Installation & Owner’s Manual

English

This Manual Covers the Following Models

HCV-BS-WAVE
HCV-CS-WAVE

Manufactured by:
ClairiTech Innovations Inc.
1095 Ohio Rd.
Boudreau-Ouest, NB
Canada E4P 6N4
# Table of Contents

**Table of Contents** ...................................................................................................................... 1  

**Service and Warranty** .................................................................................................................. 3  
  - **FOR CUSTOMER ASSISTANCE** .................................................................................................. 3  
  - **CONSUMER LIMITED WARRANTY** .......................................................................................... 4  
  - **PRE-INSTALLATION** ................................................................................................................. 5  
  - **INCLUDED COMPONENTS** ....................................................................................................... 5  
  - **TOOLS REQUIRED FOR INSTALLATION** .................................................................................. 5  
  - **KEY INSTALLATION FACTS** ....................................................................................................... 5  
  - **IMPORTANT – WHAT NOT TO DO** ............................................................................................ 5  
  - **COMBUSTION APPLIANCE PRESENT IN DWELLING** ................................................................. 6  
  - **IDEAL LOCATION OF THE UNIT** .............................................................................................. 6  
  - **REPLENISHMENT AIR TO BASEMENT FROM UPSTAIRS** .................................................... 7  
  - **DUCTING** ................................................................................................................................... 7  

**Installation** .................................................................................................................................. 8  
  - **FACTORS TO CONSIDER** ......................................................................................................... 8  
  - **SELECTING THE DUCT LOCATION** ......................................................................................... 8  
  - **PREPARING THE WAVE UNIT FOR INSTALLATION** ............................................................... 9  
  - **PUTTING THE UNIT TOGETHER** ............................................................................................. 10  
    - **For HCV-BS Only** .................................................................................................................... 10  
  - **FASTEN THE UNIT TO THE WALL** ........................................................................................... 11  
  - **ATTACHING THE FLEX, PIPE AND OUTSIDE VENT** .......................................................... 12  

**Unit Operations** ....................................................................................................................... 13  
  - **THE FIRST TIME THE UNIT RUNS** ........................................................................................... 13  
  - **VACANT HOMES** ...................................................................................................................... 13  
  - **MAINTAINING YOUR WAVE SYSTEM** ...................................................................................... 13  

**What is the dew point?** ............................................................................................................ 14  
  - **NEW INSTALLATIONS IN THE SUMMER** .............................................................................. 14  

**LCD Display and Control Layout** ............................................................................................ 15  
  - **THE LCD DISPLAY** .................................................................................................................. 16
Navigating the LCD Menu ................................................................. 16
Changing Maximum Fan Speeds....................................................... 17
Changing Low Speeds ..................................................................... 17
Changing Desired Humidity Level ................................................... 18
Setting Override Timer for Maximum Ventilation ....................... 18
Humidity Trend and Conditions ...................................................... 19
Humidity Conditions ....................................................................... 19
Humidity Trends ............................................................................ 19
   Stable Humidity Trend .............................................................. 19
   Negative Humidity Trend ........................................................ 19
   Positive Humidity Trend .......................................................... 20
   High Humidity Conditions ....................................................... 20
Notes on LCD Display Features .................................................... 20
Notes on Maintenance ................................................................... 20
Most Common Issues ...................................................................... 21
   Mold, Mildew and Musty Smell ................................................. 21
Specifications ............................................................................... 22
   Technical Data ........................................................................ 22
   Dimensions ............................................................................ 22
   Schematic of Wiring ............................................................... 23
Wave Home Solutions

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.

<table>
<thead>
<tr>
<th>Product Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model #:</td>
</tr>
<tr>
<td>Date of Manufacturing:</td>
</tr>
<tr>
<td>Date of Purchase:</td>
</tr>
<tr>
<td>Serial #:</td>
</tr>
<tr>
<td>Dealer Name (If Any):</td>
</tr>
</tbody>
</table>

**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
Website: www.wavehomesolutions.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.
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.

<table>
<thead>
<tr>
<th>Warranty Period for this product:</th>
<th>Ten (10) Years limited warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Four (4) Years on electronic control</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Items Excluded from Warranty Coverage (If Any):</th>
<th>Appearance items of the product, Exterior vent and any printed material.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Where to obtain service:</th>
<th>From the Manufacturer. Refer to Page 2 for Contact Information</th>
</tr>
</thead>
</table>

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 Wave system, 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 1-888-533-1348

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x Owner’s Manual</td>
<td></td>
</tr>
<tr>
<td>1x Warranty Card</td>
<td></td>
</tr>
<tr>
<td>1x Vinyl Flex 6” x 24”</td>
<td></td>
</tr>
<tr>
<td>1x Exhaust Vent 6”</td>
<td></td>
</tr>
<tr>
<td>1x Checklist</td>
<td></td>
</tr>
<tr>
<td>1x Exhaust Vent 6”</td>
<td></td>
</tr>
<tr>
<td>4x Plastic Anchors</td>
<td></td>
</tr>
<tr>
<td>4x 2” Screws #8</td>
<td></td>
</tr>
<tr>
<td>4x #8 x 1 1/4 Screws</td>
<td></td>
</tr>
<tr>
<td>6x #8 x 1/2” Screws</td>
<td></td>
</tr>
<tr>
<td>1x Pipe 6” x 8”</td>
<td></td>
</tr>
<tr>
<td>1x Cover plate</td>
<td></td>
</tr>
<tr>
<td>1x Aluminum tape</td>
<td></td>
</tr>
<tr>
<td>1x Checklist</td>
<td></td>
</tr>
</tbody>
</table>

Additional grilles for replenishment air and interior rooms not included.

Tools Required for Installation

- Electric reciprocal or hole saw 6 1/4”
- 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 – approximately 3” off the floor.
2) Replenishment air has to flow from upstairs into the basement or crawlspace. Open doors that can be closed are not a substitute for a properly installed vent.
3) Unit should be installed as far away as possible from the source of replenishment air.
4) Outside duct must be no less than 6” and dedicated for the Wave unit only.
5) Maximum circulation is required to draw in air from all parts of the basement.
6) Unit should not be installed within 8 feet of combustion appliance.

IMPORTANT – What Not to Do

1) DO NOT install the unit more than approx. 3 inches off the floor.
2) DO NOT make more than one turn with the duct and the ductwork should not be longer than 3 feet in total, unless rigid ducting is used - see ‘Ducting”, Page 7
3) DO NOT crush the vinyl Pipe.
4) DO NOT install the unit next to a replenishment air supply.
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, Wave unit, 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 setting the controls of exhaust appliances, including the Wave system at less than maximum speed during the heating season (Note: when humidity conditions in the home are below the humidity setting on the Wave system, as they usually are during the heating season, the Wave system operates at approx. 25% of the capacity of a standard bathroom fan), or by introducing make-up air inside the building. A fresh air kit (Air Supply Ventilator) is available from Wave Home Solutions, to help relieve the effects of negative air pressure in the building.

Ideal location of the Unit
- Air drawn in by Wave system pulls moisture off the surface floors and walls. To maximize the effectiveness;
  
  A) Install unit in dampest, coolest and lowest part of basement.
  B) If possible, without hindering point “A”, install the Wave unit as far away as possible from the source of replenishment air (i.e. stairwell) from upstairs or from replenishment air grill in crawl space area. This will allow for the unit to draw in the maximum moisture across the greatest surface distance before the upstairs replenishment air is pulled into the unit.

- Keep away from sources of excess heat (i.e. furnace room).

- Unit must be installed all the way down to floor level, in order to draw in the moisture. It should be approx. 3” and must not be higher than a max of 6 inches off floor level.

  Note: Crawlspace models can be installed at up to 12” of the floor if extra height is required to properly install the unit.

- Keep at least 8 feet away from furnace or combustion appliance, to avoid interfering with airflow.

- The area (not less than 4 ft.) around the unit should be clear to allow the air to be pulled into the vents.
Replenishment air to Basement from Upstairs

The damp air exhausted by the Wave system must be replaced by the warmer/drier air from the upper levels. If there is no open stairwell, the airflow is restricted from coming down; then install a passive return grille with 100 sq. inches either in the door, in the wall, or in the floor to allow unobstructed air downstairs.

When the flow is limited or inaccessible between rooms downstairs (if there are walls or partitions), then install a grille 8” x 10” (or other grill configuration, having total area of not less than 80 sq. in.) in the bottom of the door or wall to avoid having stagnant air in those areas. Otherwise interior doors must remain open. This insures that all the air drawn into the Wave system comes from all areas of the basement.

In the initial period after installation, before the Wave unit has had time to dry out the basement, and when the air outside is hot and humid; keep the basement/crawlspace doors, windows and vents closed to the outside. This will assure that the air is replenished with the air from upstairs and not with the humid air from outside. Generally, for improved performance, it is best to keep all exterior basement/crawlspace doors, windows and vents closed at all times.

Please check to make sure there are no openings/leaks around windows, doors, vents or other places, where outside humid air can enter the basement/crawlspace. Make sure that A/C Ducts are properly sealed and that all A/C Leads to the basement are closed. Sump Pumps holes should be properly covered.

Note: When a Mechanical Booster Fan is used to provide replenishment air, the unit should have a max capacity of 150 CFM.

Ducting

Unit comes in two sections that allow for flexibility in positioning the duct at the most convenient height. You can duct from the back of the unit, or from the top of the unit by removing the top cover. Duct can go through an outside wall, the floor joist or window. Duct should be vented above ground level to the outside or below ground into a window well that is open and not sealed off to the outdoors. The outside louver should be high enough to avoid infiltration of snow, flooding and rodents, etc. All necessary parts and outside louvers are included.

In cases where the basement height clearance is too low, the top portion of the bottom section can be cut down by a maximum of 40 inches with a cutter, leaving the vents at the bottom intact, for a total minimum unit height of 62 inches. For extra high ceilings, an extension piece of 24 inches is available which can be added at the top of the unit.
Wave Home Solutions

When ducting the unit outside, no more than 3 feet of Vinyl Flex should be used. When circumstances are that a longer span is required, rigid ducting can be used from the inside of the unit to the wall. The rigid duct will improve the airflow to compensate for the additional distance the air has to flow to reach the outside.

When replacing a pane for a window installation, use pressurized wood or similar water/rot proof material.

Make sure that no pipes, studs or wires are in the way.

Duct has to be dedicated and not combined with any other existing ductwork in operation. Seal well around the outside opening.

Installation

Factors to consider

Following is a description of how to install the Wave system unit.

The installation must be done in the basement or the lowest, dampest, coldest level of your dwelling. Try to find an outside wall to accommodate a 6¼” exit to the exterior of the house where no electrical wires or pipes are present Minimum distance to any source of heat should be 8 feet. Make sure that you do not install the unit in a boiler room.

Also maximize the distance between the unit and the source of replenishment air (example: stairwell or openings to upper level).

For Interior Wall Installation: The distance between the Wave unit back and the exterior wall should not be more than 12 feet. For this application the flex has to be replaced with rigid piping. Optional: The bottom cap may be removed for added airflow.

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’s location is above ground level. Also make sure that the hole doesn’t line up with a stud, electrical wires, or pipe. For models UNS-209 and HDS-209, which are adjustable in height, the hole is in the box/rim joist between the floor joists of the basement ceiling, or through the wall.
Preparing the Wave Unit for Installation

Measure the required Unit height. Remember that the units cannot be higher than 3” to 6” off the ground.

From the inside, drill a pilot hole of approximately ¼” at the center of the proposed 6¼” hole.

Outside the building, find the pilot hole. Using a hole-saw, with the pilot hole as a guide, drill a 6¼” 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 ¼” 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 ¼” hole.
# Putting the unit together

For HCV-BS Only

<table>
<thead>
<tr>
<th>Join the two halves (Bottom section must fit inside Top section) of the HCV-BS casing together, overlapping the two pieces such as the desired height is obtained. Remove screws if necessary.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOTE:</strong> If the unit has to be shorter than 86.5” cut the top of the bottom part.</td>
</tr>
<tr>
<td>Secure the two halves together using $\frac{1}{2}”$ metal fastening screws. Use cover plate to close gap if necessary.</td>
</tr>
<tr>
<td>Using aluminum or duct tape seal the seam in the back where the two halves join together.</td>
</tr>
<tr>
<td><strong>Note:</strong> For installing the optional 24” extension, remove top cap and straighten the 90° elbow. Use the 6” galvanized pipe to extend the length needed. Cut pipe to proper length before snapping it together. Attach top cap to extension cover with 4 screws provided. Add exterior cover to base and fasten securely with screws provided.</td>
</tr>
</tbody>
</table>
Fasten the unit to the wall

<table>
<thead>
<tr>
<th>Step</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td><img src="image1.jpg" alt="Image" /></td>
</tr>
<tr>
<td>(a few Small 9/16” Screw can be used to affix the flex to the mount)</td>
<td><img src="image2.jpg" alt="Image" /></td>
</tr>
<tr>
<td>Leaving a 1-inch gap between the top of the unit and the ceiling, drill ¼” pilot holes through the lips of the unit and the wall.</td>
<td><img src="image3.jpg" alt="Image" /></td>
</tr>
<tr>
<td>Apply the four plastics anchors on the wall with the help of a hammer.</td>
<td><img src="image4.jpg" alt="Image" /></td>
</tr>
<tr>
<td>Secure the HCV-BS or HCV-CS Unit to the wall using the four 1 ¼ inch screws provided.</td>
<td><img src="image5.jpg" alt="Image" /></td>
</tr>
</tbody>
</table>
## Attaching the Flex, Pipe and Outside Vent

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attach the vent to the 6” pipe with the ½ in screws provided.</td>
<td></td>
</tr>
<tr>
<td>From the outside, pull the flex pipe through the 6 ¼” hole. Attach the</td>
<td>flex to the 6” pipe with 24” tie wrap.</td>
</tr>
<tr>
<td>Make sure the vent is not twisted by inserting the screws too tight</td>
<td>and that the flaps are working properly.</td>
</tr>
<tr>
<td><strong>NOTE:</strong> If high winds are often present in the location of the vent,</td>
<td>they may cause a wind noise inside the house. If this is the case, an <strong>anti-gust hood</strong> (AGH-990) is available from your Wave Home Solution dealer.</td>
</tr>
<tr>
<td>Plug the unit into any 115V outlet.</td>
<td><strong>Note:</strong> A grounded extension cord with a maximum length of 10 feet may be used if necessary.</td>
</tr>
</tbody>
</table>
Unit Operations

The first time the unit runs…

Anytime the Wave HCV unit is powered on (plugged into a power outlet), it will run at the last recorded speed setting (in memory) for 2 hours to allow air to circulate in house. The factory default setting when the unit is brand new is “High Speed”. After the initial two-hour period, the unit will begin to take readings of the environmental conditions of the air coming into the house (also called replenishment air). These readings help the unit regulate its operating speed to ensure that, over time, you will get the most energy efficient ventilation for the entire home and maximum reduction of relative humidity.

If this is the first time the unit is plugged in and allowed to run, it is important to allow it to run uninterrupted for those first two hours. After this time, you can change the Min/Max operating speed as well as the dehumidistat setting.

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 speed setting and dehumidistat setting and will operate with those parameters for a period of two hours before beginning to take readings of the environmental conditions of the incoming air. However, in this case, the user can access the menu and change settings and does not have to wait for this two-hour period to be over.

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.

Vacant Homes

Performance results are maximized when the building is occupied. If home is vacant for a prolonged period of time, then the unit should be set to operate at low speed. A fresh air intake supply is recommended via a small opening in a window upstairs or a supply vent such as the ASV-90.

Maintaining your Wave System

Do not store anything within a radius of 4 feet around the base of the Wave system.

Make sure the basement or crawlspace has adequate replenishment air from upstairs, from a location as far from the Wave unit as possible. The only maintenance needed for your Wave system is a periodic vacuuming of the dust accumulation at the intake grilles or louvers located at the bottom of the unit.
**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 Wave HCV 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°F
Relative Humidity = 60%

Using the temperature and RH% values measured, we would calculate that the dew point in your home is 54°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 Wave system 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 Wave system’s 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 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.
LCD Display and Control Layout

The following sections of this operating manual refer to the user interface presented below:

The user interface consists of:

1- Humidity Button
2- Override Timer Button
3- Fan Speed Button
4- Up Arrow Button
5- Down Arrow Button
6- Ok Button
7- LCD Display
The LCD Display

The LCD Display consists of:
1- Humidity Conditions and Trending Icons
2- User Set Humidity Level
3- Override Timer
4- User Set & Operating Fan Speed
5- Low1/Low2 Fan Speed Indicator
6- Desired Max Fan Speed Indicator

Navigating the LCD Menu

The Wave system unit has an LCD display that allows the unit to display information about its operation. The LCD display also has a six button user interface that allows the user to navigate the LCD menu and change settings such as the maximum operating speed of the unit, the dehumidistat setting, as well as access the unit's built in override mode. The following sections explain how to navigate the LCD menu and change the settings, as well as how to access the override mode.
Changing Maximum Fan Speeds
To change the maximum fan speeds, simply press the Fan Speed Button (The Desired Max Fan Speed Indicator will blink) and use the Up/Down Arrow Buttons to cycle through all of the different fan speeds and to select this speed simply press the Ok Button when you have the desired fan speed. If wrong speed is entered, repeat this procedure.

<table>
<thead>
<tr>
<th>Maximum Operating Speed</th>
<th>Airflow (CFM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HCV-BS</td>
</tr>
<tr>
<td>High</td>
<td>230</td>
</tr>
<tr>
<td>Intermediate</td>
<td>150</td>
</tr>
<tr>
<td>Medium</td>
<td>90</td>
</tr>
<tr>
<td>Low1/Low2</td>
<td>35/65</td>
</tr>
</tbody>
</table>

*These speeds may vary depending on installation*

The solid bars will denote the actual speed at which the fan is operating, the arrow below denotes the maximum chosen setting.

** Please note the unit will not exceed the maximum user set fan speed, unless the override mode is running. The control will choose the proper fan speed depending on humidity, temperature and dew point conditions.

Changing Low Speeds
To change the minimum ventilation speed simply press and hold the Fan Speed Button for 10 seconds (the Low Speed bars will start blinking); Use the Up/Down Arrow Buttons to cycle through all of the different fan speeds and to select this speed simply press the Ok Button when you have the desired fan speed. If wrong speed is entered, repeat this procedure.
Changing Desired Humidity Level

To change the desired humidity, simply press the Humidity Button (the humidity setting will blink) and use the Up/Down Arrow Buttons to cycle to your desired humidity level. Press the Ok Button to enter your desired humidity level. If wrong level is entered, repeat this procedure.

** Recommended humidity level for summer season is 55% and 45% for the winter season. Please note this does not show current humidity level, but rather the desired humidity level.

Setting Override Timer for maximum ventilation

The override function permits you to provide maximum ventilation for a predetermined amount of time, regardless of the fan speed chosen by the computerized/sensor control, to alleviate certain conditions IE fumes from new paint, flooring, furniture or excess moisture from hot showers, cooking, etc. To override the unit, you simply press the Override Button (the time clock icon will blink until the desired override time is selected) and use the Up/Down Arrow Buttons to cycle through the different override timer options. Once the desired override time is chosen, press the Ok Button to begin override. If wrong time is entered, repeat this procedure.

** The override timer will reduce as time goes by indicating the remaining time left. When the override time expires the unit will revert to settings, prior to activating the override function. The unit will continue to take readings during the override to ensure that the unit will automatically make any required necessary ventilation adjustments at the expiry of the override.
Humidity Trend and Conditions

Humidity Conditions

At the top of the LCD display the house with or without the 3 water drops are used to show the current humidity conditions. The image below demonstrates the different humidity conditions shown on the LCD display.

Humidity Trends

The three drops inside the house at the top of the LCD display are also used to show the current humidity trend, when the humidity is above the desired setting.

Stable Humidity Trend

The three drops will stay illuminated constantly when a stable trend is detected, with either outline or solid drops used to indicate the condition, as above.

Negative Humidity Trend

The water drops will blink from left to right when an increasing humidity trend is detected.
Positive Humidity Trend
The water drops will blink from right to left when a decreasing humidity trend is detected, with either outline or solid drops used to indicate the condition, as above.

High Humidity Conditions
If the water drops are solid, this means that the unit has detected high humidity conditions.

Notes on LCD display features
1) The LCD display on this unit has a built in backlight to allow for better readability in darker locations. This backlight turns on when any button on the control panel is pressed and turns off after no button has been pressed on the unit for a period of 2 minutes.
2) When the LCD is left displaying a menu in which user input is required, but no input is given within 2 minutes, the unit will exit the menu and return to its normal operation, based on previous settings for which a confirmation was given.
3) The unit is fully automatic once set, requiring adjustments only if you wish to change the settings.

Notes on Maintenance
The HCV Products do not require any internal maintenance. These systems do not have any filters to clean or buckets to empty. The manufacturer does however suggest to vacuum the bottom vents of the unit twice a year. This will prevent them from being blocked and diminishing the performance of the system.
Most Common Issues

Mold, Mildew and Musty Smell
If mold or mildew is present prior to installing a Wave system, please have the contaminated area cleaned. Not doing so could cause the Wave unit to spread that mold to other locations in the basement or crawlspace.

To avoid Mold, Mildew or Musty Smells:
- Follow the Recommendations on Page 14 (Concerning New Installations in the summer).

To ensure the proper functionality of the Wave system:
- 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 Wave system yourself. If you are not sure about certain functions, please refer to Page 3.
Specifications

Technical Data

<table>
<thead>
<tr>
<th>Model</th>
<th>Amps (A)</th>
<th>Watts (W)</th>
<th>Airflow (CFM)</th>
<th>Capacity (Sq.Ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCV-BS-HDEX</td>
<td>0.30</td>
<td>34</td>
<td>230</td>
<td>2,400</td>
</tr>
<tr>
<td>HCV-CS-HDEX</td>
<td>0.30</td>
<td>34</td>
<td>230</td>
<td>3,000</td>
</tr>
</tbody>
</table>

All Units require a 115 VAC electrical outlet

Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Height (In.)</th>
<th>Width (In.)</th>
<th>Depth (In.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCV-BS-HDEX</td>
<td>*86.5 - 96”</td>
<td>11.5”</td>
<td>7.5”</td>
</tr>
<tr>
<td>HCV-CS-HDEX</td>
<td>*32”</td>
<td>11.5”</td>
<td>7.5”</td>
</tr>
</tbody>
</table>

*A 24 Inch extension section is available if extra height is required
Schematic of Wiring

Follow the wiring schematic below when the fan and/or controls need to be serviced or replaced.