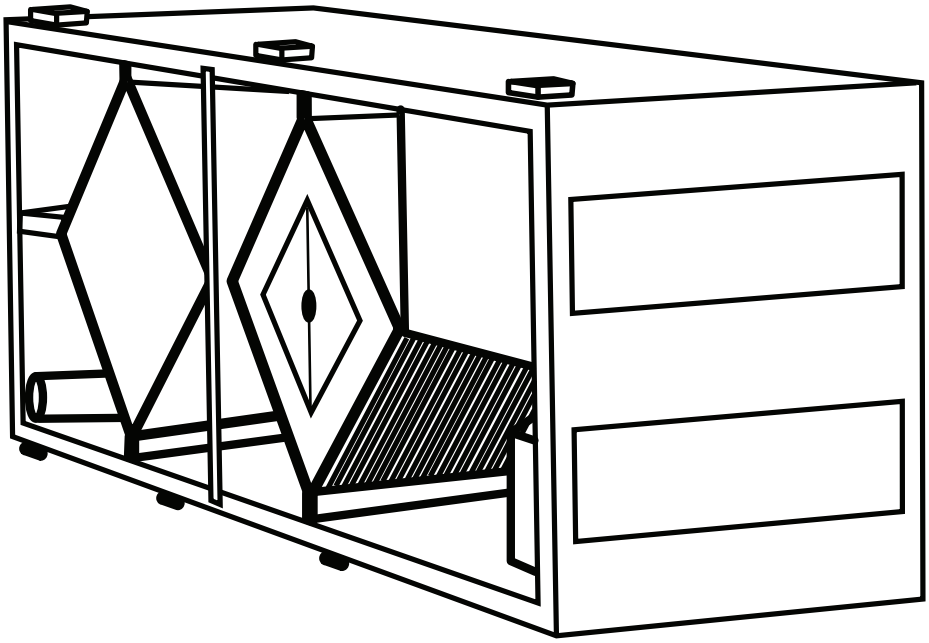
LIFEBREATH®

THE ULTIMATE AIR EXCHANGER

Operation and Installation Manual

Commercial Double Core Heat and Energy Recovery Systems

5 Speed Electronics
Lifestyle MAX Digital Control included



Models

500DCS
500REV DCS
500ERV

New Auto Dehumidistat Function
prevents unwanted use of the dehumidistat when outdoor temperatures exceed 15°C (59°F).

INSTALLER: Leave this manual for the homeowner

Installation and wiring to be in accordance with CEC, NEC and local electrical codes.
Important: Read and save these instructions.

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69-500DCS
0511

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IMPORTANT - PLEASE READ THIS MANUAL BEFORE INSTALLING UNIT.

NOTE

Due to ongoing research and product development, specifications, ratings and dimensions are subject to change without notice.

Max Series Electronics

Max Series HRVs (Heat Recovery Ventilators) and ERVs (Energy Recovery Ventilators) contain fully featured 5 Speed electronics to provide complete ventilation control.

The **Lifestyle MAX Digital Control** (included with each unit) should be mounted in an central location of the building.

Electronic features include:

- 5 Speed Operation on each mode
- 2 user selectable operational modes to provide
  - Continuous Ventilation
  - 20 Minutes ON, 40 Minutes OFF
- Humidity Control through dehumidistat
- Automatic Dehumidistat Disable
- Built-in Relay for interfacing to an Air Handler/Furnace

⚠ CAUTION

Before installation, careful consideration must be given to how this system will operate if connected to any other piece of mechanical equipment, i.e. a forced air furnace or air handler, operating at a higher static. After installation, the compatibility of the two pieces of equipment must be confirmed, by measuring the air flows of the HRV/ERV, by using the balancing procedure found in this manual. NEVER install a ventilator in a situation where its normal operation, lack of operation or partial failure may result in the backdrafting or improper functioning of vented combustion equipment.

⚠ ATTENTION

Do not apply electrical power to the unit until installation has been fully completed (including low voltage control wiring).

LEAVE WITH UNIT

TO BE COMPLETED BY CONTRACTOR AFTER INSTALLATION

Installing Contractor _____ Telephone / Contact _____

Serial Number _____ Installation Date _____

Model _____

Select the Correct HRV/ERV to Match your Climate

HRV

A Heat Recovery Ventilator (HRV) is designed to provide fresh air into a building while exhausting an equal amount of stale air. During the winter months, the incoming cold fresh air is warmed by utilizing the heat recovered from the stale air before it is exhausted to the outdoors. During summer months, when the indoor space is air conditioned, the Heat Recovery Ventilator will help in cooling the incoming fresh air with the stale air that is being exhausted.

ERV

An Energy Recovery Ventilator (ERV) is designed to provide fresh air into a building while exhausting an equal amount of stale air. An ERV is designed for use in warm humid areas with heavy air conditioning use. The ERV will transfer both sensible and latent heat from the incoming fresh air to the outgoing stale air thereby reducing the load (due to ventilation) on the air conditioning system.

ERVs are not suitable for climates where the temperature drops below -4°C (25°F) for more than five days.

Severe Conditions
HRV required

Moderate Conditions
HRV recommended

Pacific Conditions
HRV recommended
ERV optional*

Arid Zone - Dry Climate
HRV recommended

Extreme Area - High Humidity**
ERV recommended*

* ERV not recommended where temperatures fall below 25˚F (-4˚C) for more than five days.
** ERV's are recommended in regions where high outdoor humidity is cause for operating air conditioning/dehumidification more frequently than heating system.

ERV Questions and Answers

What is the difference between an HRV and an ERV?

The core in an HRV (Heat Recovery Ventilator) transfers heat from one air stream to the other. This is called sensible heat. The term ERV (Energy Recovery Ventilator) is usually used to describe a unit with an enthalpic core that transfers moisture as well as heat from one air stream to the other. This (moisture transfer) is called latent heat.

Enthalpic - what does it mean?

Enthalpy is the term used to describe the energy content of air. This energy is a combination of the sensible and latent heat. Therefore, a core which transfers energy is called an enthalpic core.

Is an ERV better than an HRV?

NOT NECESSARILY! In cold climates such as most of North America, an HRV works better than an ERV. This is because the air inside the home during the winter months will be more humid than the outside air. An ERV would transfer the latent heat (humidity) from the exhaust air back into the incoming airstream. This will aggravate moisture problems in the home and encourage the growth of mold and mildew. If the air in the home is too dry for comfort, an ERV will not help. A humidifier should be used to increase the humidity to a comfortable level.

Where do you use an ERV instead of an HRV?

An ERV is recommended for warm, humid areas with heavy air conditioning use. As there is no defrost in an ERV it is not recommended for areas where the temperature drops below -4°C (25°F) for more than five days.

Why transfer moisture in the summer (cooling season)?

The enthalpic core will allow moisture to be transferred from a humid air flow to a dry air flow. This property is useful in the cooling season if an air conditioning system is used to lower the indoor humidity. You will then have dry, cool air in the exhaust of the ERV, and warm humid air in the supply stream. With these conditions, the ERV will be able to transfer the moisture and heat of the supply air to the exhaust air. In this way, the ERV will supply to the home air which is cooler and drier than outside. Remember that an ERV is not a dehumidifier, and on its own will not take moisture out of the air.

So why use an ERV?

A properly operating air conditioner will not only lower the temperature in your house, but will also lower the humidity level. This prevents an uncomfortable cold and damp situation. In fact, about 2/3 of the energy used by the air conditioner system is to remove moisture. Therefore, when ventilating in the summer, less moisture brought into the home means less work for the air conditioner, and energy savings for you.

What's the difference between this type of core and a rotary type?

Here's a list of characteristics of the fixed plate core.

1. No rotating parts, so maintenance is easy and the unit lasts a long time.
2. It is very flexible in terms of installation.
3. The core can easily be changed.
4. Because the supply and exhaust air streams are completely separate, there is very little cross leakage of any dust or germs.

Can the core become clogged with dust?

Because the surface of the core is a turbulent flow area, dust sticks to it easily; however, because the inside of the element is a laminar flow area, virtually no dust sticks to it.

What is the maintenance?

About once a year you should either rinse the ERV core with warm water or use a vacuum cleaner to remove dust from the core's surface.

Is an air filter needed?

To prevent clogging of the core, an air filter should always be installed on the supply and exhaust sides of the core.

How much ventilation do I need?

During seasons when your windows and doors are closed, the ERV should operate continuously when the dwelling is occupied, and either continuously or intermittently when not occupied.

For most installations the ERV will normally be set to operate continuously on low speed with the option of going to high speed as the need arises. For example; if you are entertaining and there is a large number of people present (some may be smoking), the unit should be switched to high speed.

Your ERV may be equipped with automatic or manual switches, but all ERVs will have a manual speed control override.

⚠ ATTENTION

The ERV - Enthalpic Core is not suitable for climates where the outdoor temperature drops below -4°C (25°F).

⚠ ATTENTION

Use the HRV core for ventilating smoking rooms regardless of the geographical location.

LIFEBREATH
THE ULTIMATE AIR EXCHANGER

Model 500DCS

ENGINEERING DATA

CORES
Two modular (two section) aluminum HRV cores arranged for high efficiency cross-flow ventilation.

MOTORS
Two PSC, 5 speed double shafted, 120 VAC, 3.15 A motors. (6.3 A total on high speed) with 1/10 hp at 1625 RPM. Total of 610 watts on High speed.

BLOWERS
Centrifugal-type rated at 530 cfm (250 L/s) free air delivery. Each air stream has two centrifugal blowers driven by four PSC motors.

FILTERS
Washable air filters in exhaust and supply air streams.

DEFROST
Supply bypass damper routes indoor air to defrost cores.

WEIGHT 178 lbs. (81 kg) **SHIPPING WEIGHT** 203 lbs. (92 kg)

CONNECTION DUCT SIZES
Four 14"x 8" (356 mm x 200 mm)

MOUNTING
Unit to be set on support brackets hung by threaded rod-type apparatus (brackets and rods not included).

CASE
Twenty gauge pre-painted galvanized steel (G60) for superior corrosion resistance. Insulated with foil faced insulation duct liner where required to prevent exterior condensation. One drain connection 1/2" (12 mm) OD.

CONTROLS & ELECTRONICS
The **Lifestyle MAX Digital Control (99-DXPL01)** is included with the unit and can be wall mounted in a central location of the home. (3 wire) 20 gauge wire (min.) 100' length

Electronic features include:

- 5 Speed Operation on each mode
- 2 user selectable operational modes: Continuous Ventilation, 20 ON/40 OFF
- Humidity Control through dehumidistat
- Adjustable Dehumidistat function built into the main wall control
- Built-in Relay for Interfacing to furnace

OPTIONAL PROGRAMMABLE CONTROL
99-LS-01 **Lifestyle MAX Programmable Control** - contains all the features of the Lifestyle MAX Digital Control with 7/24 programmable ventilation, (3 wire) 20 gauge wire (min.) 100' length

OPTIONAL ACCESSORIES
99-DH-01 **Lifestyle Dehumidistat -** Initiates high speed ventilation when the indoor humidity level is above the set point. (3 wire) 20 gauge wire (min.) 100' length

OPTIONAL TIMERS
99-DET01 **Lifestyle 20/40/60 Minute Timer** - Initiates high speed ventilation for 20, 40, or 60 minutes, (3 wire) 20 gauge wire (min.) 100' length

99-20M01 **Lifestyle 20 Minute Timer** - Initiates high speed ventilation for 20 minutes, (3 wire) 20 gauge wire (min.) 100' length.

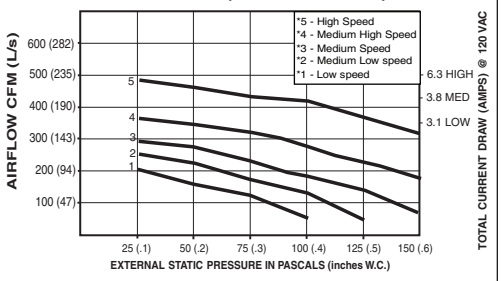
WARRANTY Units carry a 15 year warranty on the heat recovery core and a 2 year replacement parts warranty.

PERFORMANCE

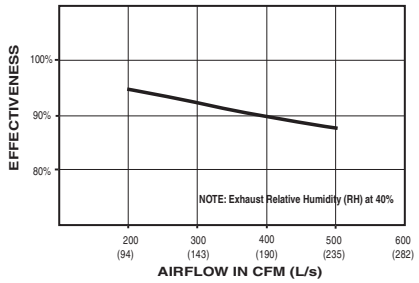
Net supply airflow in cfm (L/s) against external static pressure

E.S.P	*cfm*	*L/s*
@ 0.1" (25 Pa)	488	(229)
@ 0.2" (50 Pa)	461	(217)
@ 0.3" (75 Pa)	440	(207)
@ 0.4" (100 Pa)	436	(205)
@ 0.5" (125 Pa)	371	(174)
@ 0.6" (125 Pa)	326	(153)
VAC @ 60HZ		120
WATTS / Low speed		187
WATTS / High speed		610
Amp rating		2.9

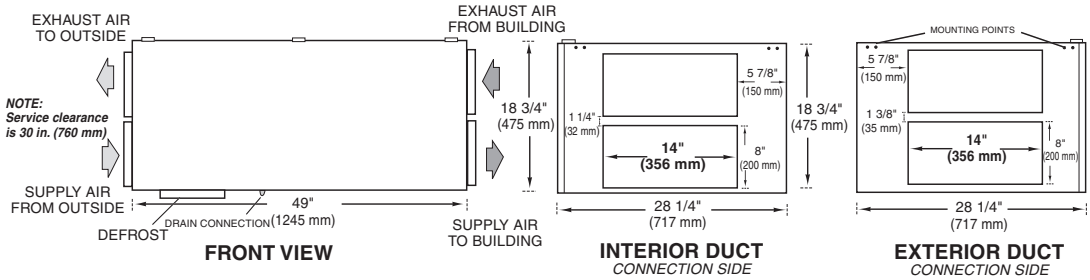
AIRFLOWS (Each Air Stream)



TEMPERATURE EFFECTIVENESS



All units conform to CSA and UL standards.



Date: _____ Contractor: _____

Tag: _____ Qty: _____ Supplier: _____

Project: _____ Quote#: _____

Engineer: _____ Submitted by: _____

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ISO 9001 REGISTERED

LIFEBREATH
THE ULTIMATE AIR EXCHANGER

Model 500DCS-REV

ENGINEERING DATA

CORES
Two modular (two section) aluminum HRV cores arranged for high efficiency cross-flow ventilation.

MOTORS
Two PSC, 5 speed double shafted, 120 VAC, 3.15 A motors. (6.3 A total on high speed) with 1/10 hp at 1625 RPM. Total of 610 watts on High speed.

BLOWERS
Centrifugal-type rated at 530 cfm (250 L/s) free air delivery. Each air stream has two centrifugal blowers driven by four PSC motors.

FILTERS
Washable air filters in exhaust and supply air streams.

DEFROST
Supply bypass damper routes indoor air to defrost cores.

WEIGHT 178 lbs. (81 kg) **SHIPPING WEIGHT** 203 lbs. (92 kg)

CONNECTION DUCT SIZES
Four " x 8" (356 mm x 200 mm)

MOUNTING
Unit to be set on support brackets hung by threaded rod-type apparatus (brackets and rods not included).

CASE
Twenty gauge pre-painted galvanized steel (G60) for superior corrosion resistance. Insulated with foil faced insulation duct liner where required to prevent exterior condensation. One drain connection 1/2" (12 mm) OD.

CONTROLS & ELECTRONICS
The **Lifestyle MAX Digital Control (99-DXPL01)** is included with unit and can be wall mounted in a central location of the home. (3 wire) 20 gauge wire (min.) 100' length

Electronic features include:

- 5 Speed Operation on each mode
- 2 user selectable operational modes: Continuous Ventilation, 20 ON/40 OFF
- Humidity Control through dehumidistat
- Adjustable Dehumidistat function built into the main wall control
- Built-in Relay for Interfacing to furnace

OPTIONAL PROGRAMMABLE CONTROL
99-LS-01 **Lifestyle MAX Programmable Control** - contains all the features of the Lifestyle MAX Digital Control with 7/24 programmable ventilation, (3 wire) 20 gauge wire (min.) 100' length

OPTIONAL ACCESSORIES
99-DH-01 **Lifestyle Dehumidistat -** Initiates high speed ventilation when the indoor humidity level is above the set point. (3 wire) 20 gauge wire (min.) 100' length

OPTIONAL TIMERS
99-DET01 **Lifestyle 20/40/60 Minute Timer** - Initiates high speed ventilation for 20, 40, or 60 minutes, (3 wire) 20 gauge wire (min.) 100' length

99-20M01 **Lifestyle 20 Minute Timer** - Initiates high speed ventilation for 20 minutes, (3 wire) 20 gauge wire (min.) 100' length.

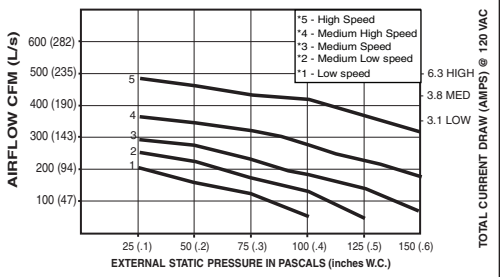
WARRANTY Units carry a 15 year warranty on the heat recovery core and a 2 year replacement parts warranty.

PERFORMANCE

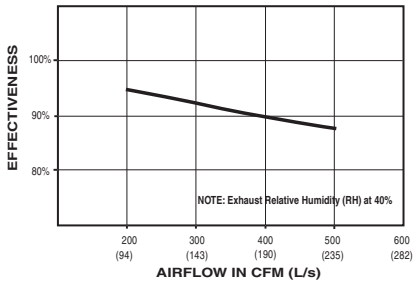
Net supply airflow in cfm (L/s) against external static pressure

E.S.P	*cfm*	*L/s*
@ 0.1" (25 Pa)	488	(229)
@ 0.2" (50 Pa)	461	(217)
@ 0.3" (75 Pa)	440	(207)
@ 0.4" (100 Pa)	436	(205)
@ 0.5" (125 Pa)	371	(174)
@ 0.6" (125 Pa)	326	(153)
VAC @ 60HZ		120
WATTS / Low speed		187
WATTS / High speed		610
Amp rating		2.9

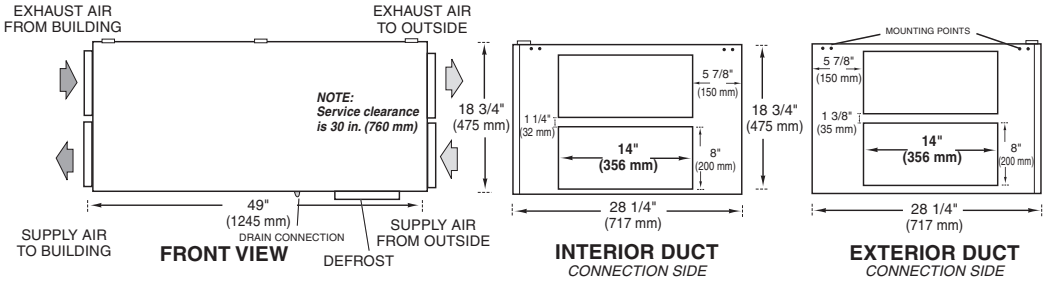
AIRFLOWS (Each Air Stream)



TEMPERATURE EFFECTIVENESS



All units conform to CSA and UL standards.



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ISO 9001 REGISTERED

LIFEBREATH
THE ULTIMATE AIR EXCHANGER

Model 500ERV

ENGINEERING DATA

CORES
One modular (two section) aluminum HRV cores and one modular (2 section) ERV core arranged for high efficiency cross-flow ventilation.

MOTORS
Two PSC, 5 speed double shafted, 120 VAC, 3.15 A motors. (6.3 A total on high speed) with 1/10 hp at 1625 RPM. Total of 610 watts on High speed.

BLOWERS
Centrifugal-type rated at 530 cfm (250 L/s) free air delivery. Each air stream has two centrifugal blowers driven by four PSC motors.

FILTERS
Washable air filters in exhaust and supply air streams.

DEFROST
Supply bypass damper routes indoor air to defrost cores.

WEIGHT 178 lbs. (81 kg) **SHIPPING WEIGHT** 203 lbs. (92 kg)

CONNECTION DUCT SIZES
Four ” x 8” (356 mm x 200 mm)

MOUNTING
Unit to be set on support brackets hung by threaded rod-type apparatus (brackets and rods not included).

CASE
Twenty gauge pre-painted galvanized steel (G60) for superior corrosion resistance. Insulated with foil faced insulation duct liner where required to prevent exterior condensation. One drain connection 1/2" (12 mm) OD.

CONTROLS & ELECTRONICS
The **Lifestyle MAX Digital Control (99-DXPL01)** is included with the unit and can be wall mounted in a central location of the home. (3 wire) 20 gauge wire (min.) 100' length

Electronic features include:

- 5 Speed Operation on each mode
- 2 user selectable operational modes: Continuous Ventilation, 20 ON/40 OFF
- Humidity Control through dehumidistat
- Adjustable Dehumidistat function built into the main wall control
- Built-in Relay for Interfacing to furnace

OPTIONAL PROGRAMMABLE CONTROL
99-LS-01 **Lifestyle MAX Programmable Control** - contains all the features of the Lifestyle MAX Digital Control with 7/24 programmable ventilation, (3 wire) 20 gauge wire (min.) 100' length

OPTIONAL ACCESSORIES
99-DH-01 **Lifestyle Dehumidistat -** Initiates high speed ventilation when the indoor humidity level is above the set point. (3 wire) 20 gauge wire (min.) 100' length

OPTIONAL TIMERS
99-DET01 **Lifestyle 20/40/60 Minute Timer** - Initiates high speed ventilation for 20, 40, or 60 minutes, (3 wire) 20 gauge wire (min.) 100' length

99-20M01 **Lifestyle 20 Minute Timer** - Initiates high speed ventilation for 20 minutes, (3 wire) 20 gauge wire (min.) 100’ length.

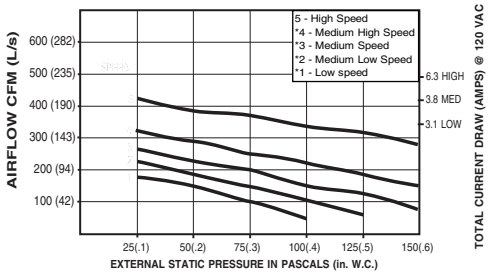
WARRANTY The aluminum core has a fifteen (15) year warranty. The enthalpic core has a two (2) year replacement parts warranty. The 500ERV carries a two (2) year replacement parts warranty.

PERFORMANCE

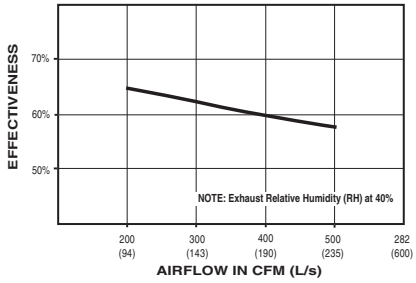
Net supply airflow in cfm (L/s) against external static pressure

E.S.P	*cfm*	*L/s*
@ 0.1” (25 Pa)	415	(195)
@ 0.2” (50 Pa)	392	(185)
@ 0.3” (75 Pa)	371	(175)
@ 0.4” (100 Pa)	344	(162)
@ 0.5” (125 Pa)	315	(149)
@ 0.6” (150 Pa)	277	(131)
VAC @ 60HZ		120
WATTS / Low speed		187
WATTS / High speed		610
Amp rating		2.9

AIRFLOWS (Each Air Stream)

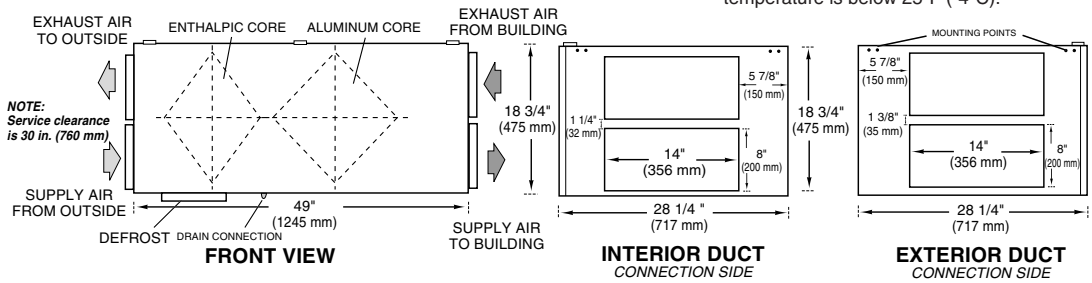


TOTAL EFFECTIVENESS



All units conform to CSA and UL standards.

ERVs are not recommended for regions where the design temperature is below 25ºF (-4ºC).



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ISO 9001 REGISTERED

Controlling your HRV/ERV

Today's modern, tight buildings require fresh outdoor air to maintain a healthy indoor air environment. The amount of ventilation you require in the building will depend upon:

• the number of occupants and their activity levels,

• the way the building was built.

• your personal preferences for fresh air,

The HRV/ERV introduces fresh air to the building while recovering energy from the air it exhausts. Specifically, an HRV/ERV that is properly installed, operated and maintained will:

- exhaust stale, contaminated air
- recover the majority of the energy from the exhausted stale air
- use the recovered energy to preheat or precool outside air that is drawn into the building
- distribute the fresh air throughout the building

HOW MUCH VENTILATION DO I NEED?

During seasons when your windows and doors are closed (winter, and summer if air conditioned), the HRV/ERV should be set to operate continuously on low speed with the option of going to high speed as the need arises. For example, if you are entertaining and there is a large number of people present, the unit should be switched temporarily to high speed.

You may wish to use an intermittent operational mode if the building is unoccupied (20 minutes ON / 40 minutes OFF).

Selecting the Mode of Operation that's Right for You

Your Lifebreath MAX SERIES HRV/ERV has 2 Operational Modes and 5 speeds on each mode to adjust indoor ventilation levels. Experiment with the ventilation levels in the building to determine a suitable amount of ventilation.

I. Continuous Ventilation Mode

This is the most popular mode since it provides continuous ventilation within the building. You may, for example, select Continuous Ventilation at high speed for high household activity levels or Continuous Ventilation for lower activity levels.

II. 20 minutes ON, 40 minutes OFF Mode

This Operational Mode will provide 20 minutes of ventilation each hour. You may wish to use this ventilation mode in low speed for low activity levels or if the building is unoccupied.

GOOD	Standby (fan speed set to 0)	Allows unit to run on demand from remote controls such as DET Timer and Dehumidistat.
BETTER	Intermittent low speed operation 20 ON/40 OFF	Provides 20 minutes air exchange and 40 minutes off.
BEST	Continuous low speed operation	Ensures continuous air exchange within the building. Air is always fresh and healthy.

Glossary

DEFROST MODE - to ensure reliable operation during cold weather, the HRV/ERV will automatically cycle through its defrost mode as needed.

DEHUMIDISTAT - a control device that senses the amount of moisture in the air and activates high speed ventilation when the air moisture level in the home exceeds the set point.

RESET - whenever resetting of the HRV/ERV is required, disconnect power for 30 seconds. The Self Test will occur when the HRV/ERV is re reconnected.

SELF TEST - each time the HRV/ERV is powered/energized the self test function will automatically initiate. During the self test the HRV/ERV will cycle through all the speeds available (1-5), test the damper motor operation and will default back to the previous operational mode and speed selection. Total self test duration is approximately 90 seconds.

STANDBY MODE - the HRV/ERV is powered/energized and waiting for fan operation to be initiated. For example, the HRV is set a Continuous Ventilation Operational Mode at Speed 0.

THERMISTOR - the HRV/ERV's temperature sensor which measures electrical resistance in a known manner, as outdoor temperatures fluctuate.

The Lifestyle MAX Digital Control (Included Wall Control)

Part # 99-DXPL01

The **Lifestyle MAX Digital Control** is fully digital and allows you to easily control the building's ventilation.

Key Features

- 5 Speed Fan setting
- Electronic Dehumidistat
- Two Selectable Modes of Operation
  20 min. On / 40 min. Off
  Continuous Ventilation
- 20 / 40 /60 High Speed override timer
- Service/Maintenance Reminder display
- Backlit LCD screen is easy to read

* Recirculation not available on all models

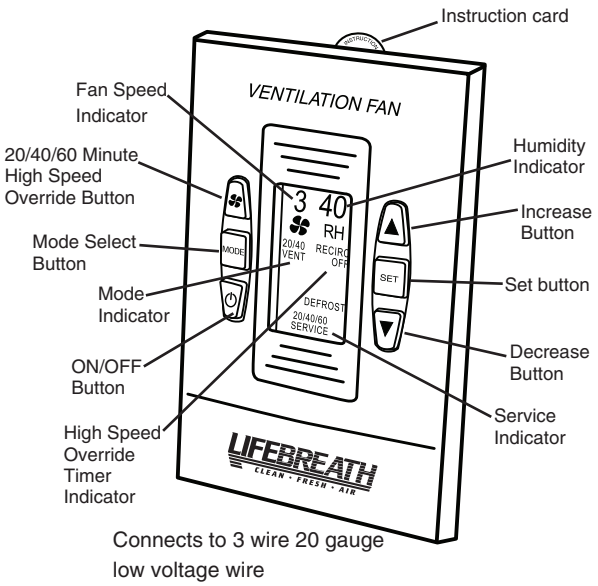
Setting the Control

1. Press and release MODE Select Button until the FAN symbol appears on the screen. Press the SET Button.
2. SCROLL (using Increase/Decrease Buttons) to select desired fan speed (0-5). Press SET Button.
3. SCROLL to select the desired operational mode (VENT, 20/40, OFF). Press SET. (Refer to "Operational Modes" in this manual.)

Setting the Dehumidistat

Refer to "How the Dehumidistat Works" in this manual before setting the Dehumidistat.

1. Press and release MODE until "RH" and a number flashes. SCROLL to desired number. Press MODE Select Button to exit.
2. Press MODE Select Button to return to operational features.



20/40/60 Minute High Speed Override Button

This function temporarily initiates high speed ventilation for 20, 40 or 60 minutes. Press FAN button once for 20, twice for 40 and three times for 60 minutes.

Service Indicator

After 4 months, a 'SERVICE' indicator will appear. Refer to "Maintenance Routine for your HRV/ERV" in this manual.

To reset the service indicator:

- Press and release the Increase/Decrease buttons simultaneously. The "SERVICE" icons will flash for 5 seconds..
- Press SET within the 5 seconds and the service indicator will reset.

How the Dehumidistat Works

Often today's well insulated and tight buildings will have high indoor humidity levels during the heating season. Visible condensation on windows indicates a high level of humidity. The amount of condensation on the windows will increase as outdoor temperatures drop.

Your HRV/ERV will reduce indoor humidity levels when outdoor air is drier than indoor air. This usually occurs during the heating season when outdoor temperatures are less than 15°C (59°F).

Your **Lifestyle MAX Digital Control** or the optional **Lifestyle MAX Programmable Control** has an adjustable dehumidistat which can be set to achieve a further dehumidification effect from your HRV/ERV. High speed ventilation will be initiated upon exceeding the dehumidistat set point regardless of the mode and speed of operation. Once the humidity in the building is reduced, the HRV/ERV will revert back to its previous setting.

We suggest operating the HRV/ERV for the first few days without use of the dehumidistat function to observe if a further dehumidification effect will be required. The dehumidistat operates in % of RH (relative humidity) with 80 being high and 20 being low. Set the Dehumidistat to 80% to disable. If, after a few days, further dehumidification is required (the building is still too humid), set the humidity level to a lower amount.

The average person is comfortable between 30-50% RH. The dehumidistat should be set to OFF for all seasons except the heating season. OFF is achieved by setting the dehumidistat to 80.

Dehumidistat Notes:

The dehumidistat function will be disabled if outdoor temperatures exceed 15°C (59°F) for a 24 hour period.

The dehumidistat function will be re-enabled if the unit is unplugged for 3 minutes or if the outdoor temperature drops below 15°C (59°F) for a 24 hour period.

How to Synchronize the Humidity Setting

The Lifestyle Digital wall control has a feature that will allow it to be synchronized with other humidity instruments in the building.

1. Turn off the control with the ON/OFF button.
2. Simultaneously press and release the ON/OFF button and the 20/40/60 Minute High Speed override button.
3. Use the Increase/Decrease buttons to adjust the Humidity Indicator on the display screen to the number of degrees difference between your humidity measuring device. Minus is indicated by flashing.
4. Press the MODE button.

The Lifestyle MAX Programmable Control (Optional)

Part # 99-LS-01

The optional **Lifestyle MAX Programmable Control** is fully digital and allows you to program when and how much fresh air will be entering the building.

Key Features

- 24 / 7 programmable ventilation
- 4 programmable events per day
- 5 Speed Fan setting
- Electronic Dehumidistat
- Two Selectable Modes of Operation
  20 min. On / 40 min. Off
  Continuous Ventilation
- 20 / 40 /60 High Speed override timer
- Service/Maintenance Reminder display
- Backlit LCD screen is easy to read

Setting Date & Time

1. Press and release MODE Select Button until "TIME" and "SET" appear on the screen. Press SET Button.
2. The letter for the day of the week flashes. SCROLL (using Up/Down Arrows) to the correct day of the week. Press SET Button.
3. The hour and "AM" or "PM" flashes. SCROLL to the correct hour using the Increase or Decrease Buttons. Press SET button.
4. The minutes will flash. SCROLL to the correct minute. Press SET button to complete entry.

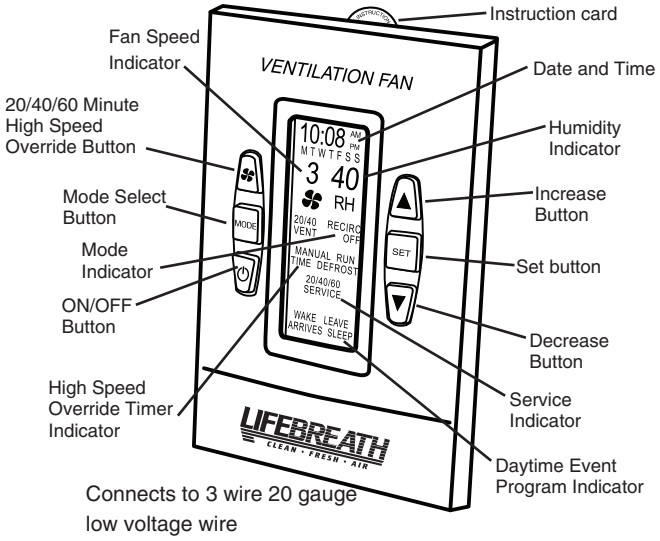
Programming Your Control

1. Press and release the MODE Button until "PROGRAM SET" appears. Press SET Button.
2. Weekday letters (MTWTF) will flash. Press SET Button.
3. "WAKE" flashes. Press SET Button.
4. "AM" or "PM" flashes. SCROLL to desired time (in 20 minute intervals). Press SET Button.
5. "FAN" flashes. SCROLL to desired fan speed (0-5). Press SET Button.
6. "OFF" flashes. SCROLL to desired operation mode (VENT, 20/40, OFF). Press SET Button two times. (Refer to "Selecting the Best Mode of Operation" in this manual for a description of operational modes.)
7. "LEAVE" flashes. Repeat steps 4 to 6 to program up to 4 events per day.
8. “ARRIVE” flashes. Repeat steps 4 to 6 to program up to 4 events per day.
9. “SLEEP” flashes. Repeat steps 4 to 6 to program up to 4 events per day.
10. “Weekend” letters (SS) flash. Press SET. Repeat steps 3 to 9.

Running the Programmed Setting

Once the programming has been completed you must activate the program.

- Press the MODE Button until "PROGRAM" and "RUN" are indicated.



⚠ ATTENTION

Only one main control can be installed on your system.

Setting the Dehumidistat

Refer to "How the Dehumidistat Works" in this manual before setting the Dehumidistat.

1. Press and release the MODE Button until "RH" and a number flashes. SCROLL using the Increase or Decrease Buttons to desired number (RH Set Point). Press the MODE Button to exit. Refer to "How the Dehumidistat Works" in this manual for a description of the functionality of the Dehumidistat.
2. Press the MODE Button to return to operational features.

Manually Setting the Control

1. Press and release MODE until "MANUAL" and "RUN" are indicated. Press SET.
2. SCROLL to select desired fan speed (0-5). Press SET.
3. Use SCROLL to select the desired operational mode (VENT, 20/40). Press SET.
4. The control will remain in the "MANUAL RUN" position until you change back to "PROGRAM RUN" (refer to "Running the Programmed Setting").

20/40/60 Minute High Speed Override Button

This function temporarily initiates high speed ventilation for 20, 40 or 60 minutes. Press FAN button once for 20, twice for 40 and three times for 60 minutes.

Service Indicator

After 4 months, a ‘SERVICE’ indicator will appear. Refer to "Maintenance Routine for your HRV/ERV" in this manual.

To reset the service indicator:

- Press and release the Increase/Decrease buttons simultaneously. The “SERVICE” icons will flash for 5 seconds..
- Press SET within the 5 seconds and the service indicator will reset.

Optional Timers

Depending on the type of HRV/ERV installation, you may have timers in areas such as restrooms. The timer will override the Operational Mode (regardless of the setting) and initiate high speed ventilation. Upon completion of the timer cycle, the HRV/ERV will return to your selected Operational Mode and speed setting.

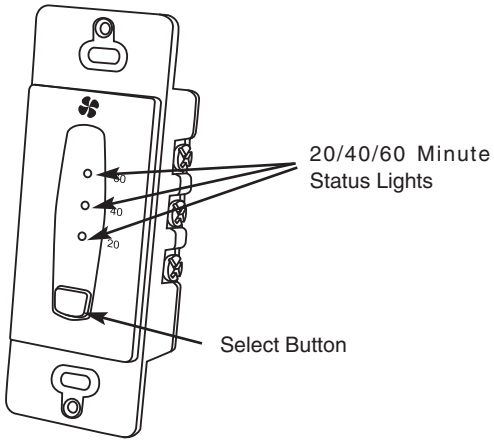
Lifestyle 20/40/60 Minute Timer

Part # 99-DET01

Initiates high speed ventilation for 20, 40 or 60 minutes. The 20/40/60 Minute Status Lights indicate high speed operation.

Lockout Mode is useful if you wish to disable the timer. Set lockout by holding the Select Button for 5 seconds. Unlock by holding for 5 seconds.

Connect to 3 wire 20 gauge low voltage wire. Mounts in a standard 2" x 4" electrical box.



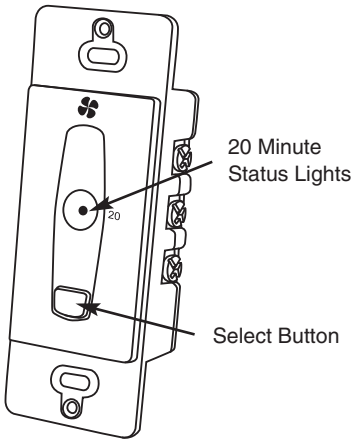
Lifestyle 20 Minute Timer

Part # 99-20M01

Initiates high speed ventilation for 20 minutes. The 20 Minute Status Light indicates high speed operation.

Lockout Mode is useful if you wish to disable the timer. Set lockout by holding the Select Button for 5 seconds. Unlock by holding for 5 seconds.

Connect to 3 wire 20 gauge low voltage wire. Mounts in a standard 2" x 4" electrical box.

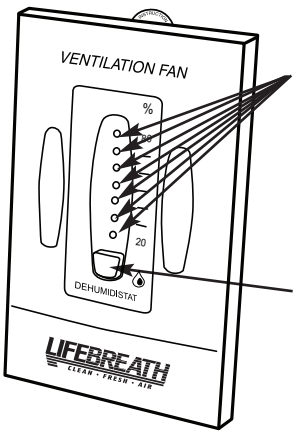


Lifestyle Dehumidistat

Part # 99-DH-01

Initiate high speed ventilation when the moisture level in the home exceeds the set point on the control. Once the humidity in the house is reduced, the HRV/ERV will revert back to its previous setting. The Dehumidistat should be set to OFF for all season except the heating season.

Refer to "How the Dehumidistat Works" in this manual before setting the Dehumidistat.



Dehumidistat LEDs
Set to the desired humidity level. High speed ventilation will initiate when the indoor moisture level exceeds the set point on the control.

Dehumidistat Adjust Button

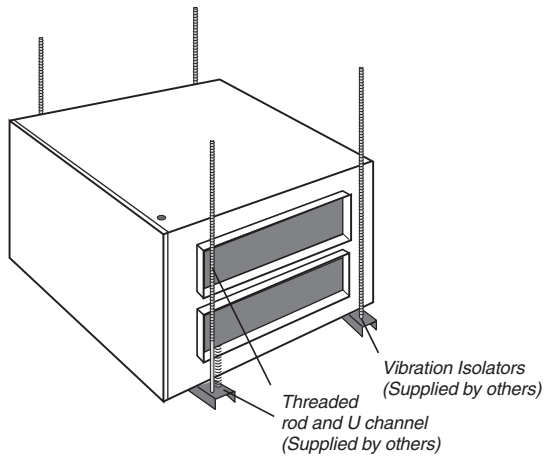
Location of the HRV/ERV for Mounting

The HRV/ERV must be located in a heated space where the surrounding air temperature does not fall below 60°F (16°C). The unit must be mounted level (horizontal) to obtain proper drainage of water from the heat exchange element and drip pans. The warranty will be void if these conditions are not met.

Typically, the HRV/ERV is positioned close to an outside wall or the roof to simplify the connections and keep the length of insulated ducting required for the fresh air intake to a minimum.

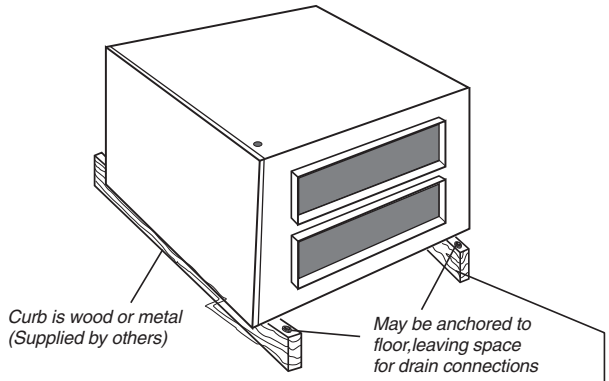
A minimum clearance of 30 inches (76 cm) in front of the HRV/ERV is recommended to service the heat exchanger cores and the filters. The HRV/ERV may be mounted on an equipment platform providing the drain hoses are clear and there is sufficient space to open the doors for servicing.

Saddle Installation



Hang unit with suspended rods and "U" channel members.

Curb Mounted



Mount unit on wooden or metal curb assembly. Unit must be raised an adequate height for installation and slope of drain lines.

⚠ ATTENTION

Flexible duct connectors should be installed between the HRV and the galvanized ductwork.

The Ductwork System

A properly designed ducting system will allow the HRV/ERV to operate at its maximum efficiency. (Air flow will be restricted by undersized ducting, use of too many elbows, tees, bends, etc.). Always try to keep duct runs as short and straight as possible.

NOTE: Fully insulated ducting with an integral vapor barrier must be used on all runs passing through unheated areas in order to avoid condensation problems and energy losses from the air steams.

All joints must be airtight, sealed and impervious to moisture. See specification sheets for each unit for exact duct sizes and location.

To minimize pressure drop and noise, galvanized metal ducts, properly sized, are recommended. Keep ducting as short as possible and use a minimum of elbows and tees. Connecting sections and shorter runs may be flexible ducting one size larger than the metal equivalent. Use flexible duct connectors at the HRV/ERV to avoid noise transmission.

All duct joints must be secured with screws, rivets or duct sealant and sealed with aluminum duct tape to prevent leakage.

⚠ ATTENTION

Fully insulated ducting with an integral vapour barrier must be used on all runs passing through unheated areas in order to avoid condensation problems and energy losses from the air systems.

Outside Weatherhoods

The weatherhoods must have built-in “bird” screen with 1/4 in (6.35 mm) minimum mesh to prevent birds and rodents from entering into the ductwork. **Do not** use smaller mesh as it will be very susceptible to plugging up. Gravity dampers at the vents must not be used as they will restrict air flow and often “seize up”. The preferred location of the outside weatherhoods is:

- no less than 10 ft. (3 m) apart from each other
- at least 18 in (46 cm) above snow line or ground level
- away from sources of contaminants, such as automobile exhaust fumes, gas meters, garbage cans, containers, etc.
- not exposed to prevailing winds

The outside perimeter of the weatherhood must be caulked to prevent leakage into the building.

The design and size of the weatherhoods or louvers chosen by the installer must allow for adequate free area. Water and debris penetration of the system is minimized when the airflow does not exceed 1000 FPM (5.08 m/s) free area velocity.

Ducting from the Weatherhoods

Galvanized sheet metal ducting with sufficient cross section with an integral single piece vapor barrier should be used to connect the HRV/ERV to the weatherhoods. **All ducting must meet UL Class 1 requirements.**

A minimum R value of insulation should be equal to 4 (RSI 0.75)

A good bead of high quality caulking (preferably acoustical sealant) and taping with a high quality aluminum foil tape is recommended to seal the duct to both the HRV/ERV and the weatherhood.

Stale Air Return System

The stale air return system is used to draw air from the points in the building where the worst air quality problems occur. Balancing dampers and/or adjustable grilles are recommended on all return air lines which are used during installation to help balance the "draw" from different areas of the building.

Alternatively, the stale air may be drawn directly from the return air duct. The airhandler/furnace blower must operate continuously or be interfaced with the Airhandler/Furnace when this system is used (refer to "Interlocking the HRV/ERV to an Airhandler/Furnace blower in this manual). The HRV/ERV exhaust take-off connection must be at least 3 ft (1 m) upstream from the HRV/ERV supply duct if both are connected to the same duct run.

A damper located just prior to the HRV/ERV is required to balance the stale air exhausted with the fresh air supply entering the building.

Return air suction points should be located on the opposite side of the room from the fresh air inlet. The inlets may be located in the ceiling or high on the walls and fitted with inlet grilles.

Many commercial activities produce air contaminants in the form of dusts, fumes, mists, vapors and gases. Contaminants should be controlled at the source so they are not dispersed through the building or allowed to increase to toxic concentration levels. The ventilator allows for economical operation of the HVAC system while effectively removing contaminants from the space. In designing the exhaust portion of the system the exhaust grilles are situated to remove the contaminants while not allowing them to enter the breathing zone of the occupants.

For contaminants lighter than air, grilles should be located high on the wall. If contaminants are heavier than air, a lower placement of the grilles will be required. Information on a contaminants specific gravity and toxicity should be available from chemical data sheets.

Fresh Air Supply System

The fresh air supply ductwork from the HRV/ERV may be directly connected to the return air duct of the forced air system. Check the air flow balance of the HRV/ERV with the air handler blower both "ON" and "OFF" to determine that it does not imbalance the HRV/ERV more than 10%. Also, it is advisable to include a short length of flex duct or other non-metallic connector in this hard ducted line in order to keep the HRV/ERV acoustically isolated and separately grounded (electrically) from the airhandler.

It may be necessary to install a separate fresh air supply ductwork system if the heating is other than forced air.

When installing an HRV/ERV, the designer and installer should be aware of local codes that may require smoke detectors and/or firestats in the HVAC or HRV/ERV ductwork.

Because an HRV/ERV is designed to bring fresh air into the building, structures may require supply voltage interrupt when smoke or flame sensors are triggered, or when a central fire alarm system is activated.

Supply air grilles may be ceiling or high wall mounted. Avoid locating incoming fresh air grilles that could cause a direct draft on the occupants as the incoming air may be below room temperature. A reheat duct heater can be installed to improve occupant comfort.

Adjustable Grilles

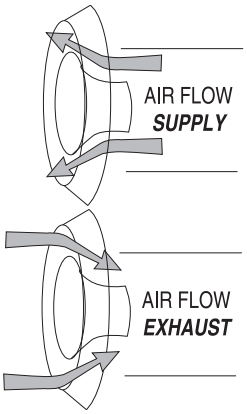
The use of balancing dampers or adjustable grilles as supply air diffusers and air exhaust covers are recommended. TECHGRILLES™ are round, efficient, sound absorbing devices available in 4", 5", 6" and 8" (100, 125, 150, and 200 mm) models.

Part# 99-EAG4 4" diameter Techgrille

Part# 99-EAG5 5" diameter Techgrille

Part# 99-EAG6 6" diameter Techgrille

Part# 99-EAG8 8" diameter Techgrille



The Integrated HVAC System

The HRV/ERV has become an integral component of the HVAC system. Figure A shows an HRV/ERV unit providing fresh air directly to the return air plenum of a rooftop heat/cool unit.

In the balanced airflow system, the HRV/ERV exhaust removes stale room air (eg. from lunch room, storage or copy area) and returns to the space an equal amount of fresh outdoor air, making the use of an economizer obsolete in conjunction with an HRV/ERV.

Many buildings have ceiling return air plenum as in Figure B. Fresh air from the HRV/ERV can be introduced directly into the ceiling space but this should occur near the air handler's intake.

The optional Lifestyle MAX Programmable Control (Part# 99-LS-01) can set the unit to operate when the occupancy or indoor conditions require the air exchanger.

ATTENTION!

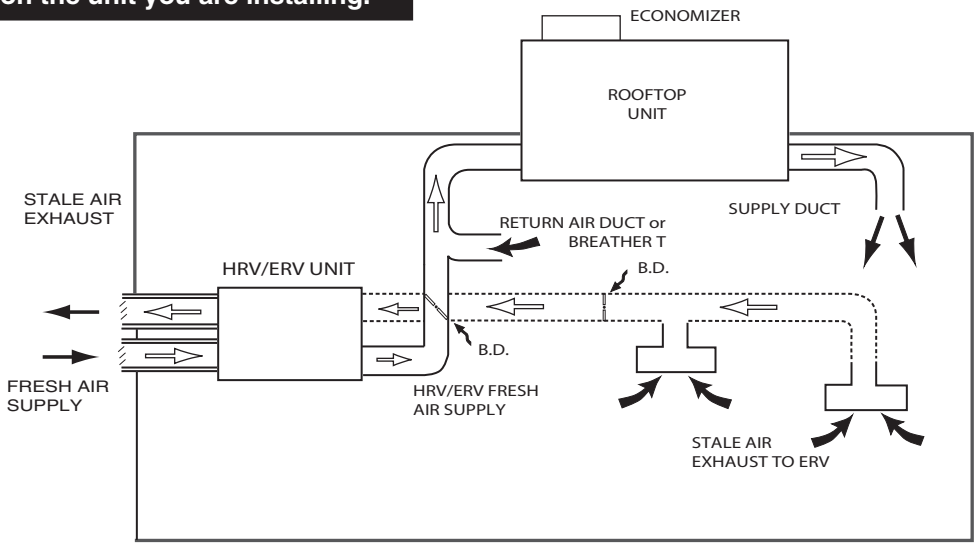
These Illustrations are examples. Be sure to verify the duct configuration of exhaust and intake on the unit you are installing.

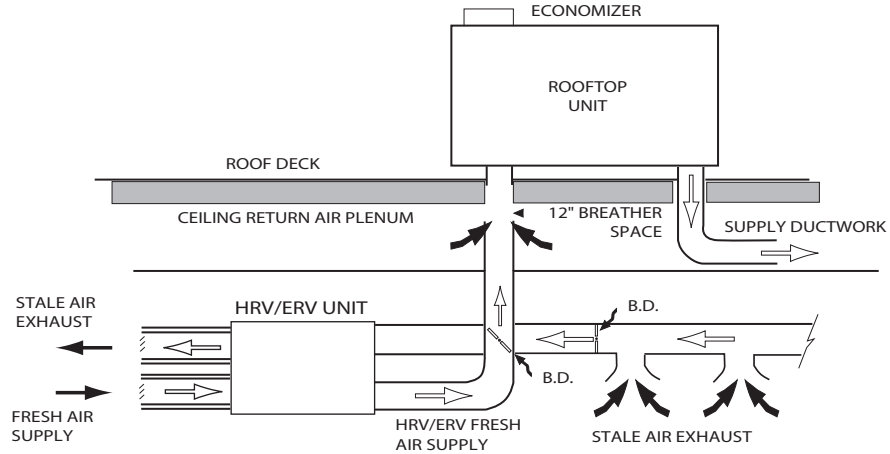
In installations where it is satisfactory to provide general exhaust from the space, the air to be exhausted may be taken directly from the return air plenum to the HRV/ERV as it is drawn back to the air handler. Fresh air supplied by the HRV/ERV is then introduced directly into the return air plenum but at a location closer to the air handler. The air handler would have a constant running blower to effectively distribute the fresh air and remove the stale air. Balancing dampers would be located in both the HRV/ERV supply and exhaust ducts between the return air plenum and the HRV/ERV.

NOTE: At no time should the air handler T.E.S.P. on the return duct exceed that of the HRV/ERV .

⚠ CAUTION

When interlocking a rooftop unit with an HRV/ERV, care must be taken to ensure the fans of both units operate in the correct rotation.





Drain Connection

The HRV/ERV may produce some condensation during a defrost cycle. This water should flow into a nearby drain, or be taken away by a condensate pump.

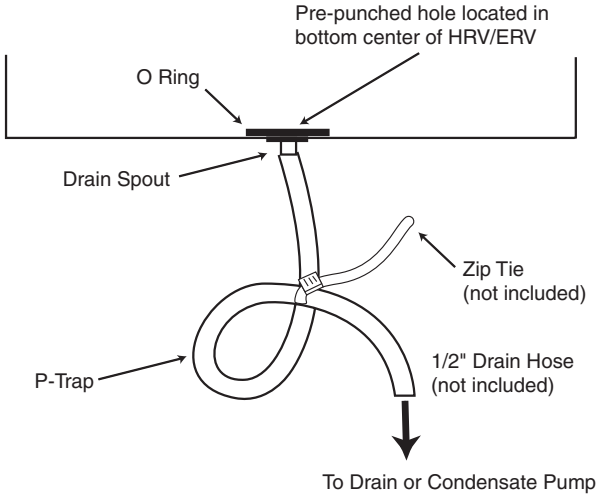
⚠ CAUTION

The HRV and all condensate lines must be installed in a space where the temperature is maintained above the freezing point or freeze protection must be provided.

The HRV/ERV cabinet has a pre-punched hole for the drain. Insert the drain spout through the hole in the drain pan. Be sure to install the "O ring" which seals each spout to the pan. HAND TIGHTEN the washer and lock nut which hold the drain spout in place.

Make a loop in a length of 1/2" drain hose to construct a P-Trap (drain hose not included). Ensure that the loop is large enough to avoid kinks and secure it with a zip tie (zip tie not included). Pour a cup of water into the drain pan of the HRV/ERV after the drain connection is complete. This creates a water seal that prevents odors from being drawn up the hose and into the fresh air supply of the HRV/ERV.

DRAIN HOSE PLUMBING



Note: Secondary drain pan may be required to protect from condensate leakage.

⚠ CAUTION

Drain trap and tubing MUST be below bottom of door with 1/4" per foot downwards slope away from unit.

Installation of the Main Control

The **Lifestyle MAX Digital Control** or optional **Lifestyle MAX Programmable Control** may be installed on either a flush mounted 2" x 4" electrical switch box or surface mounted on a wall.

Only 1 master control should be installed to a ventilation system (the Face Plate on this illustration may not be exactly the same as yours).

1. Remove the *Operating Instructions Card* from the top of the Control (Figure A).
2. Separate the *Face Plate* from the *Back Plate* by firmly pulling apart (Figure B). Be careful not to damage Face Plate Contact Pins.
3. Place the *Back Plate* of the control in the desired location on the wall and pencil mark the wall in the center of the *Wire Opening, Top Screw Hole* and *Bottom Screw Hole* (Figure C).
4. Remove the *Back Plate* and drill a 3/8" opening in the wall to allow for the *Wire Opening* and a 1/8" hole for the *Wall Anchors* for the top and bottom screw holes (Figure D).
5. Pull 3/20 wire through the opening in the wall and the *Wire Opening* of the *Back Plate* (Figure C).
6. Connect Red, Green and Yellow to the *Wiring Terminals* located on the *Back Plate* (Figure C).
7. Secure a single wire to the *Wire Retainer* located on the *Back Plate* (Figure C).
8. Attach the *Back Plate* to the wall using the 2 supplied screws and anchors.
9. Attach the *Face Plate* to the *Back Plate* (Figure B). Note: Be careful to correctly align the *Face Plate* to avoid damaging the *Face Plate Contact Pins*.
10. Insert the *Operating Instructions Card* into the control (Figure A).
11. Connect the 3/20 wire to the *Terminal Block* located on ventilator (Figure E).

⚠ ATTENTION

Pay special attention not to damage the Contact Pins when removing and detaching the Face Plate. (Figure B)

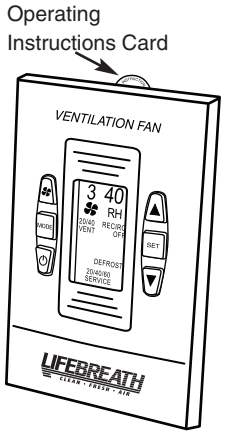


Figure A - Face Plate
(Illustration of Face Plate may vary from actual control)

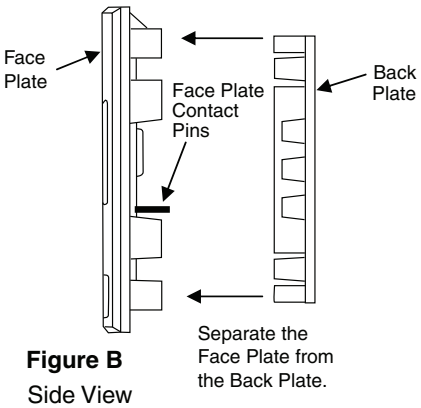


Figure B
Side View

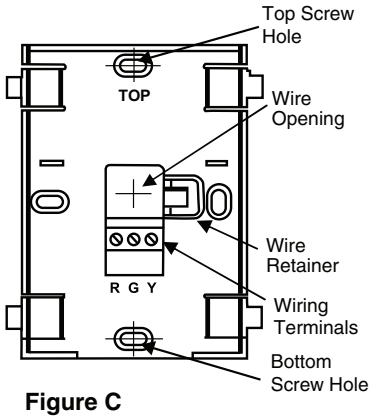


Figure C
Front View of Back Plate

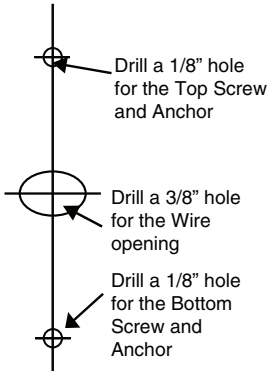


Figure D
Drill holes in wall

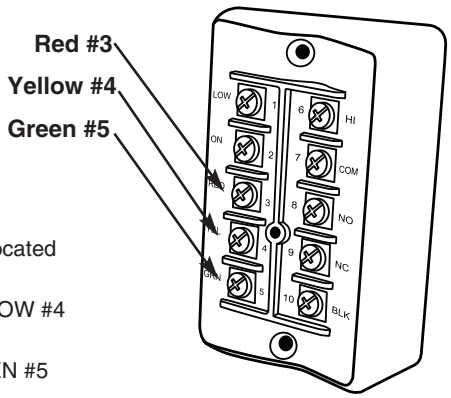


Figure E
Terminal Block located on ventilator
- Yellow to YELLOW #4
- Red to RED #3
- Green to GREEN #5

Use 3/20 wire

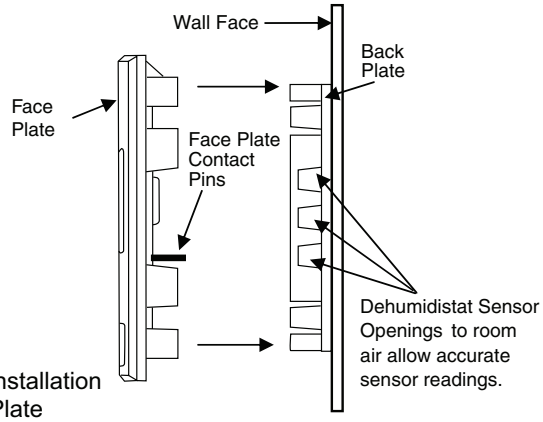


Figure F
Correct Installation of Back Plate

Installation and Operation 20/40/60 Minute Timers Part # 99-DET01

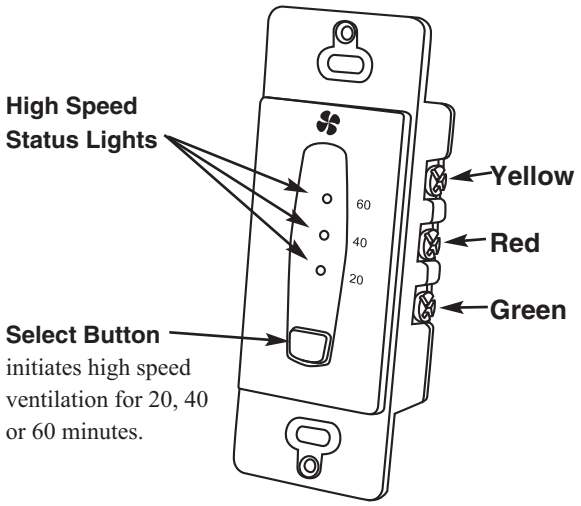
Operating your Lifestyle 20/40/60 Minute Fan Timer

Press and release the *Select Button* to activate a 20, 40 or 60 minute high speed override cycle. The *High Speed Status Light* will illuminate and the unit will run on high speed ventilation for the selected time.

The *High Speed Status Light* will dim after 10 seconds of run time.

The *High Speed Status Light* will flash during the last 5 minutes of the cycle.

All timers connected to the unit will illuminate for the duration of the override when the *Select Button* is pressed.



Lockout Mode

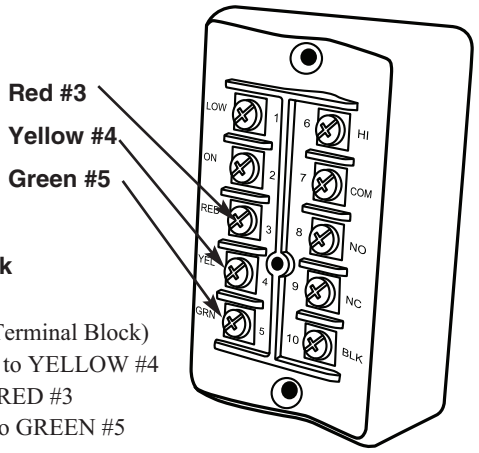
Lockout Mode is useful if you wish to disable the timers.

The timer can be set to lockout mode by pressing and holding the *Select Button* for five seconds. After five seconds, the *High Speed Status Light* will flash; release the *Select Button*. The timer is now in lockout mode. If the *Select Button* is pressed during lockout mode the *High Speed Status Light* will momentarily illuminate but no override will be initiated.

If lockout mode is initiated when the timer is activated, the timer will continue its timed sequence but will not allow any further overrides to be initiated. Lockout mode can be unlocked by pressing and holding the *Select Button* for five seconds. After five seconds the *High Speed Status Light* will stop flashing. Release the *Select Button* and the timer will now operate normally.

NOTE ABOUT TIMERS

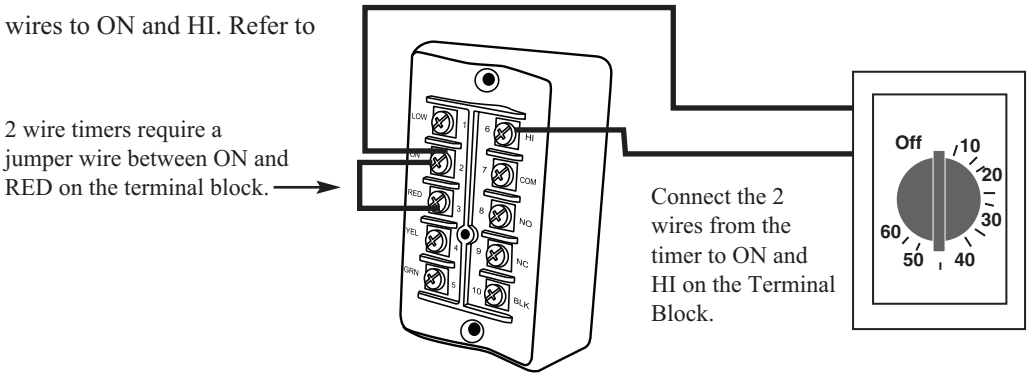
- **Timers mount in standard 2” x 4” electrical boxes.**
- **Wire multiple timers individually back to the unit.**
- **Use 3/20 low voltage wire**



Terminal Block Connections
(from Timer to Terminal Block)
Yellow on timer to YELLOW #4
Red on timer to RED #3
Green on timer to GREEN #5

Installation of Mechanical Timers Part # 99-101

The Mechanical timer is a 2 wire "dry contact" timer. A jumper wire must be connected between ON and RED. Connect the 2 timers wires to ON and HI. Refer to illustration.



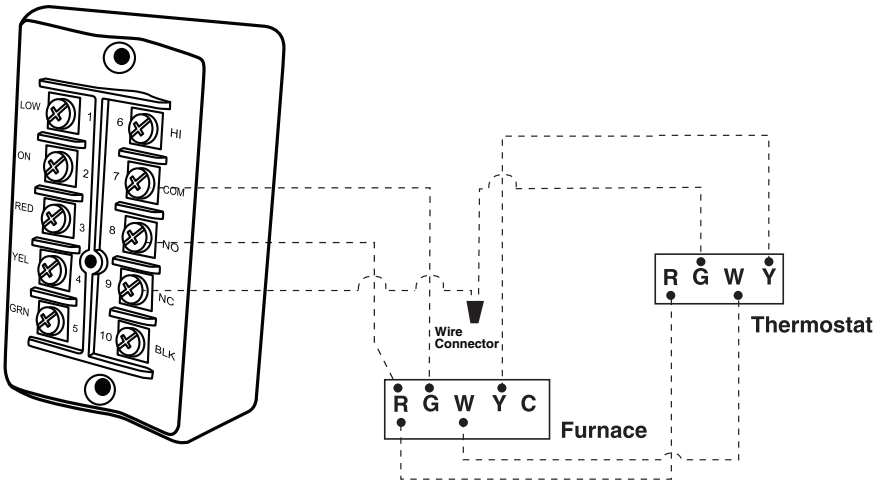
Interlocking the HRV/ERV to an Air handler/Furnace Blower

Connecting the HRV/ERV as illustrated will ensure the Air Handler/Furnace Blower Motor is operating whenever the HRV/ERV is ventilating.

The HRV/ERV must be interlocked to the Furnace/Air Handler with a Simplified Installation (Return/Return Installation) and should be interlocked with a Partially Dedicated Installation.

⚠ CAUTION

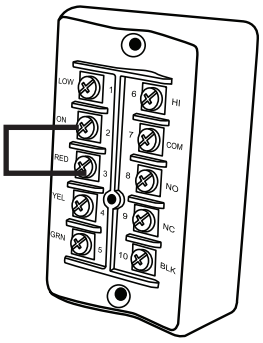
Consideration should be given to competing airflows when connecting the HRV/ERV in conjunction with an Air Handler/Furnace Blower system.



Setting "Standby" when using a Main Control

The HRV/ERV will be "fully-off" when the OFF position is selected on the Main Control. Timers and /or other controls will not function when the HRV/ERV is in the OFF position.
The "fully-off" feature can be modified to "standby-off" by adding a jumper on the Terminal Block between 2 (ON) and 3 (RED). "Standby" can also be achieved by setting the main control to the ON position and selecting speed 0*. Timers and /or additional controls will initiate high speed ventilation when activated.

* Speed 0 is not available on all controls



The Terminal Block
(located on the HRV/ERV

⚠ CAUTION

Building codes in some areas require "fully-off" functionality. Check with your local building authority before modifying the unit to "standby -off". Unintentional operation of the HRV/ERV by the end user may occur if the unit is modified from "fully-off" to "standby-off".

Operating the HRV/ERV without a Main Control and Adding Dry Contact Controls

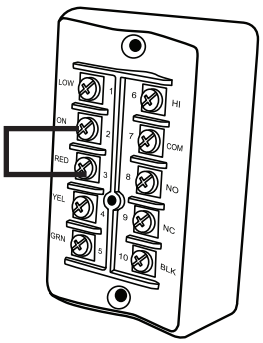
A jumper must be in place between 2 (ON) and 3 (RED) on the Terminal Block to activate the HRV/ERV for timers and/or dry contact controls.

Adding Dry Contact Controls

Low Speed - A jumper between 2 (ON) and 1 (LOW) initiates low speed ventilation.

High Speed - A jumper between 2 (ON) and 6 (HI) initiates high speed ventilation.

Dehumidistat - A dry contact for a dehumidistat is connected between 2 (ON) and 10 (BLK).



The Terminal Block
(located on the HRV/ERV

The HRV/ERV must have a Jumper in place between 2 (ON) and 3 (RED) on the Terminal Block when installing the unit without a Main Control.

It is necessary to have balanced air flows in an HRV/ERV. The volume of air brought in from the outside must equal the volume of air exhausted by the unit. If the air flows are not properly balanced, then;

- The HRV/ERV may not operate at its maximum efficiency
- A negative or positive air pressure may occur in the house
- The unit may not defrost properly
- Failure to balance HRV/ERV properly may void warranty

Excessive positive pressure may drive moist indoor air into the external walls of the building where it may condense (in cold weather) and degrade structural components. May also cause key holes to freeze up.

Excessive negative pressure may have several undesirable effects. In some geographic locations, soil gases such as methane and radon gas may be drawn into the home through basement/ground contact areas. Excessive negative pressure may also cause the backdrafting of vented combustion equipment.

Prior to balancing, ensure that:

1. All sealing of the ductwork system has been completed.
2. All of the HRV/ERV's components are in place and functioning properly.
3. Balancing dampers are fully open.
4. Unit is on HIGH speed.
5. Air flows in branch lines to specific areas of the house should be adjusted first prior to balancing the unit. A smoke pencil used at the grilles is a good indicator of each branch line's relative air flow.
6. After taking readings of both the stale air to the HRV/ERV duct and fresh air to the house duct, the duct with the lower CFM ([L/s] velocity) reading should be left alone, while the duct with the higher reading should be dampered back to match the lower reading.
7. Return unit to appropriate fan speed for normal operation

Balancing Procedure

The following is a method of field balancing an HRV/ERV using a Pitot tube, advantageous in situations when flow stations are not installed in the ductwork. Procedure should be performed with the HRV/ERV on high speed.

The first step is to operate all mechanical systems on high speed, which have an influence on the ventilation system, i.e. the HRV/ERV itself and the forced air furnace or air handler if applicable. This will provide the maximum pressure that the HRV/ERV will need to overcome, and allow for a more accurate balance of the unit.

Drill a small hole in the duct (about 3/16"), three feet downstream of any elbows or bends, and one foot upstream of any elbows or bends. These are recommended distances but the actual installation may limit the amount of straight duct.

The Pitot tube should be connected to a magnehelic gauge or other manometer capable of reading from 0 to 0.25 in. (0-62 Pa) of water, preferably to 3 digits of resolution. The tube coming out of the top of the pitot is connected to the high pressure side of the gauge. The tube coming out of the side of the pitot is connected to the low pressure or reference side of the gauge.

Insert the Pitot tube into the duct; pointing the tip into the airflow.

For general balancing it is sufficient to move the pitot tube around in the duct and take an average or typical reading. Repeat this procedure in the other (supply or return) duct. Determine which duct has the highest airflow (highest reading on the gauge). Then damper that airflow back to match the lower reading from the other duct. The flows should now be balanced. Actual airflow can be determined from the gauge reading. The value read on the gauge is called the velocity pressure. The Pitot tube comes with a chart that will give the air flow velocity based on the velocity pressure indicated by the gauge. This velocity will be in either feet per minute or meters per second. To determine the actual airflow, the velocity is multiplied by the cross sectional area of the duct being measured.

This is an example for determining the airflow in a 6" duct.

The Pitot tube reading was 0.025 inches of water.

From the chart, this is 640 feet per minute.

The 6" duct has a cross sectional area of $= [3.14 \times (6" \div 12)^2] \div 4$

$= 0.2$ square feet

The airflow is then:

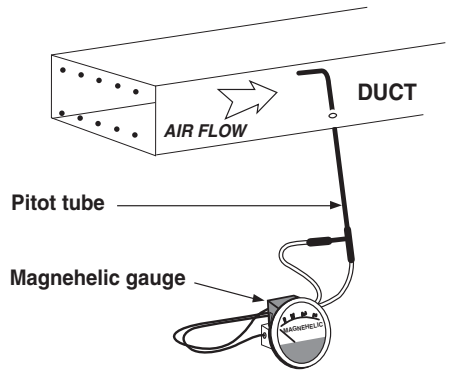
640 ft./min. X 0.2 square feet = 128 cfm

For your convenience, the cross sectional area of some common round duct is listed below:

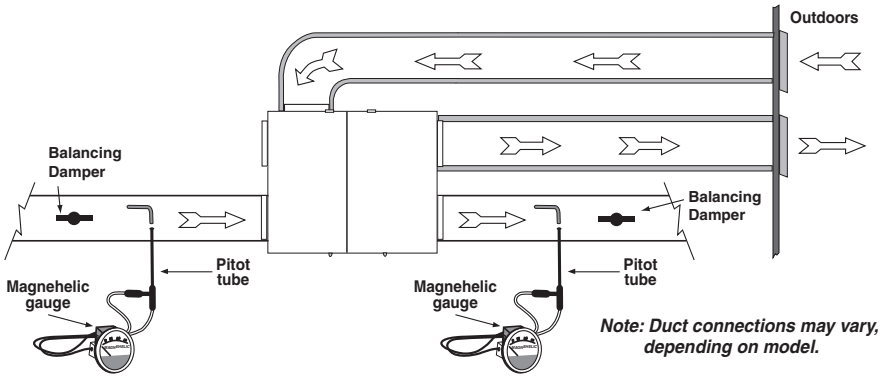
DUCT DIAM. (inches)	CROSS SECTION AREA (sq. ft.)
5	0.14
6	0.20
7	0.27

The accuracy of the air flow reading will be affected by how close to any elbows or bends the readings are taken. Accuracy can be increased by taking an average of multiple readings as outlined in the literature supplied with the Pitot tube.

Pitot tube and gauge



Place pitot tube a minimum of 18" from blower or elbows



Note: Duct connections may vary, depending on model.

Measure Exhaust Air from Building

Measure Supply Air to Building

Servicing your HRV/ERV on a regular schedule will result in optimum operating efficiencies and prolonged life of the equipment.

Due to numerous applications in which this equipment can be installed, it is difficult to predict servicing intervals. In certain situations where there is heavy smoke, servicing the equipment every one - two months may be needed; whereas ventilating a meeting room for carbon dioxide may only need service every six months to a year.

Motor

Access to the motor is through the front service doors. Note heat exchanger core can be removed to provide more room. See **CORE** in this section.

The motor is a permanent split capacitor type (PSC) which uses a sleeve mechanism to steady the shaft. There is an oil wick beside the sleeve which supplies oil to it on a continuous basis.

If the motor does not have oil tubes, no maintenance is required.

Access to the wick is through oil tubes, (two per motor) located in the motor case itself. These oil tubes are either capped with yellow plugs, (which need to be removed for oiling) or have clear tubes protruding from them.

In either case an oiling device such as an "Oil Telespout" filled with 20 S.A.E. non-detergent electric motor oil should be used to put oil inside the tubes. A couple of drops of oil once a year will do. **DO NOT OVER OIL!**

HRV Core (HRV only)

The heat exchange core is accessible through the front service door. Special care and attention should be given to this component as the edges may be sharp, and the core itself susceptible to damage if dropped.

When removing the core, the location it is removed from should be noted.

The core is removed by carefully pulling the core outward from the unit, sliding it evenly along its "H channel" supports found in each corner of the core. Note the core may have some resistance when sliding out. Avoid tilting the core as this will result in its edges catching the H channel and temporarily preventing its removal.

In most cases, washing the core in a mild detergent and warm water will be all that is needed to completely clean them. Do not use harsh chemicals as this may cause corrosion in the HRV. The time between core service will depend on the application the HRV has been installed in. It can be as often as one - two months or at the very least, cleaned every six months. When reinstalling the core you must note foam location and drip edge location for proper core placement. See diagram below.

With the core in its proper position, place the bottom flange, (approximately 1/4") into its H channel support, then place the left side, the right side and finally the top flange into place in the same fashion. Once all four corners are in place, push the core evenly into the cabinet until it reaches the back. Be sure the drip edges are overlapping the drip trays.

Note the core will protrude slightly out from the front of the cabinet, this is so the access door, when closed, ensures a tight fit.

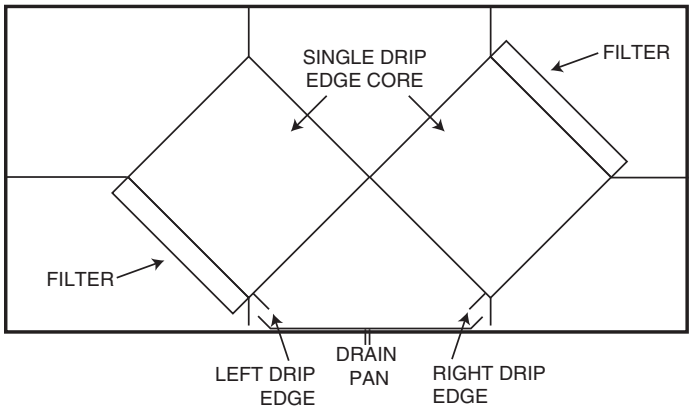
ERV Core (ERV only)

Vacuum the ERV core or rinse with cold water.

⚠ ATTENTION

- **Vacuum the ERV core or rinse with cold water**
- **Do not use cleaning solutions for the HRV Core**
- **Soak and rinse the HRV core in warm soapy water**
- **Do not use bleach or chlorine**
- **Do not use a pressure washer on the HRV or ERV core**
- **Do not place the HRV or ERV core in a dishwasher**

FRONT VIEW



Note: When removing cores and filters note their original location and arrangement.

Service and Maintenance

Filters

Open front service door to access the filters located in both supply and exhaust air streams. Note to remove and install filters, it may be easier to first remove the core(s). See **CORE**.

The filters are designed to stop large particles from entering in the core. The filters are fastened in place by a metal spring rod. To remove filters from core(s) simply pull the rod from one end, outward until free from core lip, and remove.

Only use warm water with a mild detergent to wash the filters. Do not use harsh chemicals.

The time between filter service will depend on the application the HRV/ERV has been installed in. It can be as often as one - two months or at the very least, cleaned every six months.

Condensate Drains

The condensate drain consists of one drain pan, which may collect water after the HRV/ERV initiates a defrost cycle, and a drain line to remove the condensate.

Maintenance on this portion of the system should be done as often as possible and should not exceed six months. Note bacterial growth in standing water is a major concern to healthy indoor air quality, and should be avoided whenever possible.

To clean these components, open the front service door and flush the pans with water. Ensure that the pans drain completely and in a reasonable amount of time. Note if the water does not drain right away, check for blockage in the drain line, also check that the drain line has a good slope to it. (1/8 - 1/4" per foot)

The drain line itself should have a "P" trap in it below the HRV/ERV which is to be filled with water to prevent odors or gases from entering back into the unit.

Duct Work

It is a good idea to inspect ducting, outside weather hoods (wall caps), and grilles for blockage and dirt buildup, at least every six months.

Outside weatherhoods should be protected by a bird screen which can plug up with debris. Also, it is a good idea to visually confirm that the fresh air supply is free from any sources of contamination, such as other vented combustion equipment added after the fact.

Damper Motor

The damper motor, (if applicable) is a self contained motor and does not require service. The damper door attached to the motor could use a little lithium grease on the shaft opposite the motor, where it enters its holder, once every two - three years.

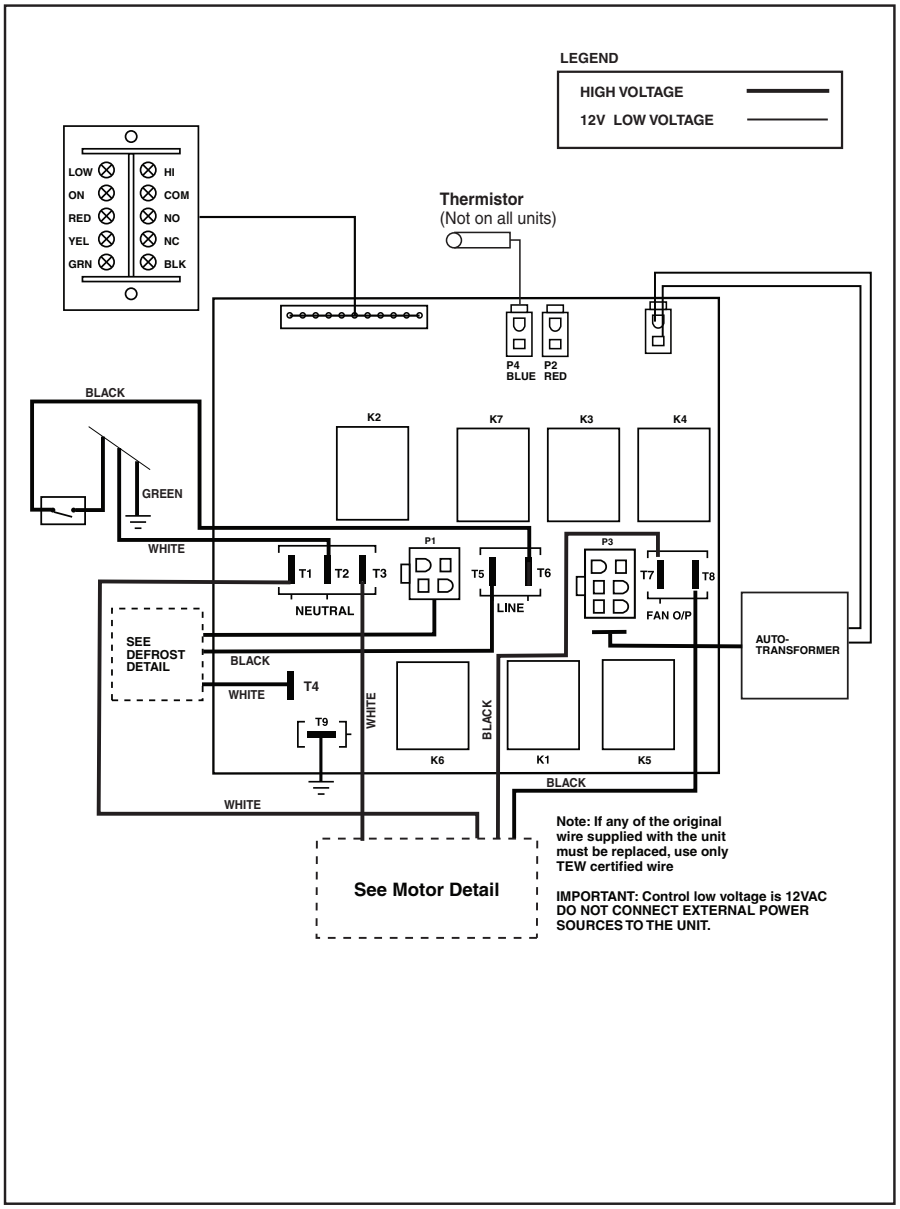
General Maintenance

As a final step in a routine maintenance schedule, it is a good idea to confirm operation of the system, checking speed control functions and remote control operation, if applicable.

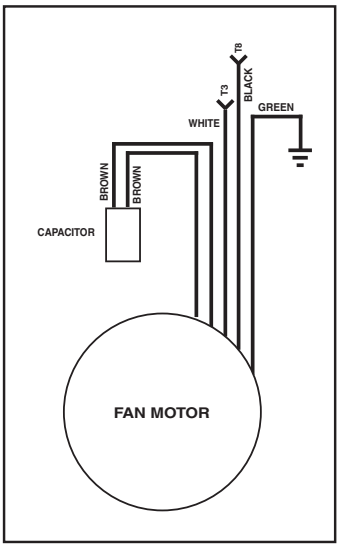
Wipe the inside of the cabinet to remove dust and cob webs as needed.

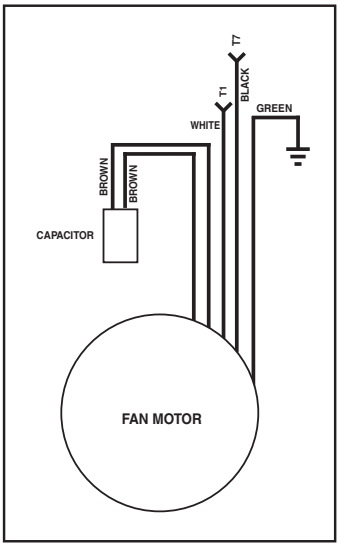
It is a good idea to keep a service/maintenance log of the unit.

CAUTION: ELECTRICAL CONTROL PANEL, SERVICE BY ELECTRICIAN ONLY

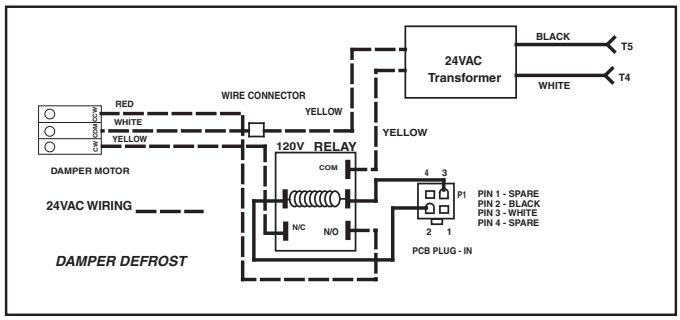


FAN MOTOR DETAILS

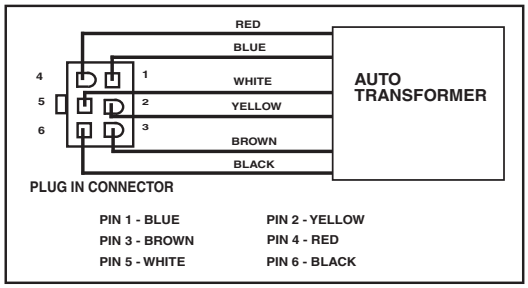




DEFROST DETAILS



AUTO-TRANSFORMER DETAIL



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COMMERCIAL LIFEBREATH®
HEAT/ENERGY RECOVERY VENTILATORS

• 2 Year Limited Warranty • 15 Year HRV Core Warranty
• 5 Year ERV Core Warranty

AIRIA BRANDS INC.® (AIRIA) warrants to the original purchaser of the Commercial LIFEBREATH® model and accessories referred to below, to be free from manufacturing defects.

This Warranty is personal to AIRIA® and is in effect from the date of the original purchase for a period of two years, save and except that a 15 YEAR WARRANTY is given to the LIFEBREATH® HRV core & a 5 YEAR WARRANTY is given to the LIFEBREATH® ERV core should they develop a condensation leak or become damaged during normal use.

Damage resulting from all other causes, including but not limited to: lightning, hurricane, tornado, earthquake or any other acts of God; improper installation, modification, alteration or misuse of the LIFEBREATH® or its operation in a manner contrary to the instructions accompanying the unit at the time of sale; accidental or intentional damage, neglect, improper care, or other failure by the owner to provide reasonable and necessary maintenance of the product; any attempt at repair by an unauthorized service representative or not in accordance with this warranty; or any other causes beyond the control of AIRIA®, are excluded from this warranty.

If you feel that the LIFEBREATH® you purchased is not free from manufacturing defects, please contact AIRIA BRANDS INC.®, 511 McCormick Blvd., London, Ontario N5W 4C8, 519-457-1904 or fax 519-457-1676 to find the name of your nearest dealer in order to repair the product. The labour required to install any replacement part(s) shall be dealt with at the option of the customer in either of the following ways:

(a) the customer may supply labour at their own expense: or
(b) if the product was purchased from a dealer, then the dealer may supply labour at cost to the customer.

AIRIA® reserves the right to replace the entire unit or to refund the original purchase price in lieu of repair.

AIRIA® MAKES NO EXPRESS WARRANTIES, EXCEPT FOR THOSE THAT ARE SET FORTH HEREIN AND SHALL NOT BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES WITH RESPECT TO LIFEBREATH® COVERED BY THIS WARRANTY. AIRIA'S COMPLETE LIABILITY AND THE OWNER'S EXCLUSIVE REMEDY BEING LIMITED TO REPAIR OR REPLACEMENT ON THE TERMS STATED HEREIN. ANY IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY AND OF FITNESS FOR ANY PARTICULAR PURPOSE, ARE EXPRESSLY EXCLUDED.
NO PERSON IS AUTHORIZED TO CHANGE THE WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGES ARE MADE IN WRITING AND SIGNED BY AN OFFICER OF AIRIA®.

MODEL NO.: _____

UNIT SERIAL NO.:_____

INSTALLED BY: _____

DATE:_____

TI-38HRV/ERV

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