



# Installation & Owner's Manual

## English

This Manual Covers the Following Models

HCS-APT-HDEX  
HCS-APTHC-HDEX

**Manufactured by:**  
ClairiTech Innovations Inc.  
1095 Ohio Rd.  
Boudreau-Ouest, NB  
Canada E4P 6N4

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## Service and Warranty

### For Customer Assistance

To aid in answering questions if you call for service or warranty purposes, please record below the model and serial number located on the side of the unit.

Product Name:
Model #:
Date of Manufacturing:
Date of Purchase:
Serial #:
Dealer Name (If Any):

**Please Note** the above information before contacting us.

**For the Following Inquiries:**

- Service
- Parts
- Accessories
- Additional Customer Information

**Please contact us by:**

Phone: 1-888-533-1348

Email: [support@clairitech.com](mailto:support@clairitech.com)

Website: [www.humidex.com](http://www.humidex.com)

### **IMPORTANT**

To properly validate your warranty, you must fill out and return the warranty card as soon as possible. If your unit is not registered, a proof of purchase will be necessary should it require any services. You can also register your warranty online at <http://www.clairitech.com/register> .

### Consumer Limited Warranty

ClairiTech Innovations Inc. warrants to the first consumer that this product, when shipped in its original container, will be free from defective workmanship and materials, and agrees that it will, at its discretion, either repair the defect or replace the defective Product or part thereof with a new or remanufactured equivalent at no charge to the purchaser for the period(s) set forth below. The defective part must be returned to the manufacturer ClairiTech Innovations Inc. All transportation charges are the sole responsibility of the purchaser.

This warranty does not apply to any appearance items of the product nor to the additional excluded item(s) set forth below of which have been damaged, defaced, subjected to improper voltage, abnormal service or handling, or which has been altered or modified in design or construction.

In order to enforce the rights under this limited warranty, the purchaser must fill out and return the warranty card as soon as possible. If your unit is not registered, a proof of purchase will be necessary should it require any services.

Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described herein, or to extend the duration of any warranties beyond the time period described herein on behalf of ClairiTech Innovations Inc.

The warranties described herein shall be the sole and exclusive warranties granted by ClairiTech and shall be the sole and exclusive remedy available to the purchaser. Correction of defects, in the manner and for the period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of ClairiTech to the purchaser with respect to the Product, and shall constitute full satisfaction of all claims, whether based on contract, negligence, and strict liability or otherwise. In no event shall ClairiTech be liable, or in any way responsible, for any damages or defects in the Product which were caused by repairs or attempted repairs performed by anyone other than an authorized servicer, unless approved by ClairiTech in writing. Nor shall ClairiTech be liable or in any way responsible for any incidental or consequential economic or property damage.

Warranty Period for this product:	Five (5) years on all electrical components (excluding the control) Two (2) years on the control.
Additional Items Excluded from Warranty Coverage (If Any):	Appearance items of the product, Exterior vent and any printed material.
Where to obtain service:	From the Manufacturer. <b>(Refer to Page 2)</b>

**This warranty is non-transferable and applies to residential use only.**

To obtain supply, accessory or product information, contact us.  
**Refer to Page 2 for Contact Information.**

## Pre-Installation

### Included Components

Before installing your Humidex, make sure that you have the right model and accessories. The following items should be included in the accessory box. If parts are missing, contact our customer service at US 1-888-533-1348, Can. 1-800-416-9111.

1x Owner's Manual	2x Cable Ties
1x Warranty Card	1x Aluminum Tape
1x Vinyl Flex 6" x 24"	4x Plastic Anchors
1x Exhaust Vent 6"	8x #8 x 2" Screws
1x Checklist	6x #8 x 9/16" Screws

### Tools Required for Installation

- Electric reciprocal or hole saw 6<sup>1</sup>/<sub>4</sub>"
- Drill with a 1/4" concrete bit
- Phillips or Robinson Screw Driver
- Measuring Tape
- Hammer
- Pencil

For concrete, cinderblock or brick installation, use a hammer drill with chiseling ability 1/2" x 16" long and a chisel bit 1" thick.

### Key Installation Facts

- 1) Unit must be installed at floor level on outside wall.
- 2) Unit should be installed as far away as possible from the source of replenishment air. (Hallways, doors, etc...)
- 3) Outside duct must be no less than 6" and dedicated for the HCS-APT or HCS-APTHC Unit only.
- 4) Location must allow for maximum circulation to draw in air from all parts of the home.
- 5) Unit should not be installed within 4 feet of combustion appliance, Central Air Leads or AC Units.

### IMPORTANT – What Not to Do

- 1) DO NOT install the unit within 4 feet of a heat source (Radiator, heater, etc.)
- 2) DO NOT install the unit more than approx. 3 inches off the floor.
- 3) DO NOT crush the vinyl Pipe.
- 4) DO NOT install the unit next to a replenishment air supply.

## Humidex

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### **Warning!!!**

### Combustion Appliance Present in Dwelling Read this Section Carefully

With the presence of appliances evacuating air outside the building envelope (such as range hood, bathroom fan, dryer, Humidex, etc.) a negative pressure could be created inside the building. As the pressure inside the building gets lower than the barometric pressure outside, the smoke and gases from any combustion appliance (oil furnace, gas/wood stove, fireplace, etc.) **may be drawn into the building rather than go out the chimney.**

This problem is usually curable by introducing make-up air inside the building. A fresh air kit (Air Supply Ventilator) is available from your Humidex dealer, to help relieve the effects of negative air pressure in the building.

## Installation

### WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSONS, OBERSEVE THE FOLLOWING:

- Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- Ducted fans must always be vented to the outdoors.
- For exhaust fans, the discharge air is to be directed to the building exterior.

### Ideal installation location

To determine the best location, examine the dwelling for an outside wall where you could install the HCS-APT or HCS-APTHC. This location should be as far as possible from sources of replenishment air such as windows, hallways and doors. Try to find a location where no electrical wires or pipes are present inside the wall. The unit has to be installed on an outside wall.

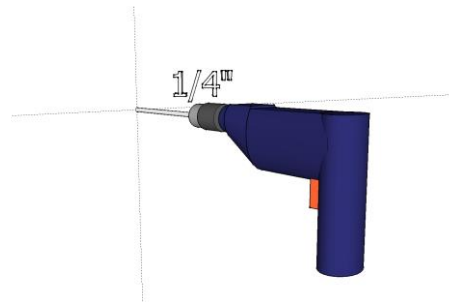
### Selecting the Duct Location

Now that you've decided where to install the unit, you must select a location for a 6¼" duct hole in the outside wall. This hole is needed to pass a duct through the outside wall. Make sure that the hole doesn't line up with a stud, electrical wires, or pipe.

### Preparing the Location for Installation

Now that an installation location has been chosen a hole must be made for the vent. Start by measuring the required Unit height and mark the location of the hole. Remember that the units cannot be higher than 3" to 6" off the ground.

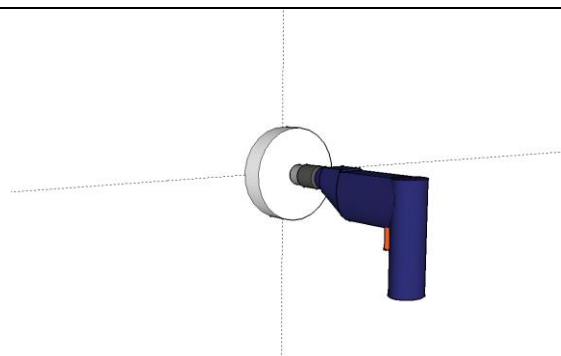
From the inside, drill a pilot hole of approximately 1/4" wide at the center of the proposed 6 1/4" hole.



Outside the building, find the pilot hole.



Now using a hole-saw, with the pilot hole as a guide, drill a 6 1/4" hole.



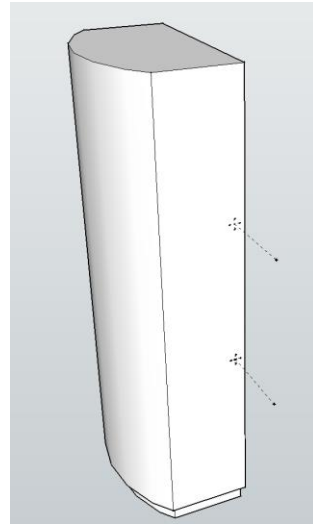
**Brick or Concrete Wall:** There are two ways of going through brick or concrete. The first method consists of using a hammer drill. Make holes (approximately 5/8") with the hammer drill 1" apart through the brick in a circular shape outlining the 6 1/4" hole. Finish cutting the outer edge of the hole using a chisel. If a hammer drill is not available, a chisel can be used. As brick is brittle chiseling from the center of the pilot hole will chip the brick easily. Continue chiseling until you reach the outer edge of the 6 1/4" hole.



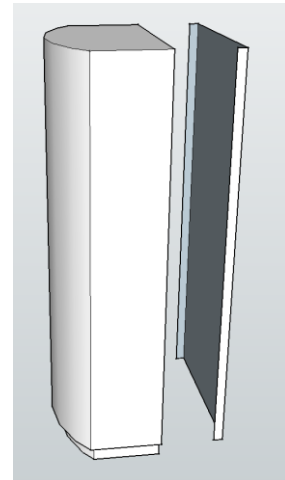
## Humidex

### Mounting and installing the unit

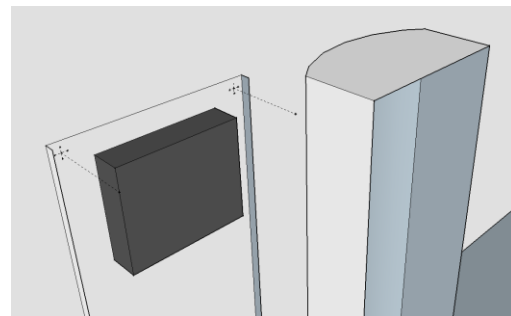
Remove the 4 White Screws on the Side of the Unit. (These are along the back edge of the unit and are holding the Back Piece)



Separate the Front Aluminum Piece from the back Galvanized piece.



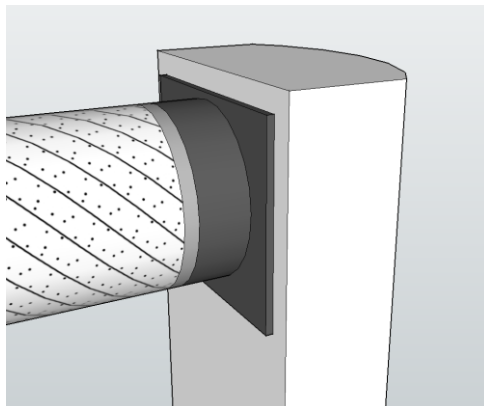
Place the Unit at its chosen location. Now scribe the four holes on the wall where the rubber grommets are installed. Remove the machine and drill four 1/4" holes where previously scribed. Apply anchors in the holes using a hammer.



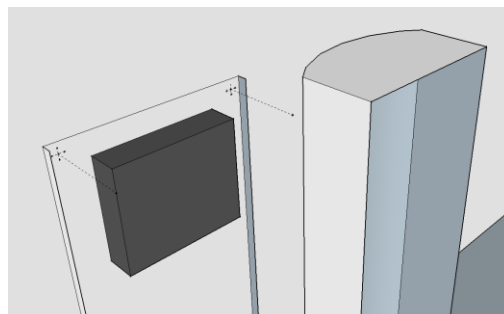
## Humidex

With the help of a tie wrap attach the flex pipe to the collar on the back of the unit before attaching the unit to the wall. Insert the other end of the flex pipe inside the hole in the wall. (a few Small 9/16" Screw can be used to affix the flex to the mount)

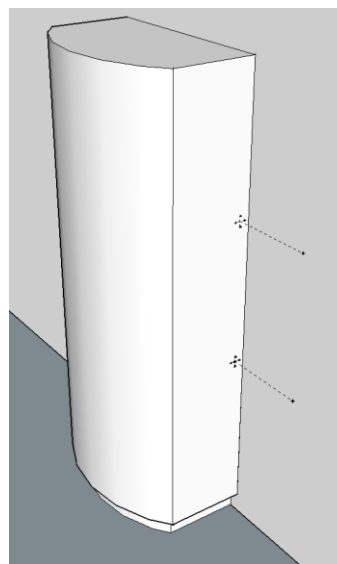
**NOTE:** For instructions on permanently connected model (APTHC), please see Page 10 for Wiring Instructions. Please note that this model requires a qualified person for installation.



Now fasten the unit to the wall using the 4 x 2" screws provided.



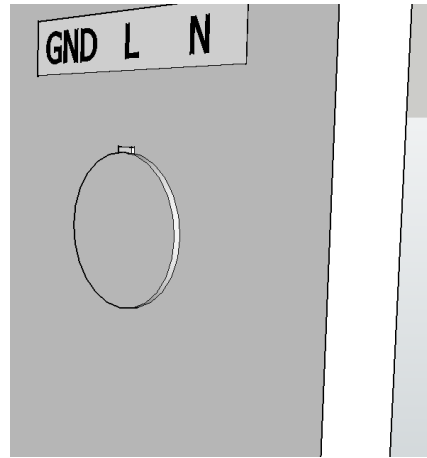
Replace the front of the unit using the 4 Screw Caps with the 4 original screws.



**Steps for the HCS-APTHC only**

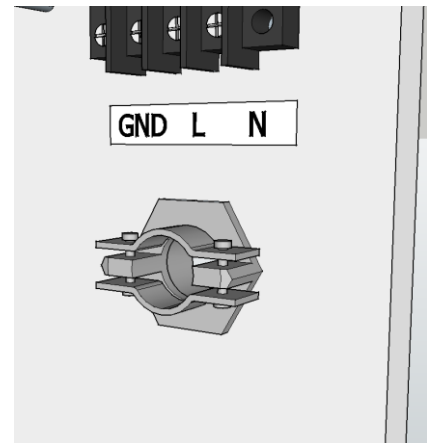
The APTHC comes with a removable cover plate that needs to be attached to the unit's back plate after the wiring has been completed.

Before the wiring can be completed, the EKO punch must be removed from the back plate

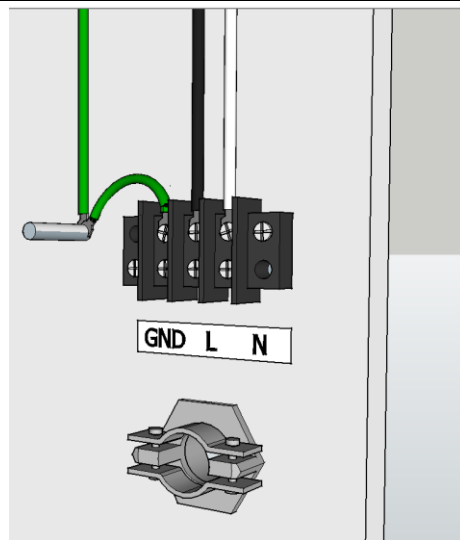


An electrical fitting needs to be installed. With the fitting installed the wire can be inserted inside the unit and connected.

**Note: Fitting not included**

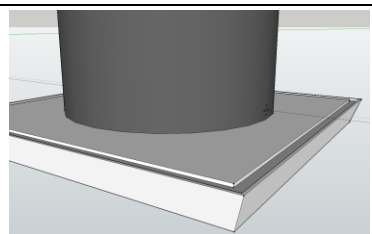


Once the wire has been run through the plate, you must connect the wire to the unit matching the colors of the inside wires. After the wiring has been completed, you can attach the small cover plate to the back plate and return to the original installation procedures.

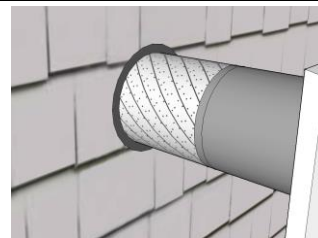


## Attaching the Flex and Outside Vent

From the outside, pull the flex pipe through the 6 1/4" hole. Attach the vent to the 6" flex with the 1/2 in screws provided.



Insert four 2 inch screws to secure the vent to the outside wall. Make sure the vent is not twisted by inserting the screws too tight and that the flaps are working properly.



**NOTE:** If high winds are often present in the location of the vent, they may cause a wind noise inside the house. If this is the case, an **anti-gust hood** (AGH-990) is available from your Humidex dealer.

Now that the system has been mounted the HCS can be plugged into any 115V outlet.

**Note:** A grounded extension cord with a maximum length of 10 feet may be used if necessary

## Unit Operations

### **The first time the unit runs...**

When the unit is first turned on, it will run at medium speed for 6 hours. During this initial 6-hour period, it is important to allow it to run uninterrupted, since the unit will take readings that will be important to determine the best operating speed that will, over time, get the most energy efficient ventilation for the entire home and maximum reduction of relative humidity.

The HCS-APT and HCS-APTHC do not require the user to input any settings, the default humidity setting will be set at 55% which will result in the best operation all year round. It truly is a set it and forget it system.

After power outages or whenever the unit is powered down (unplugged) and powered up again (plugged into the wall again), the unit reads the last recorded settings and will return to its regular operation mode.

**Note:** For the unit to function properly and to allow the unit to provide the best energy efficient ventilation and humidity control, all windows, doors with access to the outdoor and vents to the outdoor should be closed to prevent an excessive amount of outdoor air from entering directly into the house.

### **Maintaining your HCS**

The HCS Products do not require any internal maintenance. The only maintenance needed for your HCS is a periodic vacuuming of the dust accumulation at the intake grilles or louvers located at the bottom of the unit. For proper functionality do not store anything within a radius of 4 feet around the base of the Humidex.

### What is the dew point?

The dew point is one of the three environmental variables that are important when discussing the conditions in your home. Understanding the dew point will help you understand how the HCS unit operates and how it will help to reduce the relative humidity (RH%) level infiltrating your home and eliminate excess humidity, while providing energy efficient ventilation for your home. The dew point is defined as the temperature at which the water vapor contained in a given volume of air will condense into water. This is best illustrated by an example:

Assume the following measurements are taken by the unit:

Temperature = 68<sup>0</sup>F

Relative Humidity = 60%

Using the temperature and RH% values measured, we would calculate that the dew point in your home is 54<sup>0</sup>F. As the temperature of surfaces in your dwelling (these tend to reflect the floor temperature, which is generally cooler than the ceiling air temperature) approaches the value of the dew point, you risk having condensation on those colder surfaces (as well as un-insulated water pipes). This condensation can lead to problem situations that might produce unhealthy living conditions in your home (odors, molds, etc.)

### New Installations in the Summer

The late spring and early/mid-summertime temperature in most basements remains at approximately 59° to 66° F (15° to 19° C) whereas the air entering the basement from the upstairs of the house will generally be in the range of 75° to 85° F (24° to 29° C) with a relative humidity of 70 to 75%. This air will have a dew point (the temperature of surfaces on which it will condense, including basement surfaces) in the range of 64° to 76° F (18° to 24°).

When a Humidex is installed in these conditions, condensation may result, as the air from the upstairs comes in contact with cold surfaces (i.e. concrete walls, floors, etc). The Humidex ventilation effect will over time increase the basement temperature and help prevent this condition, however, during the initial operating season; a small amount of heat may have to be added temporarily to the basement to increase its temperature. If this condition occurs also reduce speed exhaust to medium.

If an air conditioner is present in the house, close all AC vents/leads/ducts to the basement.

### COLD SURFACE FACTS – IMPORTANT

It is recommended that any exposed cold water pipes and A/C ducts should be insulated to reduce condensation on these cold surfaces before a humidex is installed.

## Most Common Issues

### Mold, Mildew and Musty Smell

If mold or mildew is present prior to installing a Humidex, please have the contaminated area cleaned. Not doing so could cause the Humidex to spread that mold to other locations in the basement or crawlspace.

To avoid Mold, Mildew or Musty Smells:

- Follow the Recommendations on **Page 13** (Concerning New Installations in the summer).

To ensure the proper functionality of the Humidex:

- Verify that the replenishment air is flowing from the upstairs to the downstairs.
- Increase ventilation in remote areas with a portable fan.
- Any exposed pipes and ducts should be insulated.
- Cinder block basement walls should be sealed with plastic vapor barrier or sealant.
- Dirt floor in crawl space or basement should be covered with vapor barrier.
- Sump pump should be equipped with a cover.
- Rainwater from the roof should be directed away from the basement or foundation.
- Landscaping should slope away from foundations.
- Insulating basement will reduce the condensation and also reduce the energy cost during heating season.

Do not attempt to service the Humidex yourself. If you are not sure about certain functions, **please refer to Page 2.**

## Specifications

### Technical Data

Model	Amps (A)	Watts (W)	Airflow (CFM)	Capacity (Sq.Ft.)
HCS-APT-HDEX	0.30	34	130	2,000
HCS-APTHC-HDEX	0.30	34	130	2,000

All Units require a 115 VAC electrical outlet

### Dimensions

Model	Height (In.)	Width (In.)	Depth (In.)
HCS-APT-HDEX	23"	9.5"	5.5"
HCS-APTHC-HDEX	23"	9.5"	5.5"

\*A 24 Inch extension section is available if extra height is required

### Electrical Box Wiring for APTHC Models

