywell Expansion Tanks



XPS Series Expansion Tanks absorb hot water expansion in closed heating systems in larger installations. They have butyl diaphragms to separate clamped design, keep fluids circulating and maintain minimum system pressure.

- For ASME construction consult factory.

**Connection Type:** Female NPT

**Maximum Safe Operating Pressure (psi):** 100 psi

**Maximum Safe Operating Pressure (kPa):** 689 kPa

**Materials:** Steel shell; Heavy duty Butyl diaphragm

**Operating Temperature Range:** 240°F Maximum (115°C Maximum)

**Comments:** Heating

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

# ENVIRONMENTAL AND COMBUSTION CONTROL WARRANTY POLICY

Honeywell warrants the products in this catalog (except those parts designated on Honeywell's price lists as not covered by this warranty) to be free from defects due to workmanship or materials, under normal use and service, for the following warranty periods.

## Sixty (60) months from date of installation

- Prestige®, Prestige® IAQ, Lyric Thermostat, VisionPRO®, Commercial VisionPRO®, CommercialPRO®, FocusPRO®, Wireless FocusPRO®, PRO 4000, PRO 3000, LineVoltPRO™, Digital Round™, and Modern Round™ (T87K, N) Series Thermostats with a date code of 0501 or later
- Air Cleaners, Humidifiers, Ventilators, Ultraviolet Treatment and Zoning products with a date code of 0501 or later, excluding replacement maintenance parts
- Indoor air quality products F50, F52, F300, F200, F150, UV100E, HE225, HE265, HE365, with date codes of 0452 or earlier, excluding replacement maintenance parts
- MS, MN and fast acting 2-position Direct Coupled Actuators
- JADE economizer when used with Honeywell sensors and actuators
- AquaPUMP circulating pump
- C7189R RedLINK Wireless Indoor Air Sensor
- C7061 UV Detector

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 expressed 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 BE RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER.

## Sixty (60) months from date of manufacture

- Access and Video Systems power supplies

## Thirty-six (36) months from date of shipment

- Variable frequency drive devices (VFD) and accessories

## Thirty-six (36) months from date of installation

- AUBE branded thermostats, timers, and switches

## Twenty-four (24) months from date of installation

- SuitePRO thermostats
- PRO 2000 and PRO 1000 thermostats
- Other Honeywell indoor air quality and zoning products with a date code of 0452 or earlier, unless otherwise specified
- AQ2000 Aquatrol panels and AQ1000 thermostats
- RedLINK Entry/Exit Remote
- RedLINK Vent Boost Remote

## Twenty-four (24) months from date of manufacture

- Pan-Tilt-Zoom Domes for Access and Video Systems

## Eighteen (18) months from date of shipment,

- All WEBs building automation and security parts, unless specified otherwise (warranty replacement parts will be warranted for 90 days or the balance of the original warranty period, whichever is longer)

## Twelve (12) months from date of installation

- Water Solutions products
- Other Honeywell thermostats and thermostats with a date code of 0452 or earlier, unless specified otherwise
- RedLINK Wireless Outdoor Air Sensor
- RedLINK Portable Comfort Control
- RedLINK Internet Gateway

## Twelve (12) months from date of shipment

- Building automation security accessories

## Twelve (12) months from date of manufacture

- Keyboards, Controllers and other Access and Video System accessories.

## Ninety (90) days from date of manufacture

- IR Halogen bulbs for Access and Video Systems

## The warranty period for all other products is twelve (12) months from date of installation.

## 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.

No warranty claim for product replacement or credit will be honored by Honeywell without a completed return authorization form or a manual return authorization form issued by Honeywell Customer Care.

## INSTRUCTIONS—WHOLESALE OR DISTRIBUTOR

The following will apply to the return of any product to Honeywell under this warranty, except any products which are not variable frequency drives or WEBS and are:

- identified with a Honeywell Return Authorization Form (obtained from the B2B website at Customer.Honeywell.com)
- display the Return Authorization Form number and return address label on the outside of the return carton. Make sure a copy of the form is enclosed in the return carton
- packed separately from other returns and protected from shipping damage;
- have certification by the installer or servicing dealer that the product was removed, due to failure, within the applicable warranty period;

- are received transportation pre-paid at the facility listed on the shipping and/or packing slip.

- 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.

- 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.
- REPLACEMENT PROCEDURE.** Warranty replacement procedure must be used for in-warranty emergency replacement orders. Customer will not be credited for items not meeting warranty criteria as outlined by policy. Please return the defective item to the address listed on the return authorization form.

List Water Solutions products on a separate Return Goods Order form, marked "Water Solutions".

All new and unused VBN control ball valves MUST be approved by your Honeywell sales representative before returned.

WEBs return products must be processed through WEBs Customer Care. Defective hardware products under warranty have to be returned to Tridium in Richmond, VA. Security Access and Video products must have prior authorization.

All VFD warranty return products must be coordinated through the Commercial Components Hotline (1-888-516-9347 option 4) staff and VFD Warranty and Repair Program Coordinator (ECC-VFD Coordinator). All VFD warranty returns must have prior authorization and must be returned to the specified Honeywell VFD Service Center.

The warranty will not be honored if:

- product is damaged or missing parts or accessory items including batteries.
- product exhibits evidence of field misapplications. 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 Honeywell, contact your Customer Care Representative:

Honeywell International Inc.  
Customer Care MN10-131A  
1985 Douglas Drive  
Golden Valley, MN 55422  
1-888-793-8193

## SPECIAL MESSAGE TO INDUSTRIAL USERS AND BUILDING OWNERS

Thank you for using Honeywell 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:

- To modernize or refurbish your existing commercial and/or process control system.

- 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).

- 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 International Inc.  
Customer Care MN10-131A  
1985 Douglas Drive North  
Golden Valley, MN 55422-4386  
1-888-793-8193

or check your telephone directory (white pages) for one of many Honeywell field sales offices.







## A new angle on home heating.

The **TheraPro HR90 radiator controller** comes with a backlit, adjustable screen that gives you a clear view of temperature and other settings. The controller will regulate the ambient temperature at the ideal level for the homeowner, or it can be programmed to match the homeowner's schedule. No matter what, it's the right temperature at the right time, all the time. The TheraPro HR90 offers thoughtful, intuitive operation and can help homeowners maximize energy savings.

**Honeywell**

© 2016 Honeywell International Inc. All rights reserved.

Find out more by contacting your Honeywell representative or visit [www.forwardthinking.honeywell.com](http://www.forwardthinking.honeywell.com).

**Automation and Control Solutions**

Honeywell  
1985 Douglas Drive North  
Golden Valley, MN 55422-3992  
1-800-334-3666  
www.honeywell.com

63-8702 PR  
July 2016  
© 2016 Honeywell International Inc.



---

**Honeywell**