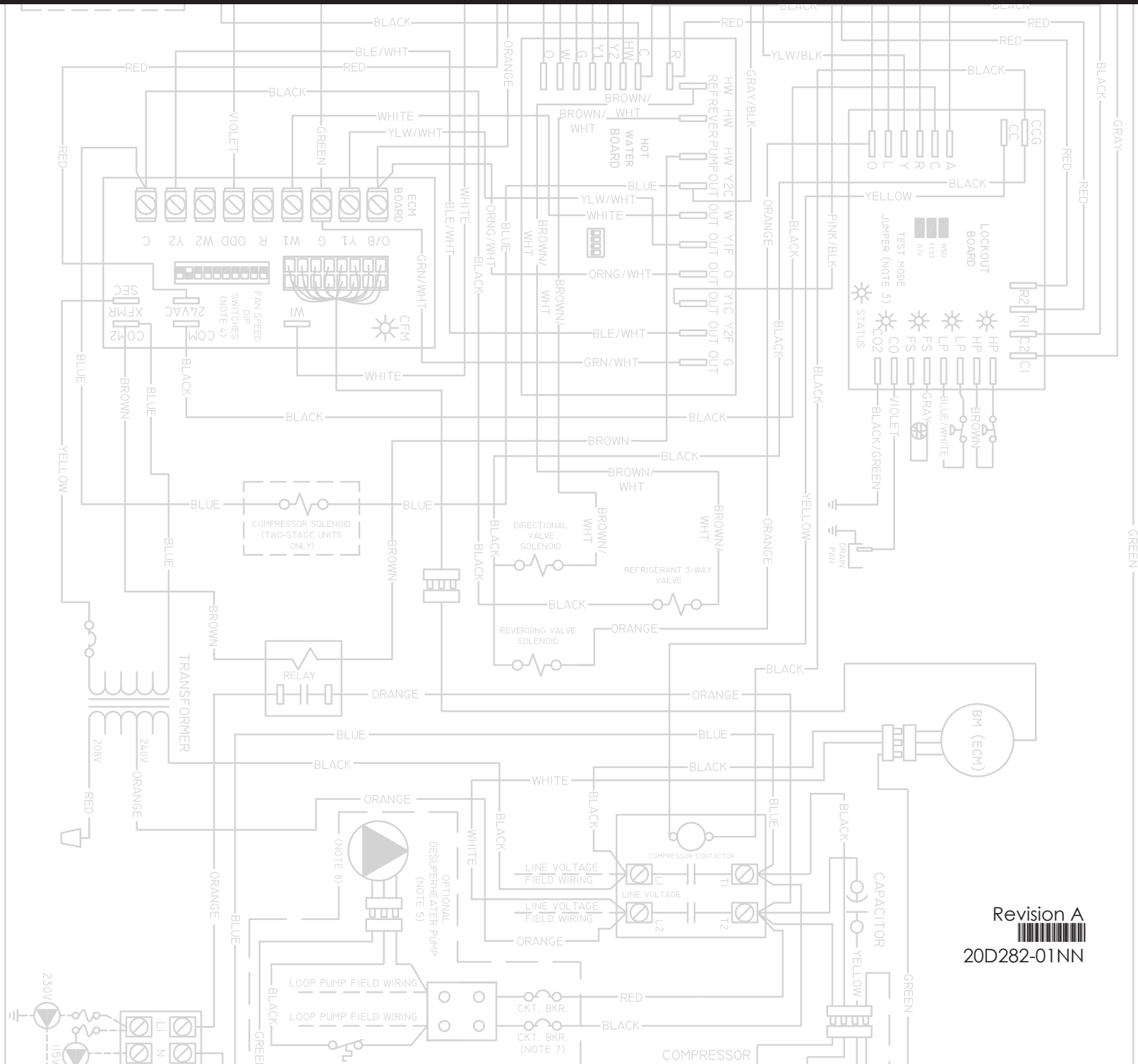


# Installation, Operations, & Maintenance Manual

MPD & MPH MULTI-POSITION AIR HANDLERS & ACD, ACH, MCD & MCH CASED/UNCASED "A" COILS



# Table of Contents

## Section 1: Model Nomenclature

|  |   |
|--|---|
| Uncased "A" Coil Model Nomenclature Decoder..... | 4 |
| MPD Series Multi-Position Nomenclature.....      | 4 |
| Cased "A" Coil Model Nomenclature Decoder.....   | 5 |

## Section 2: Introduction

|                                      |   |
|--------------------------------------|---|
| Overview .....                       | 6 |
| Safety Labeling & Signal Words ..... | 6 |
| Inspection.....                      | 6 |
| Unit Protection .....                | 6 |
| Consumer Instructions.....           | 6 |
| Enertech Global D-I-Y Policy .....   | 6 |

## Section 3: Pre-Installation

|                       |   |
|-----------------------|---|
| Pre-Installation..... | 7 |
|-----------------------|---|

## Section 4: Installation Considerations

|                                    |   |
|------------------------------------|---|
| Unit Placement .....               | 7 |
| Unit Orientation (AC Series) ..... | 7 |
| Unit Orientation (MP Series) ..... | 7 |
| Up-Flow Application .....          | 7 |
| Horizontal Application .....       | 8 |
| Down-Flow Application .....        | 8 |

## Section 5: Installation

|                                     |   |
|-------------------------------------|---|
| Ductwork .....                      | 8 |
| Ductwork Industry Standard.....     | 8 |
| MPD/ACD/MCD Refrigerant Piping..... | 8 |
| MPH/ACH/MCH Water Piping .....      | 9 |
| Condensate Drain Connection .....   | 9 |

## Section 6: Wiring & Controls

|  |    |
|--|----|
| Wiring (MPD/MPH) .....                         | 9  |
| ECM Motor Controller (MPD/MPH) .....           | 9  |
| Fan Speed .....                                | 9  |
| Dehumidification .....                         | 10 |
| Flash Sequence .....                           | 10 |
| Modes of Operation .....                       | 10 |
| MPH Air Handler Fan Speeds.....                | 11 |
| MPD (with *RT) Air Handler Fan Speeds .....    | 12 |
| MPD (with *BS/BT) Air Handler Fan Speeds ..... | 13 |

## Section 7: Dimensional Data

|  |    |
|--|----|
| Air Handler Dimensional Data.....                        | 14 |
| Hydronic Air Handler Dimensional Data .....              | 15 |
| Cased & Uncased "A" Coil Dimensional Data .....          | 16 |
| Cased & Uncased Hydronic "A" Coil Dimensional Data ..... | 17 |

## Section 8: Unit Electrical Data

|   |    |
|---|----|
| MPD Electrical Data .....                           | 18 |
| MPH Electrical Data .....                           | 18 |
| MPD/MPH with AH Electric Heat Electrical Data ..... | 19 |

## Section 9: Wiring Diagrams

|                     |    |
|---------------------|----|
| Wiring Diagram..... | 20 |
|---------------------|----|

## Section 10: Pressure Drop Data Table

|                                |    |
|--------------------------------|----|
| Pressure Drop Data Table ..... | 21 |
|--------------------------------|----|

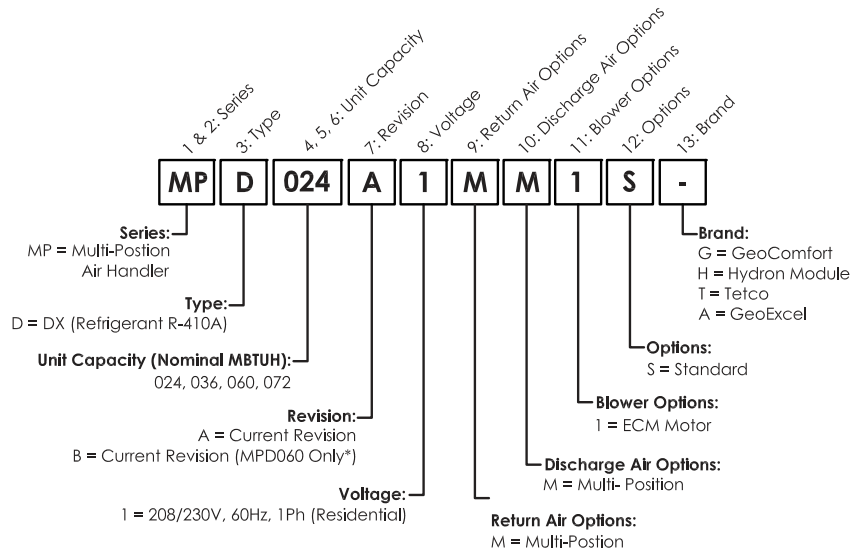
## Section 11: Down -Flow Conversion

|                              |    |
|------------------------------|----|
| Disassembly (Figure 2) ..... | 22 |
| Assembly (Figure 3) .....    | 22 |

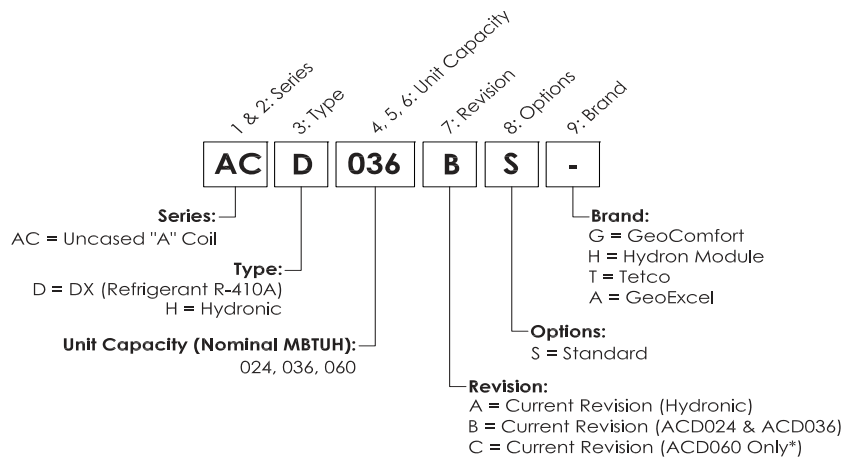
**This Page Intentionally Left Blank**

## Section 1: Model Nomenclature

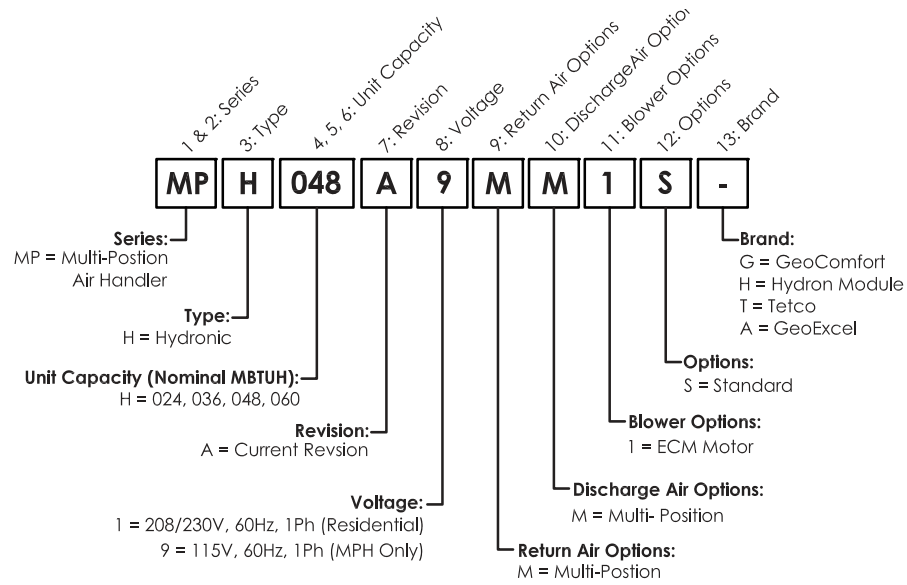
### MPD Series Multi-Position Nomenclature



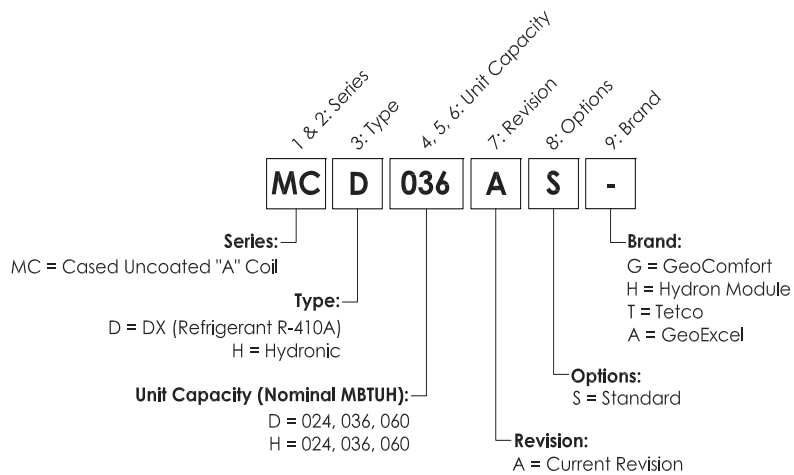
### Uncased "A" Coil Model Nomenclature Decoder



## MPH Series | Hydronic Multi-Position



## Cased "A" Coil Model Nomenclature Decoder



## Section 2: Introduction

### Overview

The MPH and MPD air handlers, as well as the ACD, MCD, and ACH “A” coils, are offered specifically for use with EnerTech Global’s water-to-air split, and water-to-water model lines. The water-to-air splits have been designed, tested, and certified with specific air handlers and “A” coils. See Table 1. The water-to-water units have the option to be paired with multiple hydronic air handlers and “A” coils depending on the installation requirements. Engineering and quality control is built into every unit. Good performance depends on proper application and correct installation. The information contained within this manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.

**Table 1: Water-to-Air Split Certified Matches**

| Compressor Section | Air Handler Match | A-Coil Match |
|--------------------|-------------------|--------------|
| *BS018             | MPD024            | ACD/MCD024   |
| *BT024/*RT024      | MPD024            | ACD/MCD024   |
| *BT036/*RT036      | MPD036            | ACD/MCD036   |
| *BT048/*RT048      | MPD060            | ACD/MCD060   |
| *BT060/*RT060      | MPD060            | ACD/MCD060   |
| *BT072             | MPD072            | ACD/MCD060   |

**NOTE:** In order to have an AHRI/Energy Star Certified product, the unit MUST be installed with its certified match.

### Safety Labeling & Signal Words

The signal words **Notice**, **Danger**, **Warning**, **Caution**, and **Note** are used on product labels and throughout this manual to identify levels of hazard seriousness.

**“NOTICE”** Notification of installation, operation or maintenance information which is important, but which is NOT hazard related.

**“CAUTION”** Indicates a potentially hazardous situation or an unsafe practice which, if not avoided, COULD result in minor or moderate injury, product or property damage.

**“WARNING”** Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

**“DANGER”** Indicates an immediate hazardous situation which, if not avoided, WILL result in death or serious injury.

**“NOTE”** Used to highlight suggestions which will result in enhanced installation, reliability, or operation.

### Inspection

Upon receipt of any geothermal equipment, carefully check the shipment against the packing slip and the freight company bill of lading. Verify that all units and packages have been received. Inspect the packaging of each unit for damages. Ensure that the carrier makes proper notation of all damages and shortage on all bill of lading papers. Concealed damage should be reported to the freight company within 15 days. If not filed within 15 days, the freight company can deny all claims.

**NOTE:** Notify the EnerTech Global LLC shipping department of all damages within 15 days. It is the responsibility of the purchaser to file all necessary claims with the freight company.

### Unit Protection

Protect units from damage and contamination due to plastering (spraying), painting and all other foreign materials that may be used at the job site. Keep all units covered on the job site with either the original packaging or equivalent protective covering. Cap or recap all unit connections and all piping until the unit is installed. Precautions must be taken to avoid physical damage and contamination which may prevent proper start up and may result in costly equipment repair. Units should be stored in an upright position at all times and should not be stacked unless specifically noted on the packaging.

### Consumer Instructions

The dealer should instruct the consumer in the proper operation, maintenance, filter replacements, thermostat and indicator lights.

### EnerTech Global D-I-Y Policy

EnerTech Global’s system installations may include electrical, refrigerant and/or water connections. Federal, state and local codes and regulations apply to various aspects of the installation. Improperly installed equipment can lead to equipment failure and health/safety concerns. For these reasons, only qualified technicians should install an EnerTech Global built geothermal system.

Due to the importance of proper installation, EnerTech Global does not sell equipment direct to homeowners. Internet websites and HVAC outlets may allow for purchases directly by homeowners and do-it-yourselfers, but EnerTech Global offers no warranty on equipment that is purchased via the internet or installed by persons without proper training.

EnerTech Global has set forth this policy to ensure that installations of EnerTech Global geothermal systems are done safely & properly. The use of well-trained, qualified technicians helps ensure that your system provides many years of comfort and savings.

**⚠ CAUTION ⚠**  
**ALL EQUIPMENT IS DESIGNED FOR INDOOR INSTALLATION ONLY. DO NOT INSTALL OR STORE UNIT IN CORROSIVE ENVIRONMENT OR IN A LOCATION WHERE THE TEMPERATURE AND HUMIDITY ARE SUBJECT TO EXTREMES. IF INSTALLED OUTDOORS OR IN EXTREME CONDITIONS, ALL WARRANTIES WILL BE VOID.**

### Section 3: Pre-Installation

#### Pre-Installation

1. Compare the model number on the unit nameplate with packing slip and ordering information to verify that the correct unit has been shipped.
2. The installer must verify that all applicable wiring, piping, and accessories are correct and on the job site. All wiring, line and low voltage, should comply with the manufacturer's recommendations, The National Electrical Code, and all local codes and ordinances.
3. Inspect all electrical connections and wires. Connections must be clean and tight at the terminals, and wires should not touch any sharp edges or copper pipe.
4. Verify that all refrigerant tubing is free of dents and kinks. Refrigerant tubing should not be touching other unit components.
5. Before unit start-up, read all manuals and become familiar with unit components and operation. Thoroughly check the unit before operating.
6. For A-Coil installations, it is recommended that coil be sprayed with liquid detergent thoroughly and rinsed thoroughly before installation to ensure proper drainage of condensate from the coil fins to eliminate water blow off and to assure maximum coil performance. If not sprayed, approximately 50 hours of break in time is required to achieve the same results.

### Section 4: Installation Considerations

#### Unit Placement

When installing a geothermal heating and cooling unit, there are several items the installer should consider before placing the equipment.

Make sure to provide enough clearance for service access. There needs to be enough space to service the control box, coil, blower, and electric elements (if equipped).

The unit should be located in a way that piping and ductwork, or other permanently installed fixtures, do not have to be removed for servicing or filter replacement. These air handling units have a 0" minimum clearance to combustible materials rating from all cabinet surfaces.

If an electric heater is installed, there is a 1" clearance on the supply plenum and duct. The unit should be installed with serviceability clearance of 30" from the front of the unit. The unit can be serviced entirely from the front, including replacing the filter. Be sure to route primary and secondary drain connections in a way that will not obstruct replacement of the filter. The unit is shipped from the factory arranged to be installed in a vertical up-flow, or horizontal right to left airflow position (standard). It can be field converted to a horizontal left to right airflow position or down-flow position.

All units should be located in an indoor area where the ambient temperature will remain between 55°F and 105°F.

**⚠ CAUTION ⚠**  
**CAUTION! IF THE UNIT IS INSTALLED IN NON-CONDITIONED SPACE, SUCH AS AN ATTIC OR GARAGE, THE INSTALLER MUST PROVIDE A FULL SIZE AUXILIARY DRAIN PAN TO PREVENT DAMAGE FROM CONDENSATE RUN-OFF.**

All air handling equipment should be placed on either a formed plastic air pad, or a high density, closed cell, polyethylene pad. Down-flow units should be placed on a non-combustible base. This helps eliminate vibration/noise that could be transmitted through the floor. The use of corner pads alone, is not recommended.

The AC Series coils are designed to be installed in new and existing indoor furnaces.

**⚠ WARNING ⚠**  
**IF USING A DUEL FUEL APPLICATION, THE "A" COIL MUST BE INSTALLED ON THE OUTLET OF THE FURNACE. INSTALLATION ON THE RETURN COULD CAUSE FURNACE HEAT EXCHANGER FAILURE, AND MAY VOID FURNACE WARRANTY.**

#### Unit Orientation (AC Series)

The AC Series coils may be used in up-flow and down-flow applications.

#### Unit Orientation (MP Series)

The air handler should be configured prior to installation. Begin with the unit in the vertical, upright position. Do not connect drains or refrigerant lines, until optimal orientation has been determined.

#### Up-Flow Application

In an up-flow installation the discharge outlet is at the top of the unit. Care should be taken to ensure the unit is level to permit proper condensate drainage. Normal up flow installation would typically be in a basement or closet.

If installed in a closet, the closet should have a platform framed in, with an opening on top of the platform centered in the closet. Connect the supply air outlet to a warm air plenum. Install return air grilles from outside the closet to a space below the platform. The platform must be at least 10" above the floor. If installed in a basement, run supply and return ductwork in accordance with local codes.

### Horizontal Application

Horizontal applications will normally be used in an attic or crawl space. This type of installation requires that a return air duct be attached to the unit inlet. The opposite end of the return air duct is attached to a return air filter grill through the ceiling or wall. Remove the filter from the unit if the filter grill is used. The unit is shipped in right to left configuration. For left to right applications, remove the coil and doors and move the horizontal pan to the right side. Then, reinstall the coil and doors.

### Down-Flow Application

With the proper kit, air handlers can be converted to a down flow application. See Section 10 for details on conversion. Contact EnerTech customer service for details on the proper down-flow kit to order.

**NOTE:** If the unit is configured in the down-flow orientation or horizontal left to right configuration, it is recommended to trap the primary and secondary drain lines in order to prevent condensate from being sucked in to the blower.

## Section 5: Installation

### Ductwork

All new ductwork shall be designed as outlined in the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) or Air Conditioning Contractors of America (ACCA) or American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) handbooks.

All supply/return plenums should be isolated from the unit by a flexible connector (canvas or equivalent) to prevent transfer of vibration noise to the ductwork. The flex connector should be designed so as not to restrict airflow. Turning vanes should be used on any transition with airflow over 500 CFM.

**NOTE:** All metal ductwork should be insulated on the inside to prevent heat loss/gain, condensation, and to absorb air noise.

If the unit is being installed with existing ductwork, the ductwork must be designed to handle the air volume required by the unit being installed. When running a cooling or heating load on a building; size ductwork accordingly to the building design load and air handling CFM.

### Ductwork Industry Standard

When sizing ductwork use 400 CFM per Ton.

As a general rule, maximum recommended face velocity for a supply outlet used in a residential application is 750 FPM; maximum recommended return grille velocity is 600 FPM. Systems with higher velocities are likely to have noise problems. Table 2 shows maximum air velocities.

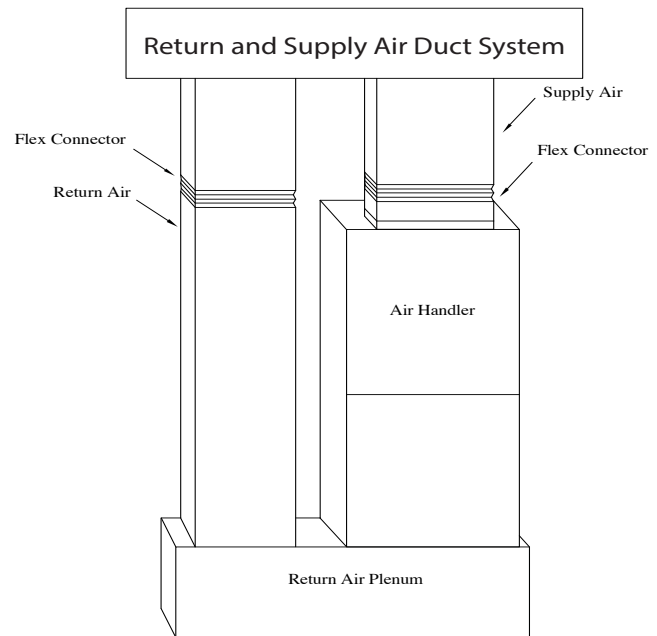
**Table 2: Maximum Air Velocities**

| Location                     | Supply  | Return  |
|------------------------------|---------|---------|
| Main Duct                    | 900 FPM | 600 FPM |
| Branch Ducts                 | 700 FPM | 600 FPM |
| Grills, Registers, Diffusers | 750 FPM | 600 FPM |

In buildings where ceilings are 8 feet or more, at least 50% of the return air should be taken back to the air handler from the ceiling or high sidewall location and not more than 50% from the floor or low sidewall location.

The air handling unit comes with an ECM blower motor. For maximum performance, the blower speed should be set to maintain between 350 and 450 CFM/ton. See Fan Speed in Section 5 for details.

### Typical Supply and Return Ductwork Connections



### MPD/ACD/MCD Refrigerant Piping

MPD air handlers and ACD "A" coils require the installation of suction and liquid refrigerant lines (line set) from the unit to the compressor section.



**NOTE:** Please refer to the unit IOM for details on Line Set Installation and Line Set Size requirements.

These units are equipped with sweat copper adaptors. The refrigerant lines should be brazed on with silver solder or a high temperature brazing alloy.

**⚠ CAUTION ⚠**  
**CAUTION! ALWAYS USE DRY NITROGEN WHEN BRAZING.**

Once piping is complete, it will be critical for the installer to insulate the suction line to avoid condensate issues. Armaflex (or equivalent type/brand) of at least a 3/8" wall thickness is recommended.

For details on system charging, refer to the unit specific IOM for details.

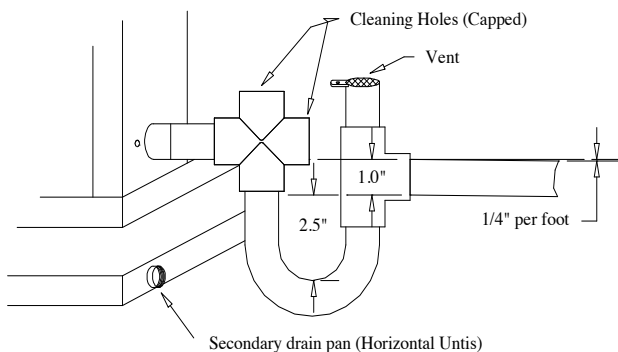
### MPH/ACH/MCH Water Piping

MPH air handlers and ACH "A" coils are equipped with sweat copper adaptors, which the water lines should be soldered to.

### Condensate Drain Connection

Connect the EZ-Trap to the 3/4" equipment condensate drain connection as shown in Figure 1. The condensate line must be trapped a minimum of 1.0" as shown. The condensate line should be pitched away from the unit a minimum of 1/4" per foot. The condensate line from the unit drain connection to the p-trap should be sloped downward. For more information on installing EZ-Trap, see installation sheet that comes with the EZ-Trap Kit. Available kits are shown in Table 3. Always install the air vent after the trap.

**Figure 1**



**Note:** Connect the drain through the trap to the condensation drain system in conformance to local plumbing codes.

**Table 3: EZ-Trap Kits**

| Part Number | Description   |
|-------------|---|
| ACDT1A      | EZ-Trap 3/4" Kit  |
| ACDT2A      | EX-Trap 1" Kit (*Customer to provide a 1" S x 3/4" Mips Adapter |

## Section 6: Wiring & Controls

### Wiring (MPD/MPH)

Make sure to locate the unit in a space where electrical supply and thermostat wiring can easily be routed, and will not be damaged.

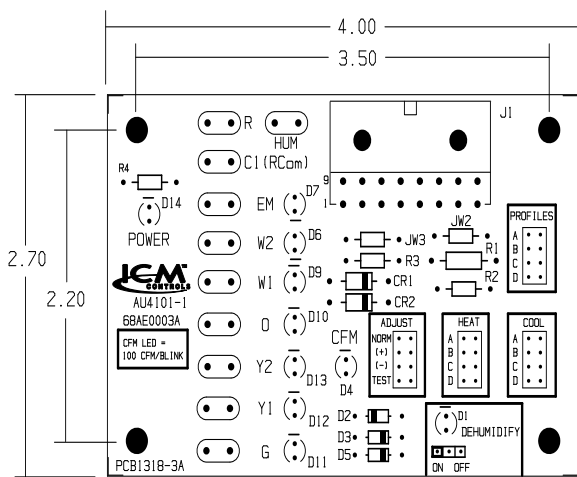
Thermostat wiring will be ran in series from the thermostat to the air handler ECM control board, and from the air handler ECM control board to the compressor section.

The wiring for the air handler can enter either through the side or top of the unit, depending on what configuration it has been set up in.

### ECM Motor Controller (MPD/MPH)

### Fan Speed

The MPD and MPH air handler units are equipped with a variable speed ECM motor. **Recommended fan speed settings are shown on the fan charts on Pages 11-13.**



If a different speed is desired:

1. Shut OFF electrical power at the unit disconnect switch or service panel.
2. Remove blower access door, and confirm circuit breakers (if equipped with electric heat) are in the OFF position.
3. The speed can be changed for both heating and cooling modes. To change the heating blower speed, move the jumper on the "HEAT" jumper pins to a different setting. To change the cooling blower speed, move the jumper on the "COOL" jumper pins to a different setting.
4. The "ADJUST" pin is used to increase or decrease the blower speed by 10% to 12%. To increase the speed, move the jumper to the "+" setting, and to decrease the speed, move the jumper to the "-" setting.

## Dehumidification

The ECM board is also equipped with a 0 ohm resistor or jumper pin that provides 24 VAC to the HUM terminal. This keeps the motor from going into dehumidification mode.

Once the resistor is cut, or the jumper is moved to the ON position, use either the HUM terminal, located on the accessory terminal strip in the compressor section, (reverse logic -- designed to be used with a humidistat) to lower the fan speed when dehumidification is needed. If the HUM terminal is not connected (and the resistor is cut/jumper moved to ON position), the air handler will operate at a lower fan speed in cooling, and normal fan speed in heating.

## Flash Sequence

The ECM control board has a CFM flash code when the air handler is operating to indicate the current CFM.

The LED will flash once per 100 CFM. To determine the CFM, count the number of flashes between pause flashes (10 second off period), and multiply by 100.

## Modes of Operation

### Heating 1st Stage (Y1, G)

The ECM fan will immediately ramp up to the 1st stage airflow (CFM) level (based on jumper settings).

### Heating 2nd Stage (Y1, Y2, G)

The ECM fan will adjust to 2nd stage airflow (CFM) level (based on jumper settings).

### Heating 3rd Stage (Y1, Y2, W1, G)

The ECM fan remains at 100% of 2nd stage airflow (CFM) level (based on jumper settings), and the 1st stage of electric heat is energized. The 2nd stage of electric heat (W2) will be energized two minutes after the 1st stage of electric heat.

### Emergency Heat (W1, G)

The ECM fan is started immediately at 2nd stage airflow (CFM) level (based on jumper settings), and the electric heat is energized. The 2nd stage of electric heat (W2) will be energized two minutes after the 1st stage of electric heat.

**NOTE:** Electric heat is only available on models that have had electric heat installed in them. W2 is only available with some models.

### Cooling 1st Stage (Y1, O, G)

The ECM fan will immediately ramp up to the 1st stage airflow (CFM) level (based on jumper settings).

### Cooling 2nd Stage (Y1, Y2, O, G)

The ECM fan will adjust to 2nd stage airflow (CFM) level (based on jumper settings).

## Dehumidification

The dehumidification mode lowers the airflow (CFM) through the evaporator coil, to improve latent (dehumidification) capacity. In ODD mode, a humidistat or a thermostat with a dehumidification output (output must be reverse logic -- i.e. it must operate like a humidistat) is connected to the ODD terminal, located on the accessory terminal strip in the compressor section.

For additional details on wiring and controls, please reference the unit specific IOM.

## MPH Air Handler Fan Speeds

| Model Number   | COOL Jumper  | HEAT Jumper | ADJUST Jumper | High SPD CFM Y2 |      |      | Low SPD CFM Y1 |      |      | FAN G |      |      |
|--|--|-------------|---------------|-----------------|------|------|----------------|------|------|-------|------|------|
|  |  |             |               | .40"            | .60" | .80" | .40"           | .60" | .80" | .40"  | .60" | .80" |
| <b>MPH024A</b><br>Change to:<br>COOL Jumper B<br>HEAT Jumper B<br>ADJUST Jumper Norm   | A  | A           | -             | 920             | 920  | 910  | 820            | 810  | 800  | 420   | 410  | 400  |
|  | B  | B           | -             | 910             | 900  | 900  | 750            | 740  | 720  | 370   | 360  | 350  |
|  | C  | C           | -             | 910             | 900  | 900  | 710            | 700  | 670  | 350   | 340  | 330  |
|  | D  | D           | -             | 820             | 800  | 800  | 680            | 660  | 640  | 330   | 320  | 310  |
|  | A  | A           | Norm          | 930             | 930  | 920  | 830            | 820  | 810  | 420   | 410  | 410  |
|  | B  | B           | Norm          | 930             | 920  | 890  | 770            | 750  | 730  | 380   | 370  | 360  |
|  | C  | C           | Norm          | 870             | 860  | 820  | 710            | 700  | 670  | 360   | 350  | 330  |
|  | D  | D           | Norm          | 870             | 840  | 810  | 700            | 680  | 650  | 350   | 340  | 330  |
|  | A  | A           | +             | 930             | 930  | 920  | 930            | 930  | 920  | 470   | 460  | 460  |
|  | B  | B           | +             | 930             | 930  | 900  | 880            | 860  | 830  | 440   | 430  | 420  |
|  | C  | C           | +             | 930             | 930  | 890  | 810            | 800  | 760  | 410   | 400  | 380  |
|  | D  | D           | +             | 930             | 930  | 890  | 800            | 780  | 750  | 400   | 390  | 370  |
|  | <b>MPH036A</b><br>Change to:<br>COOL Jumper C<br>HEAT Jumper C<br>ADJUST Jumper Norm | A           | A             | -               | 1510 | 1500 | 1490           | 1290 | 1270 | 1260  | 540  | 530  |
| B  |  | B           | -             | 1450            | 1430 | 1420 | 1120           | 1100 | 1090 | 410   | 400  | 400  |
| C  |  | C           | -             | 1200            | 1150 | 1150 | 900            | 890  | 890  | 350   | 340  | 330  |
| D  |  | D           | -             | 1060            | 1040 | 1030 | 820            | 800  | 800  | N/A   | N/A  | N/A  |
| A  |  | A           | Norm          | 1560            | 1560 | 1510 | 1450           | 1450 | 1430 | 570   | 540  | 500  |
| B  |  | B           | Norm          | 1550            | 1550 | 1520 | 1240           | 1240 | 1230 | 480   | 430  | 410  |
| C  |  | C           | Norm          | 1300            | 1310 | 1310 | 1010           | 1010 | 1010 | 400   | 350  | 300  |
| D  |  | D           | Norm          | 1150            | 1150 | 1140 | 880            | 870  | 870  | 320   | 290  | N/A  |
| A  |  | A           | +             | 1560            | 1560 | 1510 | 1570           | 1570 | 1520 | 670   | 630  | 620  |
| B  |  | B           | +             | 1550            | 1550 | 1520 | 1430           | 1430 | 1430 | 560   | 530  | 490  |
| C  |  | C           | +             | 1530            | 1520 | 1500 | 1160           | 1160 | 1160 | 450   | 400  | 380  |
| D  |  | D           | +             | 1320            | 1320 | 1320 | 1020           | 1020 | 1010 | 400   | 350  | 300  |
| <b>MPH048A</b><br>Change to:<br>COOL Jumper C<br>HEAT Jumper C<br>ADJUST Jumper Norm<br><b>MPH060A</b><br>Ship Set On:<br>COOL Jumper B<br>HEAT Jumper B<br>ADJUST Jumper Norm |  | A           | A             | -               | 1710 | 1700 | 1690           | 1420 | 1410 | 1400  | 860  | 850  |
|  | B  | B           | -             | 1610            | 1600 | 1580 | 1330           | 1320 | 1300 | 810   | 800  | 790  |
|  | C  | C           | -             | 1350            | 1340 | 1330 | 1130           | 1110 | 1100 | 680   | 670  | 660  |
|  | D  | D           | -             | 1260            | 1250 | 1230 | 1060           | 1040 | 1030 | 640   | 630  | 620  |
|  | A  | A           | Norm          | 2180            | 2170 | 2120 | 1810           | 1810 | 1780 | 1160  | 1140 | 1140 |
|  | B  | B           | Norm          | 2020            | 2020 | 2000 | 1680           | 1680 | 1660 | 1090  | 1090 | 1050 |
|  | C  | C           | Norm          | 1710            | 1700 | 1690 | 1410           | 1410 | 1400 | 950   | 930  | 910  |
|  | D  | D           | Norm          | 1570            | 1570 | 1550 | 1320           | 1300 | 1270 | 910   | 990  | 960  |
|  | A  | A           | +             | 2240            | 2170 | 2120 | 1890           | 1860 | 1820 | 1290  | 1270 | 1250 |
|  | B  | B           | +             | 2230            | 2170 | 2110 | 1900           | 1870 | 1850 | 1220  | 1200 | 1190 |
|  | C  | C           | +             | 1940            | 1920 | 1910 | 1610           | 1610 | 1600 | 1030  | 1020 | 980  |
|  | D  | D           | +             | 1810            | 1800 | 1750 | 1500           | 1500 | 1470 | 1000  | 980  | 950  |

### Notes:

- Dehumidification mode can be enabled by cutting the jumper on the ECM board. When cut, cooling CFM is reduced by 15%, and heating/ auxiliary heat CFM remains unchanged. **Example:** Model 036 with HEAT and COOL jumpers on C setting and ADJUST jumper on Norm setting would run at 1115 CFM with jumper cut, instead of 1310 CFM with jumper intact.
- Gray shaded areas are recommended settings. Other settings may be used, depending upon application. DO NOT cut dehumidification jumper if CFM setting will cause airflow to be below 250 CFM per ton on first stage, and below 325 CFM per ton on second stage. **Example:** Model 036 should not run below 750 CFM in first stage, or below 975 CFM in second stage.
- The COOL and HEAT jumpers should both be set at the same position. COOL controls heating and cooling airflow; HEAT controls electric heat airflow.
- Above CFM will be maintained up to 0.50" ESP for models MPH024 and 036, and up to 0.75" ESP for models MPH048 and 060.

## MPD (with \*RT) Air Handler Fan Speeds

| Model Number   | COOL Jumper   | HEAT Jumper | ADJUST Jumper | High SPD CFM Y2 |      |      | Low SPD CFM Y1 |      |      | FAN G |      |      |     |
|--|---|-------------|---------------|-----------------|------|------|----------------|------|------|-------|------|------|-----|
|  |   |             |               | .40"            | .60" | .80" | .40"           | .60" | .80" | .40"  | .60" | .80" |     |
| <b>RT024 with MPD024A</b><br>Change to:<br>COOL Jumper B<br>ADJUST Jumper Norm   | A   | A           | -             | 920             | 920  | 910  | 820            | 810  | 800  | 420   | 410  | 400  |     |
|  | B   | B           | -             | 910             | 900  | 900  | 750            | 740  | 720  | 370   | 360  | 350  |     |
|  | C   | C           | -             | 910             | 900  | 900  | 710            | 700  | 670  | 350   | 340  | 330  |     |
|  | D   | D           | -             | 820             | 800  | 800  | 680            | 660  | 640  | 330   | 320  | 310  |     |
|  | A   | A           | Norm          | 930             | 930  | 920  | 830            | 820  | 810  | 420   | 410  | 410  |     |
|  | B   | B           | Norm          | 930             | 920  | 890  | 770            | 750  | 730  | 380   | 370  | 360  |     |
|  | C   | C           | Norm          | 870             | 860  | 820  | 710            | 700  | 670  | 360   | 350  | 330  |     |
|  | D   | D           | Norm          | 870             | 840  | 810  | 700            | 680  | 650  | 350   | 340  | 330  |     |
|  | A   | A           | +             | 930             | 930  | 920  | 930            | 930  | 920  | 470   | 460  | 460  |     |
|  | B   | B           | +             | 930             | 930  | 900  | 880            | 860  | 830  | 440   | 430  | 420  |     |
|  | C   | C           | +             | 930             | 930  | 890  | 810            | 800  | 760  | 410   | 400  | 380  |     |
|  | D   | D           | +             | 930             | 930  | 890  | 800            | 780  | 750  | 400   | 390  | 370  |     |
|  | <b>RT036 with MPD036A</b><br>Change to:<br>COOL Jumper C<br>HEAT Jumper C<br>ADJUST Jumper Norm | A           | A             | -               | 1510 | 1500 | 1490           | 1290 | 1270 | 1260  | 540  | 530  | 520 |
|  |   | B           | B             | -               | 1450 | 1430 | 1420           | 1120 | 1100 | 1090  | 410  | 400  | 400 |
| C  |   | C           | -             | 1200            | 1150 | 1150 | 900            | 890  | 890  | 350   | 340  | 330  |     |
| D  |   | D           | -             | 1060            | 1040 | 1030 | 820            | 800  | 800  | N/A   | N/A  | N/A  |     |
| A  |   | A           | Norm          | 1560            | 1560 | 1510 | 1450           | 1450 | 1430 | 570   | 540  | 500  |     |
| B  |   | B           | Norm          | 1550            | 1550 | 1520 | 1240           | 1240 | 1230 | 480   | 430  | 410  |     |
| C  |   | C           | Norm          | 1300            | 1310 | 1310 | 1010           | 1010 | 1010 | 400   | 350  | 300  |     |
| D  |   | D           | Norm          | 1150            | 1150 | 1140 | 880            | 870  | 870  | 320   | 290  | N/A  |     |
| A  |   | A           | +             | 1560            | 1560 | 1510 | 1570           | 1570 | 1520 | 670   | 630  | 620  |     |
| B  |   | B           | +             | 1550            | 1550 | 1520 | 1430           | 1430 | 1430 | 560   | 530  | 490  |     |
| C  |   | C           | +             | 1530            | 1520 | 1500 | 1160           | 1160 | 1160 | 450   | 400  | 380  |     |
| D  |   | D           | +             | 1320            | 1320 | 1320 | 1020           | 1020 | 1010 | 400   | 350  | 300  |     |
| <b>RT048 with MPD060B</b><br>Change to:<br>COOL Jumper C<br>HEAT Jumper C<br>ADJUST Jumper Norm<br><b>RT060 with MPD060B</b><br>Ship Set On:<br>COOL Jumper B<br>HEAT Jumper B<br>ADJUST Jumper Norm |   | A           | A             | -               | 1710 | 1700 | 1690           | 1420 | 1410 | 1400  | 860  | 850  | 850 |
|  |   | B           | B             | -               | 1610 | 1600 | 1580           | 1330 | 1320 | 1300  | 810  | 800  | 790 |
|  | C   | C           | -             | 1350            | 1340 | 1330 | 1130           | 1110 | 1100 | 680   | 670  | 660  |     |
|  | D   | D           | -             | 1260            | 1250 | 1230 | 1060           | 1040 | 1030 | 640   | 630  | 620  |     |
|  | A   | A           | Norm          | 2180            | 2170 | 2120 | 1810           | 1810 | 1780 | 1160  | 1140 | 1140 |     |
|  | B   | B           | Norm          | 2020            | 2020 | 2000 | 1680           | 1680 | 1660 | 1090  | 1090 | 1050 |     |
|  | C   | C           | Norm          | 1710            | 1700 | 1690 | 1410           | 1410 | 1400 | 950   | 930  | 910  |     |
|  | D   | D           | Norm          | 1570            | 1570 | 1550 | 1320           | 1300 | 1270 | 910   | 990  | 960  |     |
|  | A   | A           | +             | 2240            | 2170 | 2120 | 1890           | 1860 | 1820 | 1290  | 1270 | 1250 |     |
|  | B   | B           | +             | 2230            | 2170 | 2110 | 1900           | 1870 | 1850 | 1220  | 1200 | 1190 |     |
|  | C   | C           | +             | 1940            | 1920 | 1910 | 1610           | 1610 | 1600 | 1030  | 1020 | 980  |     |
|  | D   | D           | +             | 1810            | 1800 | 1750 | 1500           | 1500 | 1470 | 1000  | 980  | 950  |     |

### Notes:

- Dehumidification mode can be enabled by cutting the jumper on the ECM board. When cut, cooling CFM is reduced by 15%, and heating/ auxiliary heat CFM remains unchanged. **Example:** Model 036 with HEAT and COOL jumpers on C setting and ADJUST jumper on Norm setting would run at 1115 CFM with jumper cut, instead of 1310 CFM with jumper intact.
- Gray shaded areas are recommended settings. Other settings may be used, depending upon application. DO NOT cut dehumidification jumper if CFM setting will cause airflow to be below 250 CFM per ton on first stage, and below 325 CFM per ton on second stage. **Example:** Model 036 should not run below 750 CFM in first stage, or below 975 CFM in second stage.
- The COOL and HEAT jumpers should both be set at the same position. COOL controls heating and cooling airflow; HEAT controls electric heat airflow.
- Above CFM will be maintained up to 0.50" ESP for models MPD024 and 036, and up to 0.75" ESP for models MPD048 and 060.

## MPD (with \*BS/BT) Air Handler Fan Speeds

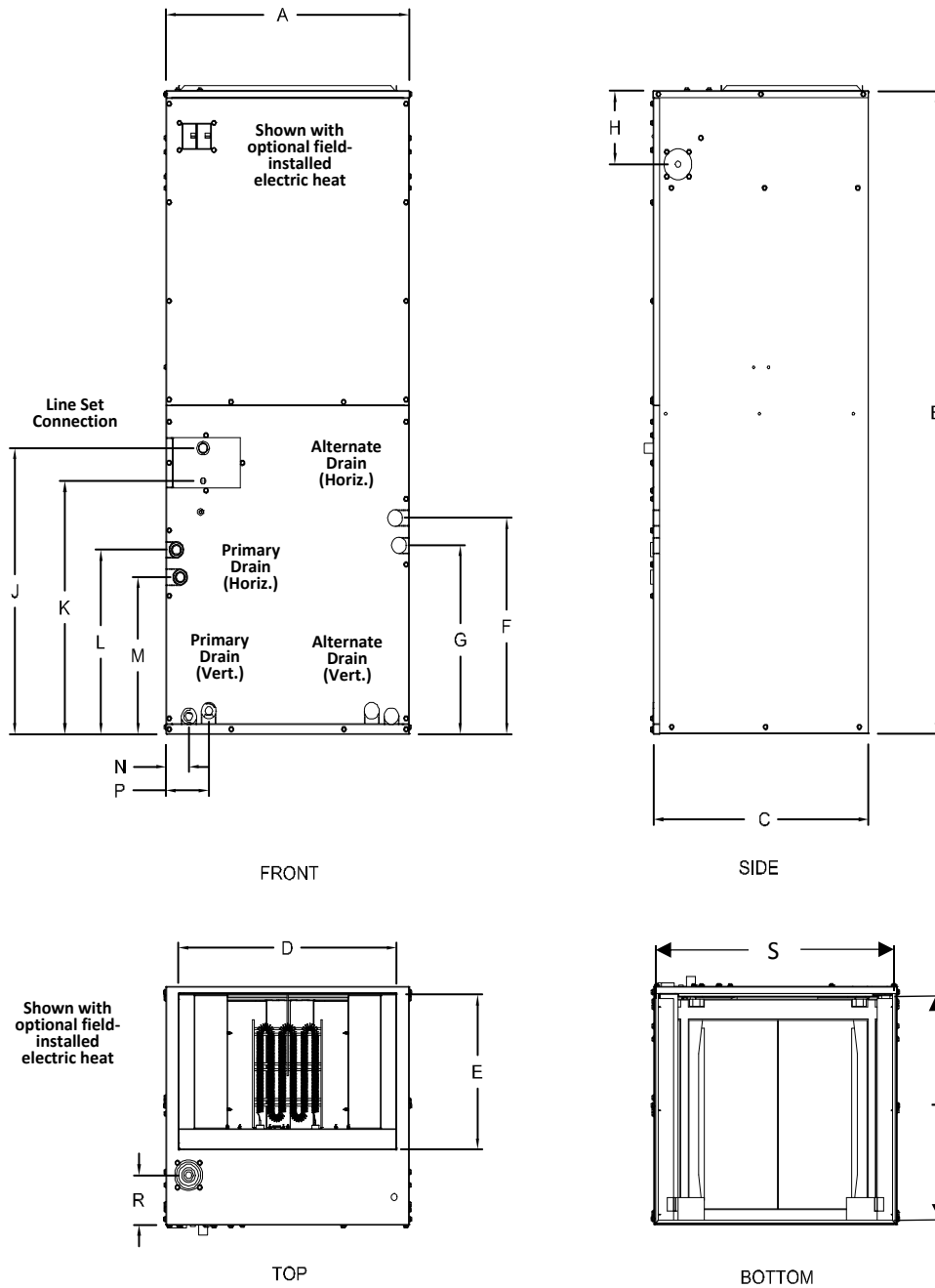
| Model Number   | COOL Jumper | HEAT Jumper | ADJUST Jumper | High SPD CFM Y2 |      |      | Low SPD CFM Y1 |      |      | FAN G |      |      |  |
|--|-------------|-------------|---------------|-----------------|------|------|----------------|------|------|-------|------|------|--|
|  |             |             |               | .40"            | .60" | .80" | .40"           | .60" | .80" | .40"  | .60" | .80" |  |
| <b>BS018 with MPD024A</b><br>Change to:<br>COOL Jumper A<br>HEAT Jumper A<br>ADJUST Jumper -<br><b>BT024 with MPD024A</b><br>Change to:<br>COOL Jumper B<br>HEAT Jumper B<br>ADJUST Jumper Norm      | A           | A           | -             | 920             | 920  | 910  | 820            | 810  | 800  | 420   | 410  | 400  |  |
|  | B           | B           | -             | 910             | 900  | 900  | 750            | 740  | 720  | 370   | 360  | 350  |  |
|  | C           | C           | -             | 910             | 900  | 900  | 710            | 700  | 670  | 350   | 340  | 330  |  |
|  | D           | D           | -             | 820             | 800  | 800  | 680            | 660  | 640  | 330   | 320  | 310  |  |
|  | A           | A           | Norm          | 930             | 930  | 920  | 830            | 820  | 810  | 420   | 410  | 410  |  |
|  | B           | B           | Norm          | 930             | 920  | 890  | 770            | 750  | 730  | 380   | 370  | 360  |  |
|  | C           | C           | Norm          | 870             | 860  | 820  | 710            | 700  | 670  | 360   | 350  | 330  |  |
|  | D           | D           | Norm          | 870             | 840  | 810  | 700            | 680  | 650  | 350   | 340  | 330  |  |
|  | A           | A           | +             | 930             | 930  | 920  | 930            | 930  | 920  | 470   | 460  | 460  |  |
|  | B           | B           | +             | 930             | 930  | 900  | 880            | 860  | 830  | 440   | 430  | 420  |  |
|  | C           | C           | +             | 930             | 930  | 890  | 810            | 800  | 760  | 410   | 400  | 380  |  |
|  | D           | D           | +             | 930             | 930  | 890  | 800            | 780  | 750  | 400   | 390  | 370  |  |
| <b>BT036 with MPD036A</b><br>Change to:<br>COOL Jumper C<br>HEAT Jumper C<br>ADJUST Jumper Norm  | A           | A           | -             | 1510            | 1500 | 1490 | 1290           | 1270 | 1260 | 540   | 530  | 520  |  |
|  | B           | B           | -             | 1450            | 1430 | 1420 | 1120           | 1100 | 1090 | 410   | 400  | 400  |  |
|  | C           | C           | -             | 1200            | 1150 | 1150 | 900            | 890  | 890  | 350   | 340  | 330  |  |
|  | D           | D           | -             | 1060            | 1040 | 1030 | 820            | 800  | 800  | N/A   | N/A  | N/A  |  |
|  | A           | A           | Norm          | 1560            | 1560 | 1510 | 1450           | 1450 | 1430 | 570   | 540  | 500  |  |
|  | B           | B           | Norm          | 1550            | 1550 | 1520 | 1240           | 1240 | 1230 | 480   | 430  | 410  |  |
|  | C           | C           | Norm          | 1300            | 1310 | 1310 | 1010           | 1010 | 1010 | 400   | 350  | 300  |  |
|  | D           | D           | Norm          | 1150            | 1150 | 1140 | 880            | 870  | 870  | 320   | 290  | N/A  |  |
|  | A           | A           | +             | 1560            | 1560 | 1510 | 1570           | 1570 | 1520 | 670   | 630  | 620  |  |
|  | B           | B           | +             | 1550            | 1550 | 1520 | 1430           | 1430 | 1430 | 560   | 530  | 490  |  |
|  | C           | C           | +             | 1530            | 1520 | 1500 | 1160           | 1160 | 1160 | 450   | 400  | 380  |  |
|  | D           | D           | +             | 1320            | 1320 | 1320 | 1020           | 1020 | 1010 | 400   | 350  | 300  |  |
| <b>BT048 with MPD060B</b><br>Change to:<br>COOL Jumper C<br>HEAT Jumper C<br>ADJUST Jumper Norm<br><b>BT060 with MPD060B</b><br>Ship Set On:<br>COOL Jumper B<br>HEAT Jumper B<br>ADJUST Jumper Norm | A           | A           | -             | 1710            | 1700 | 1690 | 1420           | 1410 | 1400 | 860   | 850  | 850  |  |
|  | B           | B           | -             | 1610            | 1600 | 1580 | 1330           | 1320 | 1300 | 810   | 800  | 790  |  |
|  | C           | C           | -             | 1350            | 1340 | 1330 | 1130           | 1110 | 1100 | 680   | 670  | 660  |  |
|  | D           | D           | -             | 1260            | 1250 | 1230 | 1060           | 1040 | 1030 | 640   | 630  | 620  |  |
|  | A           | A           | Norm          | 2180            | 2170 | 2120 | 1810           | 1810 | 1780 | 1160  | 1140 | 1140 |  |
|  | B           | B           | Norm          | 2020            | 2020 | 2000 | 1680           | 1680 | 1660 | 1090  | 1090 | 1050 |  |
|  | C           | C           | Norm          | 1710            | 1700 | 1690 | 1410           | 1410 | 1400 | 950   | 930  | 910  |  |
|  | D           | D           | Norm          | 1570            | 1570 | 1550 | 1320           | 1300 | 1270 | 910   | 990  | 960  |  |
|  | A           | A           | +             | 2240            | 2170 | 2120 | 1890           | 1860 | 1820 | 1290  | 1270 | 1250 |  |
|  | B           | B           | +             | 2230            | 2170 | 2110 | 1900           | 1870 | 1850 | 1220  | 1200 | 1190 |  |
|  | C           | C           | +             | 1940            | 1920 | 1910 | 1610           | 1610 | 1600 | 1030  | 1020 | 980  |  |
|  | D           | D           | +             | 1810            | 1800 | 1750 | 1500           | 1500 | 1470 | 1000  | 980  | 950  |  |
| <b>BT072 with MPD072A</b><br>Change to:<br>COOL Jumper C<br>HEAT Jumper C<br>ADJUST Jumper +   | A           | A           | -             | 2400            | 2400 | 2390 | 2040           | 2040 | 2030 | 1020  | 1020 | 1010 |  |
|  | B           | B           | -             | 2400            | 2400 | 2390 | 1860           | 1860 | 1850 | 930   | 930  | 910  |  |
|  | C           | C           | -             | 1640            | 1630 | 1610 | 1190           | 1180 | 1170 | 610   | 590  | 570  |  |
|  | D           | D           | -             | 1450            | 1450 | 1440 | 1060           | 1060 | 1040 | 550   | 530  | 510  |  |
|  | A           | A           | Norm          | 2510            | 2510 | 2500 | 2510           | 2510 | 2500 | 1300  | 1300 | 1270 |  |
|  | B           | B           | Norm          | 2500            | 2460 | 2420 | 2340           | 2340 | 2330 | 1160  | 1160 | 1140 |  |
|  | C           | C           | Norm          | 2080            | 2070 | 2050 | 1530           | 1520 | 1500 | 700   | 620  | 530  |  |
|  | D           | D           | Norm          | 1850            | 1850 | 1830 | 1330           | 1330 | 1310 | 570   | 460  | 420  |  |
|  | A           | A           | +             | Not Available   |      |      |                |      |      |       |      |      |  |
|  | B           | B           | +             | 2570            | 2510 | 2450 | 2570           | 2510 | 2550 | 1390  | 1390 | 1370 |  |
|  | C           | C           | +             | 2380            | 2370 | 2360 | 1780           | 1750 | 1730 | 820   | 760  | 690  |  |
|  | D           | D           | +             | 2160            | 2130 | 2120 | 1540           | 1520 | 1500 | 720   | 640  | 540  |  |

**Notes:**

- Dehumidification mode can be enabled by cutting the jumper on the ECM board. When cut, cooling CFM is reduced by 15%, and heating/ auxiliary heat CFM remains unchanged. **Example:** Model 036 with HEAT and COOL jumpers on C setting and ADJUST jumper on Norm setting would run at 1115 CFM with jumper cut, instead of 1310 CFM with jumper intact.
- Gray shaded areas are recommended settings. Other settings may be used, depending upon application. DO NOT cut dehumidification jumper if CFM setting will cause airflow to be below 250 CFM per ton on first stage, and below 325 CFM per ton on second stage. **Example:** Model 036 should not run below 750 CFM in first stage, or below 975 CFM in second stage.
- The COOL and HEAT jumpers should both be set at the same position. COOL controls heating and cooling airflow; HEAT controls electric heat airflow.
- Above CFM will be maintained up to 0.50" ESP for models MPD024 and 036, and up to 0.75" ESP for models MPD048 and 060.

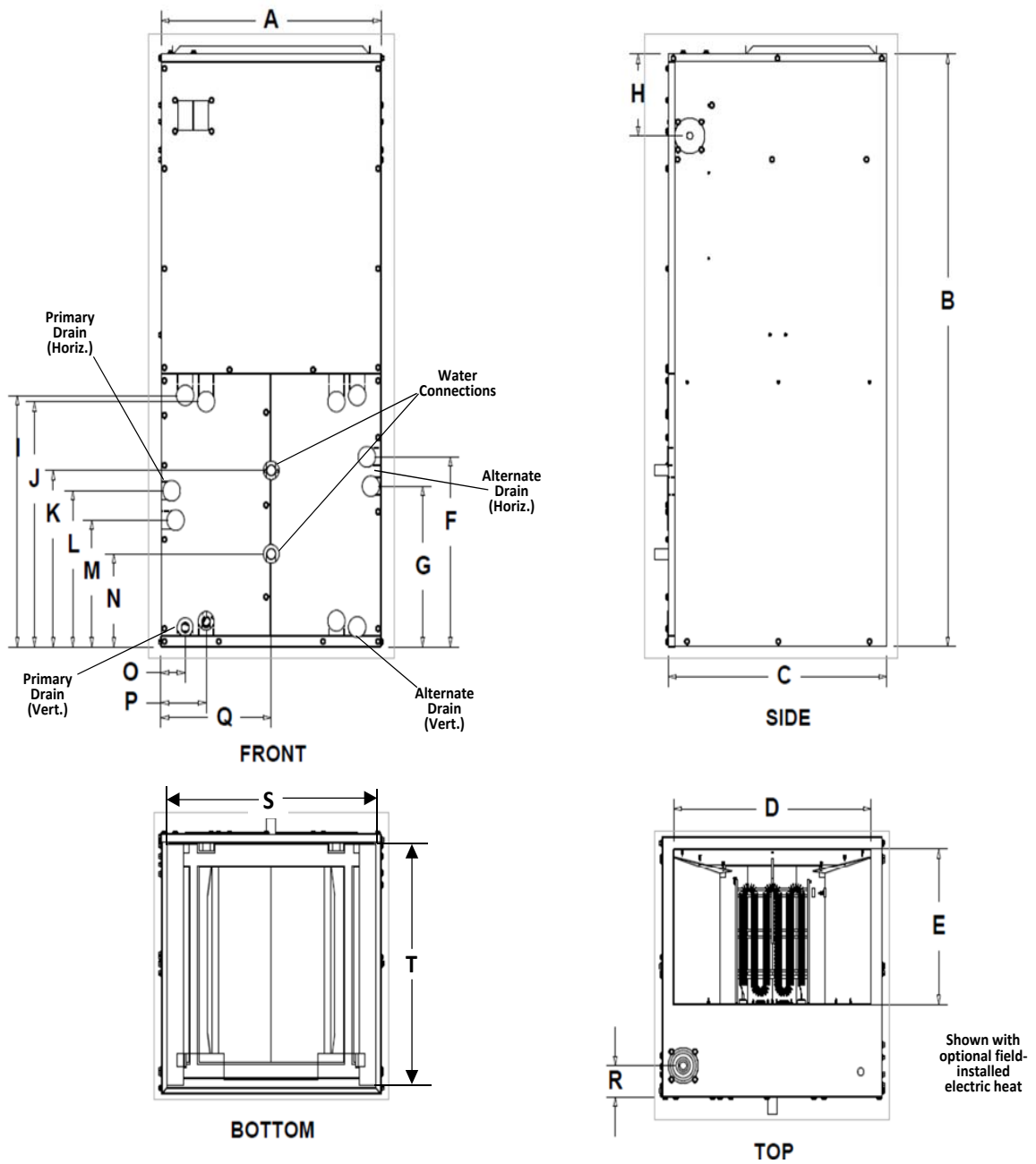
## Section 7: Dimensional Data

### Air Handler Dimensional Data



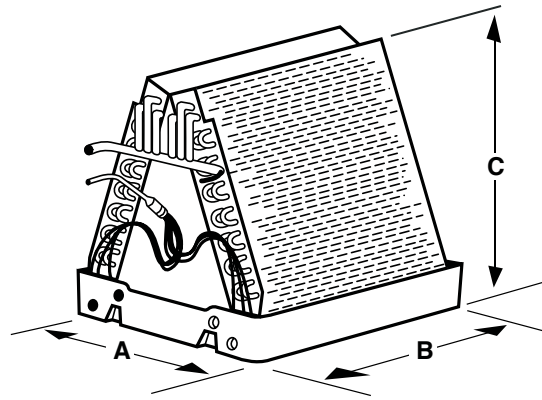
| Model  | All Dimensions in Inches |      |      |      |      |      |      |     |      |      |      |      |     |     |     |      |      |
|--------|--------------------------|------|------|------|------|------|------|-----|------|------|------|------|-----|-----|-----|------|------|
|        | A                        | B    | C    | D    | E    | F    | G    | H   | J    | K    | L    | M    | N   | P   | R   | S    | T    |
| MPD024 | 17.5                     | 43.0 | 21.0 | 15.6 | 12.5 | 13.5 | 11.0 | 6.8 | 16.8 | 14.0 | 11.0 | 10.8 | 2.0 | 1.5 | 5.0 | 16.1 | 20.2 |
| MPD036 | 21.0                     | 48.0 | 21.0 | 19.0 | 12.5 | 14.5 | 13.0 | 6.8 | 20.0 | 17.0 | 12.8 | 10.3 | 2.3 | 4.4 | 5.0 | 19.9 | 20.8 |
| MPD060 | 24.5                     | 58.9 | 21.8 | 22.3 | 14.3 | 19.8 | 17.3 | 6.8 | 26.0 | 23.0 | 16.8 | 14.4 | 2.3 | 4.4 | 4.5 | 23.5 | 20.7 |
| MPD072 |                          |      |      |      |      |      |      |     |      |      |      |      |     |     |     |      |      |

# Hydronic Air Handler Dimensional Data

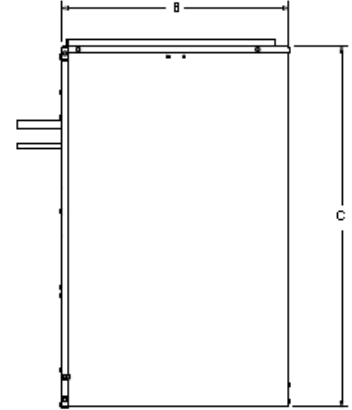
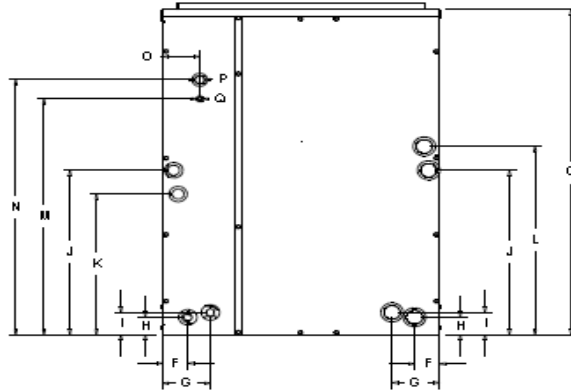
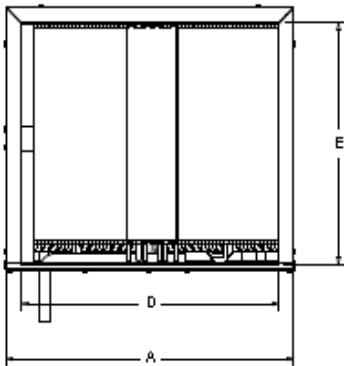


| Model  | All Dimensions in Inches |      |      |      |      |      |      |     |      |      |      |      |      |      |     |     |      |     |      |      |
|--------|--------------------------|------|------|------|------|------|------|-----|------|------|------|------|------|------|-----|-----|------|-----|------|------|
|        | A                        | B    | C    | D    | E    | F    | G    | H   | I    | J    | K    | L    | M    | N    | O   | P   | Q    | R   | S    | T    |
| MPH024 | 17.5                     | 43.0 | 21.0 | 15.5 | 12.5 | 13.5 | 11.0 | 6.8 | 16.8 | 16.3 | 13.5 | 10.8 | 8.3  | 4.8  | 2.0 | 4.0 | 8.8  | 2.0 | 16.1 | 20.2 |
| MPH036 | 21.0                     | 48.0 | 21.0 | 19.0 | 12.5 | 15.5 | 13.0 | 6.8 | 20.3 | 19.8 | 14.3 | 12.8 | 10.3 | 7.5  | 2.3 | 4.3 | 10.5 | 2.5 | 19.9 | 20.8 |
| MPH048 | 24.5                     | 58.9 | 21.8 | 19.5 | 16.3 | 19.8 | 17.3 | 6.8 | 28.3 | 28.8 | 19.8 | 16.0 | 13.5 | 10.3 | 2.3 | 4.3 | 12.5 | 2.3 | 23.5 | 20.7 |
| MPH060 |                          |      |      |      |      |      |      |     |      |      |      |      |      |      |     |     |      |     |      |      |

## Cased & Uncased "A" Coil Dimensional Data



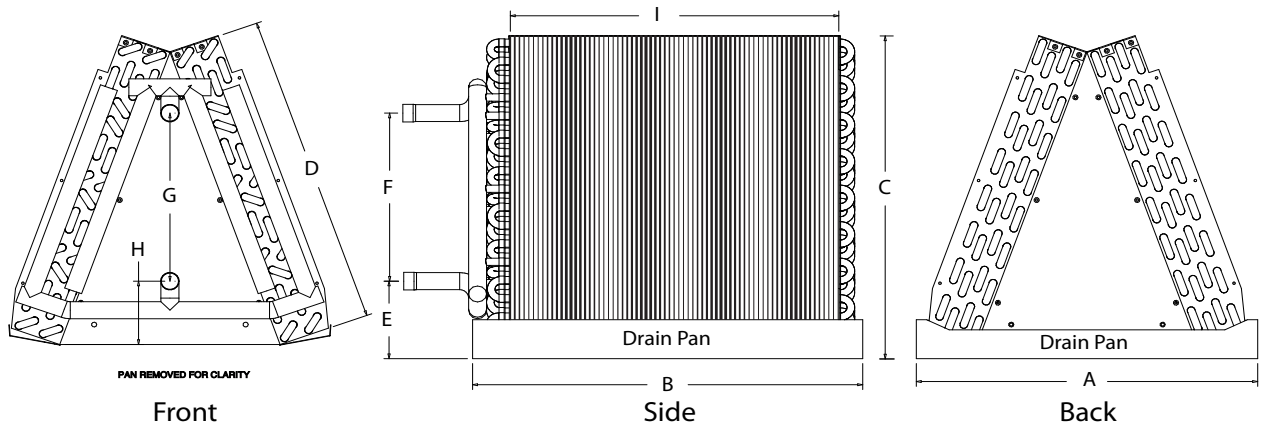
| Model  | All Dimensions in Inches |      |      |        |         |
|--------|--------------------------|------|------|--------|---------|
|        | A                        | B    | C    | Liquid | Suction |
| ACD024 | 16.7                     | 19.0 | 14.4 | 3/8    | 3/4     |
| ACD036 | 19.7                     | 19.0 | 18.1 | 3/8    | 3/4     |
| ACD060 | 23.8                     | 20.5 | 27.9 | 3/8    | 7/8     |



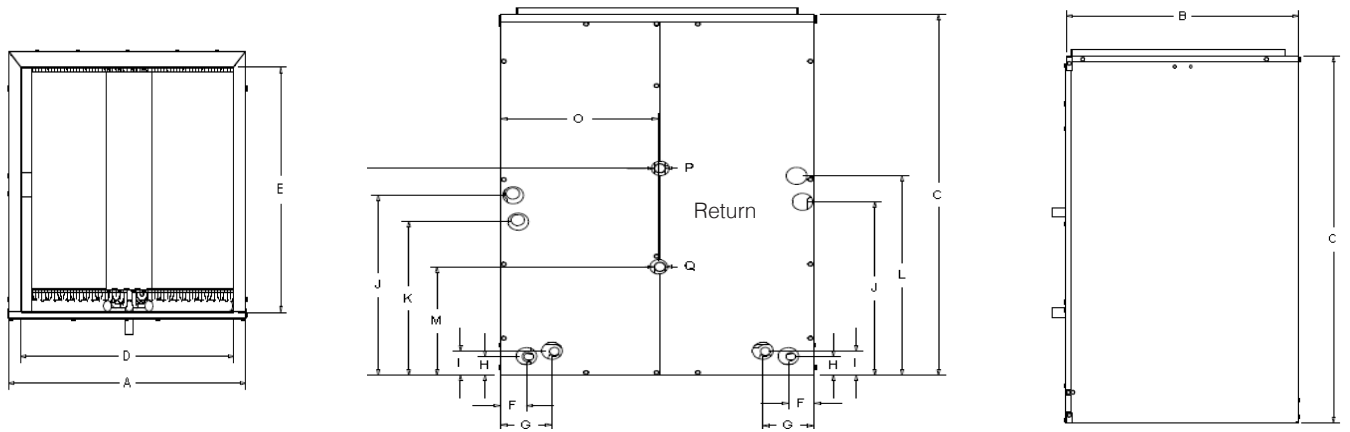
| Model  | All Dimensions in Inches |      |      |      |      |     |     |     |     |      |      |      |      |      |     |             |            |
|--------|--------------------------|------|------|------|------|-----|-----|-----|-----|------|------|------|------|------|-----|-------------|------------|
|        | A                        | B    | C    | D    | E    | F   | G   | H   | I   | J    | K    | L    | M    | N    | O   | P (Suction) | Q (Liquid) |
| MCD024 | 17.5                     | 21.1 | 20.1 | 15.9 | 19.3 | 2.1 | 4.1 | 1.9 | 2.4 | 10.0 | 7.4  | N/A  | 8.5  | 11.3 | 3.2 | 3/4         | 3/8        |
| MCD036 | 21.2                     | 21.1 | 24.2 | 19.4 | 19.3 | 2.1 | 4.1 | 1.9 | 2.4 | 11.9 | 9.4  | N/A  | 12.1 | 14.1 | 4.9 | 3/4         | 3/8        |
| MCD060 | 24.7                     | 21.2 | 34.2 | 23.1 | 20.0 | 2.1 | 4.1 | 1.8 | 2.3 | 17.3 | 14.7 | 19.8 | 26.8 | 28.8 | 3.6 | 7/8         | 3/8        |



## Cased & Uncased Hydronic "A" Coil Dimensional Data



| Model  | All Dimensions in Inches |      |      |            |             |
|--------|--------------------------|------|------|------------|-------------|
|        | A                        | B    | C    | Inlet O.D. | Outlet O.D. |
| ACH024 | 16.6                     | 16.5 | 19.0 | 7/8        | 7/8         |
| ACH036 | 19.6                     | 20.5 | 19.0 | 7/8        | 7/8         |
| ACH060 | 23.8                     | 28.5 | 20.5 | 1-1/8      | 1-1/8       |



| Model  | All Dimensions in Inches |      |      |      |      |     |     |     |     |      |      |      |      |      |      |           |            |
|--------|--------------------------|------|------|------|------|-----|-----|-----|-----|------|------|------|------|------|------|-----------|------------|
|        | A                        | B    | C    | D    | E    | F   | G   | H   | I   | J    | K    | L    | M    | N    | O    | P (Inlet) | Q (Outlet) |
| MCH024 | 17.5                     | 21.0 | 20.0 | 15.1 | 19.1 | 2.1 | 4.1 | 1.5 | 2.0 | 11.0 | 8.4  | 13.6 | 4.8  | 13.6 | 8.8  | 7/8       | 7/8        |
| MCH036 | 21.0                     | 21.0 | 24.0 | 18.6 | 19.1 | 4.0 | 6.0 | 1.7 | 2.3 | 13.0 | 10.4 | 15.6 | 7.8  | 14.6 | 10.5 | 7/8       | 7/8        |
| MCH060 | 24.5                     | 21.5 | 34.0 | 22.0 | 19.9 | 2.2 | 4.2 | 1.9 | 2.3 | 17.3 | 14.8 | 19.8 | 10.3 | 19.6 | 12.5 | 1-1/8     | 1-1/8      |

## Section 8: Unit Electrical Data

### MPD Electrical Data

| Air Handler Model | Motor FLA <sup>1</sup> |     | Motor HP | MCA-Minimum Circuit Ampacity |     | MOCP Maximum Overcurrent Protective Device <sup>2,3</sup> (AMPS) NEC 240.4(B) |     |
|-------------------|------------------------|-----|----------|------------------------------|-----|---|-----|
|                   | 240                    | 208 |          | 240                          | 208 | 240   | 208 |
| MPD024            | 0.8                    | 0.9 | 1/3      | 1.0                          | 1.1 | 15  | 15  |
| MPD036            | 2.0                    | 2.3 | 1/2      | 2.5                          | 2.9 | 15  | 15  |
| MPD060            | 2.5                    | 2.9 | 3/4      | 3.1                          | 3.6 | 15  | 15  |
| MPD072            | 3.8                    | 4.3 | 1        | 4.7                          | 5.4 | 15  | 15  |

**Notes:**

1. Rated Motor Amps (at DOE External Static Rating Point)
2. Fuse or HACR Breaker
3. Maximum Overcurrent Device, Overcurrent Protection Installed on Breaker Models are sized per MCA

### MPH Electrical Data

| Hydronic Air Handler Model-208/240V | Motor FLA <sup>1</sup> |     | Motor HP | MCA-Minimum Circuit Ampacity |     | MOCP Maximum Overcurrent Protective Device <sup>2,3</sup> (AMPS) NEC 240.4(B) |     |
|-------------------------------------|------------------------|-----|----------|------------------------------|-----|---|-----|
|                                     | 240                    | 208 |          | 240                          | 208 | 240   | 208 |
| MPH024                              | 0.8                    | 0.9 | 1/3      | 1.0                          | 1.1 | 15  | 15  |
| MPH036                              | 2.0                    | 2.3 | 1/2      | 2.5                          | 2.9 | 15  | 15  |
| MPH048/MPH060                       | 2.5                    | 2.9 | 3/4      | 3.1                          | 3.6 | 15  | 15  |

| Hydronic Air Handler Model- 115V | Motor FLA <sup>1</sup> |  | Motor HP | MCA-Minimum Circuit Ampacity |  | MOCP Maximum Overcurrent Protective Device <sup>2,3</sup> (AMPS) NEC 240.4(B) |  |
|----------------------------------|------------------------|--|----------|------------------------------|--|---|--|
|                                  | 115                    |  |          | 115                          |  | 115   |  |
| MPH024                           | 1.8                    |  | 1/3      | 2.3                          |  | 15  |  |
| MPH036                           | 2.3                    |  | 1/2      | 2.9                          |  | 15  |  |
| MPH048/MPH060                    | 6.3                    |  | 3/4      | 7.9                          |  | 15  |  |

**Notes:**

1. Rated Motor Amps (at DOE External Static Rating Point)
2. Fuse or HACR Breaker
3. Maximum Overcurrent Device, Overcurrent Protection Installed on Breaker Models are sized per MCA

## MPD/MPH with AH Electric Heat Electrical Data

| Technical Data Single Phase w/ Circuit Breaker |                        |     |          |              |                       |                      |       |                       |      |             |      |                              |      |   |     |
|--|------------------------|-----|----------|--------------|-----------------------|----------------------|-------|-----------------------|------|-------------|------|------------------------------|------|---|-----|
| Air Handler Model                              | Motor FLA <sup>1</sup> |     | Motor HP | Heater Model | Supply Circuit Number | Heat kW <sup>2</sup> |       | Heater kW Per Circuit |      | Heater Amps |      | MCA-Minimum Circuit Ampacity |      | MOCP Maximum Overcurrent Protective Device <sup>3,4</sup> (AMPS) NEC 240.4(B) |     |
|  | 240                    | 208 |          |              |                       | 240                  | 208   | 240                   | 208  | 240         | 208  | 240                          | 208  | 240   | 208 |
| MPD024/MPH024                                  | 0.8                    | 0.9 | 1/3      | AHM051S      | Single                | 5                    | 3.75  | 5                     | 3.75 | 20.8        | 18.0 | 27.0                         | 23.7 | 30  | 25  |
|  |                        |     |          | AHM101S      | Single                | 10                   | 7.5   | 10                    | 7.50 | 41.7        | 36.1 | 53.1                         | 46.2 | 60  | 50  |
| MPD036/MPH036                                  | 2.0                    | 2.3 | 1/2      | AHM101M      | Single                | 10                   | 7.5   | 10                    | 7.50 | 41.7        | 36.1 | 54.6                         | 48.0 | 60  | 50  |
| MPH048/<br>MPD060/MPH060                       | 2.5                    | 2.9 | 3/4      | AHM101L      | Single                | 10                   | 7.5   | 10                    | 7.50 | 41.7        | 36.1 | 55.2                         | 48.7 | 60  | 50  |
| MPD060/MPH060                                  | 2.5                    | 2.9 | 3/4      | AHM151L      | L1/L2                 | 15                   | 11.25 | 10                    | 7.50 | 41.7        | 36.1 | 55.2                         | 48.7 | 60  | 50  |
|  |                        |     |          |              | L3/L4                 |                      |       | 5                     | 3.75 | 20.8        | 18.0 | 26.0                         | 22.5 | 30  | 25  |
|  |                        |     |          | AHM201L      | L1/L2                 | 20                   | 15    | 10                    | 7.50 | 41.7        | 36.1 | 55.2                         | 48.7 | 60  | 50  |
|  |                        |     |          |              | L3/L4                 |                      |       | 10                    | 7.50 | 41.7        | 36.1 | 52.1                         | 45.1 | 60  | 50  |
| MPD072   | 3.8                    | 4.3 | 1        | AHM151L      | L1/L2                 | 15                   | 11.25 | 10                    | 7.50 | 41.7        | 36.1 | 56.8                         | 50.5 | 60  | 60  |
|  |                        |     |          |              | L3/L4                 |                      |       | 5                     | 3.75 | 20.8        | 18.0 | 26.0                         | 22.5 | 30  | 25  |
|  |                        |     |          | AHM201L      | L1/L2                 | 20                   | 15    | 10                    | 7.50 | 41.7        | 36.1 | 56.8                         | 50.5 | 60  | 60  |
|  |                        |     |          |              | L3/L4                 |                      |       | 10                    | 7.50 | 41.7        | 36.1 | 52.1                         | 45.1 | 60  | 50  |

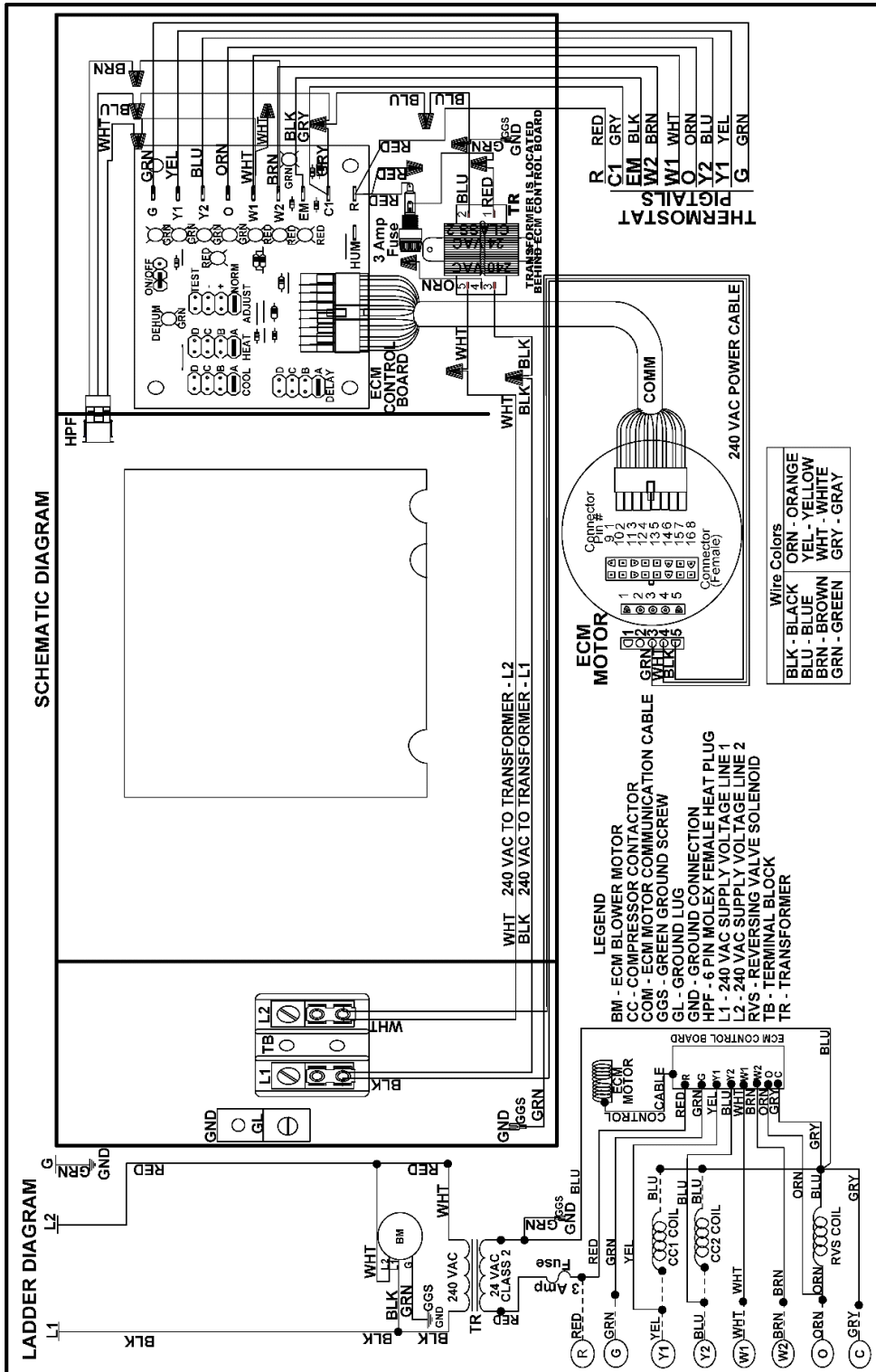
| Technical Data Single Phase w/ Circuit Breaker & Single Point Connection (Canadian Customers) |                        |     |          |              |                       |                      |       |                       |      |             |      |                              |      |   |     |
|---|------------------------|-----|----------|--------------|-----------------------|----------------------|-------|-----------------------|------|-------------|------|------------------------------|------|---|-----|
| Air Handler Model   | Motor FLA <sup>1</sup> |     | Motor HP | Heater Model | Supply Circuit Number | Heat kW <sup>2</sup> |       | Heater kW Per Circuit |      | Heater Amps |      | MCA-Minimum Circuit Ampacity |      | MOCP Maximum Overcurrent Protective Device <sup>3,4</sup> (AMPS) NEC 240.4(B) |     |
|   | 240                    | 208 |          |              |                       | 240                  | 208   | 240                   | 208  | 240         | 208  | 240                          | 208  | 240   | 208 |
| MPD060/MPH060   | 2.5                    | 2.9 | 3/4      | AHM151L      | L1/L2                 | 15                   | 11.25 | 10                    | 7.50 | 62.5        | 54.1 | 81.3                         | 71.2 | 90  | 80  |
|   |                        |     |          |              | L3/L4                 |                      |       | 5                     | 3.75 |             |      |                              |      |   |     |
|   |                        |     |          | AHM201L      | L1/L2                 | 20                   | 15    | 10                    | 7.50 | 83.3        | 72.1 | 107.3                        | 93.7 | 110   | 100 |
|   |                        |     |          |              | L3/L4                 |                      |       | 10                    | 7.50 |             |      |                              |      |   |     |
| MPD072  | 3.8                    | 4.3 | 1        | AHM151L      | L1/L2                 | 15                   | 11.25 | 10                    | 7.50 | 62.5        | 54.1 | 82.8                         | 73.0 | 90  | 80  |
|   |                        |     |          |              | L3/L4                 |                      |       | 5                     | 3.75 |             |      |                              |      |   |     |
|   |                        |     |          | AHM201L      | L1/L2                 | 20                   | 15    | 10                    | 7.50 | 83.3        | 72.1 | 108.9                        | 95.5 | 110   | 100 |
|   |                        |     |          |              | L3/L4                 |                      |       | 10                    | 7.50 |             |      |                              |      |   |     |

**Notes:**

1. Rated Motor Amps (at DOE External Static Rating Point)
2. Nominal kW at 240V (Derate 25% for 208V)
3. Fuse or HACR Breaker
4. Maximum Overcurrent Device, Overcurrent Protection Installed on Breaker Models are sized per MCA

**NOTE:** Additional information regarding the installation of the AH Electric Heaters can be found in the AH Electric Heat IOM, P/N: 20D284-01NN.

# Section 9: Wiring Diagrams



## Section 10: Pressure Drop Data Table

| Pressure Drop Table                 |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Cased/Uncased "A-Coil" Only Airflow |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Model Number                        | Wet Coil Pressure Drop @ 80°F DB / 67°F WB |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                                     | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 |
| MCD/ACD024                          | 0.03                                       | 0.05 | 0.06 | 0.08 | 0.10 | 0.12 | 0.14 | 0.16 | 0.18 | 0.21 | 0.24 | 0.26 | 0.29 |      |      |      |      |
| MCD/ACD036                          |  |      |      |      |      | 0.10 | 0.11 | 0.13 | 0.15 | 0.17 | 0.20 | 0.22 | 0.24 | 0.27 | 0.30 | 0.33 |      |
| MCD/ACD060                          |  |      |      |      |      |      |      | 0.17 | 0.19 | 0.22 | 0.25 | 0.28 | 0.31 | 0.34 | 0.38 | 0.42 |      |
| MCH/ACH024                          | 0.05                                       | 0.07 | 0.10 | 0.12 | 0.15 | 0.18 | 0.21 | 0.25 | 0.29 |      |      |      |      |      |      |      |      |
| MCH/ACH036                          |  |      |      | 0.08 | 0.10 | 0.12 | 0.14 | 0.17 | 0.19 | 0.22 | 0.25 | 0.28 | 0.31 |      |      |      |      |
| MCH/ACH060                          |  |      |      |      |      |      |      | 0.09 | 0.11 | 0.12 | 0.14 | 0.15 | 0.17 | 0.19 | 0.21 | 0.23 | 0.25 |
| Air Handler - "A-Coil" Only Airflow |  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Model Number                        | Wet Coil Pressure Drop @ 80°F DB / 67°F WB |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|                                     | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 |
| MPD024                              | 0.05                                       | 0.07 | 0.09 | 0.12 | 0.14 | 0.17 | 0.21 | 0.24 | 0.28 | 0.32 |      |      |      |      |      |      |      |
| MPD036                              |  |      |      |      |      | 0.11 | 0.13 | 0.15 | 0.18 | 0.20 | 0.23 | 0.26 | 0.29 | 0.32 |      |      |      |
| MPD060/MPD072                       |  |      |      |      |      |      | 0.14 | 0.16 | 0.19 | 0.22 | 0.25 | 0.28 | 0.31 | 0.34 | 0.38 | 0.41 | 0.45 |
| MPH024                              | 0.05                                       | 0.07 | 0.09 | 0.12 | 0.15 | 0.18 | 0.21 | 0.25 | 0.28 | 0.32 |      |      |      |      |      |      |      |
| MPH036                              |  |      |      |      |      | 0.12 | 0.14 | 0.16 | 0.19 | 0.22 | 0.25 | 0.28 | 0.31 |      |      |      |      |
| MPH048                              |  |      |      |      |      |      |      | 0.09 | 0.10 | 0.12 | 0.13 | 0.15 | 0.17 | 0.19 | 0.20 | 0.23 | 0.25 |
| MPH060                              |  |      |      |      |      |      |      |      |      | 0.10 | 0.11 | 0.13 | 0.14 | 0.16 | 0.17 | 0.19 | 0.21 |

**Note:**

1. Data shown above is supplied from the air coil manufacturer.

## Section 11: Down -Flow Conversion

**Table 4: Available Down-Flow Kits**

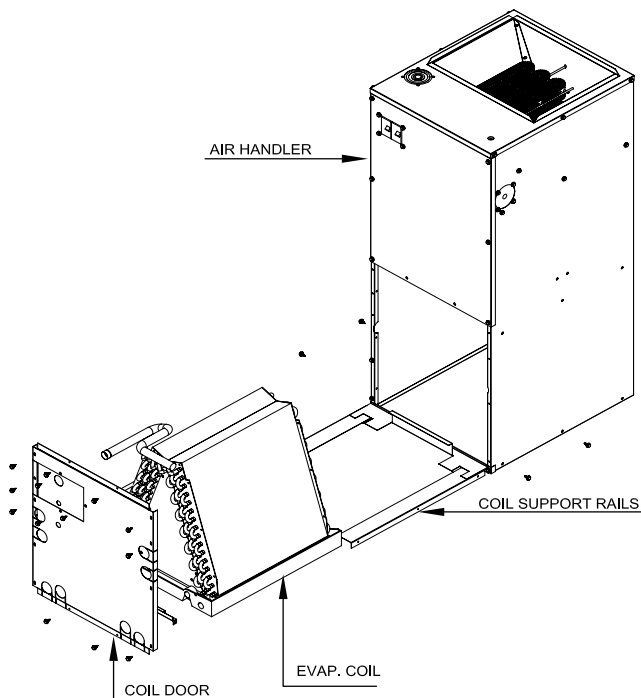
| Kit Part Number | Compatible Unit |
|-----------------|-----------------|
| AHDKSA          | MPH024          |
| AHDKMA          | MPH036          |
| AHDKLA          | MPH048/ MPH060  |
| AMPDNWFLWS      | MPD024          |
| AMPDNWFLWM      | MPD036          |
| AMPDNWFLWL      | MPD060/MPD072   |

**NOTE:** The conversion kit cannot be used on hydronic air handling units which have a separate hot water coil mounted in the discharge section of the unit.

### Disassembly (Figure 2)

1. Remove the evaporator coil door panel, and discard it. It will not be re-used. A new door is supplied in the down-flow conversion kit.
2. Remove the evaporator coil assembly with the drain pan, by sliding it out of the front of the unit.
3. Remove the (6) screws ((3) on each side of unit) securing the evaporator coil rails. Set the rails and hardware aside, as they will be re-used.

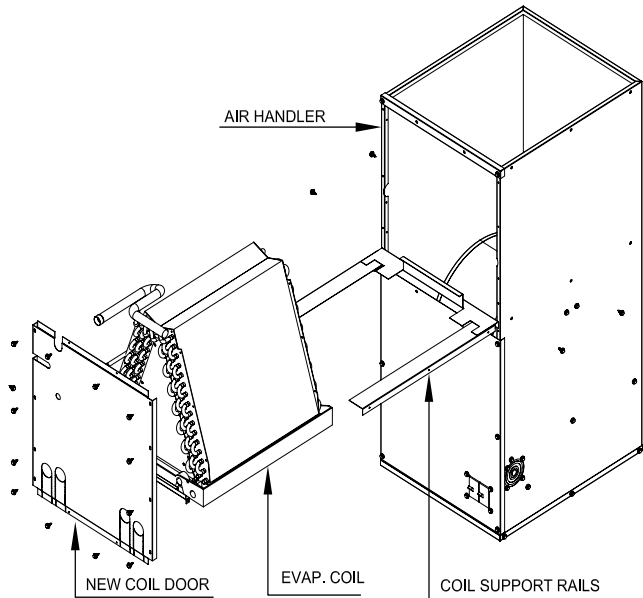
**Figure 2**



### Assembly (Figure 3)

1. Invert the air handler 180°, and reinstall the coil support rails just above the blower. Use the (6) screws that were taken out in Step #3.
2. Slide the evaporator assembly back into the coils section. Evaporator must be installed so it is configured in the "A" position.
3. Install new door assembly provided in the kit.

**Figure 3**



**⚠ WARNING ⚠**  
**IF UNIT IS BEING INSTALLED ON COMBUSTIBLE FLOORING, A NON-COMBUSTIBLE BASE MUST BE USED. UNIT CANNOT BE INSTALLED ON CARPETING.**

**This Page Intentionally Left Blank**



# ENERTECH<sup>®</sup>

Geothermal Made Better<sup>®</sup>

[www.enertechgeo.com](http://www.enertechgeo.com)

Greenville, IL - Mitchell, SD  
[info@enertechgeo.com](mailto:info@enertechgeo.com)



Conforms to  
UL Std 1995  
Certified to  
CAN/CSA Std  
C22.2 No. 236



Rev Tab

Enertech Global is continually working to improve its products. As a result, the pricing, design and specifications of each product may change without notice and may not be as described herein. For the most up-to-date information, please visit our website, or contact our Customer Service department at [info@enertechgeo.com](mailto:info@enertechgeo.com). Statements and other information contained herein are not express warranties and do not form the basis of any bargain between the parties, but are merely Enertech Global's opinion or commendation of its products.