Recognize this symbol as a safety precaution.

Recognize Safety Symbols, Words and Labels

The following symbols and labels are used throughout this manual to indicate immediate or potential hazards. It is the owner's responsibility to read and comply with all safety information and instructions accompanying these symbols. Failure to heed safety information increases the risk of serious personal injury or death, property damage and/or product damage.

⚠️ WARNING

Hazards or unsafe practices could result in property damage, product damage, severe personal injury or death.

⚠️ CAUTION

Hazards or unsafe practices may result in property damage, product damage, personal injury or death.

⚠️ WARNING

Hazard or unsafe practices may result in property or product damage.

⚠️ WARNING

Installation and repair of this unit should be performed ONLY by individuals meeting the requirements of an “Entry Level Technician” as specified by the Air-Conditioning, Heating and Refrigeration Institute (AHRI). Attempting to install or repair this unit without such background may result in product damage, personal injury or death.

⚠️ WARNING

HIGH VOLTAGE!

Disconnect ALL power before servicing.

Multiple power sources may be present.

Failure to do so may cause property damage, personal injury or death.

Whirlpool® Models WMAHM, WMAHV

WPIO-239E
**WARNING**

This product is factory-shipped for use with 208/240/1/60 electrical power supply. DO NOT reconfigure this air handler to operate with any other power supply.

**WARNING**

To avoid property damage, personal injury or death due to electrical shock, this unit MUST have an uninterrupted, unbroken electrical ground. The electrical ground circuit may consist of an appropriately sized electrical wire connecting the ground lug in the unit control box to the building electrical service panel. Other methods of grounding are permitted if performed in accordance with the National Electric Code (NEC) /American National Standards Institute (ANSI)/National Fire Protection Association (NFPA) 70 and local/state codes. In Canada, electrical grounding is to be in accordance with the Canadian Electric Code (CSA) C22.1.

**CAUTION**

When installing or servicing this equipment, safety clothing, including hand and eye protection, is strongly recommended. If installing in an area that has special safety requirements (hard hats, etc.), observe these requirements.

**WARNING**

To prevent the risk of property damage, personal injury, or death, do not store combustible materials or use gasoline or other flammable liquids or vapors in the vicinity of this unit.

**DANGER**

CARBON MONOXIDE POISONING HAZARD

Special Warning for Installation of Furnace or Air Handling Units in Enclosed Areas such as Garages, Utility Rooms or Parking Areas.

Carbon monoxide producing devices (such as an automobile, space heater, gas water heater, etc.) should not be operated in enclosed areas such as unventilated garages, utility rooms or parking areas because of the danger of carbon monoxide (CO) poisoning resulting from the exhaust emissions. If a furnace or air handler is installed in an enclosed area such as a garage, utility room or parking area and a carbon monoxide producing device is operated therein, there must be adequate, direct outside ventilation. This ventilation is necessary to avoid the danger of CO poisoning which can occur if a carbon monoxide producing device continues to operate in the enclosed area. Carbon monoxide emissions can be (re)circulated throughout the structure if the furnace or air handler is operating in any mode.

CO can cause serious illness including permanent brain damage or death.

**INSTALLATION REQUIREMENTS**

These instructions are intended as a general guide only and do not supersede any national or local codes in any way. Compliance with all local, state, or national codes pertaining to this type of equipment should be determined prior to installation. Read this entire instruction manual, as well as the instructions supplied in separate equipment, before starting the installation. All models are designed for indoor installation only.

The installation of the air handler, field wiring, warm air ducts, etc. must conform to the requirements of the National Electrical Code, ANSI/NFPA No. 70 (latest edition) in the United States, and any state laws, and local ordinances (including plumbing or wastewater codes). Local authorities having jurisdiction should be consulted before installation is made. Such applicable regulations or requirements take precedence over the general instructions in this manual.

Install the conditioned air plenum, ducts and air filters (not provided) in accordance with NFPA 90B Standard for the Installation of Warm Air Heating and Air-Conditioning Systems (latest edition).

The air handler is provided with flanges for the connection of the plenum and ducts.

Air filters (not provided) must be listed as Class 2 furnace air filters.

The air handler may be used with an optional modular evaporator coil (WMAH) in upflow, counterflow, or horizontal applications. See “Installation Configuration Options” in “Installation Configurations” for acceptable system configurations. The mounting plates and the necessary hardware to connect the air handler and modular evaporator coil cabinets together are included with this air handler.
An optional electric heater may be installed in this cabinet. For electric heater accessory, refer to the electric heater rating plate for specific information regarding the electric supply.

Do not remove the cabinet knockouts until it has been determined which knockouts will need to be removed for the installation.

Select any accessories that are to be included in this installation. Select the final installation position which best suits the site conditions. Consider required clearances, space, routing requirements for refrigerant line, condensate disposal, filters, ductwork, wiring, and accessibility for service. Refer to the air handler rating plate on the air handler for specific information.

Tools and Parts
Gather the required tools and parts before starting installation. Read and follow the instructions provided with any tools listed here.

**Tools Needed**
- 9/16" nut driver
- Level
- Screwdriver
- Adjustable wrench

**Parts Needed**
Check local codes, check existing electrical supply, and read "Ductwork Requirements," and "Electrical Requirements," before purchasing parts.
- UL listed wire connectors

**Parts Supplied**
The mounting plates and the necessary hardware to connect the air handler and modular evaporator coil cabinets together are included with the air handler.

Location Requirements

**NOTE:** When used on cooling applications, excessive sweating may occur when the unit with optional evaporator coil is installed in a very humid space.

- If this unit is located in an area with high ambient temperature and/or high humidity, the air handler may be subject to nuisance sweating of the casing. On these installations, a wrap of 2" (5.1 cm) fiberglass insulation with a vapor barrier is recommended.
- If the air handler is installed in an unconditioned space, sealant should be applied around the electrical wires, refrigerant tubing, and condensate lines where they enter the cabinet.
- Electrical wires should be sealed on the inside where they exit the conduit opening. Sealant is required to avoid air leakage into and condensate from forming inside the unit, control box, and on electrical controls.
- The unit must be installed in such a way as to allow free access to the optional coil/filter compartment and blower/ control compartment.

Installation Clearances

**Non-Duct Return Closet Installation**
The unit can be installed in a closet with a false bottom to form a return air plenum, with a return air plenum through the wall of the closet, with an air duct routed through the floor, or with another approved method. Louvered closet doors or return air grilles are field supplied. Local codes may limit application of systems without a duct return to single-story buildings.

- Louvered closet doors shall be sized with the minimum opening required to provide minimum return air free area. See Minimum Filter Requirements Chart.
- Louvers installed in a closet to provide return air shall be sized with minimum opening required to provide minimum air return free area. See Minimum Filter Requirements Chart.
- Return air plenum installed through the floor shall be sized with minimum opening required to provide minimum return free area. See Minimum Filter Requirements Chart.
- If the free area is not known, assume a 25% free area for wood or a 75% free area for metal louvers or grilles.
- If the return air plenum is used, the return air grille should be immediately in front of the opening in the plenum to allow for the free flow of return air.
- When not installed in front of the opening, there must be adequate clearance around the unit to allow for the free flow of return air.

Clearances and Accessibility

- The unit can be positioned for upflow, counterflow, horizontal right or horizontal left operation.
- Zero clearance is allowed on all sides for combustible materials.
- 36" (91.4 cm) should be allotted on the door side for maintenance and service.
- To reduce the risk of rusting, do not install the unit blower directly on the ground or on a floor that is likely to be wet. In such environments, the unit must be elevated by use of a sturdy, nonporous material.

Installation Configurations
For ease in installation, it is best to make any necessary coil configuration changes before setting the unit in place. See “Installation Configuration Options” later in this section.

**Vertical Installations**

**Upflow/Counterflow**
- The unit must be supported on the bottom only and set on a field-supplied supporting frame with an air return opening.
- Securely attach the unit to the supporting frame.

**Horizontal Installations**
- Horizontal installations can be left-hand or right-hand air supply.
- The cabinet must be supported by the building structure to ensure cabinet integrity.
- Ensure that there is adequate room to remove the blower access panel if installing in the horizontal position.

**Suspended Cabinet Installation**
**NOTE:** Units cannot be installed in such a way that the blower access panel is facing up or down.

- The suspending means must be field fabricated, and should consist of 2 “cradles” made by attaching 2 rods to a length of angle iron or equivalent structural steel.
- Locate the cradles so that they are as close as possible to the ends of the unit (this will provide access for removal of major components such as the blower assembly).
- Provide enough clearance between the suspension rods and the unit to allow removal of the blower access panel.
Installation Configuration Options

NOTE: Typical installations with optional WMAH modular evaporator coil are shown.

Applications—Upflow/Counterflow

Attic Installation

Hanging Installation

Electrical Requirements

**WARNING**

To avoid the risk of injury, electrical shock or death, the furnace must be electrically grounded in accordance with local codes or, in their absence, with the latest edition of the National Electric Code (NEC).

**NOTES:**

■ Use copper conductors only.

■ All field wiring must be done in accordance with National Electrical Code, applicable requirements of UL and local codes where applicable.

■ Electrical wiring, disconnect means and overcurrent protection are to be supplied by the installer. Refer to the air handler rating plate for maximum overcurrent protection, minimum circuit ampacity, as well as operating voltage.

■ The power supply must be sized and protected according to the specifications supplied on the product.

■ This air handler is factory-configured for 240-volt, single phase, 60 cycles. For 208-volt applications, see “208-Volt Conversion” in the “Make Electrical Connections” section.

■ For optional electric heater applications, see “Accessories.” Refer to the instructions provided with the accessory for proper installation.

Ductwork Requirements

■ Install the conditioned air plenum, ducts and air filters (not provided) in accordance with NFPA 90B Standard for the Installation of Warm Air Heating and Air-Conditioning Systems (latest edition).

■ The air handler is provided with flanges for the connection of the plenum and ducts.

■ All air filters (not provided) must be listed as Class 2 furnace air filters.

■ The supply and return ductwork must be adequately sized to meet the system’s air requirements and static pressure capabilities. Ductwork should be insulated with a minimum of 1” (2.5 cm) thick insulation with a vapor barrier in the conditioned areas or 2” (5.1 cm) minimum in unconditioned areas.

■ The supply plenum should be the same size as the flanged opening provided around the blower outlet and should extend ideally at least 36” (91.4 cm) from the air handler before turning or branching off plenum into the duct runs. The plenum forms an extension of the blower housing and minimizes air expansion losses from the blower.
INSTALLATION INSTRUCTIONS

Inspect Shipment

The air handler is completely factory assembled, and all components are performance tested. Each unit consists of a blower assembly and controls in an insulated, galvanized factory-finished enclosure. Knockouts are provided for electrical wiring entrance.

- Check the unit rating plate to confirm specifications are as ordered.
- Upon receipt of equipment, inspect it for possible shipping damage. Be sure to examine the unit inside the carton if the carton is damaged.
- If damage is found, it should be noted on the carrier's freight bill. Damage claims should be filed with the carrier immediately. Claims of shortages should be filed with the seller within 5 days.

NOTE: If any damages are discovered and reported to the carrier, do not install the unit as your claim may be denied.

Install Ductwork

IMPORTANT:

- Install the ductwork in accordance with NFPA 90B Standard for the Installation of Warm Air Heating and Air-Conditioning Systems (latest edition) and any local codes.
- Connect the supply air duct to the flange on top of the unit. If an isolation connector is used, it must be nonflammable.
- A return air duct system is recommended. If the unit is installed in a confined space or closet, the entire duct cross sectional area must meet the minimum return air free area.

Install Blower—Cased Evaporator Coil

1. Secure the coil and blower together with the 2 connector plates and screws supplied in the blower bag assembly.
2. Use 1 connector plate and 6 screws on each side of the unit.
3. If accessory electric heat is to be added, install now according to the instructions shipped with the heater kit.

Upflow Installation

For upflow installations, the blower cabinet must sit on top of the coil cabinet.

NOTE: All panels should be in place before installing the cabinet.

Upflow Installation

1. Place the blower and coil cabinet assembly upright on the return duct or duct opening. Ensure that there is ample support for the cabinet assembly and all attached ductwork.
2. Connect the refrigerant and condensate drain connections according to the evaporator coil installation instructions. Ensure that the refrigerant and drain lines do not interfere with service access to the unit.
3. Attach the supply ductwork.
4. Seal the connections between the unit and the ductwork as required to reduce/eliminate air leakage.

Make electrical connections as specified in “Electrical Connections.”

Counterflow Installation

For counterflow installations, the evaporator coil cabinet must sit on top of the blower cabinet.

NOTE: All panels should be in place when installing the unit.
Counterflow Application

NOTES:
■ Supply ductwork for counterflow applications must be Class I.
■ If combustible ductwork is used, sheet metal protection is required.

1. Place the blower and coil cabinet assembly supply outlet on the supply duct or duct opening. Ensure there is ample support for the unit and all attached ductwork.
2. Connect the refrigerant and condensate drain connections according to the evaporator coil installation instructions. Ensure refrigerant and drain lines do not interfere with service access to the unit.
3. Attach the return ductwork.
4. Seal the connections between the unit and the ductwork as required to reduce/eliminate air leakage.
5. Make electrical connections as specified in “Electrical Connections.”

Horizontal Installation

For horizontal installations, the coil cabinet must be upstream of the blower cabinet.

NOTE: All panels should be in place when installing the unit.

Attic Installation

1. Set the unit near its final installation place. The unit must be supported along the entire length of the unit.
2. Install rubber isolation pads to reduce sound and vibration transmission.
3. Ensure there is ample support for the unit and all attached ductwork.
4. If installed above a finished ceiling or living space, be sure to place a secondary drain pan under the entire unit, and pipe the drain separately from the main condensate drain.
5. Connect the refrigerant and condensate drain connections according to the coil section installation instructions.
6. Ensure that the refrigerant and drain lines do not interfere with service access to the unit.
7. Attach the return and supply ductwork.
8. Seal connections.
9. Make electrical connections as specified in “Electrical Connections.”

Install Filter

Filters are not supplied with these air handlers. It is the installer’s responsibility to install properly sized filters in accordance with the Minimum Filter Requirements Chart.
■ The filter size is determined by the “Nominal Tons Air Conditioning and Nominal Airflow” (see chart).
■ Areas and dimensions shown for cleanable filters are based on filters rated at 600 ft per minute face velocity.
Typical filter sizes are shown; however, any combination of filters whose area equals or exceeds the minimum area shown is satisfactory.

Minimum Filter Requirements Chart

<table>
<thead>
<tr>
<th>Nominal Tons Air Conditioning and Nominal Airflow</th>
<th>Sq. In. (cm²)</th>
<th>Surface Area and Nominal Size—In. (cm)</th>
<th>Minimum Return Air Free Area—sq. in. (cm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 2 Tons 800 to 900 CFM</td>
<td>432 (2,787)</td>
<td>20 x 25 (50.8 x 63.5)</td>
<td>260 (1,677)</td>
</tr>
<tr>
<td>2½ Tons 900 to 1,000 CFM</td>
<td>480 (3,097)</td>
<td>20 x 30 (50.8 x 76.2)</td>
<td>288 (1,858)</td>
</tr>
<tr>
<td>3 Tons 1,100 to 1,300 CFM</td>
<td>576 (3,716)</td>
<td>*14 x 25 (35.6 x 63.5)</td>
<td>346 (2,232)</td>
</tr>
<tr>
<td>3½ Tons 1,300 to 1,500 CFM</td>
<td>672 (4,335)</td>
<td>*16 x 25 (40.6 x 63.5)</td>
<td>404 (2,606)</td>
</tr>
<tr>
<td>4 Tons 1,500 to 1,700 CFM</td>
<td>768 (4,955)</td>
<td>*20 x 25 (50.8 x 63.5)</td>
<td>461 (2,974)</td>
</tr>
<tr>
<td>5 Tons 1,900 to 2,100 CFM</td>
<td>960 (6,194)</td>
<td>*20 x 30 (50.8 x 76.2)</td>
<td>576 (3,716)</td>
</tr>
</tbody>
</table>

*2 disposable filters required for these units

If a central return air filter-grille is used, the air handler does not require a filter.

Make Electrical Connections

208/240 Volt Installations

1. Disconnect all power supplies.
2. Remove the blower access panel.
3. Route the field supply wires to the air handler electrical connection box.
4. Using UL-listed wire connectors, connect the field supply wires to the air handler (black to black and yellow to yellow).
5. Connect ground wire to terminal marked “GND.”
6. Replace the blower access panel.

208 Volt Conversion

1. Disconnect all power supplies.
2. Remove the blower access panel.
3. Move the 2 connected black transformer leads from the 240 Volt terminal on the transformer to the 208 Volt terminal on the transformer. See the appropriate wiring diagram for your model.
**WARNING**

Disconnect ALL power before servicing. Multiple power sources may be present. Failure to do so may cause property damage, personal injury or death.

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**WMAHM Wiring Diagram—Low Voltage for Cooling Unit with Optional Heat Kit—10KW and Below**

- Room Thermostat
- To Comfort Alert Module (If Used)
- Contactor Coil
- To Condensing Unit 24V Connections
- #18 Gauge - 2 Wires
- #18 Gauge - 4 Wires With Cooling, 3 Wires Without Cooling
- Red
- Green
- White
- Blue

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**WMAHM Wiring Diagram—Low Voltage for Cooling Unit with Optional Heat Kit—15KW and Above**

- Room Thermostat
- To Comfort Alert Module (If Used)
- Outdoor Thermostat (Optional)
- Contactor Coil
- To Condensing Unit 24V Connections
- #18 Gauge - 2 Wires
- #18 Gauge - 4 Wire With Cooling, 3 Wire Without Cooling
- Red
- Green
- White
- Brown
- Blue
WARNING

Disconnect ALL power before servicing.
Multiple power sources may be present.
Failure to do so may cause property damage, personal injury or death.

WMAHM System Composite Diagram—800 to 2000—10KW and Below

NOTES:
■ OT—Outdoor Thermostat (optional)
■ EHR—Emergency Heat Relay (optional)
1. Outdoor thermostat (OT-1) should be the first to close and the first to open.
2. If the outdoor thermostat is not used, tie the white and brown wires from the air handler together.
3. Remove wire when using the outdoor thermostat. #18 gauge 7 wire needed when 2 outdoor thermostats are used.

WMAHM System Composite Diagram—1200 to 2000—Above 10KW

NOTES:
■ OT—Outdoor Thermostat (optional)
■ EHR—Emergency Heat Relay (optional)
1. Outdoor thermostat (OT-1) should be the first to close and the first to open.
2. If the outdoor thermostat is not used, tie the white and brown wires from the air handler together.
3. Remove wire when using the outdoor thermostat. #18 gauge 7 wire needed when 2 outdoor thermostats are used.
WARNING

Disconnect ALL power before servicing. Multiple power sources may be present. Failure to do so may cause property damage, personal injury or death.

WMAHV Single-Stage Cooling with Single- or 2-Stage Heating

Cooling Only—2-Stage Heat Thermostat

NOTES:
1. Y/Y2 enables high speed fan cooling.
2. E/W1 enables low speed fan heating. W/W2 enables high speed fan heating.
3. OT1 PJ4 must be cut for this configuration.
5. DIP Switch 4 must be in the “ON” position.

Cooling Only—2-Stage Heat—1st Room Thermostat and 2nd Outdoor Thermostat

NOTES:
1. 1st Stage enabled through room thermostat.
2. 2nd Stage enabled through closed outdoor thermostat.
3. OT1 PJ4 must be cut for this configuration.
5. DIP Switch 4 must be in the “ON” position.
Cooling Only—2-Stage Heat—Outdoor Thermostat Enabled

NOTES:
■ 1st Stage enabled through room thermostat.
■ 2nd Stage enabled through closed outdoor thermostat.
1. Y/Y2 enables high speed fan cooling.
2. E/W1 enables low speed fan heating. W/W2 with outdoor thermostat closed enables high speed fan heating.
3. OT1 PJ4 must be cut for this configuration.
4. OT2 PJ2 must be cut for this configuration.
6. DIP Switch 4 must be in the “ON” position.

WMAHV Heat Pump with Single- or 2-Stage Heating and Options for Emergency Heat

Heat Pump—1-Stage Emergency Heat and 1-Stage Auxiliary Heat

NOTES:
1. Y enables high speed fan cooling.
2. E and W2 enable high speed fan heating.
3. If OT2 PJ2 jumper is cut, E and W2 enable low speed fan heating.
5. DIP Switch 4 must be in the “ON” position.
Heat Pump—2-Stage Emergency Heat and 1-Stage Auxiliary Heat

NOTES:
1. Y enables high speed fan cooling.
3. OT1 PJ4 must be cut for this configuration.
5. DIP Switch 4 must be in the “ON” position.

Heat Pump—2-Stage Emergency Heat and 2-Stage Auxiliary Heat—1 Outdoor Thermostat

NOTES:
- 1st Stage auxiliary heat enabled by room thermostat.
- 2nd Stage auxiliary heat enabled by room thermostat and outdoor thermostat.
- Y enables high speed fan cooling.
- OT2 PJ2 must be cut for this configuration.
- DIP Switch 4 must be in the “ON” position.
Heat Pump—2-Stage Emergency Heat and 2-Stage Auxiliary Heat—2 Outdoor Thermostats

NOTES:
- No auxiliary heat in heat pump mode until outdoor thermostat closes.
1. Y enables high speed fan cooling.
2. E enables low speed fan heating. W2 with OT1 closed enables low speed fan heating. W2 with OT2 closed enables high speed fan heating.
3. OT1 PJ4 must be cut for this configuration.
4. OT2 PJ2 must be cut for this configuration.
6. DIP Switch 4 must be in the “ON” position.

Heat Pump—2-Stage Emergency Heat and 1-Stage Auxiliary Heat—1 Outdoor Thermostat

NOTES:
- No auxiliary heat in heat pump mode until outdoor thermostat closes.
1. Y enables high speed fan cooling.
2. E enables low speed fan heating. W2 with OT1 closed enables low speed fan heating. W2 with OT2 closed enables high speed fan heating.
3. OT1 PJ4 must be cut for this configuration.
4. OT2 PJ2 must be cut for this configuration.
6. DIP Switch 4 must be in the “ON” position.
**WARNING**

Disconnect ALL power before servicing.
Multiple power sources may be present.
Failure to do so may cause property damage, personal injury or death.

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**WMAHV 2-Stage Cooling with Conventional 2-Stage Thermostat**

**2-Speed Cooling Only—1-Stage Electric Heat**

![Diagram of 2-Speed Cooling Only—1-Stage Electric Heat]

**NOTES:**
2. E/W1 enables high speed fan heating.
3. If OT1 PJ4 jumper is cut, E/W1 enables low speed fan heating.
5. DIP Switch 4 must be in the “OFF” position.

**2-Speed Cooling Only—2-Stage Heat Thermostat**

![Diagram of 2-Speed Cooling Only—2-Stage Heat Thermostat]

**NOTES:**
2. E/W1 enables high speed fan heating.
3. If OT1 PJ4 jumper is cut, E/W1 enables low speed fan heating.
5. DIP Switch 4 must be in the “OFF” position.
2-Speed Cooling Only—2-Stage Heat—Outdoor Thermostat Enabled

NOTES:
2. E/W1 enables low speed fan heating. W/W2 with outdoor thermostat closed enables high speed fan heating.
3. OT1 PJ4 must be cut for this configuration.
4. OT2 PJ2 must be cut for this configuration.
6. DIP Switch 4 must be in the “OFF” position.

WMAHV Heat Pump with Single- or 2-Stage Heating with Conventional Thermostat and Options for Emergency Heat

Heat Pump—1-Stage Emergency Heat and 1-Stage Auxiliary Heat

NOTES:
1. Y enables high speed fan cooling.
2. E and W2 enable high speed fan heating.
3. If OT2 PJ2 jumper is cut, E and W2 enable low speed fan heating.
5. DIP Switch 4 must be in the “ON” position.
Heat Pump—2-Stage Emergency Heat and 1-Stage Auxiliary Heat

NOTES:
1. Y enables high speed fan cooling.
3. OT1 PJ4 must be cut for this configuration.
5. DIP Switch 4 must be in the “ON” position.

Heat Pump—2-Stage Emergency Heat and 2-Stage Auxiliary Heat—1 Outdoor Thermostat

NOTES:
1. Y enables high speed fan cooling.
3. OT1 PJ4 must be cut for this configuration.
5. DIP Switch 4 must be in the “ON” position.
Heat Pump—2-Stage Emergency Heat and 2-Stage Auxiliary Heat—2 Outdoor Thermostats

NOTES:

■ No auxiliary heat in heat pump mode until outdoor thermostat closes.
1. Y enables high speed fan cooling.
2. E enables low speed fan heating. W2 with OT1 closed enables low speed fan heating. W2 with OT2 closed enables high speed fan heating.
3. OT1 PJ4 must be cut for this configuration.
4. OT2 PJ2 must be cut for this configuration.
6. DIP Switch 4 must be in the “ON” position.

Heat Pump—2-Stage Emergency Heat and 1-Stage Auxiliary Heat—1 Outdoor Thermostat

NOTES:

1. Y enables high speed fan cooling.
2. E enables low speed fan heating. W2 with OT2 closed enables high speed fan heating.
3. OT1 PJ4 must be cut for this configuration.
4. OT2 PJ2 must be cut for this configuration.
6. DIP Switch 4 must be in the “ON” position.
**WARNING**

Disconnect ALL power before servicing.
Multiple power sources may be present.
Failure to do so may cause property damage, personal injury or death.

**WMAHV 2-Speed Heat Pump with Single- or 2-Stage Heating and Options for Emergency Heat—Conventional 2-Stage Thermostat**

**Heat Pump—1-Stage Emergency Heat and 1-Stage Auxiliary Heat**

NOTES:
1. Y enables high speed fan cooling.
2. E enables low speed fan heating.
3. If OT2 PJ2 jumper is cut, E and W2 enable low speed fan heating.
5. DIP Switch 4 must be in the “OFF” position.

**Heat Pump—2-Stage Emergency Heat and 1-Stage Auxiliary Heat**

NOTES:
1. Y enables high speed fan cooling.
3. OT2 PJ2 must be cut for this configuration.
5. DIP Switch 4 must be in the “OFF” position.
**WARNING**

Disconnect ALL power before servicing.
Multiple power sources may be present.
Failure to do so may cause property damage, personal injury or death.

---

**Heat Pump—2-Stage Emergency Heat and 2-Stage Auxiliary Heat—1 Outdoor Thermostat**

**NOTES:**

- 1st Stage auxiliary heat enabled by room thermostat.
- 2nd Stage auxiliary heat enabled by room thermostat and outdoor thermostat.
- Y enables high speed fan cooling.
- OT2 PJ2 must be cut for this configuration.
- DIP Switch 4 must be in the “OFF” position.

---

**Heat Pump—2-Stage Emergency Heat and 1-Stage Auxiliary Heat—1 Outdoor Thermostat**

**NOTES:**

- No auxiliary heat in heat pump mode until outdoor thermostat closes.
- Y enables high speed fan cooling.
- E enables low speed fan heating. W2 with OT2 closed enables high speed fan heating.
- OT1 PJ4 must be cut for this configuration.
- OT2 PJ2 must be cut for this configuration.
- DIP Switch 4 must be in the “OFF” position.
Heat Pump—2-Stage Emergency Heat and 2-Stage Auxiliary Heat—2 Outdoor Thermostats

NOTES:

■ No auxiliary heat in heat pump mode until outdoor thermostat closes.
1. Y enables high speed fan cooling.
2. E enables low speed fan heating. W2 with OT1 closed enables low speed fan heating. W2 with OT2 closed enables high speed fan heating.
3. OT1 PJ4 must be cut for this configuration.
4. OT2 PJ2 must be cut for this configuration.
6. DIP Switch 4 must be in the “OFF” position.

Complete Installation

Pre-Start Check

■ Is the unit properly located, level, secure and serviceable?
■ Is the wiring neat, correct and in accordance with the wiring diagram?
■ Is the unit properly grounded and connected to the correct size fuse or circuit breaker?
■ Is the thermostat correctly wired, level, and in a good location?
■ Are all of the access panels in place and secure?
■ Are all of the accessories properly installed?

Check Airflow (WMAHV Motor)

For proper cooling operation, the airflow through the indoor coil should be between 350 and 450 CFM per ton of cooling capacity (or 350 to 450 CFM per 12,000 Btu/h) based on the rating of the outdoor condensing unit.

WARNING

Disconnect ALL power before servicing.
Failure to do so may cause property damage, personal injury or death.

The WMAHV control board is factory set with DIP Switch #4 in the “ON” position and all other DIP switches are factory set in the “OFF” position. For most applications, the settings are to be changed according to the electric heat size and the outdoor unit selection.

The WMAHV motor provides many features not available on the traditional PSC motor. These features include:

■ Improved efficiency
■ Constant CFM
■ Soft start and stop
■ Improved humidity control
Motor Speed Adjustment
Each WMAHV blower motor has been preprogrammed for operation at 4 distinct airflow levels when operating in cooling/heat pump mode or electric heat mode. These 4 distinct levels may also be adjusted slightly lower or higher if desired. The adjustment between levels and the trim adjustments are made by changing the DIP switch(s) either to an OFF or ON position.

DIP Switch Functions
The WMAHV blower motor has an electronic control that contains an 8-position DIP switch. The functions of these DIP switches are shown in the following chart.

<table>
<thead>
<tr>
<th>DIP Switch Number</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Electric Heat</td>
</tr>
<tr>
<td>2</td>
<td>N/A</td>
</tr>
<tr>
<td>3</td>
<td>Indoor Thermostat</td>
</tr>
<tr>
<td>4</td>
<td>Cooling/Heat Pump CFM</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>CFM Trim Adjust</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

CFM Delivery
The following table shows the CFM output for DIP switch combinations 1 and 2, and for 5 and 6.

<table>
<thead>
<tr>
<th>Model</th>
<th>Switch 1</th>
<th>Switch 2</th>
<th>Electric Heat CFM</th>
<th>Switch 5</th>
<th>Switch 6</th>
<th>Cooling/Heat Pump CFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMAHV 1200</td>
<td>Off</td>
<td>Off</td>
<td>1,200</td>
<td>Off</td>
<td>Off</td>
<td>1,200</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>Off</td>
<td>1,000</td>
<td>On</td>
<td>Off</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>On</td>
<td>800</td>
<td>Off</td>
<td>On</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>On</td>
<td>600</td>
<td>On</td>
<td>On</td>
<td>600</td>
</tr>
<tr>
<td>WMAHV 1600</td>
<td>Off</td>
<td>Off</td>
<td>1,600</td>
<td>Off</td>
<td>Off</td>
<td>1,600</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>Off</td>
<td>1,400</td>
<td>On</td>
<td>Off</td>
<td>1,400</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>On</td>
<td>1,200</td>
<td>Off</td>
<td>On</td>
<td>1,200</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>On</td>
<td>1,000</td>
<td>On</td>
<td>On</td>
<td>1,000</td>
</tr>
<tr>
<td>WMAHV 2000</td>
<td>Off</td>
<td>Off</td>
<td>1,900</td>
<td>Off</td>
<td>Off</td>
<td>2,000</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>Off</td>
<td>1,600</td>
<td>On</td>
<td>Off</td>
<td>1,800</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>On</td>
<td>1,400</td>
<td>On</td>
<td>Off</td>
<td>1,600</td>
</tr>
<tr>
<td></td>
<td>On</td>
<td>On</td>
<td>1,200</td>
<td>On</td>
<td>On</td>
<td>1,200</td>
</tr>
</tbody>
</table>

Thermostat—Fan Only Mode
During Fan Only Operations, the CFM output is 30% of the cooling setting.

CFM Trim Adjustment
Minor adjustments can be made through the DIP switch combination of 7 and 8. The following table shows the DIP switch position for this feature.

NOTE: The airflow will not make the decreasing adjustment in Electric Heat mode.

<table>
<thead>
<tr>
<th>CFM</th>
<th>Switch 7</th>
<th>Switch 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>+10%</td>
<td>On</td>
<td>Off</td>
</tr>
<tr>
<td>-15%</td>
<td>Off</td>
<td>On</td>
</tr>
</tbody>
</table>

NOTE: If no adjustment is required, DIP switches 7 and 8 should be left in the OFF position.

Humidity Control
When using a humidistat (normally closed), cut jumper PJ6 on the control board. The humidistat will only affect the cooling airflow by adjusting the airflow to 85%.

2-Stage Heating
When using staged electric heat, cut jumper PJ4 on the control board.
Check Airflow (WMAHM Motor)

For proper cooling operation, the airflow through the indoor coil should be between 350 and 450 CFM per ton of cooling capacity (or 350 to 450 CFM per 12,000 Btu/h) based on the rating of the outdoor condensing unit.

<table>
<thead>
<tr>
<th>Speed</th>
<th>Static</th>
<th>WMAHM0800**-*SCFM</th>
<th>WMAHM1200**-*SCFM</th>
<th>WMAHM1600**-*SCFM</th>
<th>WMAHM2000**-*SCFM</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0.1</td>
<td>1,240</td>
<td>1,500</td>
<td>1,800</td>
<td>2,160</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>1,170</td>
<td>1,460</td>
<td>1,740</td>
<td>2,080</td>
</tr>
<tr>
<td></td>
<td>0.3</td>
<td>1,120</td>
<td>1,360</td>
<td>1,680</td>
<td>1,990</td>
</tr>
<tr>
<td></td>
<td>0.4</td>
<td>1,060</td>
<td>1,280</td>
<td>1,610</td>
<td>1,890</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>980</td>
<td>1,200</td>
<td>1,520</td>
<td>1,790</td>
</tr>
<tr>
<td></td>
<td>0.6</td>
<td>900</td>
<td>1,110</td>
<td>1,430</td>
<td>1,690</td>
</tr>
<tr>
<td>Medium</td>
<td>0.1</td>
<td>900</td>
<td>1,380</td>
<td>1,540</td>
<td>1,730</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>850</td>
<td>1,320</td>
<td>1,490</td>
<td>1,670</td>
</tr>
<tr>
<td></td>
<td>0.3</td>
<td>790</td>
<td>1,270</td>
<td>1,450</td>
<td>1,590</td>
</tr>
<tr>
<td></td>
<td>0.4</td>
<td>740</td>
<td>1,200</td>
<td>1,400</td>
<td>1,520</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>680</td>
<td>1,140</td>
<td>1,350</td>
<td>1,420</td>
</tr>
<tr>
<td></td>
<td>0.6</td>
<td>605</td>
<td>1,040</td>
<td>1,280</td>
<td>1,320</td>
</tr>
<tr>
<td>Low</td>
<td>0.1</td>
<td>650</td>
<td>1,170</td>
<td>1,130</td>
<td>1,520</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>590</td>
<td>1,130</td>
<td>1,100</td>
<td>1,450</td>
</tr>
<tr>
<td></td>
<td>0.3</td>
<td>540</td>
<td>1,080</td>
<td>1,070</td>
<td>1,360</td>
</tr>
<tr>
<td></td>
<td>0.4</td>
<td>500</td>
<td>1,020</td>
<td>1,030</td>
<td>1,290</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>430</td>
<td>950</td>
<td>990</td>
<td>1,200</td>
</tr>
<tr>
<td></td>
<td>0.6</td>
<td>330</td>
<td>830</td>
<td>930</td>
<td>1,090</td>
</tr>
</tbody>
</table>
SEQUENCE OF OPERATION

Cooling—Cooling Only or Heat Pump
When the thermostat calls for cooling, the circuit between R and G is completed, and the blower relay is energized. The normally open contacts close, causing the indoor blower motor to operate. The circuit between R and Y is also completed; this circuit closes the contactor in the outdoor unit starting the compressor and outdoor fan motor. Circuit R and O energizes the reversing valve, switching it to the cooling position. (The reversing valve remains energized as long as selector switch is in the COOL position.)

Heating—Electric Heat Only
When the thermostat calls for heat, the circuit between R and W is completed, and the heat sequencer relay is energized. A time delay follows before the heating elements and the indoor blower motor come on. Units with a second heat sequencer relay can be connected with the first sequencer to W on the thermostat subbase or connected to a 2nd stage on the subbase.

Heating—Heat Pump
When the thermostat calls for heat, the circuits between R and Y and R and G are completed. Circuit R-Y energizes the contactor starting the outdoor fan motor and the compressor. Circuit R and G energizes the blower relay starting the indoor blower motor.

If the room temperature should continue to fall, the circuit between R and W1 is completed by the 2nd stage heat room thermostat. Circuit R-W1 energizes a heat sequencer relay. The completed circuit will energize supplemental electric heat (if available). Units with a second heat sequencer relay can be connected with the first sequencer to W1 on the thermostat or connected to a second heating stage W2 on the thermostat subbase.

AIR HANDLER MAINTENANCE

WARNING
HIGH VOLTAGE!
Disconnect ALL power before servicing.
Multiple power sources may be present.
Failure to do so may cause property damage, personal injury or death.

IMPORTANT: Do not operate system without a filter. A filter is required to keep excessive dirt and dust from the coil, blower, and internal parts. The filter is placed in the supply air return duct by the installer.

Inspect air filters at least once a month and replace or clean as required. Dirty filters are the most common cause of inadequate heating or cooling performance.

Replace disposable filters. Cleanable filters can be cleaned by soaking in mild detergent and rinsing with cold water.

Install new/clean filters with the arrows on the side pointing in the direction of airflow.

Do not replace a cleanable (high velocity) filter with a disposable (low velocity) filter unless the return air system is properly sized for it.

If water should start coming from the secondary drain line, a problem exists which should be investigated and corrected. Contact a qualified person.

ASSISTANCE OR SERVICE

If you need further assistance, you can write to the below address with any questions or concerns:
Whirlpool® Home Cooling and Heating
14610 Breakers Drive
Jacksonville, FL 32258

Please include a daytime phone number in your correspondence.

Accessories
To order accessories, contact your Whirlpool® Home Cooling and Heating dealer.

Electric Heat Kits
Refer to the accessory kit label on the front panel of the air handler for electric heat kit accessory options and applications.