

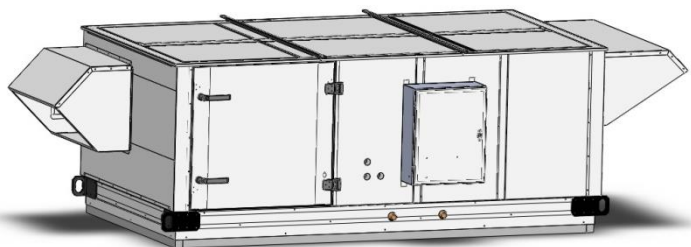
# SERVICE MANUAL

LH2000e

LE2000e

LH3000e

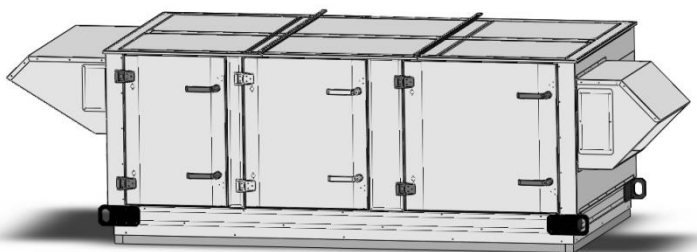
LE3000e



*Heat/Energy  
Recovery  
Ventilator*

*Low-Profile  
Commercial  
Series*

261162



**CAUTION**

Always turn off electrical power before performing device maintenance. This device contains high-voltage electrical components.

**CAUTION**

This device has moving parts. All repairs should be made by a qualified technician in order to avoid serious injury.

**IMPORTANT – Read this manual before installation**

- Always turn off electrical power on the device before beginning maintenance.
- No modifications should be made to the unit under any circumstances. Warranty will be immediately void.
- Do not use this device to evacuate steam, inflammable gases or explosive substances.
- Electrical connections should always be made by a qualified electrician.
- Air input and output must be in equilibrium in order for the ventilation system to function properly.
- Installation should be completed in conformance with local construction and safety standards.
- All drawings, photos and diagrams are for reference purposes only.
- Aldes reserves the right to modify devices and their components without prior warning.



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**Warranty**

Aldes products are guaranteed to be defect-free for a period of (2) years from the purchase date.

- Labor not included.

**Warranty does not apply if:**

1. Modifications were made by or for the client.
2. Product was poorly installed.
3. Maintenance, cleaning and lubrication were not executed in accordance with recommendations made by Aldes.

**Warranty Exclusions**

1. All installation fees and labor relating to product repairs.
2. All fees related to a loss of operations, merchandise, inventory or equipment due to a defective Aldes product.

## Unpacking Your Device

Remove the plastic wrapping from the device as well as the styrofoam protecting its corners, being careful not to scratch the painted surfaces. Appropriately dispose of materials once all wrapping has been removed.

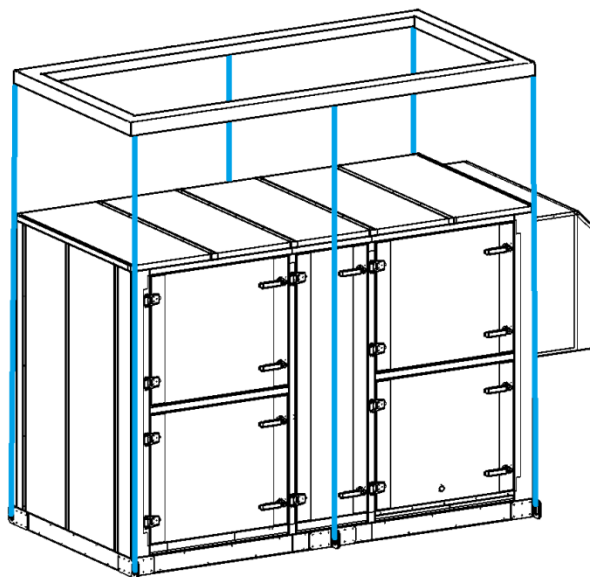
## Inspecting Your Device

Visually inspect your device to ensure that no sheet metal has been dented or scratched. Verify that the air intake and exhaust hoods have not been damaged in transport.

**Warning:** Do not remove any obstructing parts or attachments until the device has been moved to its final location.

## Transport Method

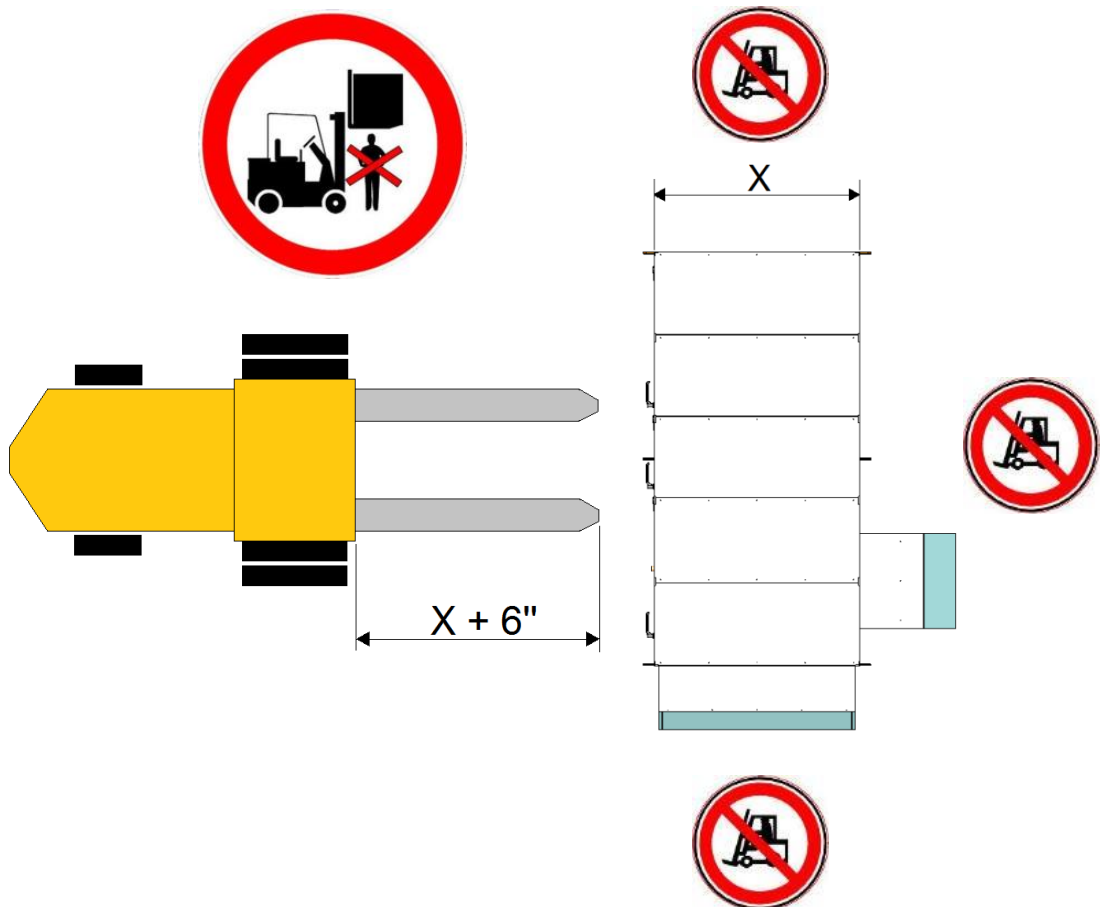
Your device is equipped with anchoring hooks for transport purposes. Strictly follow all directions before moving your device. Always use all six (6) anchorage points simultaneously as shown in the diagram.



## Using a Forklift to Transport Devices

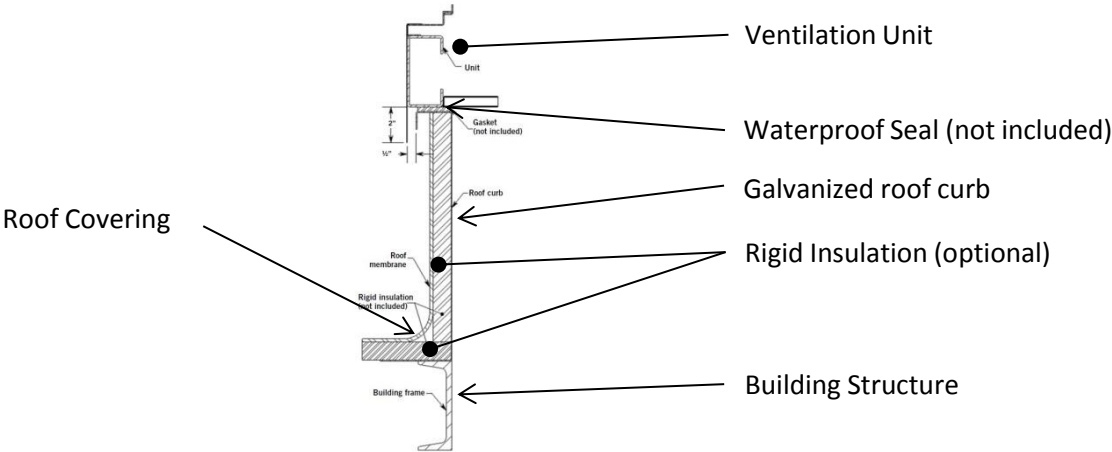
Before using a forklift to move your device, you must follow several safety rules.

- Weigh the device and check the forklift capacity. The capacity of the forklift must exceed the weight of the device.
- Raise the device as shown in the diagram below. This is the only permissible method authorized by Aldes for transporting devices using a forklift.
- Transportation of the device must be executed by a trained forklift operator.
- Ensure that the forklift skids are a minimum of 6 inches longer than the length of the device.



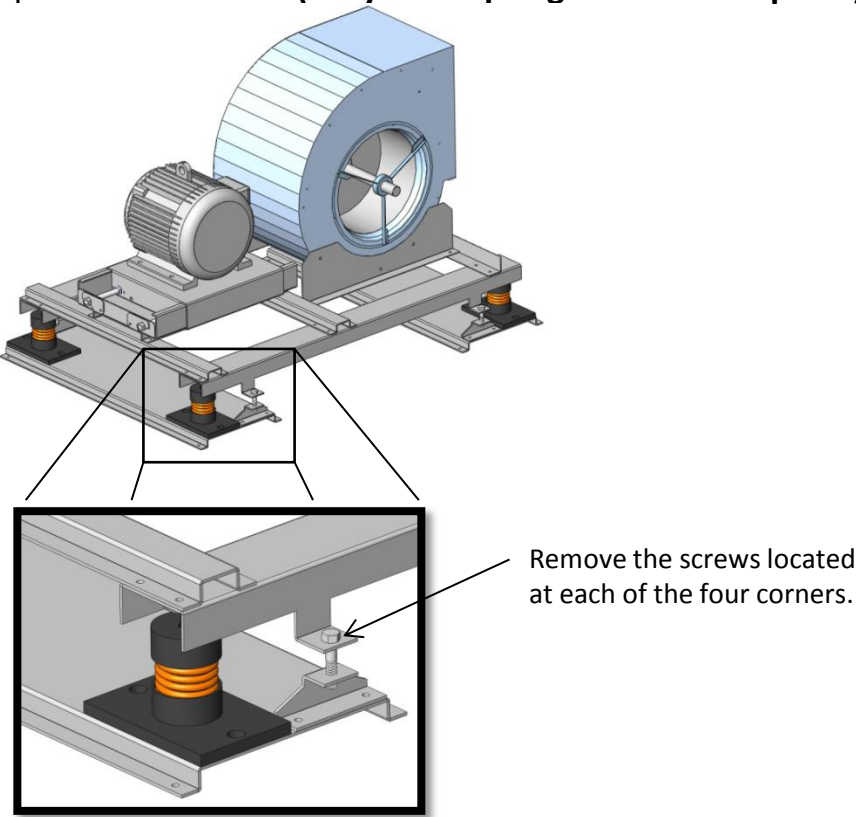
# Roof Curb Installation

Install the roof curb as indicated in the accompanying document provided.



# Obstructing Materials and Transport Attachments

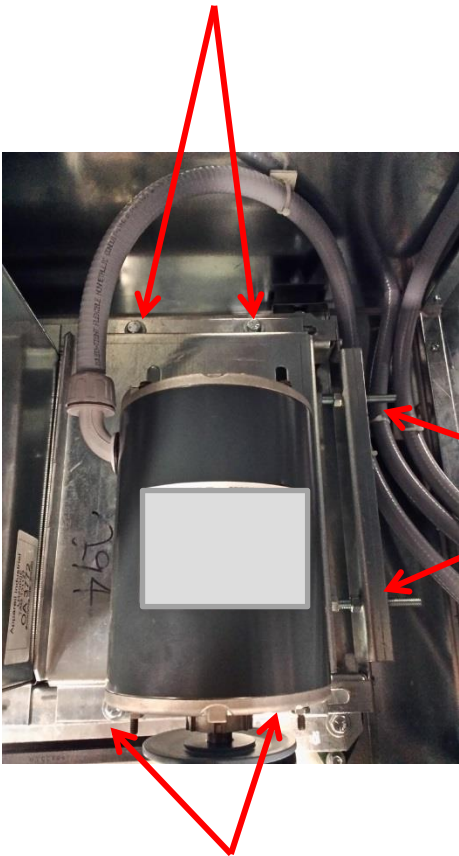
Once the device has been placed in its final location, remove all obstructing materials and transport attachments. **(Only with Springs insulation option).**



Blower Belt tension setting

In order to avoid unusual wear of moving pieces, adjust belt tension at minimum value to avoid slipping. Belt tension is adjusted by the adjusting screws as illustrated below.

Loosen these screw before adjusting.  
Tighten it after.



Adjusting screws

Loosen these screw before adjusting.  
Tighten it after.



**DANGER**

This device contains high-voltage electrical components. All maintenance must be done by a qualified technician to prevent serious injury and possible death. Installation should be completed in conformance with local building standards and safety codes.

**Photo 1**

5/16"



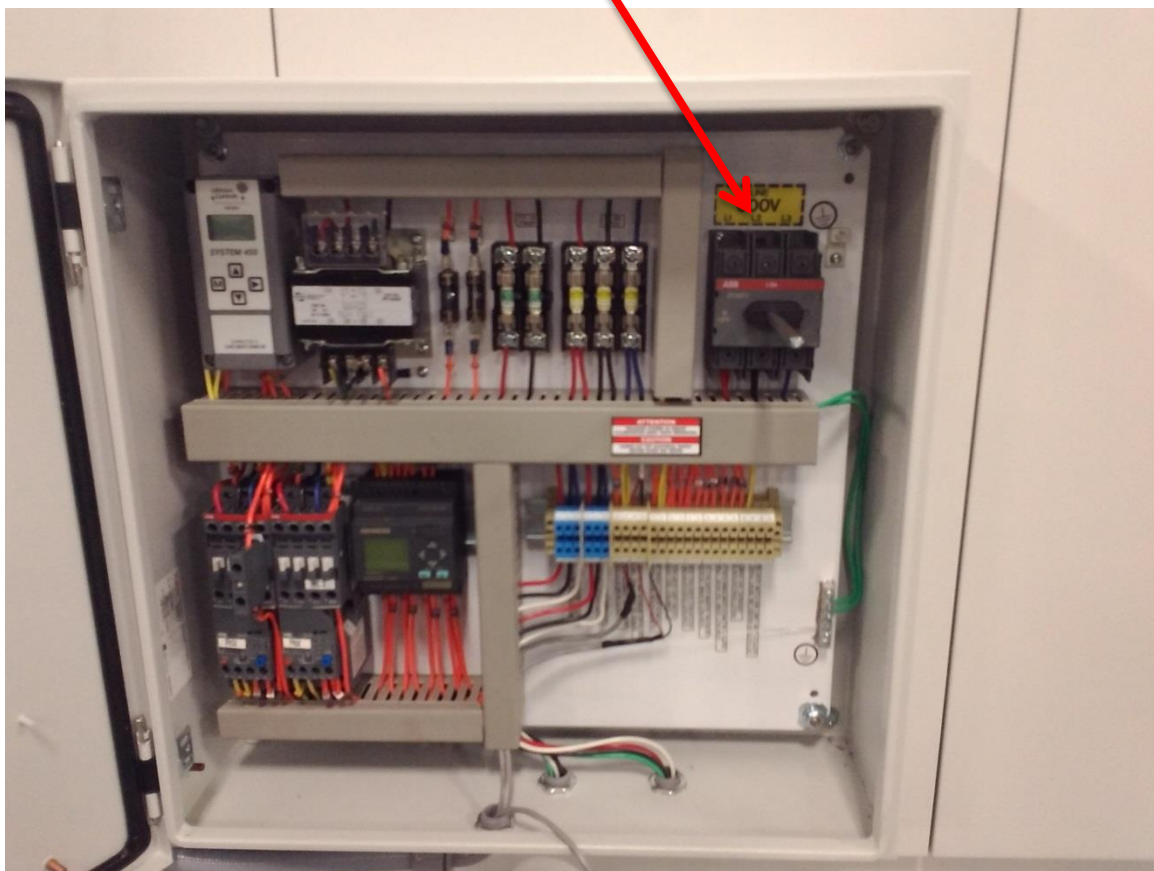
- Open the exterior panel using the handles (Photo 1).
- Turn the handles downwards and counter clockwise as indicated in the photo.
- Be aware that you must unlock the handles with the appropriate key in order to open the panel.

**DANGER**

This device contains high-voltage electrical components. All maintenance must be done by a qualified technician to prevent serious injury and possible death. Installation should be completed in conformance with local building standards and safety codes.



Proceed to the high-voltage connections while strictly following the set-up sequence and respecting the electrical standards in effect.

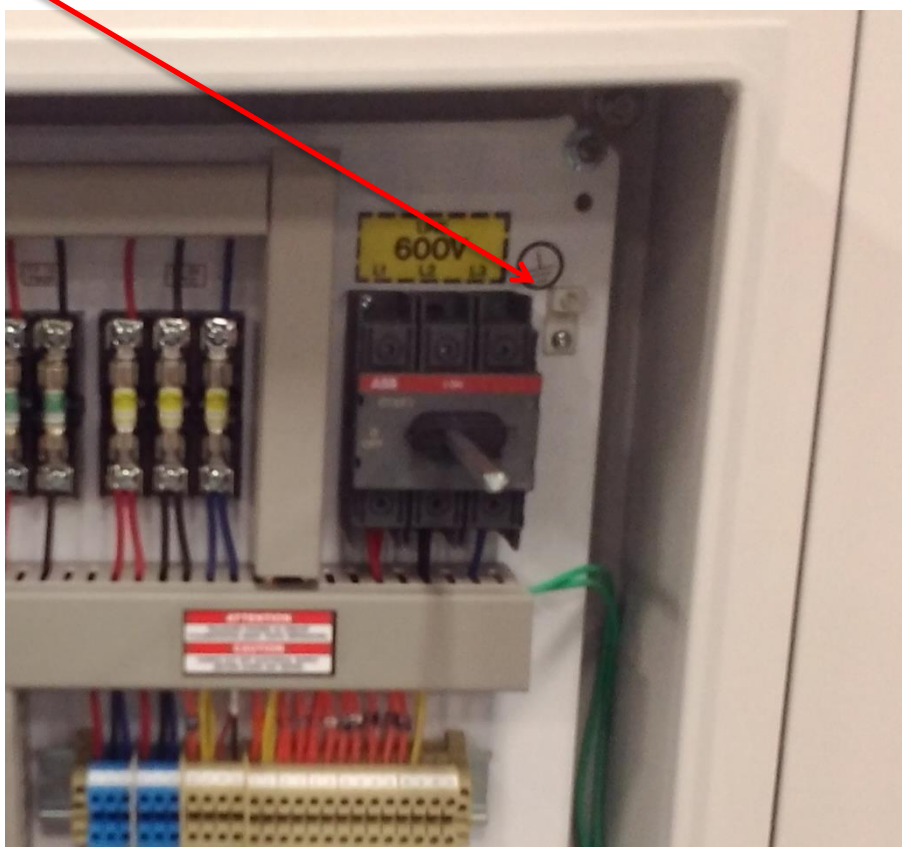


**DANGER**

This device contains high-voltage electrical components. All maintenance must be done by a qualified technician to prevent serious injury and possible death. Installation should be completed in conformance with local building standards and safety codes.



Proceed to the grounding connections while respecting current electrical standards. Be sure to fasten the wire securely.



**DANGER**

This device contains high-voltage electrical components. All maintenance must be done by a qualified technician to prevent serious injury and possible death. Installation should be completed in conformance with local building standards and safety codes.



1- Check the voltage of the main circuit breaker (1 to 3 steps).

- L1 – L2 : \_\_\_\_\_
- L1 – L3 : \_\_\_\_\_
- L2 – L3 : \_\_\_\_\_
- L1 – G : \_\_\_\_\_
- L2 – G : \_\_\_\_\_
- L3 – G : \_\_\_\_\_

A maximum deviation of  $\pm 5\%$  is acceptable.



2- Activate the main disconnect switch.



3- Manually put the device in the stop position using the keyboard. See the provided user manual.

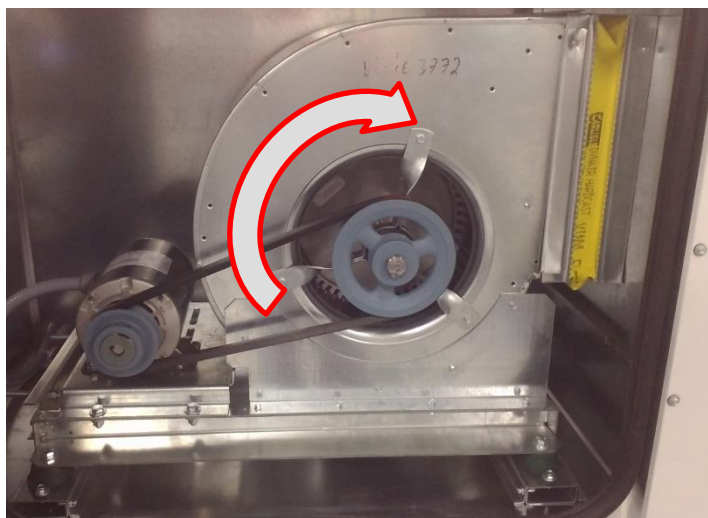
**DANGER**

This device contains high-voltage electrical components. All maintenance must be done by a qualified technician to prevent serious injury and possible death. Installation should be completed in conformance with local building standards and safety codes.



4- Manually turn on the device using the keyboard. See the provided user manual.

5- Verify that the motors and thermal wheel are rotating in the proper direction.

**DANGER**

This device has moving parts. All repairs should be made by a qualified technician in order to avoid serious injury.



## RECOMMENDATION

Before turning on your new device, inspect the condition of the ventilation ducts. Clean the ducts before turning on your device. If building construction has not yet been completed, we recommend that you wait until work has been finished before starting up your device. An abnormal volume of dust in the air could clog the device filters and cause damage to the motors. Ensure that all diffusers are opened to their maximum capacity before turning on your device. It is common to notice a faint smell of burning upon the first start-up.



## CAUTION

This device should be installed and balanced by a contractor specializing in ventilation services.



## WARNING

Electrical voltage remain in VFD for 5 minutes minimum after input circuits have been opened and the following electrical components have been activated:

- Speed variator for the thermal wheel motor;
- Speed variator for the ventilator motors.



The following options may not be included with your device. Consult the specifications form provided with your device for more information.

### ***Control Options***

**Dirty contact filter:**

A warning message will display upon the closing of a dry contact when fresh air circuit filters or contaminated air filters are plugged.

**Ventilator rotation detection:**

Unit stops if rotation is faulty. A message will display if the ventilator rotation has experienced a malfunction or if a belt has slipped.

**Dampers limit switches:**

Unit start-up according to dampers openings and closings

**Controller compatible with the BACnet Controller Network :**

Two (2) means of communication are available:

- MS/TP
- IP

**Remote Displays:**

Offered with command buttons or with touch screen.

All of the defrost modes listed below may not be included with your device. Consult the specifications form provided with your device for more information.

Defrost Modes

The frost control system is activated according to a reference temperature or pressure (selectable option).

- Built-in automated electric preheating coil (SSR-controlled).
- Built-in liquid preheating coil (0 to 10V signal controls are available).
- Face and bypass damper .
- Built-in automated adjustable resistance clap (cool air diversion).
- Defrost recirculation or exhaust cycles (see tables below for temperature references).

Sensible Fixed Plates recovery core (Alu. or Poly.)			
°C	°F	Defrost Time	Ventilation Time
T° > -5°C	T° > 23°F	N/A	Continuous
-25°C < T° < -5°C	-13°F < T° < 23°F	7 min	32 min
T° < -25°C	T° < -13°F	7 min	20 min
Sensible Fixed Plates recovery core (Enthalpy)			
°C	°F	Defrost Time	Ventilation Time
T° > -15°C	T° > 5°F	N/A	Continuous
-25°C < T° < -15°C	-13°F < T° < 5°F	7 min	32 min
T° < -25°C	T° < -13°F	7 min	20 min



The following options may not be included with your device. Consult the specifications form provided with your device for more information.

### ***Components Options***

**MERV13 Filters :**

Add MERV13 filters to the fresh air circuit only.

**Insulated Aluminum dampers:**

Activated by a servomotor upon admission of fresh or exhaust air.

**Non-Insulated Gravity dampers (for evacuation purposes only).**

**Ventilator with rear-facing fan blades (BI).**

**Post-Heating Coil:**

Electric or liquid (0-10 VDC internal signal or 0-10 VDC signal provided by other components to maintain air input temperature).

The following options may not be included with your device. Consult the specifications form provided with your device for more information.

### ***Unit Features***

#### **Intake and Exhaust Hoods:**

Include shaped aluminum insulated dampers that are activated by a servomotor. A protective grill covers the inlet hood.

#### **Roof curb:**

14 inches in height, insulated or non-insulated, in 18-calibre galvanized steel.

#### **Piping Outlet (liquid coils) :**

Front or rear-facing (made of stainless steel)

### ***Ventilator Motor Options***

**Construction : TEFC**

**Efficiency: Premium**

#### **Two speeds:**

Two-speed motor (controller-adjusted).

#### **Variable speeds:**

VFD on motors (0-10 VDC signal from other components).

**CAUTION**

Always turn off electrical power before performing device maintenance. Device contains high-voltage electrical components.

**Every 3 months**

- Check the condition of the filters and replace if necessary.
- Check the condition and tension of belts. Adjust or replace if necessary.
- Check the condition of blowers and clean if needed.

**Every 12 months**

- Clean the cores with water and mild soap.
- Clean the inside of the unit using a vacuum cleaner or soapy water.

**IMPORTANT – Please read the following before placing a service call**

Before making a service request, please have the following information ready concerning your device:

- Device series number
- Model number
- Project number

This information is necessary in order to address your problem as quickly as possible. The information is available on the specification card located on your device (see photo below).



Can.: 1-800-262-0916  
Usa.:1-800-255-7749



**Model number** ← LH2000e

**Serial number** ← LH2000e1401001

**Project number** ← 131127 (HRV-1)