Honeywell Home

V8043 Zone Valves with Press Connection

INSTALLATION INSTRUCTIONS

Model	Pipe Size	Description	Max ΔP (psi)	C_v
V8043A1311/U	DN15	1/2" Zone Valve Pro Press with 18" lead wires	20	3
V8043A1312/U	DN20	3/4" Zone Valve Pro Press with 18" lead wires	20	3.5
V8043A1612/U	DN20	3/4" Zone Valve Pro Press with 18" lead wires	8	8
V8043A1313/U	DN25	1" Zone Valve Pro Press with 18" lead wires	6.5	8.5
V8043E1411/U	DN15	1/2" Zone Valve Pro Press with 18" lead wires and End Switch	20	3
V8043E1412/U	DN20	3/4" Zone Valve Pro Press with 18" lead wires and End Switch	20	3.5
V8043E1712/U	DN20	3/4" Zone Valve Pro Press with 18" lead wires and End Switch	8	8
V8043E1413/U	DN25	1" Zone Valve Pro Press with 18" lead wires and End Switch	6.5	8.5
V8043F1511/U	DN15	1/2" Zone Valve Pro Press with Terminal Block Connections and End Switch	20	3
V8043F1512/U	DN20	3/4" Zone Valve Pro Press with Terminal Block Connections and End Switch	20	3.5
V8043F1812/U	DN20	3/4" Zone Valve Pro Press with Terminal Block Connections and End Switch	8	8
V8043F1513/U	DN25	1" Zone Valve Pro Press with Terminal Block Connections and End Switch	6.5	8.5

APPLICATION

These valves consist of an actuator motor and valve assembly for controlling the flow of hot and/or cold water. The V8043A provides two-position, straight-through control of supply water. The valves are designed for use with fan coil and other units requiring quiet, compact water valves. The V8043E and V8043F also control supply water for baseboard radiators and convectors.

INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

⚠ CAUTION

1. Disconnect power supply before connecting wiring to prevent electrical shock of equipment damage.
2. Normally it is not necessary to remove the powerhead from the valve body during installation. If the valve must be disassembled, be certain that it is reassembled with the water flow in the direction of the arrow. Reversal of the powerhead will result in damage to the gear train.
3. On 24V systems, never jumper the valve coil terminals even temporarily. This may burn out the heat anticipator in the thermostat.

IMPORTANT

Use this valve in hydronic heating systems which do not contain dissolved oxygen in the system water. The dissolved oxygen, which is found in systems that have a frequent source of makeup water, causes the rubber plug inside the valve to deteriorate and eventually fail.

LOCATION

Install the valve in an area with adequate clearance to:

- move the manual opening lever on the side of the powerhead;
- remove the powerhead cover;
- wire the powerhead;
- replace the powerhead motor.

The valve location should be in an area where the temperature does not exceed the maximum valve operating temperature as shown in Specifications.

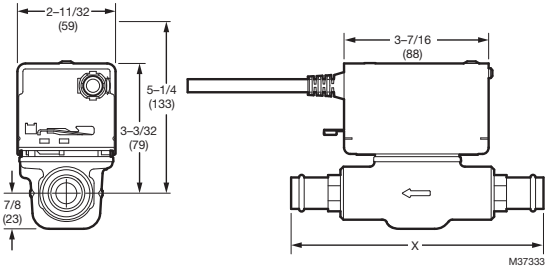

Fig. 1. Dimensions (V8043A, V8043E). Measurements in inches (mm). See Table 1.

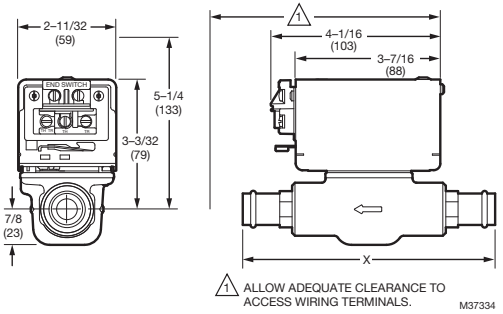

Fig. 2. Dimensions (V8043F). Measurements in inches (mm). See Table 1.

Table 1. X dimension. See Fig. 1 or Fig. 2.

1/2 in. Valves DN15	3/4 in. Valves DN20	1 in. Valves DN25
6–13/32 in. 165 mm	6–25/32 in. 170 mm	6–7/8 in. 176 mm

SPECIFICATIONS

Static Pressure Rating:120 psi

Temperature Rating:
Liquid: 4 to 93 °C (40 to 200 °F).
Ambient: 4 to 52 °C (40 to 125 °F).
Steam: Consult your local Resideo representative.

Humidity Rating: 5-95% RH (non-condensing)

Atmosphere: non-corrosive, non-explosive

Power Requirements and Timing:
All models: 24 V, 50/60 Hz (cycles) 6 W nominal, 15 seconds to open, and 4-5 seconds to close. Order transformer separately.

Transformer:
All models: AT72 or AT20B (maximum of 4 valves per AT72 or 2 valves per AT20B).
Order transformers separately.

Auxiliary Switch Ratings:
'E', 'F' Models: 4.4 Amps running at 120 Vac.

Recommended Wall Thermostats:
Heating Only: TH1100, TL8100.
Heating Only with Slab Control: TH6100AF.
Heating Only with N.O. Zone valves, or Cooling Only: TH1010D
Heating and Cooling: TH1110D.

Thermostat Heater Setting:
For heat anticipation: 0.32 Amps.

MOUNTING

The valve can be mounted in any position on a vertical line. If the valve is mounted horizontally; the powerhead must be even with or above the center line of the piping. Make sure that enough room is provided above the powerhead to remove the cover for servicing.

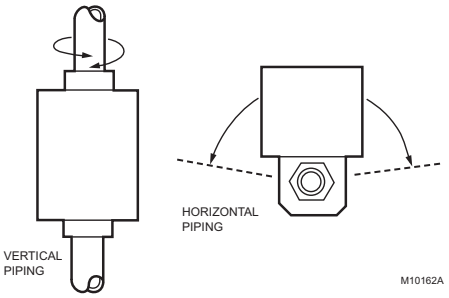

Fig. 3. Mounting positions.

Mount the valve directly in the tube or pipe. Make sure that the flow through the valve is in the direction indicated by the arrow stamped on the valve body.

⚠ WARNING

Read and understand all instructions for installing the press connection. Failure to follow all instructions may result in extensive property damage, serious injury or death.

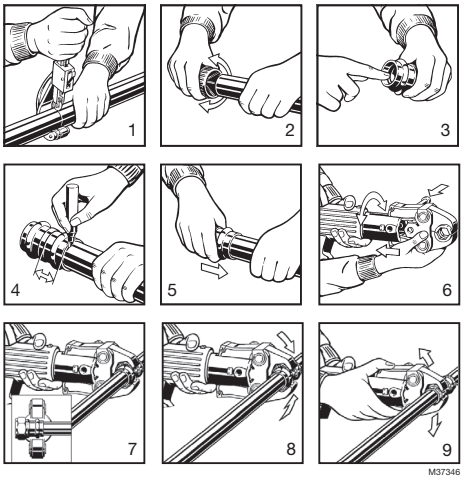

Fig. 4. Mounting procedure.
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1. Cut copper tubing at right angles using displacement-type cutter or fine-toothed steel saw.
2. Remove burr from inside and outside of tubing to prevent cutting sealing element.
3. Check seal for correct fit. Do not use oils or lubricants.
4. Mark proper insertion depth as shown in Table 2. Improper insertion depth may result in improper seal.
5. While turning slightly, slide press fitting onto tubing to the marked depth.

   NOTE: End of tubing must contact stop.

6. Insert appropriate jaw into the pressing tool and push in, holding pin until it locks in place.
7. Open the jaw and place at right angles on the fitting. Visually check insertion depth using mark on tubing.
8. Start the pressing process and hold the trigger until the jaw has engaged the fitting.
9. After pressing, the jaw can be opened again.
10. Leak Testing with Smart Connect®: Unpressed connections are located by pressurizing the system with air or water. When testing with water the proper pressure range is 15 psi to 85 psi maximum. Leak testing with air can be dangerous at high pressures. When testing with compressed air the proper pressure range is ½ psi to 45 psi maximum. Following a successful leak test, the system may be pressure tested up to 200 psi with air, or up to 600 psi with water, if required by local code requirements or project specifications.

Table 2. Insertion depth.

Tube Size	1/2 in.	3/4 in.	1 in.
Insertion Depth	3/4 in.	7/8 in.	7/8 in.

WIRING

Disconnect the power supply before connecting wiring to prevent electrical shock or equipment damage.

All wiring must comply with local codes and ordinances. Connections to the individual valves are shown in Fig. 5-6.

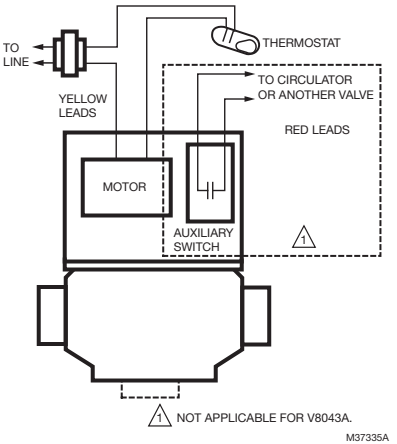


Fig. 5. Typical wiring for V8043A, V8043E.

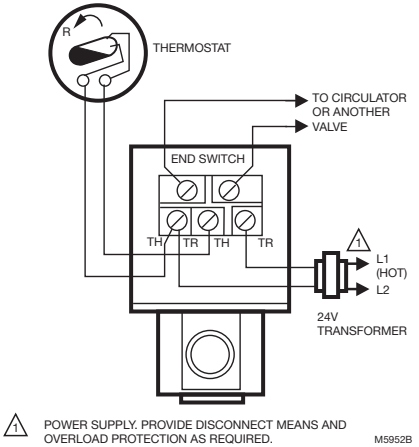


Fig. 6. Typical wiring for V8043F.

OPERATION AND CHECKOUT

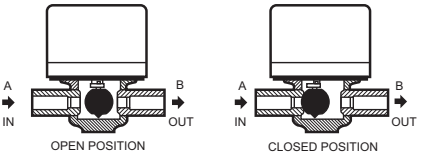
⚠ CAUTION

On 24 V systems, never jumper the valve coil terminals even temporarily. This may burn out the heat anticipator in the thermostat.

NORMALLY CLOSED MODELS

With the manual opener set to AUTO and the powerhead energized, the valve is opened as shown in Fig. 7 (left). When the powerhead is de-energized, a spring-return mechanism drives the valve to the closed position as shown in Fig. 7 (right). The valve can also be opened with no electrical power by moving the manual opening lever over the stop and pushing slowly and firmly to the MAN. OPEN position. The stop permits the valve to be locked in the open position. The valve will return to the automatic position when the valve is energized.

Auxiliary switch is not energized when the valve is manually opened.



NOTE: Inlet port is stamped 'A', outlet Port is stamped 'B' on the valve body.

Fig. 7. V8043 Operation for N.C. Valve.

Checkout

1. Raise the setpoint on the zone thermostat above the room temperature to initiate a call for heat.
2. Observe all control devices—the valve should open and the auxiliary switch should make the circuit to the circulator or other valve at the end of the opening stroke.
3. Lower the setpoint on the zone thermostat below the room temperature.
4. Observe the control devices. The valve should close and the auxiliary equipment should stop.

Service

This valve should be serviced by a trained, experienced service technician.

1. If the valve is leaking, drain the system and check to see if the O-ring needs replacing.
2. If the gear train is damaged, replace the entire powerhead assembly. See the Installation section. If the motor is burned out, replace the motor.

NOTE: Resideo zone valves are designed and tested for silent operation in properly designed and installed systems. However, water noises may occur as a result of excessive water velocity or piping noises may occur in high temperature (over 212 °F [100 °C]) systems with insufficient water pressure.

NOTE: These hydronic valves are not suitable for use in open loop systems where there is air exposure.

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