

air 2000

Parce que l'air c'est vital

INSTALLATION GUIDE AND OPERATING PROCEDURE



Heat recuperation air exchanger
Series 7500-7520

Read attentively and keep this booklet handy

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a Table of contents

1 Welcome	
a Table of contents.....	2
b Introduction	3
c Heat recuperation air exchanger	3
2 Preparing for installation	
a Contents of the box	4
b Accessories for installation	4
3 Location	
a of the device.....	5
b of the hygrometric controller	5
4 Installation	
a of the unit	6
b of the exhaust air clap	6
c of the exterior air vent.....	6
d of the hygrometric controller	7
e of the electric wiring (model 7500)	7
f of the ducts	8
g Balancing the air flow	9
5 Operations	
a Operating the device	10
b Operating the hydrometric controller	11
c Maintenance	13
6 General information	
a Technical data sheet	14
b Warranty	15
c Additional information	16
d Fact sheet	16

b Warranty

The period covered by guarantee for residential ventilation appliances begins the day of purchase and lasts three years*.

The guarantee does not apply to defects or breakage resulting from incorrect installation, abusive usage, acts of nature or all other circumstances out of the company's control. Requests for damages or any other actions for indemnity are excluded from this guarantee.

AIR2000 will not be held responsible for personal injury or property damage caused directly or indirectly by AIR2000 ventilation appliances.

Procedure to follow

If a part is defective, it will be replaced with another part or repaired, according to the company's assessment.

All costs for pick up or installation of the defective part will, in all cases, be the responsibility of the consumer.

Before taking out the defective appliance, we recommend speaking with one of our technicians. He or she can suggest the easiest way to resolve your problem.

Obtain an authorization number from Customer Service before sending in an appliance for repairs.

Send the defective part postage paid to the address below. It will be returned to you postage paid.

a Contents of the box

Verify that all the parts have been included in shipping.

- Air exchanger
- Hydrostat (Model 7500)
- Drain hose
- Bag of parts:
 - Assembly chain
 - 4 butterfly nuts
 - Tie-wraps
 - Attachment screws for the butterfly nuts

b Accessories for installation

Additional parts can be bought to complete the installation. The following list is recommended for a typical basement installation.

- Exterior vent
- Insulated duct
- Uninsulated duct
- Balance key

a Location of the device

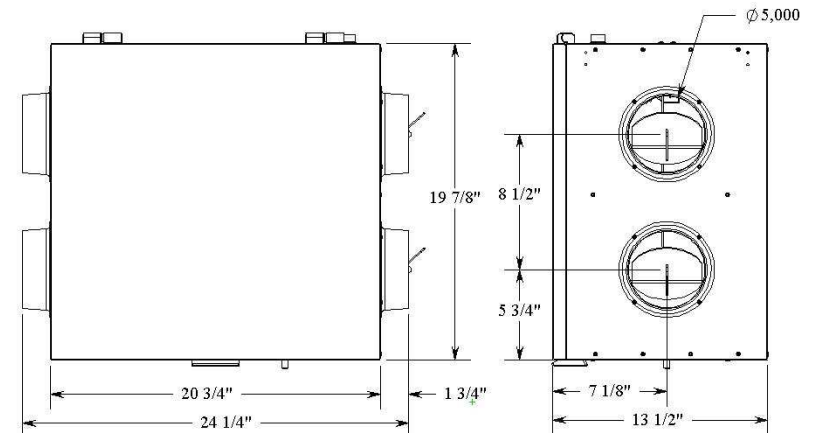
Chose a location for the device where all ducts will be short and, if possible, not change direction. This will allow the system to function optimally. The configuration of the ducts connecting the device to the outside should not significantly affect the static pressure of the system. The heat exchanger should not be installed near a cooking area.

b Location of the hydrometric controller

The hydrometric controller (dehumidistat) should be installed in the place where excess humidity is the most likely to be detected. This would generally be between the washroom and the kitchen. If you wish to control humidity in the basement, the control should be placed there. Ensure good air circulation around the hydrometric controller. Do not place it behind a door, for example.

a Technical data sheet

Maximal space to be ventilated (pi ²)	4000	
Maximum circulating flow (pi ³ /min)	160	
Filters (option: high efficiency carbon filter)	Yes	
Defrosting	none	
Electrical characteristics (model 7500)	Opt. 110VAC	
Tension (VAC)	24	110
Current (A)	0.5	0.1
Dimensions		
Height	19 7/8 in.	
Width	20 3/4 in.	
Depth	13 5/8 in.	
Vent connector measurements	5 inches in diameter	
Weight	30 lbs.	
Guarantee	3 years	



c Maintenance

Warning: Always turn off the electricity before performing maintenance tasks.

Every month during the winter, make sure that the air inlet and outlet are not obstructed by particles or ice. Also, every month, make sure that the condensation drain opening is not obstructed.

The filter must be cleaned with soapy water (by hand or in the dish washer) three times a year or as need be.

Once a year or as need be, clean the heat recovery core. Take it out of the unit delicately by pulling it towards you. To avoid cutting yourself, wear gloves when handling the core.

Once a year (preferably in the fall), vacuum out the inside of the device.

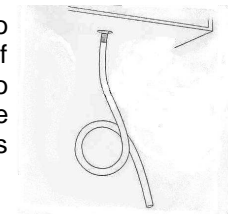
The installation of the air exchanger must be in compliance with the codes in effect in your town.

a Installation of the unit

The air exchanger is designed to be set on a shelf or suspended from a structure.

To suspend the device, affix the four butterfly nuts in the upper corners of the unit. Cut the chain provided with the unit into four equal lengths. Cut the last link at the end of each section of chain so that it may serve as a hook. Using the chains, suspend the air exchanger from the wood joists.

The device should be installed level to ensure that condensation drains out of the unit. Connect one end of the hose to the drain located at the bottom of the device and the other end to the building's drainage system.



b Installation of the exhaust air clap

The exhaust air clap should be installed through an exterior wall at a minimum high of 4 inches (10 cm) from the ground. Attach the intermediate sleeve to the plastic clap with a screw. Seal the free space between the sleeve and the wall.

c Installation of the exterior air vent

This air vent should be installed through an exterior wall at more than 6 feet (185 cm) from the exhaust air damper and less than 18 inches (46 cm) from the ground. It should be installed in the same way as the exhaust air clap.



d Installation of the hydrometric controller

The hydrometric controller should be installed on the wall, at about 5 feet (150 cm) from the floor.

Drill a hole in the wall and pass an electrical wire through it long enough to reach the device. The main wire has two wires. Connect them with the terminal block located in the furnace splice box according to the electrical diagram found in the device. These wires transmit a 24V electrical current.

Screw the back part of the controller to the wall and then attach the plastic cover and the button with the mounting screws.

e Installation of the electric wiring (Model 7500)

The clap activation motor must be connected to the furnace. To do this, connect the terminal blocks and the grounding screw located inside the device according to the wiring instructions. Then, connect it to your furnace according to the manufacturer's recommendations.



In fall and summer, outside temperatures and humidity levels can vary considerably. The relative ambient humidity should preferably be less than 60% for occupants' comfort and good health. The table below indicates when it is recommended to ventilate to reduce the humidity rate.

Outside temp.		Relative ambient humidity*			
		30%	40%	50%	60%
°C	°F	Maximum relative outside humidity			
18	(64)	38%	51%	64%	77%
15	(59)	46%	62%	77%	93%
12	(53)	56%	76%	94%	100%
9	(48)	69%	93%	100%	
6	(43)	84%	100%	100%	

* For an ambient temperature of 22°C (72°F)

We see here the maximum rate of humidity of outside air that can help lower the humidity of a home by a given amount. For example, if the outside air is 59°F (15°C) and has a rate of 77% humidity, you can reduce the humidity rate of the ambient air by up to 50%. To do this, the house will be ventilated until the controller detects that the ambient air is at the desired humidity level. The table also indicates that if the outside air is at 64°F (18°C) and has more than 77% humidity, the ambient humidity rate will rise to a level higher than 60% if the device is used in ventilation mode.

During the summer, users can increase their comfort by replacing their home's hot air with cooler air from the outside. The system can be used during the night when the outside temperature is most comfortable.

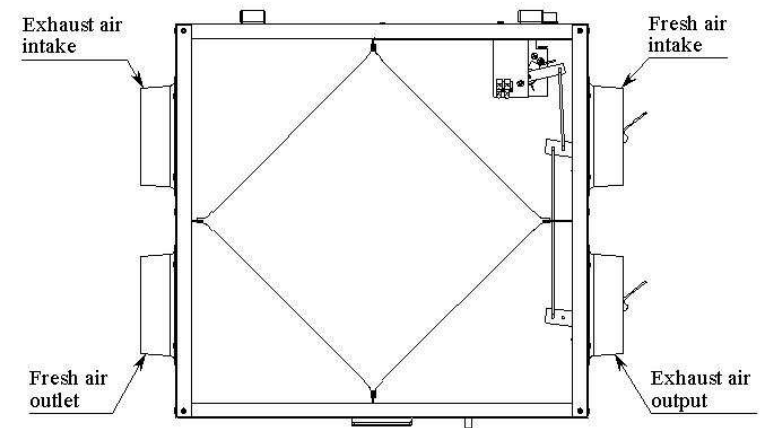
b Operating the hydrometric controller

Turn the dial to the humidity rate you wish to maintain in your home. When the humidity of the air is higher than this setting, the device will evacuate the humid air from the house and replace it with fresh air from outside. The controller will show you the ambient humidity rate. To do so, turn the dial from the maximum to the minimum level. You will hear a click-stop when the set humidity level has been reached.

It is most important to control the humidity level in winter, when the outside temperature is cold and the humidity in the ambient air can condense on windows and doors. The more the air is maintained at a low level of humidity, the less condensation there will be in these areas. However, very dry air can cause other problems. In order to ensure occupants' health, we do not recommend maintaining humidity at less than 30% over a long period of time. In winter, outside air is always drier than the ambient inside air. By evacuating moist air and replacing it with dry air, the device takes the excess humidity out of the air in the house.

f Installation of the ducts

For the air exchanger to run optimally, place the ducts so they are as straight as possible. Rigid ducts are recommended for long lengths. They offer less resistance to airflow than flexible ducts and are easier to clean. Connect the ducts to your central unit according to the figure below.



All ducts going through unheated areas must be insulated. The duct between the outside air vent and the device must be insulated and covered with a vapour barrier. The exhaust vent must be insulated near the exhaust air clap for 3 feet (1m) and also equipped with a vapour barrier. Attach the ducts to the diffuser using the tie-wraps. Seal these connections using duct tape.

g Balancing the air flow

The installation must balance the air flow brought in from the outside and the exhaust air flow so that the difference between the two has a maximum flow of 10%. Install the balance claps in the duct bringing in new air and in the exhaust duct. Measure the air flows using a flow metre and adjust the claps to obtain the desired flow. The air balance is especially important in homes using a combustion device or in those located in areas where the ground emits radon.

a Operating the device

Series 7500-7510 devices are designed to meet the ventilation needs of homes equipped with a forced air system. They are installed along side the central heating unit to ensure efficient air exchange. Most forced air systems have the connections necessary to plug in external modules, such as air exchangers (check with your manufacturer for connections). Two air exchanger models are available to meet your needs.

Model 7500 has two motorized claps that control the fresh air feed. In normal operations, when the humidity rate is lower than the setting level, the air exchanger's feed claps are closed. Therefore, air circulation inside the device is impossible. When the hydrometric controller detects a humidity level higher than the setting level, the device's feed claps open and a signal is sent to the central unit to start the fans (if they are not already working). A percentage of exhaust air is evacuated by the air exchanger and replaced by fresh air from the outside. The heat recovery core transfers heat to ensure energy efficiency.

Model 7510 functions similarly to Model 7500 except that it does not have motorized claps. Therefore, during normal functioning, when the humidity level is lower than the setting, air exchange occurs according to the cycles of the central unit.