



# Ultra-Aire™ MD33

## Installation Instructions

INSTALLATION BY AN HVAC PROFESSIONAL IS RECOMMENDED

The Ultra-Aire MD33 is a built-in dehumidification solution that can be conveniently installed inside standard wall framing. The Ultra-Aire MD33 provides the ultimate in comfort, health and property protection.

**HVAC Installer: Please Leave Manual for Homeowner**

P/N: 4035900 Serial No.: \_\_\_\_\_ Install Date: \_\_\_\_\_

Sold by: \_\_\_\_\_



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Therma-Stor is committed to manufacturing quality products. To maintain our standards, product specifications may change without notice.



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# SAFETY INSTRUCTIONS

**READ THE INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS CAREFULLY BEFORE INSTALLING AND OPERATING THIS DEVICE. PROPER ADHERENCE TO THESE INSTRUCTIONS IS ESSENTIAL TO OBTAIN MAXIMUM BENEFIT FROM THIS DEHUMIDIFIER.**

## **⚠ WARNING!**

**THIS SYMBOL MEANS IMPORTANT INSTRUCTIONS. FAILURE TO HEED THEM CAN RESULT IN SERIOUS INJURY OR DEATH.**

## **⚠ CAUTION!**

**THIS SYMBOL MEANS IMPORTANT INSTRUCTIONS. FAILURE TO HEED THEM CAN RESULT IN INJURY OR MATERIAL PROPERTY DAMAGE.**

### **Registrations**



The Ultra-Aire MD33 conforms to unified standard UL 60335-2-40 and CSA Standard C22.2.60335-2-40.

## **⚠ WARNING!**

**120 VOLTS MAY CAUSE SERIOUS INJURY FROM ELECTRIC SHOCK. TURN OFF CIRCUIT BREAKER BEFORE STARTING INSTALLATION OR SERVICING, AND LEAVE CIRCUIT BREAKER OFF UNTIL INSTALLATION OR SERVICE IS COMPLETED.**

## **⚠ CAUTION!**

**READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION.**

**ALWAYS USE CAUTION AND WEAR CUT RESISTANT GLOVES WHEN HANDLING SHEET METAL.**

**ALL STATE AND NATIONAL ELECTRICAL AND PLUMBING CODES MUST BE ADHERED TO FOR PROPER UNIT OPERATION AND WARRANTY COMPLIANCE.**

**IMPROPER INSTALLATION MAY CAUSE PROPERTY DAMAGE OR INJURY. INSTALLATION, SERVICE, AND MAINTENANCE MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN.**

**DEHUMIDIFIER IS HEAVY. HANDLE WITH CARE AND FOLLOW INSTALLATION INSTRUCTIONS. DO NOT USE IN POOL APPLICATIONS, OR WARRANTY WILL BE VOID.**

**THIS APPLIANCE IS INTENDED FOR USE AT ELEVATIONS BELOW 4000 M (13,000 FT).**

**THIS APPLIANCE IS NOT INTENDED FOR USE BY PERSONS (INCLUDING CHILDREN) WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES, OR LACK OF EXPERIENCE OR KNOWLEDGE, UNLESS THEY HAVE BEEN GIVEN SUPERVISION OR INSTRUCTION CONCERNING THE USE OF THE APPLIANCE BY A PERSON RESPONSIBLE FOR THEIR SAFETY. CHILDREN SHOULD BE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE APPLIANCE.**

# SAFETY INSTRUCTIONS

LISEZ ATTENTIVEMENT LES INSTRUCTIONS SUR LE FONCTIONNEMENT ET L'ENTRETIEN RELIÉS À L'UTILISATION DE CETTE UNITÉ AVANT D'EN EFFECTUER L'INSTALLATION ET L'UTILISATION. LE RESPECT DE CES INSTRUCTIONS EST PRIMORDIAL AFIN DE TIRER LE MAXIMUM DE BÉNÉFICES DE VOTRE DÉSHUMIDIFICATEUR.

## **⚠ AVERTISSEMENT!**

**CE SYMBOLE DÉSIGNE DES INSTRUCTIONS IMPORTANTES. LE NON-RESPECT DE CES INSTRUCTIONS PEUT ENTRAÎNER DE GRAVES BLESSURES, VOIRE LA MORT.**

## **⚠ MISE EN GARDE!**

**CE SYMBOLE DÉSIGNE DES INSTRUCTIONS IMPORTANTES. LE NON-RESPECT DE CES INSTRUCTIONS PEUT ENTRAÎNER DE GRAVES BLESSURES OU DES DOMMAGES MATÉRIELS.**

### ENREGISTREMENTS



LE Ultra-Aire MD33 EST FIDÈLE À LA NORME UNIFIÉE UL 60335-2-40 AINSI QU'À LA NORME C22.2.60335-2-40.

## **⚠ AVERTISSEMENT!**

**UNE DÉCHARGE ÉLECTRIQUE DE 120 VOLTS PEUT CAUSER DES BLESSURES SÉRIEUSES. FERMEZ LE DISJONCTEUR AVANT DE COMMENCER L'INSTALLATION OU L'ENTRETIEN ET LAISSEZ LE DISJONCTEUR EN POSITION FERMÉE JUSQU'À CE QUE L'INSTALLATION OU L'ENTRETIEN SOIT COMPLÉTÉ(E).**

## **⚠ MISE EN GARDE!**

**LISEZ LES CONSIGNES EN ENTIER AVANT DE COMMENCER L'INSTALLATION.**

**SOYEZ TOUJOURS VIGILANT ET PORTEZ DES GANTS RÉSISTANT AUX COUPURES LORSQUE VOUS MANIPULEZ DES FEUILLES DE MÉTAL.**

**TOUS LES CODES DE L'ÉLECTRICITÉ NATIONALE ET D'ÉTAT DOIVENT ÊTRE RESPECTÉS POUR UNE UTILISATION ADÉQUATE DE CETTE UNITÉ ET UNE VALIDITÉ DE LA GARANTIE.**

**UNE INSTALLATION NON CONFORME PEUT CAUSER DES DOMMAGES MATÉRIELS OU DES BLESSURES.**

**TOUTE INSTALLATION, TOUT ENTRETIEN ET TOUTE RÉPARATION DOIVENT ÊTRE EFFECTUÉS PAR UN TECHNICIEN D'ENTRETIEN QUALIFIÉ.**

**LE DÉSHUMIDIFICATEUR EST LOURD. MANIPULER AVEC SOIN ET SUIVRE LES INSTRUCTIONS D'INSTALLATION.**

**ÉVITEZ D'UTILISER POUR LE FONCTIONNEMENT D'UNE PISCINE OU LA GARANTIE SERA ANNULÉE.**

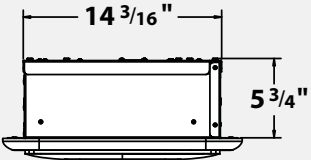
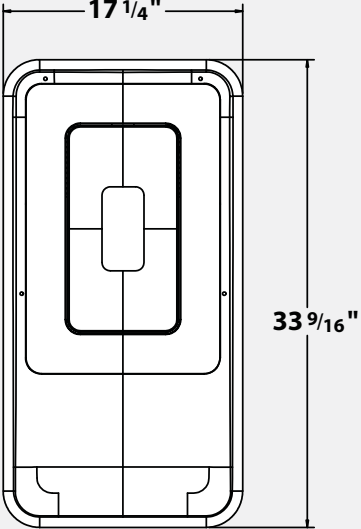
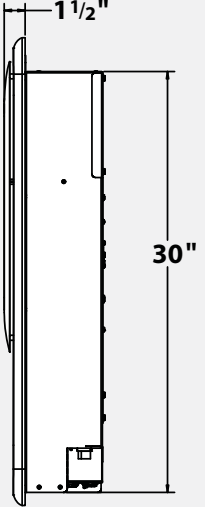
**CET APPAREIL EST PRÉVU POUR UNE UTILISATION EN ALTITUDE À PLUS DE 4000 M (13000 PI).**

**CET APPAREIL NE DOIT PAS ÊTRE UTILISÉ PAR DES PERSONNES DONT LES CAPACITÉS PHYSIQUES, SENSORIELLES OU MENTALES SONT LIMITÉES (Y COMPRIS LES ENFANTS) OU DES PERSONNES SANS EXPÉRIENCE NI CONNAISSANCES PERTINENTES POUR L'UTILISATION DE L'APPAREIL À MOINS D'AVOIR ÉTÉ FORMÉES SUR L'UTILISATION DE L'APPAREIL PAR UNE PERSONNE RESPONSABLE DE LEUR SÉCURITÉ. LES ENFANTS DEVRAIENT ÊTRE SUPERVISÉS AFIN D'ÉVITER QU'ILS NE JOUENT AVEC L'APPAREIL.**

# SPECIFICATIONS

<b>Part Number:</b>	4035900
<b>Blower:</b>	155 CFM @ 0.0" WG
<b>Power:</b>	305 Watts @ 80°F and 60% RH 110-120 Volt, hard-wired, electrical can be routed through bottom or out the back of the cabinet
<b>Automatic Restart:</b>	Yes
<b>Current Draw:</b>	2.8 Amps
<b>Operating Range:</b>	49°F - 95°F
<b>Sized For:</b>	Up to 1,200 Square Feet
<b>Water Removal at 80°F and 60% RH</b>	
Capacity:	33 Pints/day
Efficiency:	4.3 Pints/kWh
<b>Controls:</b>	Digital dehumidistat control – internally mounted (behind tamper-proof cover)
<b>Air Filter:</b>	1/2" Washable, mounted behind diffuser
<b>Dehumidistat:</b>	Digital, tamper proof, float switch input
<b>Cabinet:</b>	Galvanized Steel
<b>Decibels:</b>	46 dBA
<b>Drain Connection:</b>	3/4" O.D.
<b>Drain Hose:</b>	10' gravity fed (3/4" I.D.), can be routed through bottom or out the back of the cabinet
<b>Refrigerant Type:</b>	R134A (Refer to manufacturers label for more information)
<b>Refrigerant Amount:</b>	10 oz.
<b>Coils:</b>	Electrophoretic coated coils, prevents corrosion and extends life of the unit
<b>Utility Connections:</b>	Accessible from front for blind installation
<b>Dimensions (listed in inches):</b>	
Width:	14 3/16"
Height:	30"
Depth:	5 3/4"
Unit Weight:	40 lbs.
Shipping Weight:	45 lbs.

## OPTIONAL ACCESSORIES

<b>4037766</b>	<b>Surface Mount Kit</b> (Available for masonry CMU or installations where the unit cannot be recessed into the wall)
<b>4037767</b>	<b>2x4 Wall Mounting Bezel Kit</b> (Available for 2x4 wall installations where the unit cannot be allowed to penetrate the opposite side wall)
<b>4037768</b>	<b>Rear Panel Kit</b> (Available for 2x4 wall installations where the unit will penetrate through the other side of the wall into an unconditioned space)

## DEHUMIDIFIER SET UP

### Important Precautions

- If used near a water source, be certain that there is no chance the unit could get splashed. Connecting the unit to a dedicated circuit with Ground Fault Circuit Protection is recommended. Electrical wires must be properly grounded, and with the capability to be disconnected to provide for service.
- The device is designed to be installed indoors in a space that is protected from rain and flooding.
- Tamper proof fasteners provide access to the front of the device for operation, maintenance and service.
- Avoid directing discharge air at occupants.
- DO NOT place sides, top or bottom of cabinet in direct contact with structural building members or unwanted noise may result. Unit is designed to be suspended by side mounting flanges only.
- Drain hose must be routed with downward slope from unit drain connection to appropriate location. Consult local building codes for acceptable condensate drain connections.

### Location Considerations

- Install the unit on or inside of an interior wall and with direct connection to building electrical service. A 15 Amp circuit must be provided. Install the unit in a location that is near a power supply.
- Electrical and plumbing rough-in must be provided to installation location, adhering to any applicable local codes.
- Install the unit such that discharge air is directed away from thermostats and not installed inside of a wall cavity that contains a thermostat.
- Install the unit in an area that is not near the A/C return or below a supply vent.
- The unit generates condensate. Install the unit with nearby access to a drain or determine if there will be a need for a condensate pump.
- The unit will fit within 16" O.C. stud walls. If walls are more or less than 16", consideration must be given to providing additional support.
- Rough opening must be a minimum of 2" off the floor, 6" from the ceiling, and 10" from an inside corner.
- Check that there are no hidden wires or pipes inside the wall where unit is to be installed. Contact a certified electrician or plumber before removing any wires or pipes inside the wall.

# DRAIN INSTALLATION CONSIDERATIONS

Consult local building codes for condensate drain restriction and additional requirements. The Ultra-Aire MD33 is provided with 10' of 3/4" ID drain hose. Verify drain hose length is appropriate for application. The hose must be connected to the drain port and routed down the wall cavity and into the air conditioning condensate drain or other acceptable drainage.

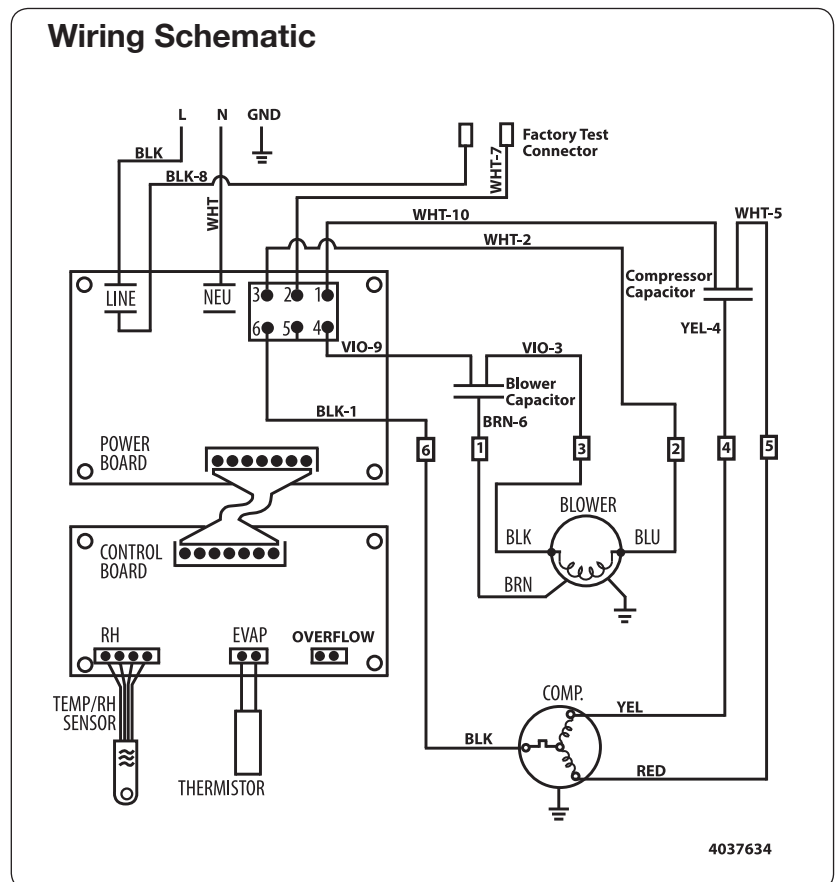
- For gravity drainage, the bottom of the unit must be at, or above the drain height.
- Avoid any entrapment of stagnant water within the hose.
- Consider 1/4" drop for every foot of drain hose.
- Codes may dictate that a drain trap is necessary before or near to the main building drain.

Be sure to install the metal cover over the top of the hose. This prevents air from entering the unit through the wall cavity.

# ELECTRICAL REQUIREMENTS

Ensure that the electrical connection and wire size are adequate and in conformance with the National Electrical Code, ANSI/NFPA 70 – latest edition and all local codes and ordinances. Use flexible, armored, or nonmetallic sheathed, copper wire with grounding conductor.

- The Ultra-Aire MD33 requires 120-volt, 60 Hz, AC-only, 15 amp, fused and grounded electrical supply.
- A visible circuit breaker or disconnect switch near the unit is required for maintenance and service.
- A dedicated circuit is recommended.
- Use of a UL listed or CSA approved strain relief is required.



# DEHUMIDIFIER INSTALLATION

The Ultra-Aire MD33 can be installed in a variety of applications:

- 2x6 O.C. Stud Wall Installation
- 2x4 Wall Installation
  - If penetrating both walls and the opposite side is a mechanical room, no additional accessories are needed.
  - If back wall is functional space, installation requires Front Mounted Bezel Kit (PN 4037767).
  - If the other side of the wall goes into an unconditioned space, it may require the Rear Panel Kit (PN 4037768) to add a layer of insulation to prevent condensation.
- Surface Mount Installation
  - Surface Mount Kit (PN 4037766) required for installation.

## Items Included in Box:

- Ultra-Aire MD33 Dehumidifier
- Diffuser Cover with Filter
- Ultra-Aire MD33 Installation Instructions
- Drain Hose (10')
- Hose Clamp
- Grommet for Drain Hose
- Non-Metallic Cable Clamp
- Bag A: #10 Wood Screws (5)
- Bag B: #8 Sheet Metal Screws (5)
- Bag C: Tamper Resistant Screws for Diffuser Cover (5) and 1/4" Hex T-15 Torx Security Bit
- Bag D: Phillips Screws for Diffuser Cover (5)

## Tools Required:

- Phillips Screwdriver
- 1/4" Hex Nut Screwdriver
- Level
- Square or Ruler
- Stud Finder
- Wire Stripper
- Drywall Saw
- Side Cutters or Carpenters Knife
- Tape Measure
- Pen or Pencil

## Other Materials To Consider:

- Electrical wire (depends on installation and distance of wiring requirements)
- Electrical power cord for retrofit installation
- Additional hose length or PVC pipe (depends on drain location)
- Materials to repair drywall (depends on installation)
- Condensate Pump Kit (depends on drain location)

## ⚠ WARNING!

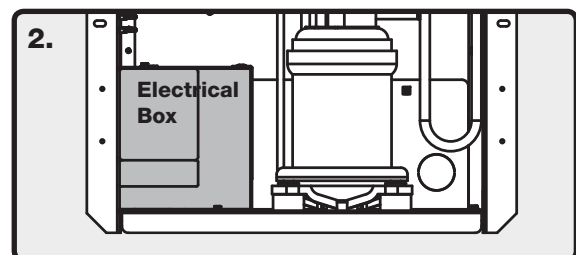
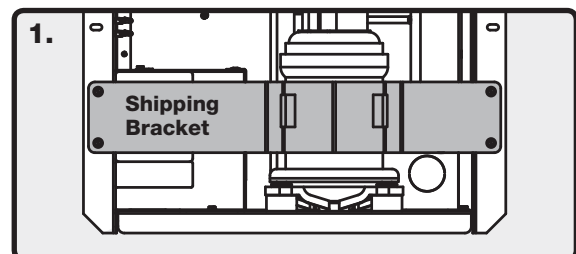
**SHUT OFF BREAKER / POWER BEFORE BEGINNING INSTALLATION.**

## ⚠ AVERTISSEMENT!

**FERMEZ LE DISJONCTEUR/ALIMENTATION AVANT DE COMMENCER L'INSTALLATION.**

**Step 1.** Remove the shipping bracket by cutting the zip tie with side cutters or carpenters knife. Remove the four screws from the shipping bracket using a 1/4" hex nut screwdriver.

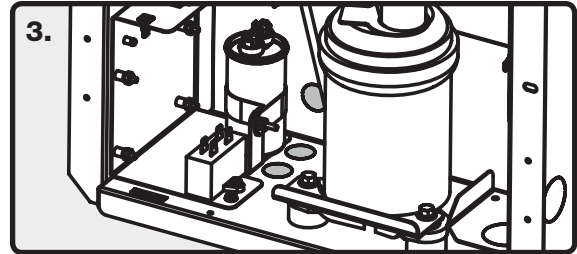
**Step 2.** Remove electrical box cover from the unit by removing the two screws on the cover using a 1/4" hex nut screwdriver.





# DEHUMIDIFIER INSTALLATION

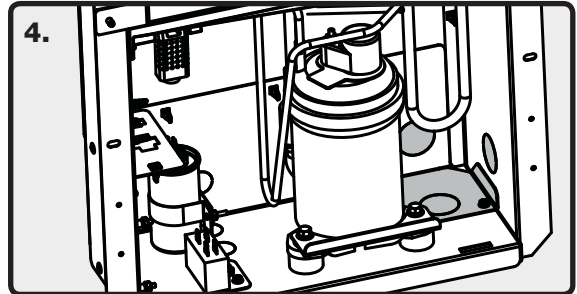
**Step 3.** There are three electrical knock outs, one on the back and two on the bottom of the unit. Remove appropriate knock out and install non-metallic cable clamp with clamp screws inside of unit oriented so they are accessible for tightening later.



**Step 4.** The drain hose can exit through the back, side, or bottom of the unit. Once the location is determined, remove the appropriate knock out.

If exiting through the bottom, remove the access cover to facilitate routing of the drain line.

Save access cover for reinstallation after drain line is routed.



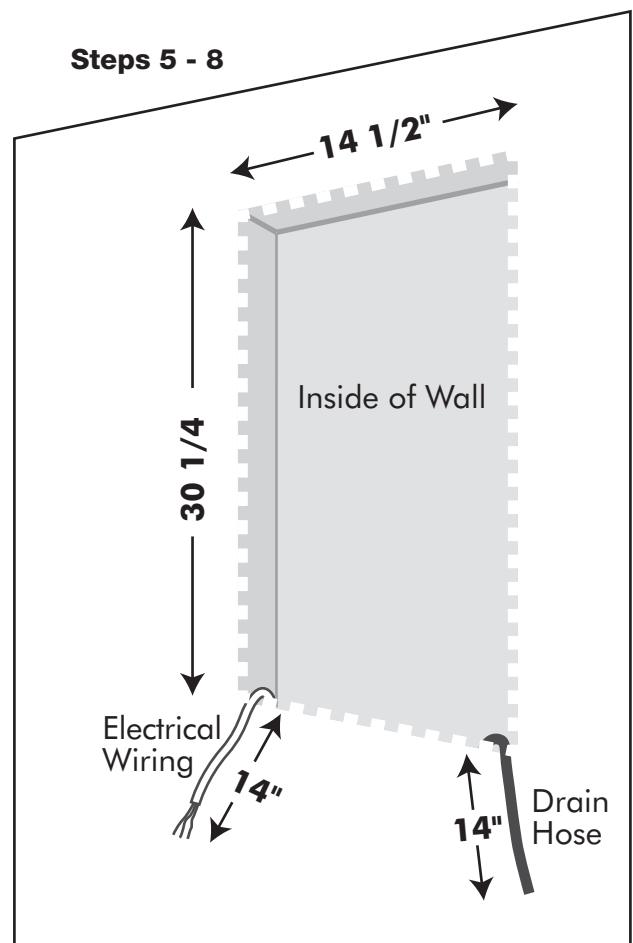
**Step 5.** After installation location has been determined, use a stud finder, locate and mark stud walls.

**Step 6.** Using measuring tape and pencil, measure 14 1/2" across and 30 1/4" down and draw a line.

**Step 7.** Using a square or ruler, score the lines and cut with drywall saw.

Depending on installation, both walls may need to be cut through.

## Steps 5 - 8



## ⚠ WARNING!

**SHUT OFF BREAKER / POWER BEFORE BEGINNING INSTALLATION.**

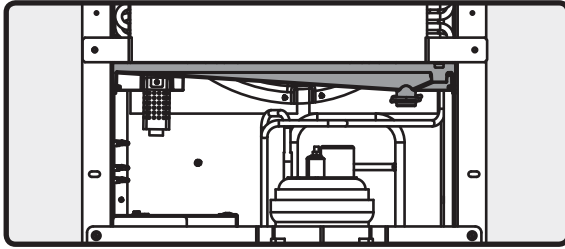
**Step 8.** Route the electrical wire from the circuit breaker or disconnect switch through the wall cavity and extend out of the opening by 14" to 20".

Use the 10' drain hose provided or the appropriate length of hose to come through the wall cavity or back of the unit and extend out of the opening by 14" inches.

If cutting through both walls, electrical wiring and drain hose may be routed differently. Use appropriate routing for your installation.

# DEHUMIDIFIER INSTALLATION

It is recommended to have two people to lift the unit. Place one hand under the drain pan to support the unit during this step.



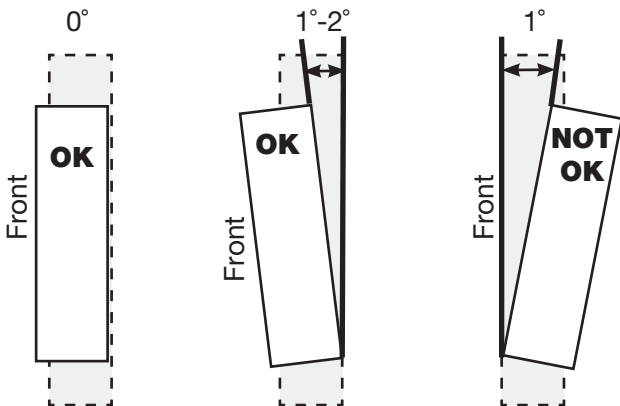
**Step 9.** Lift the unit and place it near the wall opening to route electrical wires through appropriate knock out and drain hose through hole.

If access cover was not removed, insert grommet into knock out hole and snap into place before routing drain hose through.

**Step 10.** Once electrical and drain hose are routed through the unit, set the unit into the wall.

**CAUTION! The unit is not secured yet.**

Before securing the unit into place, make sure it is level. Level or slightly forward is acceptable, but never backwards.



**Step 11.** Insert the dehumidifier into the center of the opening, allowing for a minimum of 1/8" clearance from framing on both sides. Additional insulation or sound dampening material (not provided) may be required if the dehumidifier cabinet contacts the studs, especially in applications involving metal studs.

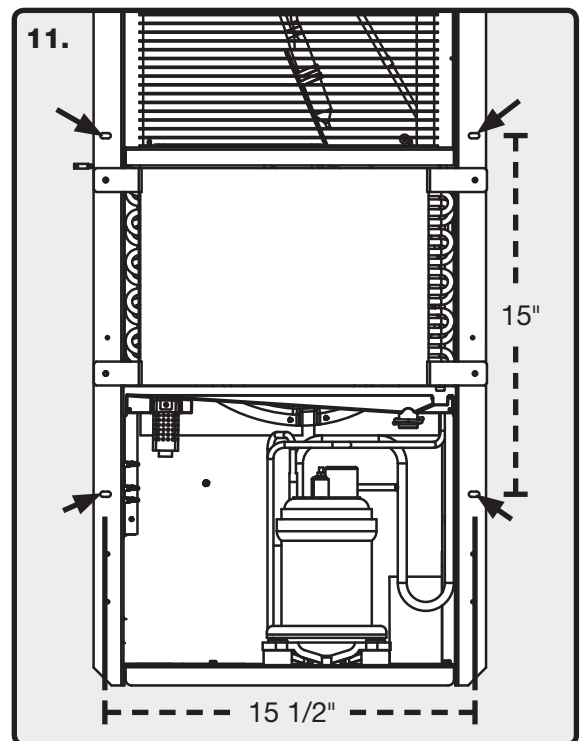
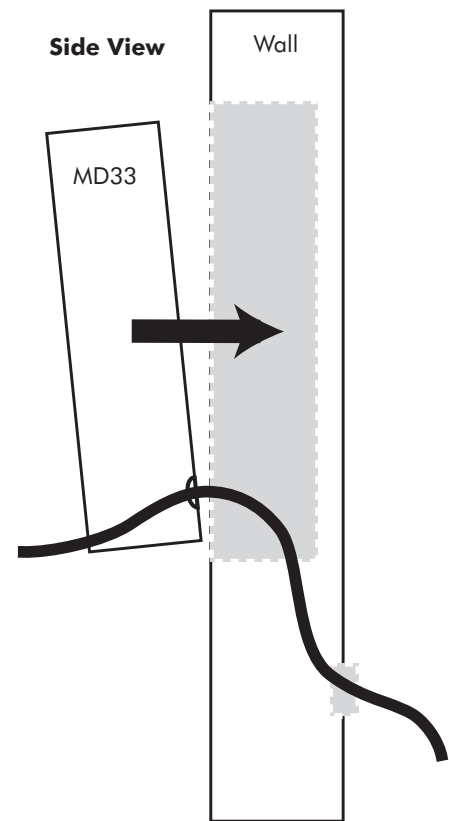
Fasten the unit to the framing by inserting four of the #10 fasteners into the slotted holes.

Top and bottom blocking is not necessary for securing the dehumidifier. Any existing blocking, headers or framing should not intrude into the rough opening and be a minimum of 1/2" away from the cabinet.

The cabinet is designed to create 1/2" clearance to the back wall when installed inside a standard 2x6 stud space with 1/2" minimum drywall sheathing.

For alternate installations, maintain 1/2" clearance to back of wall of dehumidifier cabinet.

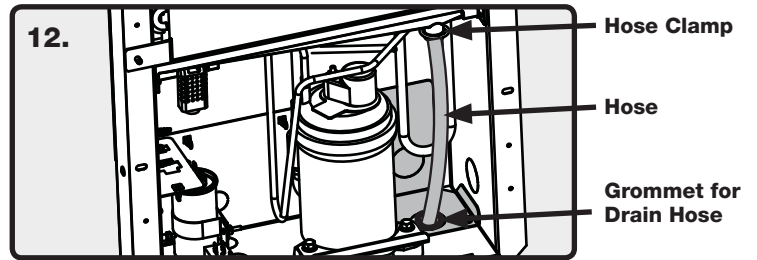
## Steps 9 - 10



# DEHUMIDIFIER INSTALLATION

**Step 12.** If the drain access cover was removed, reinstall it by routing the drain hose through the appropriate knock out and reattach the screw. Route the grommet over the drain hose and snap into place at the knock out.

Use 1/4" hex nut screwdriver to apply hose clamp to the drain hose and secure onto the drain port hose barb.

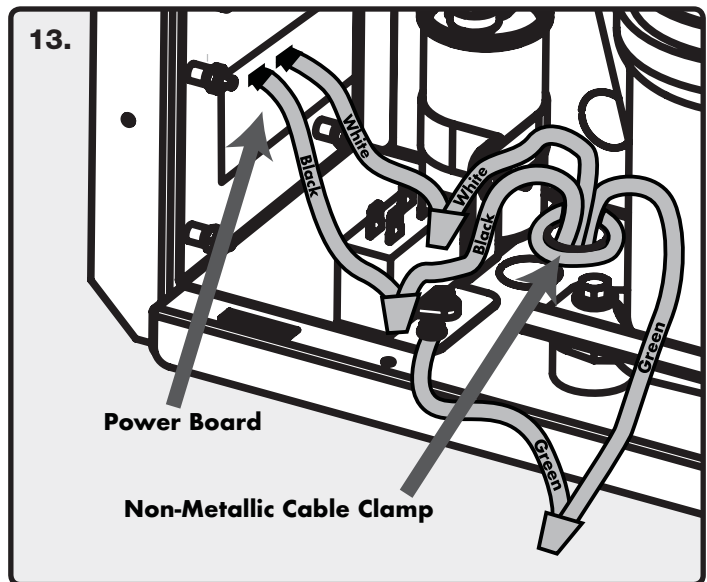


**Step 13.** Complete electrical connections:

- white to white
- green to green
- black to black

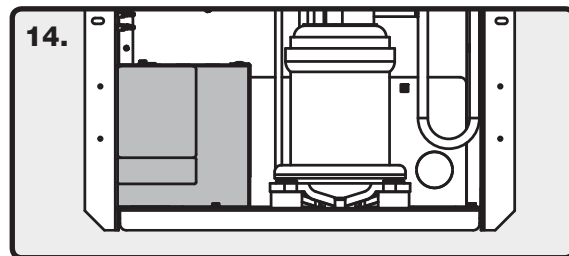
Screw wire nuts back onto each electrical connection.

Then tighten clamp screws on non-metallic cable clamp.



**Step 14.** Tuck the electrical wires in and reinstall electrical cover with its two screws using 1/4" hex nut screwdriver. Be sure none of the electrical wires are pinched.

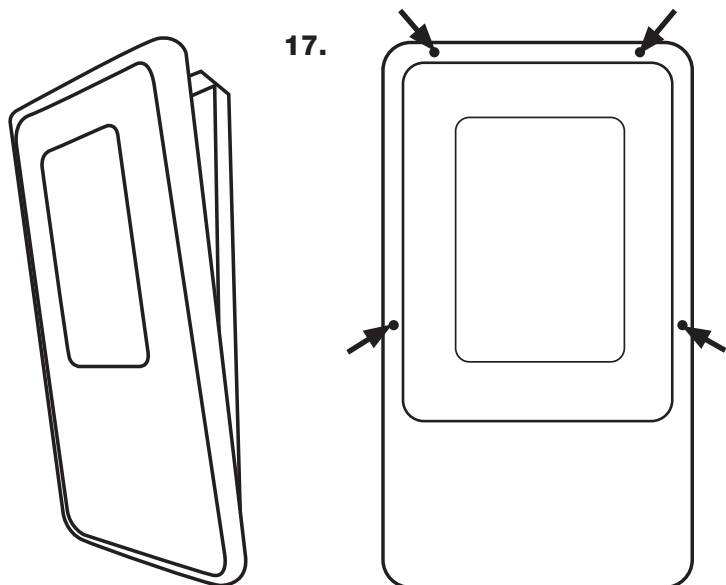
Make sure drain hose is routed to the appropriate location before turning on the unit.



**Step 15.** Turn breaker / power back on.

**Step 16.** Set the digital controller to desired RH. (See Controls Section on page 13).

**Step 17.** Install diffuser cover by aligning the lower tabs first, then setting the cover back against the wall. Insert the four tamper resistant screws to secure the diffuser cover.



# MAINTENANCE

## ⚠ WARNING!

**BE SURE THE UNIT IS POWERED OFF AND UNPLUGGED OR CIRCUIT BREAKER IS TURNED OFF BEFORE REMOVING THE FRONT COVER TO SERVICE THE UNIT**

## ⚠ AVERTISSEMENT!

**ASSUREZ-VOUS QUE L'UNITÉ EST FERMÉE OU DÉBRANCHÉE OU QUE LE CIRCUIT D'ALIMENTATION EST FERMÉ AVANT DE RETIRER LE PANNEAU AVANT POUR ENTREtenir L'UNITÉ.**

### Filter Maintenance

The Ultra-Aire MD33 comes with a washable filter. Check filter every two months. Clean or replace the filter as necessary.

#### Removing the Filter:

Remove the screws on the front cover and then push the front cover up gently to free the cover hooks from the chassis. Filter is located on the back side of the front cover. Gently remove the filter by lifting the bottom side corners first to prevent bending it.

#### Filter Cleaning:

The filter can be vacuumed with a wet / dry vac or washed with warm water.

#### Reinstalling the Filter:

Insert the filter into the tabs on top of mount and flex the filter to insert it into the bottom tabs. Reinstall the cover by lining up the tabs, sliding down into place, and secure with tamper proof screws.

### Diffuser Maintenance

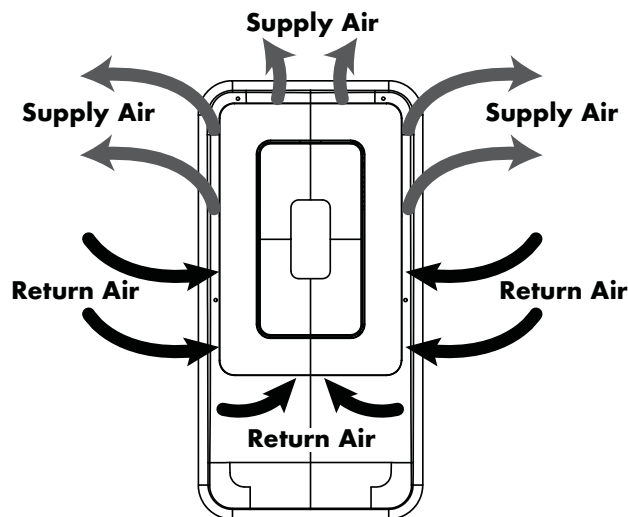
It is recommended to use a mild detergent to clean the surface of the diffuser, especially around the edges where the return air is flowing into the unit (see illustration below). This is where air is being drawn into the filter and may collect dust. Do not use harsh solvents on the diffuser.

The diffuser can be painted to blend in with interior aesthetics. Use only paint that is recommended for polycarbonate surfaces and follow the manufacturer's recommendations for surface prep and application.

## AIR FLOW

The Ultra-Aire MD33 functions by drawing moist air in through the bottom portion of the diffuser and returning dried air to the space out the top portion of the diffuser.

**Note:** Avoid blocking the return and supply air flow to maximize unit performance and prevent heat build up. Furniture must be at least 6" away from the diffuser.



# CONTROLS

The Ultra-Aire MD33 has an illuminated display, user selectable setpoint, and a power ON / OFF button located behind the diffuser. The diffuser is fastened with tamper resistant screws to limit access to the control.

When turning power on for the first time, the set point will be at the factory setting of 55% RH. In the event of a power outage, the dehumidifier restarts at the previous set point when power is restored.

Pressing the middle button (the power button), the control will toggle the Ultra-Aire MD33 to turn ON or OFF.

If the unit is on and power button is pressed, control will turn compressor and fan off. As a result, both DISPLAY and LED will go off.

If the unit is off and power button is pressed, control will turn fan on. As a result, both DISPLAY and LED will go on.

If there is an error, the unit will shut down and indicator LED will turn to red and display will show an error code (see page 14 for error codes).

## Sequence of Operation

1. Press the ON / OFF button to turn the dehumidifier control on. The display will show "00" for a couple of seconds and then it will display the RH level of the room and the dehumidifier blower will turn on to start sampling the air for one minute.

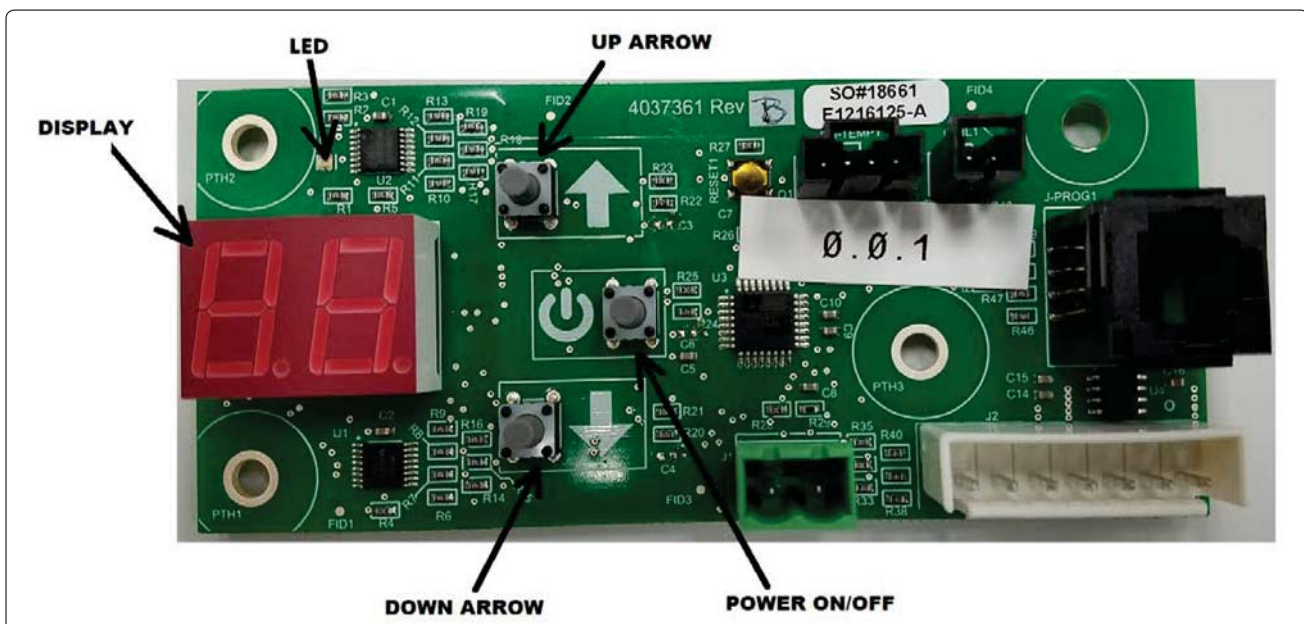
Indicator LED, located above display, will be green, showing the unit is operating normally.

2. Pressing either of the arrow keys will cause the DISPLAY to flash and indicate the current set point. The RH set point can be adjusted from a minimum of 35% to a maximum of 99% in 1% increments. Adjust the humidity set point as desired. The recommended initial setting is 55%.

Pressing the DOWN arrow key below the 35% set point on the control will cause the display to read "00" and the Ultra-Aire MD33 will run continuously. After 10 seconds, it will go back to display room RH level.

Ten seconds after making an adjustment, from either UP or DOWN arrow keys, the display will go back to show the room RH level.

3. If the sensor detects a reading above the set point, it will run the fan to sample the return air for a period of one minute. The sampled humidity of the return air will be compared to the RH setting. If the humidity is above the setting, the dehumidifier compressor turns on. The compressor remains on until the measured humidity falls 3% below the RH setting. If the sampled humidity is below the setting, the compressor and blower turn off and the display returns to showing the RH setting. The dehumidifier will sample again every 15 minutes.





# CONTROLS

## Diagnostic, Maintenance and Servicing

### Error codes:

- “1” = Prompting a bad RH sensor.
- “2” = Condensate pump or external float switch is installed in the drain line and is detecting a closed switch.
- “3” = The delta temperature between ambient and evaporator coil not wide enough to reflect a normal operating condition. Unit will turn off and try to restart after an hour.

## Evaporator Temperature Mode

To enter evaporator temperature mode, press and hold both arrow buttons for >5 seconds and the LED will change to Blue.

The display will flash at twice the rate of “set point” mode, and display the evaporator coil temperature.

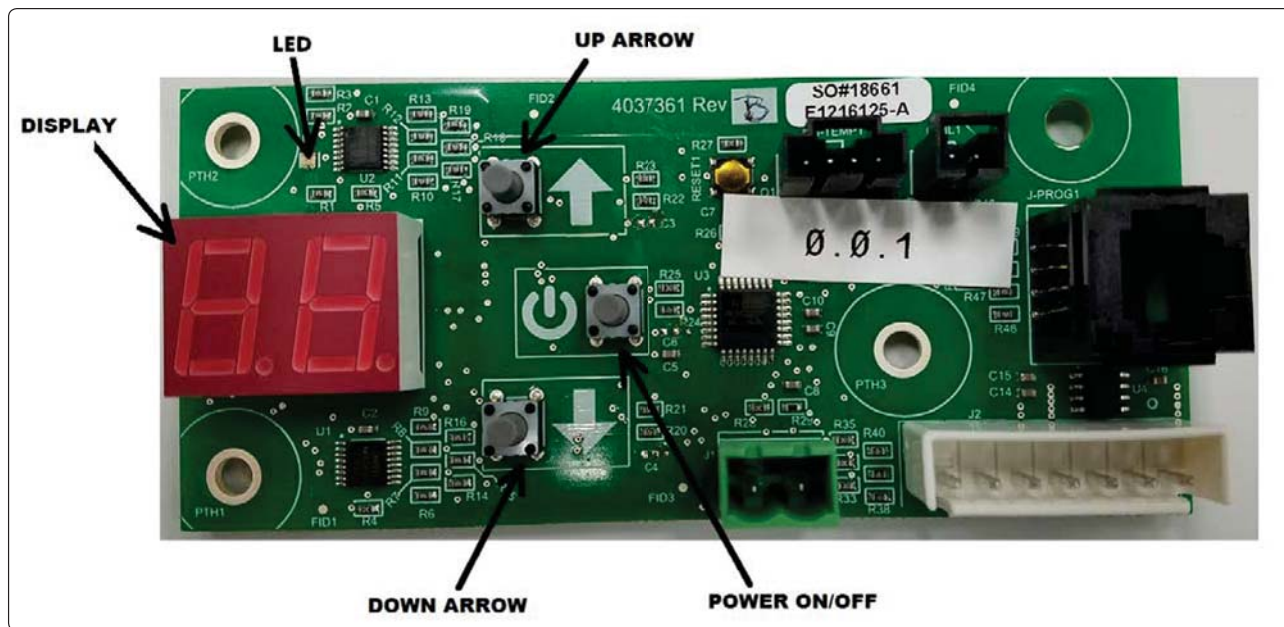
Press any button to exit evaporator temperature mode.

## Ambient Temperature Mode

To enter ambient temperature mode, press and hold the up arrow and power buttons for >5 seconds and the LED will change to Purple.

The display will flash at twice the rate of “set point” mode and display the ambient temperature.

Press any button to exit ambient temperature mode.



# SERVICE

## Service Parts List

Item	Part No.	Description
1	4036923	Power Board
2	4038072	Control Board
3	4035235-08	Compressor Capacitor
4	4035235-01	Blower Capacitor
5	4037585	Blower
6	4038144	Diffuser with Filter and Sound Dampening Insulation
7	4036848	Temperature /RH Sensor
8	4038001	3/4" Crush Resistant Hose (20')
9	4037996	Hose Clamp
10	4037916	Tamper Resistant Screws
11	4037714	Filter
12	4038145	Defrost Probe Kit

## Troubleshooting

### ⚠ CAUTION!

TROUBLESHOOTING SHOULD BE PERFORMED BY A QUALIFIED HVAC TECHNICIAN.

### ⚠ MISE EN GARDE!

LES TRAVAUX DE DÉPANNAGE NE DEVRAIENT ÊTRE EFFECTUÉS QUE PAR UN TECHNICIEN CVCA QUALIFIÉ.

### ⚠ WARNING!

**ELECTRICAL SHOCK HAZARD: ELECTRICAL POWER MUST BE PRESENT TO PERFORM SOME TESTS. THESE TESTS SHOULD BE PERFORMED BY A QUALIFIED SERVICE PERSON.**

### ⚠ AVERTISSEMENT!

**RISQUE DE DÉCHARGE ÉLECTRIQUE : UNE ALIMENTATION ÉLECTRIQUE DOIT ÊTRE UTILISÉE POUR EFFECTUER CERTAINES VÉRIFICATIONS. CES VÉRIFICATIONS DOIVENT ÊTRE EFFECTUÉES PAR UN PERSONNEL D'ENTRETIEN QUALIFIÉ.**

### ⚠ WARNING!

**120 VOLTS MAY CAUSE SERIOUS INJURY FROM ELECTRIC SHOCK. TURN OFF CIRCUIT BREAKER BEFORE STARTING INSTALLATION OR SERVICING, AND LEAVE CIRCUIT BREAKER OFF UNTIL INSTALLATION OR SERVICE IS COMPLETED.**

### ⚠ AVERTISSEMENT!

**UNE DÉCHARGE ÉLECTRIQUE DE 120 VOLTS PEUT CAUSER DES BLESSURES SÉRIEUSES. FERMEZ LE DISJONCTEUR AVANT DE COMMENCER L'INSTALLATION OU L'ENTRETIEN ET LAISSEZ LE DISJONCTEUR EN POSITION FERMÉE JUSQU'À CE QUE L'INSTALLATION OU L'ENTRETIEN SOIT COMPLÉTÉ(E).**

# SERVICE

## Troubleshooting

Symptom	Possible Reason	Troubleshooting Procedure
Neither blower nor compressor is running and display is off.	<ol style="list-style-type: none"> <li>1. No power to unit, circuit breaker tripped</li> <li>2. Power board wiring or connector loose</li> <li>3. Control board wiring or connector loose</li> <li>4. Circuit board failure</li> </ol>	<ul style="list-style-type: none"> <li>• Locate circuit breaker and reset if necessary.</li> <li>• Check all circuit board connections for loose plugs or wires.</li> <li>• Replace control board and power board.</li> </ul>
Neither blower nor compressor is running and display is on.	<ol style="list-style-type: none"> <li>1. No call for dehumidification</li> <li>2. Wiring or connectors loose</li> </ol>	<ul style="list-style-type: none"> <li>• Press down arrow until setpoint reads "00", wait 1 minute, fan and compressor should run.</li> <li>• Check wiring and connectors for damage or loose connections.</li> </ul>
Blower is running and compressor is cycling on and off while ambient humidity is high.	<ol style="list-style-type: none"> <li>1. Unit is defrosting</li> <li>2. Ambient temperature is too low</li> <li>3. Defrost sensor malfunction</li> <li>4. Poor airflow</li> <li>5. Failing compressor relay</li> <li>6. Compressor or sealed system failure</li> </ol>	<ul style="list-style-type: none"> <li>• Check setpoint, if setting is "00" increase setpoint to 55%.</li> <li>• Cold ambient conditions will cause unit to go in and out of defrost (this is normal).</li> <li>• Press and hold both arrow buttons for &gt;5 seconds to display the defrost sensor temperature, replace sensor if reading is in error.</li> <li>• Verify airflow over the coils is not blocked or restricted, clean filter and/or coils as required</li> <li>• Replace power board.</li> <li>• Note that sealed system is not generally field serviceable.</li> </ul>
Blower is not spinning humidity is high and compressor is running.	<ol style="list-style-type: none"> <li>1. Wiring or connectors loose</li> <li>2. Blower relay failure</li> <li>3. Blower capacitor failure</li> <li>4. Blower failure</li> </ol>	<ul style="list-style-type: none"> <li>• Check wiring and connectors for damage or loose connections.</li> <li>• Check power to blower circuit, replace power board if no power is detected.</li> <li>• Replace blower capacitor if failed.</li> <li>• Replace blower (note requires unit be removed from installation).</li> </ul>
Blower is running and compressor is off while ambient humidity is high (evaporator coil is warm).	<ol style="list-style-type: none"> <li>1. Wiring or connectors loose</li> <li>2. Compressor relay failure</li> <li>3. Compressor capacitor failure</li> <li>4. Compressor failure</li> </ol>	<ul style="list-style-type: none"> <li>• Check wiring and connectors for damage or loose connections.</li> <li>• Check power to compressor circuit, replace power board if no power is detected.</li> <li>• Replace compressor capacitor if failed.</li> <li>• Note that sealed system is not generally field serviceable.</li> </ul>
Poor dehumidification performance and evaporator coil is covered in ice or frost.	<ol style="list-style-type: none"> <li>1. Defrost sensor or connection is defective</li> <li>2. Poor airflow</li> <li>3. Low refrigerant charge</li> </ol>	<ul style="list-style-type: none"> <li>• Check circuit board connection for loose plug or wires.</li> <li>• Press and hold both arrow buttons for &gt;5 seconds to display the defrost sensor temperature, replace sensor if reading is an error. See diagnostic - Error code "1"</li> <li>• Verify airflow over the coils is not blocked or restricted, clean filter and/or coils as required.</li> <li>• Note that sealed system is not generally field serviceable</li> <li>• See diagnostic - Error code "3"</li> </ul>
Poor dehumidification performance, compressor is running and evaporator coil is not cooling.	<ol style="list-style-type: none"> <li>1. Failed compressor or low refrigerant charge</li> </ol>	<ul style="list-style-type: none"> <li>• See diagnostic - Error code "3"</li> <li>• Note that sealed system is not generally field serviceable.</li> </ul>



# WARRANTY

**Limited Warranty.** Therma-Stor, LLC (“Therma-Stor”) warrants as follows: (i) the Ultra-Aire MD33 dehumidifier (“Product”) will be free of material defects in workmanship or materials for a period of one (1) year (“One-Year Warranty”) following the date of initial purchase of such Product by an original customer purchasing from Therma-Stor or an authorized reseller (“Customer”); and (ii) the Product’s components will be free of material defects in workmanship or materials for a period of **four (4) years** following the date of initial purchase of such Product by a Customer.

**Limitation of Remedies.** CUSTOMER’S SOLE AND EXCLUSIVE REMEDY UNDER THE ABOVE LIMITED WARRANTY AND THERMA-STOR’S ENTIRE LIABILITY THEREUNDER, SHALL BE, AT THE SOLE OPTION OF THERMA-STOR, REPLACEMENT OR REPAIR OF SUCH PRODUCT OR ITS COMPONENTS (“COMPONENTS”) BY THERMA-STOR OR THERMA-STOR’S AGENTS ONLY. REFRIGERANT, PIPING, SUPPLIES, TRANSPORTATION COSTS, LABOR COSTS INCURRED IN REPAIR OR REPLACEMENT OF SUCH COMPONENTS ARE NOT INCLUDED. THIS DISCLAIMER AND EXCLUSION SHALL APPLY EVEN IF THE EXPRESS WARRANTY AND LIMITED REMEDY SET FORTH HEREIN FAILS OF ITS ESSENTIAL PURPOSE. CUSTOMER ACKNOWLEDGES THAT NO REPRESENTATIVE OF THERMA-STOR OR OF ITS AFFILIATES OR RESELLERS IS AUTHORIZED TO MAKE ANY REPRESENTATION OR WARRANTY ON BEHALF OF THERMA-STOR OR ANY OF ITS AFFILIATES OR RESELLERS THAT IS NOT IN THIS AGREEMENT. Notwithstanding the above, during the term of the One-Year Warranty only, Therma-Stor will provide, free of charge to Customer, all Components and labor (except costs related to removal and installation of Product) required to fulfill its obligations under such One-Year Warranty.

**Disclaimer of Warranties.** EXCEPT FOR ABOVE LIMITED WARRANTY, WHICH IS THE SOLE AND EXCLUSIVE WARRANTY PROVIDED WITH RESPECT TO THE PRODUCT AND ITS COMPONENTS, THERMA-STOR HEREBY DISCLAIMS ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Warranty Limitations.** The foregoing limited warranty extends only to a Customer and shall be null and void upon attempted assignment or transfer. A “defect” under the terms of the limited warranty shall not include problems resulting from Customer’s or Customer’s employees’, agents’, invitees’ or a third party’s misuse, improper installation, improper design of any system in which the Product is included, abuse, lack of normal care, failure to follow written instructions, tampering, improper repair, or freezing, corrosion, acts of nature or other causes not arising out of defects in Therma-Stor’s workmanship or material. If a Product or Component is replaced while under warranty, the applicable limited warranty period shall not be extended beyond the original warranty time period. The limited warranty does not cover any costs related to changes to a Product or Component that may be required by any codes, laws, or regulations that may become effective after initial purchase of the Product by Customer.

**Customer Responsibilities.** As a further condition to obtaining warranty coverage hereunder, the Customer must send a valid warranty claim to Therma-Stor such that Therma-Stor receives such claim prior to the end of the applicable warranty period. Therma-Stor shall have no obligation hereunder with respect to any claim received by Therma-Stor after the expiration of the applicable warranty period. As a further condition to obtaining warranty coverage hereunder, the Customer must present forms of invoices evidencing proof of purchase of a Product. If such invoices do not clearly indicate the date of initial purchase by a Customer, the applicable Product’s date of manufacture will be used instead of the date of initial purchase for the purpose of calculating the commencement of the applicable warranty period. Warranty service must be performed by Therma-Stor or a servicer authorized by Therma-Stor. In order to obtain warranty service, the Customer should call Therma-Stor at 1-800-533-7533 and ask for the Therma-Stor Products Service Department, which will then arrange for applicable warranty service. Warranty service will be performed during customary, daytime working hours. If the Product must be shipped for service, Customer shall be solely responsible for properly packaging the Product, for all freight charges, and for all risk of loss associated with shipment.

**Limitation of Liability.** IN NO EVENT SHALL THERMA-STOR, IN CONNECTION WITH THE DESIGN, SALE, INSTALLATION, USE, REPAIR, REPLACEMENT OR PERFORMANCE OF ANY PRODUCT, COMPONENT, PART THEREOF OR WRITTEN MATERIAL PROVIDED THEREWITH, BE LIABLE, TO THE EXTENT ALLOWED UNDER APPLICABLE LAW, UNDER ANY LEGAL THEORY FOR ANY SPECIAL, DIRECT, INDIRECT, COLLATERAL OR CONSEQUENTIAL DAMAGES OF ANY KIND. NOTWITHSTANDING THE ABOVE LIMITATIONS AND WARRANTIES, THE SOLE AND EXCLUSIVE LIABILITY OF THERMA-STOR, REGARDLESS OF THE NATURE OR THEORY OF THE CLAIM, SHALL UNDER NO CIRCUMSTANCES EXCEED THE PURCHASE PRICE OF THE PRODUCT, COMPONENT OR PART UPON WHICH THE CLAIM IS PREMISED.

**Applicable Law and Venue.** ANY ARBITRATION, ENFORCEMENT OF AN ARBITRATION OR LITIGATION RELATED TO THE PRODUCT WILL BE BROUGHT EXCLUSIVELY IN DANE COUNTY, WISCONSIN, AND CUSTOMER CONSENTS TO THE JURISDICTION OF THE FEDERAL AND STATE COURTS LOCATED THEREIN, SUBMITS TO THE JURISDICTION THEREOF AND WAIVES THE RIGHT TO CHANGE VENUE. CUSTOMER FURTHER CONSENTS TO THE EXERCISE OF PERSONAL JURISDICTION BY ANY SUCH COURT WITH RESPECT TO ANY SUCH PROCEEDING.

**Miscellaneous.** If any term or condition of this Limited Warranty is found by a court of competent jurisdiction to be invalid, illegal or otherwise unenforceable, the same shall not affect the other terms or conditions hereof or thereof or the whole of this Limited Warranty. Any delay or failure by Therma-Stor to exercise any right or remedy will not constitute a waiver of Therma-Stor to thereafter enforce such rights.





