



DEHUMIDIFIERS

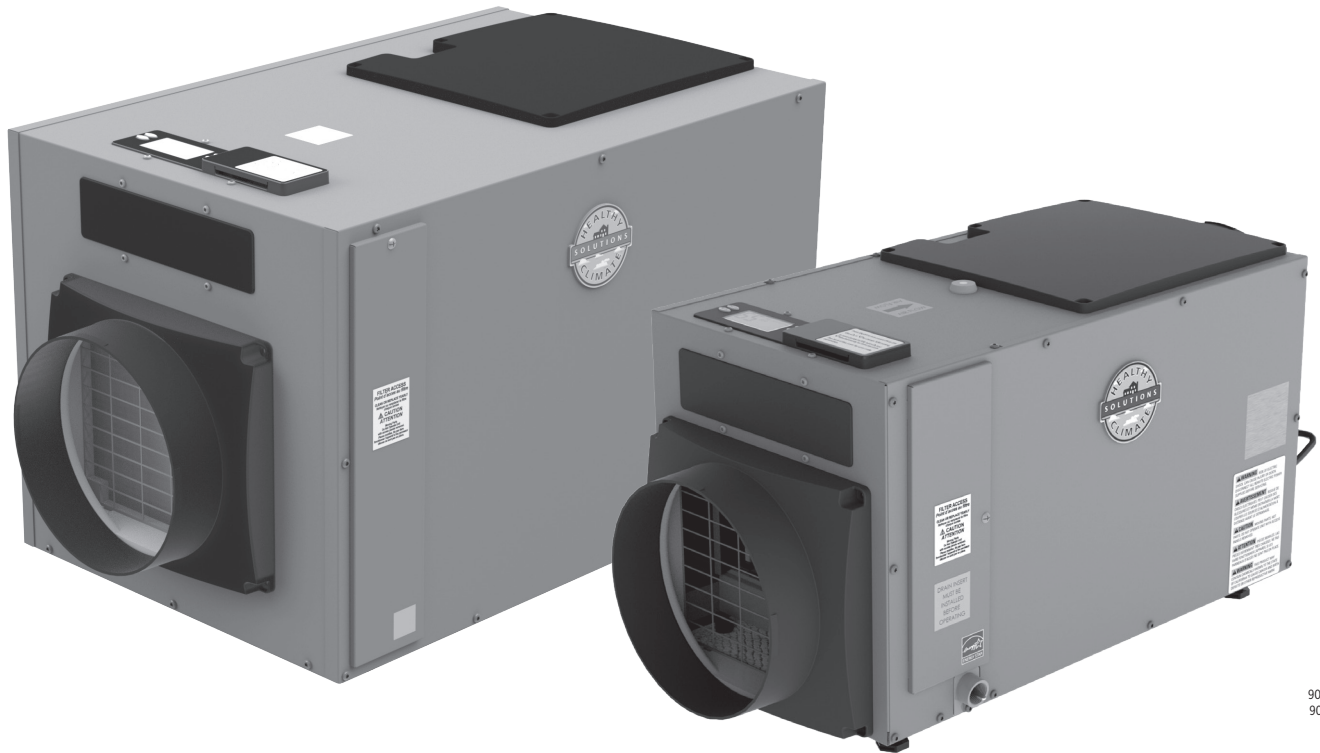
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Supersedes 507393-01

HEALTHY CLIMATE® DEHUMIDIFIERS

QUICK START GUIDE FOR HEALTHY CLIMATE® DEHUMIDIFIER MODEL HCWHD4-080, HCWHD4-100 AND HCWHD4-130

READ COMPLETE SAFETY INSTRUCTIONS AND INSTALLATION INSTRUCTIONS BEFORE STARTING

This guide provides a quick and simple guide for set-up, based on the installation application. Each application sheet contains parts needed, illustrations, and the sequence of operation for the specific application. The **Quick Start Guide** is to be used as a reference only. Installation is to be performed by qualified heating and air conditioning professionals in accordance with the **Installation Manual** provided with the dehumidifier.



90-2630
90-2637

Application	Primary Zone to Dehumidify	Secondary Zone to Dehumidify	Control Type	Sheet Number	
	Single Zone	Whole House or Basement	N/A	Internal	1
				External	2
	Two Zone <i>(Not recommended in HVAC zoning applications)</i>	Whole house	Basement	Internal	3
				External in Primary	4
	Two Zone <i>(Not recommended in HVAC zoning applications)</i>	Basement	Whole house	Internal	3
				External in Primary	4
	Using the Ventilation Feature			5	

SHEET 1 – Single Zone Using Internal Control

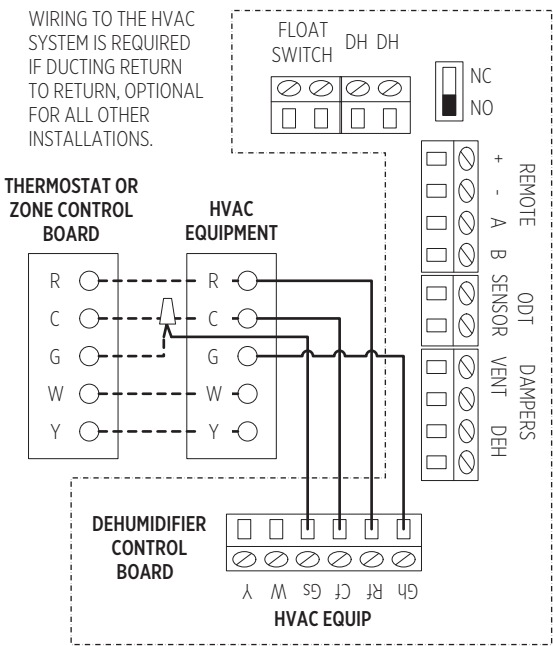
PARTS NEEDED (ADDITIONAL PARTS MAY BE REQUIRED)

- Insulated duct
- Duct fittings & hardware
- Grilles (if required)
- Drain pan and float switch (if required)
- Thermostat wire
- 20A outlet (HCWHD4-130 only)

WIRING INTERNAL CONTROL (SHOWN WITHOUT “DISABLE WITH AC” FEATURE BEING USED)

----- EXISTING WIRE
 _____ NEW WIRE

WIRING TO THE HVAC SYSTEM IS REQUIRED IF DUCTING RETURN TO RETURN, OPTIONAL FOR ALL OTHER INSTALLATIONS.



SEQUENCE OF OPERATION

The dehumidifier will automatically “sample” the air by turning on its blower (and the HVAC blower if this option has been wired – see **WIRING INTERNAL CONTROL** above), and measuring the relative humidity (RH) once every hour. Sampling will also occur when the RH setting is lowered using the ▲ or ▼ buttons on the control.

During sampling, if the RH of the air is above the setting the dehumidifier, the compressor will turn on. The compressor, dehumidifier blower and HVAC system blower (if on) turns off when the RH of the air is 3% RH below the setting.

FIGURE 1 – DEHUMIDIFIER DUCTED TO HVAC SYSTEM

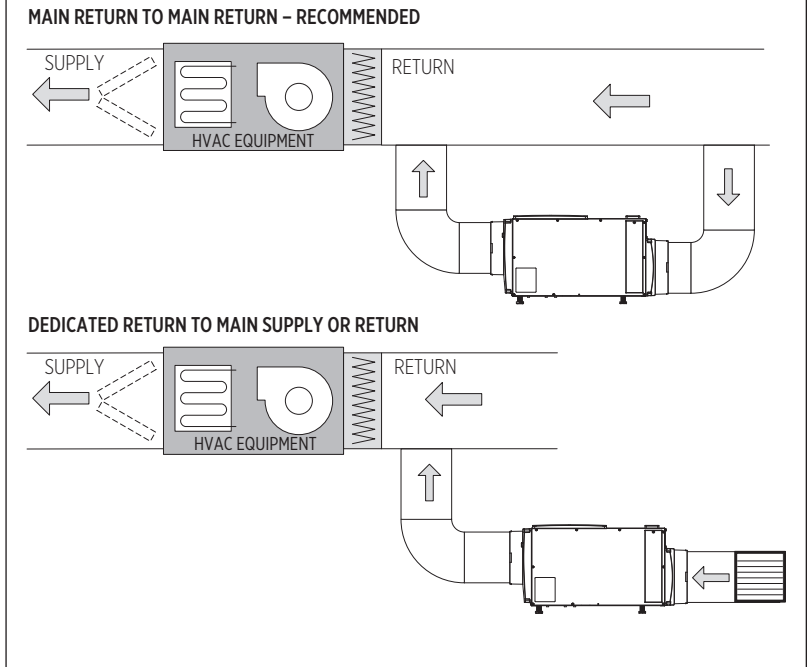
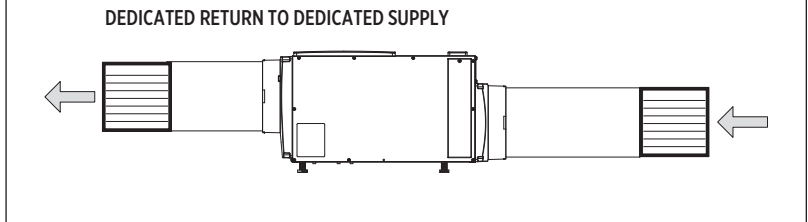


FIGURE 2 – DEHUMIDIFIER DUCTED DIRECTLY

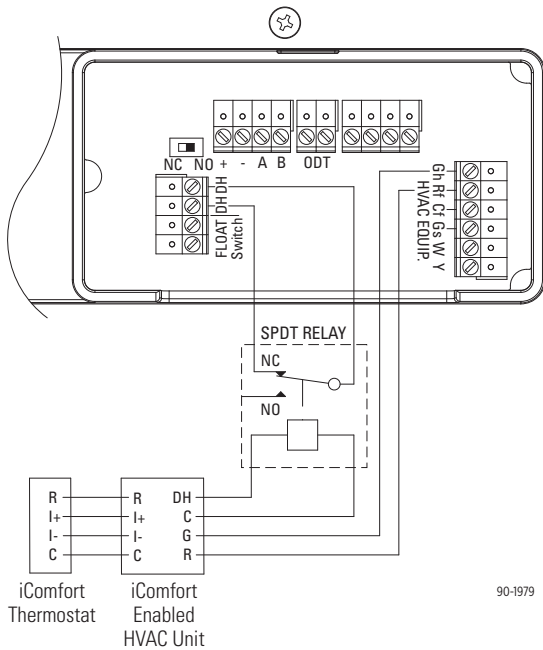


SHEET 2 – Single Zone Using iComfort Wi-Fi® Thermostat

PARTS NEEDED (ADDITIONAL PARTS MAY BE REQUIRED)

- iComfort Wi-Fi® Thermostat
- Insulated duct
- Duct fittings & hardware
- Grilles (if required)
- Drain pan and float switch (if required)
- Thermostat wire
- 20A outlet (HCWHD4-130 only)

WIRING EXTERNAL CONTROL (SHOWN WITHOUT “DISABLE WITH AC” FEATURE BEING USED)



EXTERNAL CONTROL

The external control must have a normally open (NO) or normally closed (NC) dry contact output, and must be installed in the space that is going to be dehumidified. Select the type of control using the NO/NC dip switch on the dehumidifier control.

SEQUENCE OF OPERATION

When the external control calls for dehumidification, the dehumidifier blower and HVAC blower (if this option has been wired – see **WIRING EXTERNAL CONTROL** above) turn on, then three seconds later the compressor turns on. All will turn off when the external control stops calling for dehumidification.

FIGURE 1 – DEHUMIDIFIER DUCTED TO HVAC SYSTEM

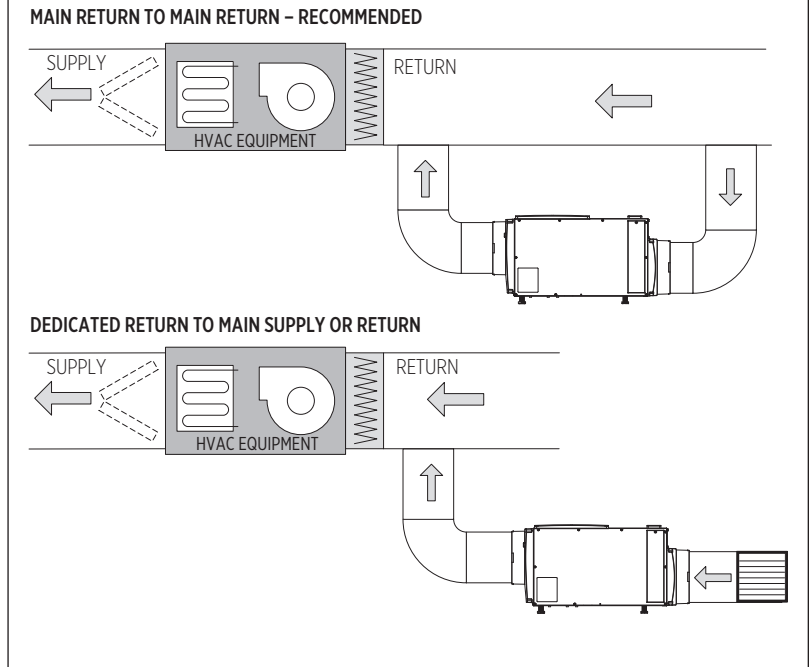
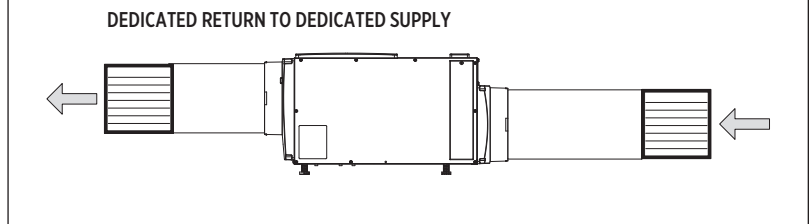


FIGURE 2 – DEHUMIDIFIER DUCTED DIRECTLY

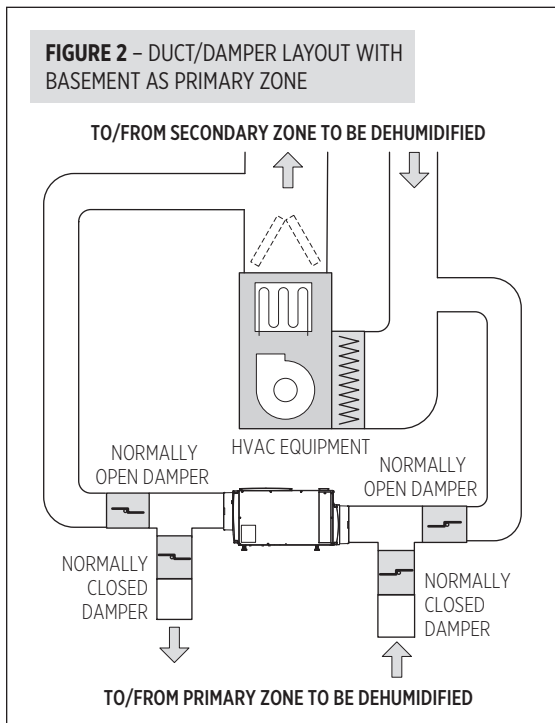
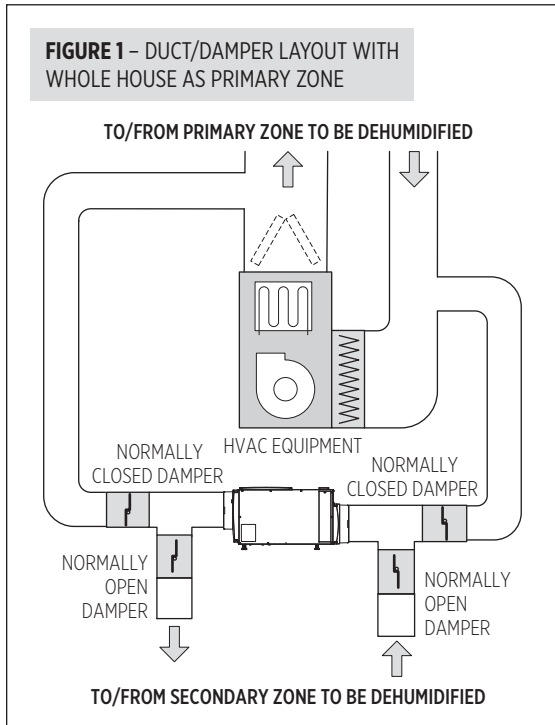


SHEET 3 – Two Zone Using Internal Control

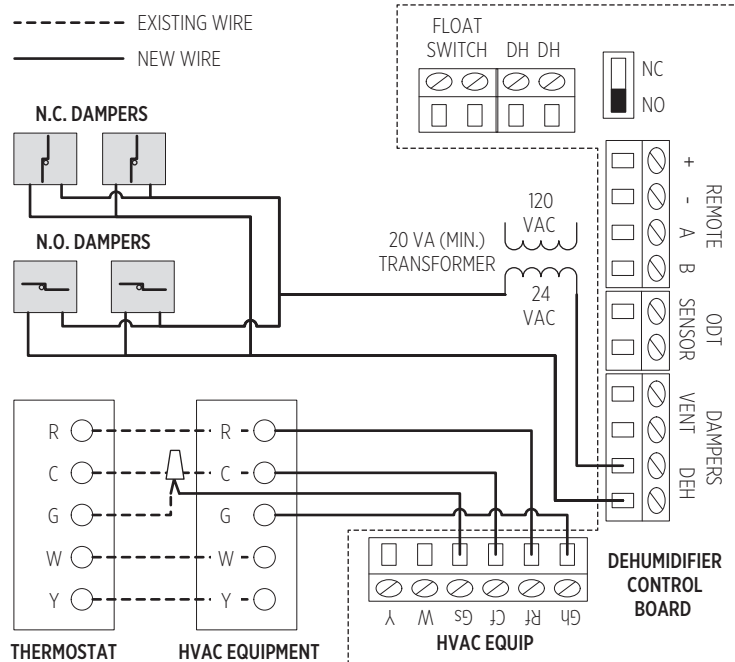
Note: Dehumidifier zoning is not recommended in zoned HVAC applications.

PARTS NEEDED (ADDITIONAL PARTS MAY BE REQUIRED)

- Insulated duct
- Thermostat wire
- Duct fittings & hardware
- 20A outlet (HCWHD4-130 only)
- Drain pan and float switch (if required)
- Grilles
- Y6451 Zone Kit (includes: 2 – 10" dia N.O. dampers, 2 – 10" dia N.C. dampers and one 40VA, 24VAC plug-in transformer)



WIRING INTERNAL CONTROL



SEQUENCE OF OPERATION

Adjust the relative humidity (RH) setting on the dehumidifier control; this will be the setting for both the Primary and Secondary Zone. Once an hour, the dehumidifier will “sample” the air in the Primary Zone. If there is no need for dehumidification in the Primary Zone the dehumidifier will then sample the air in the Secondary Zone.

When sampling in the Primary Zone the dehumidifier will energize the dampers and then turn on its blower (and the HVAC System blower if wired as shown in **WIRING INTERNAL CONTROL** above), to measure the RH of the air. If the RH of the air is above the setting, the compressor will turn on. If the Primary Zone does not need dehumidification, the dampers are de-energized and the HVAC System Blower (if on) is turned off while the dehumidifier blower continues to run to sample the air in the Secondary Zone. If the RH of the air in the Secondary Zone is above the setting, the compressor will turn on.

SET UP THE DEHUMIDIFIER FOR ZONING

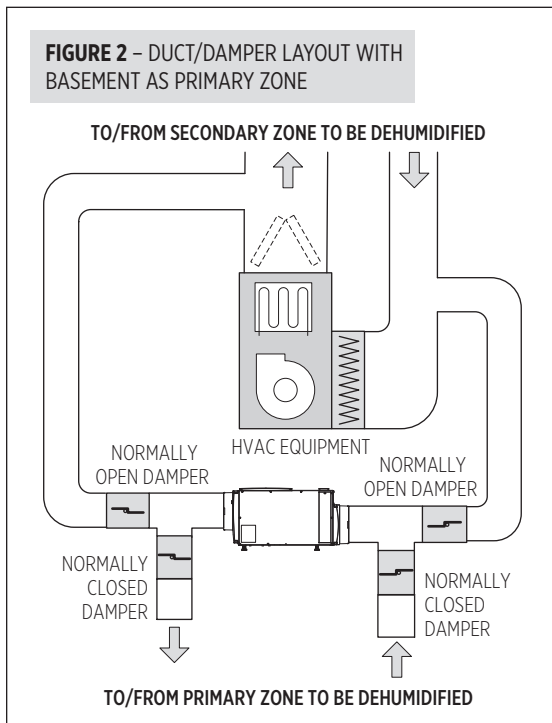
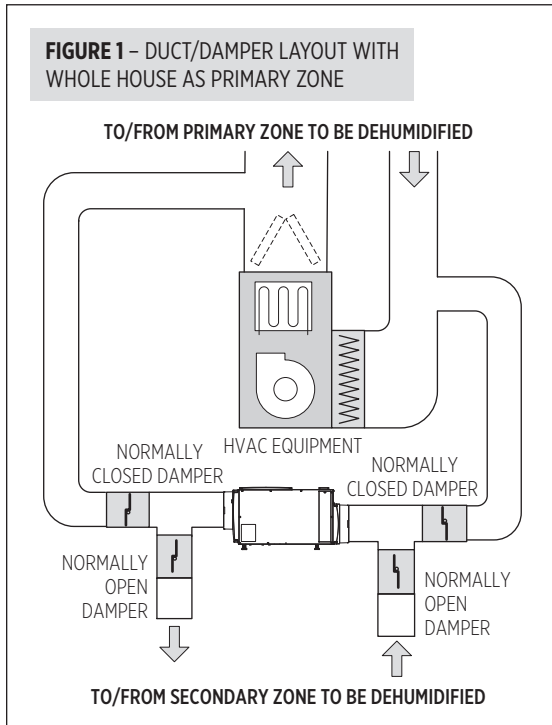
1. With **OFF** showing on the control, press the **MODE** button for 3 seconds to enter the Installer Set Up menu.
2. Press the **MODE** button until **ZONE DISABLED** appears.
3. Press the ▲ or ▼ button to change to **ZONE ENABLED**.
4. Press the **MODE** button repeatedly until **DONE** shows on the display.

SHEET 4 – Two Zone with External Control in Primary Zone

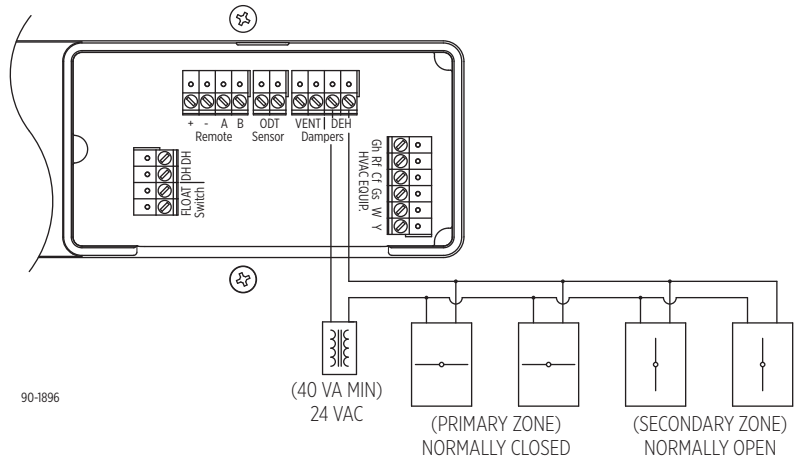
Note: Dehumidifier zoning is not recommended in zoned HVAC applications.

PARTS NEEDED (ADDITIONAL PARTS MAY BE REQUIRED)

- iComfort Wi-Fi® Thermostat
- Insulated duct
- Thermostat wire
- Duct fittings & hardware
- 20A outlet (HCWHD4-130 only)
- Drain pan and float switch (if required)
- Grilles
- 5442 Damper Kit (includes: 2 - 10" dia N.O. dampers, 2 -10" dia N.C. dampers and one 40VA, 24VAC plug-in transformer)



WIRING EXTERNAL CONTROL IN PRIMARY ZONE



SEQUENCE OF OPERATION

The external control (iComfort Wi-Fi® Thermostat) provides on-demand control of the dehumidifier for the Primary Zone. When the Primary Zone calls for dehumidification, the dehumidifier energizes the dampers, and turns on its blower and compressor. The dehumidifier will also turn on the HVAC System Blower if wired as shown in **WIRING EXTERNAL CONTROL IN PRIMARY ZONE** above. The Primary Zone demand will override an existing Secondary Zone demand.

The Secondary Zone is controlled by the relative humidity (RH) setting at the dehumidifier control. Once an hour, or immediately after dehumidifying the primary zone, the dehumidifier will “sample” the air in the Secondary Zone. When sampling, the dampers are **not** energized while the dehumidifier blower runs and the RH is measured. If the RH is above the setting on the control, the compressor will turn on and the Secondary Zone will be dehumidified.

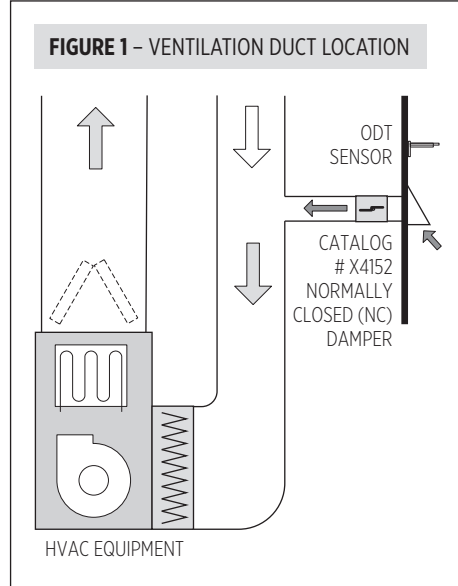
SET UP THE DEHUMIDIFIER FOR ZONING AND EXTERNAL CONTROL

1. Press the MODE button for 3 seconds to enter the Installer Set Up menu
2. Press the MODE button until **ZONE DISABLED** appears.
3. Press the ▲ or ▼ button to change to **ZONE ENABLED**.
4. Press the MODE button again to show **EXTERNAL DISABLED**.
5. Press the ▲ or ▼ button to change to **EXTERNAL ENABLED**.
6. Press the MODE button repeatedly until **DONE** shows on the display.

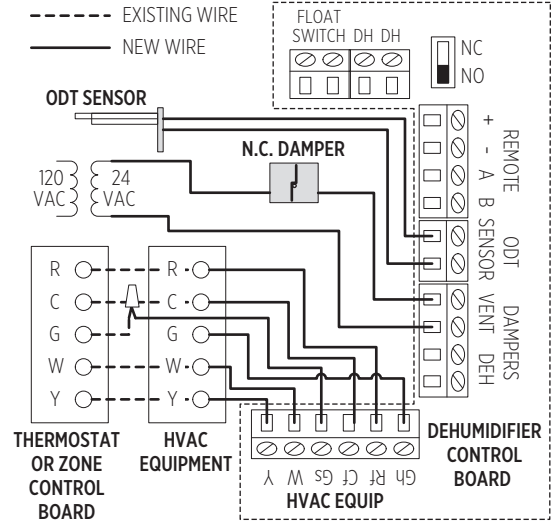
SHEET 5 – Using the Ventilation Feature of the Dehumidifier

PARTS NEEDED (ADDITIONAL PARTS MAY BE REQUIRED)

- Catalog # X4152
- Catalog # 58N66 Outdoor Temperature Sensor (optional)
- Catalog # 22N03 10VA transformer
- 6" insulated duct, fittings and hardware
- Intake hood
- Thermostat wire



VENTILATION WIRING



Install a ventilation duct with a normally closed Catalog # X4152 damper to the return duct of the HVAC system (see **FIGURE 1**) and wire the dehumidifier to the HVAC system as shown in **VENTILATION WIRING**. The outdoor temperature (ODT) sensor is used to limit ventilation if the outdoor temperature gets too hot or too cold (see **SET UP THE DEHUMIDIFIER FOR VENTILATION** below). If temperature limits are not needed, the ODT sensor does not have to be installed. Follow the set up instructions below and set the number of minutes per hour that ventilation will be needed (refer to the Installation Manual for details on determining how much ventilation is needed). Whenever the heating or cooling turns on, or when the dehumidifier turns on, the dehumidifier will open the damper and bring in fresh outdoor air. If the equipment doesn't run for the set number of minutes, the dehumidifier will turn on HVAC fan at the end of the hour to ensure ventilation needs are met.

SET UP THE DEHUMIDIFIER FOR VENTILATION

1. With **OFF** showing on the control, press the **MODE** button for 3 seconds to enter the Installer Set Up menu.
2. Press the **MODE** button until **VENT DISABLED** appears.
3. Press the ▲ or ▼ button to change to **VENT ENABLED**.
4. Press the **MODE** button and **VENT TIMED** will be displayed. Press the ▲ or ▼ button to toggle between:
 - TIMED:** no temperature limits.
 - AUTO - B:** Ventilation not allowed if ODT > 100°F or ODT < 0°F; allowed only when heating if 0°F < ODT < 20°F.
 - AUTO - C:** Ventilation not allowed if ODT > 100°F or ODT < 0°F.
 - AUTO - D:** Ventilation not allowed if ODT > 90°F; allowed only when heating if 0°F < ODT < 40°F.
5. Press the **MODE** button, then use the ▲ or ▼ button to set the Vent Time (minutes/hour).
6. Press the **MODE** button repeatedly until **DONE** appears on the display.

USING THE DEHUMIDIFIER TO PRE-CONDITION THE VENTILATION AIR

The dehumidifier can be used to remove moisture from the ventilation air **before** it is delivered to the home. Install the ventilation duct to the dehumidifier inlet duct as shown in **FIGURE 2**. The control on the dehumidifier must be used for the Primary Zone (i.e. an external control cannot be used) in this installation. If the RH of the incoming air is above the setting on the control the air will be dehumidified.

