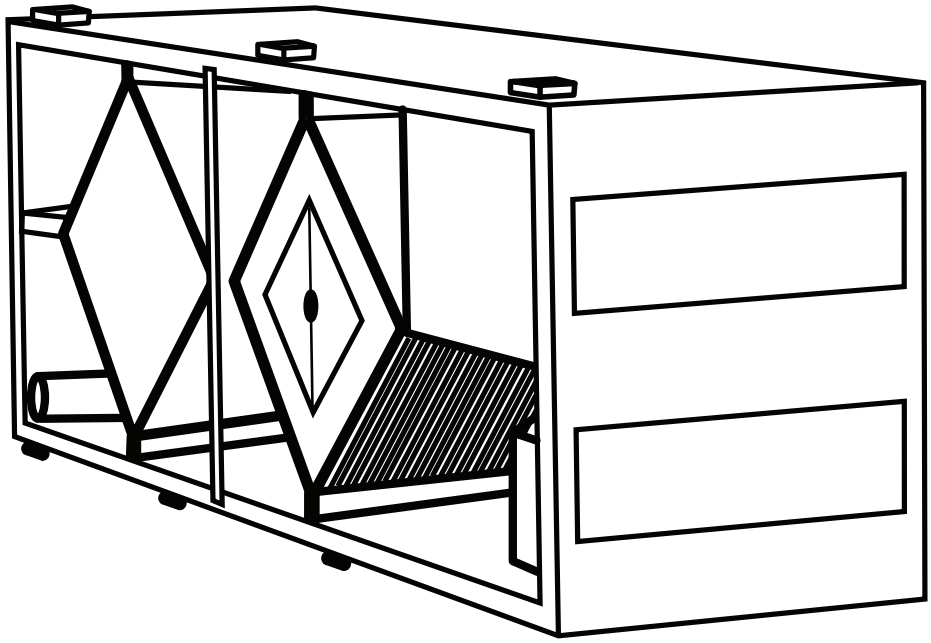
LIFEBREATH®
Indoor Air Systems

Operation and Installation Manual

Commercial Double Core Heat Recovery System



Models

350DCS
350DCS-REV

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.

ISO 9001 REGISTERED
C SP US Conforms to UL Standards
HRAI YOUR ENVIRONMENT. OUR EXPERTISE. MEMBER COMPANY

69-350DCS
110116

Table of Contents

⚠ 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, 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).

NOTE

Due to ongoing research and product development, specifications, rating and dimensions are subject to change without notice. Refer to www.LIFEBREATH.com for the latest product information.

IMPORTANT -
PLEASE READ THIS MANUAL BEFORE INSTALLING UNIT.

LEAVE WITH UNIT

TO BE COMPLETED BY CONTRACTOR AFTER INSTALLATION

Installing Contractor _____Telephone / Contact _____

Serial Number_____Installation Date _____

Model _____

LIFEBREATH® Indoor Air Systems

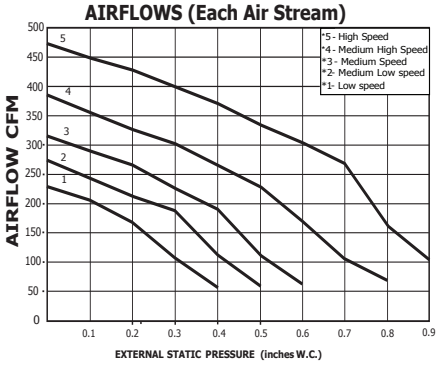
CORES
Two modular (two section) aluminum HRV cores arranged for high efficiency cross-flow ventilation.
MOTORS
Two PSC, 5 speed double shafted, 120 VAC, 3.15 A motors. (6.3 A total on high speed) with 1/10 hp at 1625 RPM. Total of 610 watts on High speed. MCA: 7.9 MOP:10
BLOWERS
Centrifugal-type rated at 530 cfm (250 L/s) free air delivery. Each air stream has two centrifugal blowers driven by two PSC motors.
FILTERS
Washable air filters in exhaust and supply air streams.
DEFROST
Supply bypass damper routes indoor air to defrost cores.
WEIGHT 160 lbs. (70 kg) **SHIPPING WEIGHT** 240 lbs. (110 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.
ELECTRONICS
Integrated microprocessor circuit board. Built-in interlock contacts.

PERFORMANCE

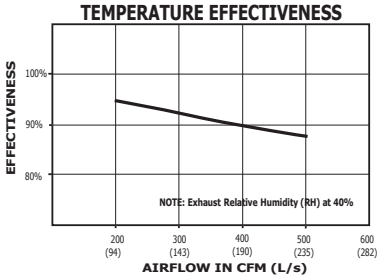
Net supply airflow in cfm (L/s) against external static pressure

E.S.P	*cfm*	*L/s*
@ 0.1" (25 Pa)	450	(212)
@ 0.2" (50 Pa)	426	(201)
@ 0.3" (75 Pa)	400	(189)
@ 0.4" (100 Pa)	371	(175)
@ 0.5" (125 Pa)	337	(159)
@ 0.6" (150 Pa)	304	(143)
@ 0.7" (175 Pa)	269	(127)
@ 0.8" (200 Pa)	158	(75)
@ 0.9" (225 Pa)	107	(50)
VAC @ 60HZ		120
WATTS / Low speed		187
WATTS / High speed		610
Amp rating		6.3

AIRFLOWS (Each Air Stream)



TEMPERATURE EFFECTIVENESS



CONTROL OPTIONS

99-DXPL02 Lifebreath Digital Control *(Included)*
- 5 speed operation on each mode
- Humidity control through adjustable Dehumidistat
- 5 user selectable operational modes: Continuous Ventilation, Continuous Recirculation, 20 ON/40 OFF, 10 ON/50 OFF, 20 ON/40 Recirculation
- 20/40/60 min. High speed override button
- Compatible with 99-DET02 Wireless Timers
- 3 wire connection

99-BC02 Lifebreath Ventilation Control
- 2 speed fan setting (Low/High)
- Humidity control through adjustable Dehumidistat
- Compatible with 99-DET02 Wireless Timers
- 3 wire connection

99-BC03 Lifebreath Ventilation Control
- Continuous Low fan speed Humidity
- control through adjustable
- Dehumidistat
  3 modes of operation: Ventilation, Recirculation, 20/40
- Compatible with 99-DET02 Wireless Timers
- 3 wire connection

99-BC04 Lifebreath Ventilation Control
- 2 speed fan setting (Low/High)
- 2 modes of operation: Ventilation, 20/40
- Compatible with 99-DET02 Wireless Timers
- 3 wire connection

99-DH01 Lifebreath Dehumidistat
- Humidity control through adjustable Dehumidistat
- 3 wire connection

TIMER OPTIONS

99-DET01 Lifebreath 20/40/60 Minute Timer - Initiates High speed Ventilation for 20, 40 or 60 minutes. 3 wire connection.

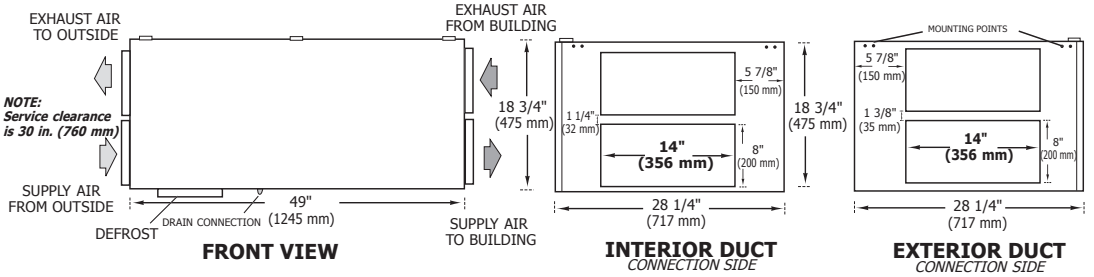
99-DET02 Lifebreath WIRELESS 20/40/60 Minute Timer - Initiates High speed Ventilation for 20, 40 or 60 minutes. Wirelessly connects to main control for ease of installation. 40' approximate range.

99-RX02 Lifebreath WIRELESS Repeater - Used to extend range of 99-DET02 Wireless Timers. Plugs into 120V power outlet. Wirelessly connects to main control and 99-DET02. Install at halfway point between timer and main wall control if timer is out of range.

All units conform to CSA and UL standards

NOTE: All specifications are subject to change without notice.

DIMENSIONS inches (mm)



WARRANTY

Units carry a 15 year warranty on the HRV core and a 2 year replacement parts warranty.

Date: _____ Contractor: _____

Tag: _____ Qty: _____ Supplier: _____

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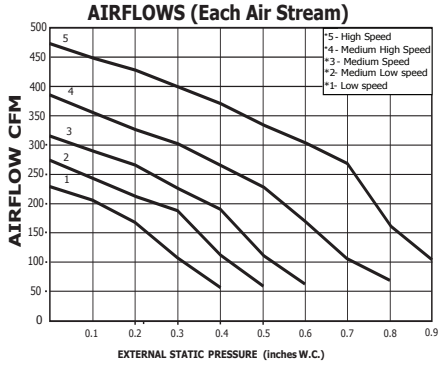

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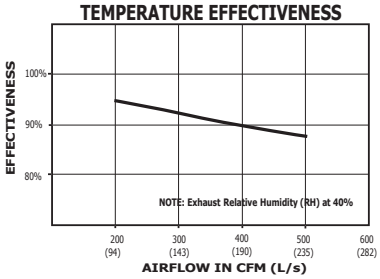

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- 2 speed fan setting (Low/High)
- Humidity control through adjustable Dehumidistat
- Compatible with 99-DET02 Wireless Timers
- 3 wire connection

99-BC03 Lifebreath Ventilation Control
- Continuous Low fan speed Humidity
- control through adjustable
- Dehumidistat
  3 modes of operation: Ventilation, Recirculation, 20/40
- Compatible with 99-DET02 Wireless Timers
- 3 wire connection

99-BC04 Lifebreath Ventilation Control
- 2 speed fan setting (Low/High)
- 2 modes of operation: Ventilation, 20/40
- Compatible with 99-DET02 Wireless Timers
- 3 wire connection

99-DH01 Lifebreath Dehumidistat
- Humidity control through adjustable Dehumidistat
- 3 wire connection

All units conform to CSA and UL standards

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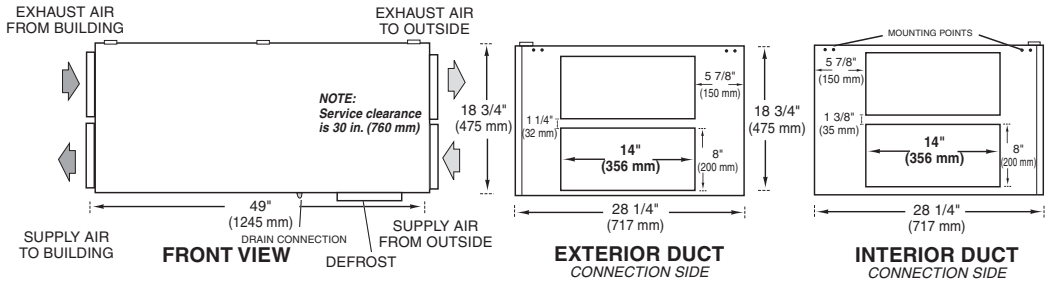

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Glossary

DEFROST MODE - to ensure reliable operation during cold weather, the HRV 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.

RECIRCULATION - Recirculates existing household air without introducing fresh air.

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

SELF TEST - each time the HRV is powered/energized the self test function will automatically initiate. During the self test the HRV 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 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's temperature sensor which measures electrical resistance in a known manner, as outdoor temperatures fluctuate.

VENTIALTION - Operational mode that introduces fresh outdoor air to the home or building.

Controlling Your HRV

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 introduces fresh air to the building while recovering energy from the air it exhausts. Specifically, an HRV 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 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 or 10 minutes ON / 50 minutes OFF for even less ventilation).

Selecting the Mode of Operation that's Right for You

The modes of operation and speeds are used to adjust your indoor ventilation rate. Experiment with the ventilation levels in your home to evaluate the ideal amount of ventilation to suit your home and personal preferences. Operational modes available to you will depend on the main control that is installed. Some features and modes may be unavailable to you.

I. Continuous Ventilation

This mode of operation provides continuous ventilation within the home. You may, for example, select Continuous Ventilation at low speed for normal operation and increase to high speed during increased activity levels, such as cooking and showering, etc.

II. 20 Minutes On, 40 Minutes Recirculation 20/hr 40/hr

This mode ventilates for 20 minutes and recirculates the household air every 40 minutes each hour. This mode is not applicable if your HRV is connected to a forced air system.

III. 20 Minutes On, 40 Minutes Standby 20/hr 40/hr

This mode of operation provides 20 minutes of ventilation each hour. You can use this ventilation mode at low speed for low household activity levels or when the home is unoccupied.

IV. 10 Minutes On, 50 Minutes Standby 10/hr 50/hr

This mode of operation provides 10 minutes of ventilation each hour. You can use this ventilation mode at low speed for low household activity levels or when the home is unoccupied. This mode is useful when 20/40 mode is providing too much ventilation.

V. Continuous Recirculation *or*

This mode continuously recirculates your household air (no ventilation). This mode is not applicable if your HRV is connected to a forced air system.

VI. Continuous Low Fan Speed **LO**

This mode will operate the fan in low speed continuously at the selected operating mode (Ventilation or Recirculation).

VII. Continuous High Fan Speed **HI**

This mode will operate the fan in high speed continuously at the selected operating mode (Ventilation or Recirculation). This mode is useful when occupancy in the home or activity is high for an extended period of time.

Recirculation

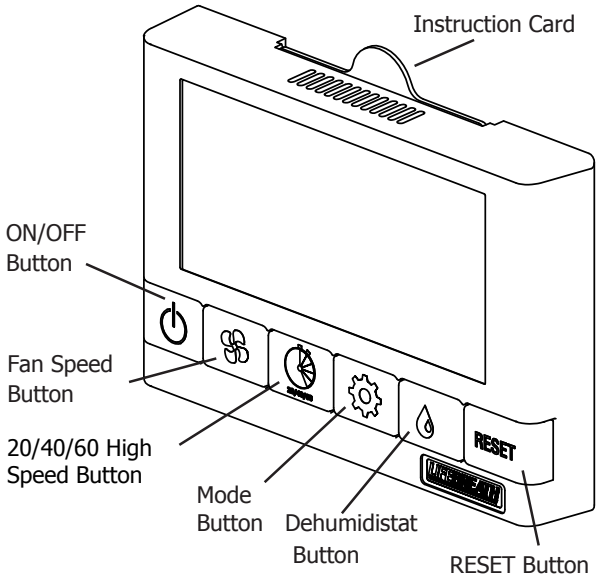
Recirculates existing household air without introducing fresh air. Recirculation modes (II and V) are not applicable if your HRV is connected to a forced air system, since your forced air system already circulates the household air. Recirculation modes are unavailable on some models.

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

Included Lifebreath Digital Control - Part #99-DXPL02

Key Features:

- 5 speed fan setting
- Standby setting (fan speed 0)
- Electronic Dehumidistat
- 20/40/60 HIGH speed override button
- Compatible with 99-DET02 Wireless Timers
- Easy to read backlit LCD screen
- Slim-line design
- Connect to 3 wire 20 gauge low voltage wire
- Five selectable modes of operation
    - Continuous Ventilation
    - 20 min. Ventilation / 40 min. Recirculation 20/hr 40/hr
    - 20 min. Ventilation / 40 min. OFF 20/hr 40/hr
    - 10 min. Ventilation / 50 min. OFF 10/hr 50/hr
    - Continuous Recirculation
- Service indicator



Digital Control Operating Instructions (DXPL02):

Turning on the Control

Press and release the ON/OFF button . The light above will illuminate.

Setting the Ventilation Speed

Press and release the Fan button to select one of the 5 fan speeds. The fan speed will be displayed on the screen beside the Fan symbol . Standby mode (Fan OFF) is indicated as speed 0. The fan will turn ON if required by a remote Timer (if installed).

20/40/60 High Speed Button

Press and release the 20/40/60 High Speed button to temporarily initiate HIGH Fan speed for 20, 40 or 60 minutes. Press once for 20 minutes, twice for 40 minutes, 3 times for 60 minutes and 4 times to disable. The will appear on the screen and the corresponding section of the clock will flash to indicate the time interval selected. When the timer runs out, the unit will return to it's previous operating speed.

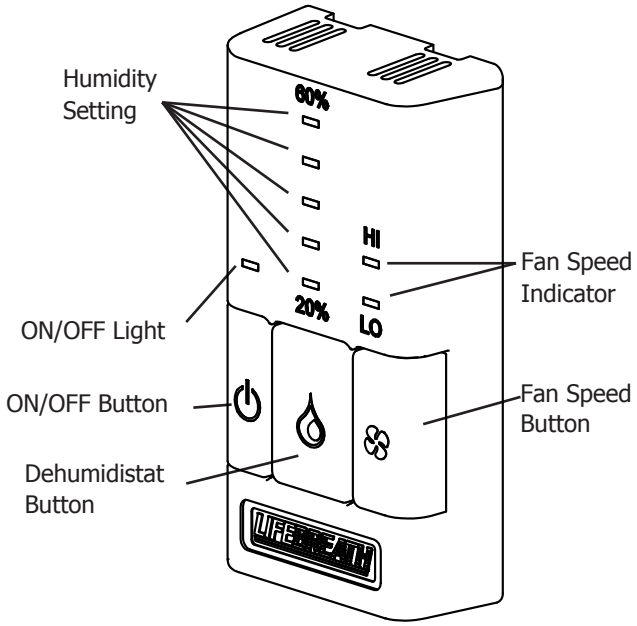
Setting the Mode of Operation

There are 5 modes of operation available with the DXPL02 control. Pressing the Mode button will cycle through the different modes of operation and they will be displayed on the screen.

Optional Lifebreath Ventilation Control - Part #99-BC02

Key Features:

- 2 speed fan setting (LOW / HIGH)
- Standby setting (fan OFF)
- Electronic Dehumidistat
- Compatible with 99-DET02 Wireless Timers
- Slim-line design
- Connect to 3 wire 20 gauge low voltage wire



BC02 Operating Instructions:

Turning on the Control

Press and release the ON/OFF button ⏻. The light above will illuminate.

Setting the Ventilation Speed

Press and release the Fan button to select LOW or HIGH fan speed. The corresponding "Indicator Light" will illuminate. If both LO and HI indicator lights are off, the fan is OFF but will turn ON if required by the Dehumidistat or remote Timer (if installed).

Humidity Control

Your unit will reduce indoor humidity when outdoor humidity levels are lower than indoor humidity levels. This feature is only effective when the outdoor temperature is below 59˚F (15˚C).

Setting the Dehumidistat

Press and release the Dehumidistat button until the Dehumidistat Light is at the desired setting. After a few seconds the Dehumidistat light will either flash or be on continuous.

A flashing light indicates the humidity level is higher than the setting and the unit is operating on high speed ventilation. A continuous light indicates the humidity level is lower than the setting. Refer to the unit's Home Owner's manual for instructions on how the Dehumidistat works.

The Dehumidistat will override the current speed setting to HIGH speed.

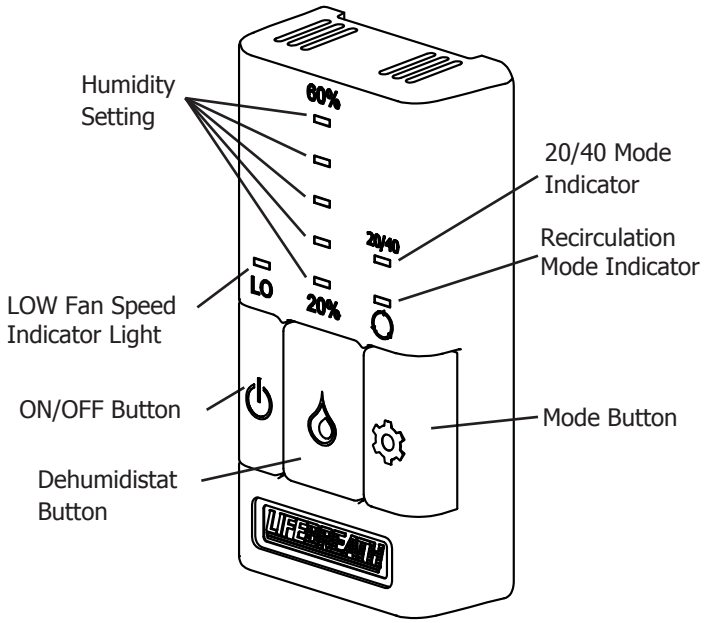
The Dehumidistat function can be turned OFF by pressing the button until no Dehumidistat light is on.

Note - Only 1 Dehumidistat should be installed in a system.

Optional Lifebreath Ventilation Control - Part #99-BC03

Key Features:

- Continuous LOW fan speed operation
- Electronic Dehumidistat
- 3 modes of operation:
    - Ventilation
    - Recirculation
    - 20/40 mode
- Compatible with 99-DET02 Wireless Timers
- Slim-line design
- Connect to 3 wire 20 gauge low voltage wire



BC03 Operating Instructions:

Turning on the Control

Press and release the ON/OFF button ⏻. The light above will illuminate and the fan will turn on to LOW speed.

Humidity Control

Your unit will reduce indoor humidity when outdoor humidity levels are lower than indoor humidity levels. This feature is only effective when the outdoor temperature is below 59˚F (15˚C).

Setting the Dehumidistat

Press and release the Dehumidistat button 💧 until the Dehumidistat Light is at the desired setting. After a few seconds the Dehumidistat light will either flash or be on continuous.

A flashing light indicates the humidity level is higher than the setting and the unit is operating on high speed ventilation. A continuous light indicates the humidity level is lower than the setting. Refer to the unit's Home Owner's manual for instructions on how the Dehumidistat works.

The Dehumidistat will override the current fan speed setting to high fan speed.

The Dehumidistat function can be turned OFF by pressing the 💧 button until no Dehumidistat light is on.

Note - Only 1 Dehumidistat should be installed in a system.

Setting 20/40 Mode

To activate 20/40 mode, press and release the Mode button ⚙ until the "Indicator Light" below 20/40 is illuminated.

20/40 mode is a repeating cycle. The fan will run at LOW speed for 20 minutes, then turn OFF for 40 minutes.

Some units are equipped to Recirculate air in your home during the 40 minute cycle with no Ventilation. The control will automatically detect this feature and Recirculate air during the 40 minute cycle at LOW fan speed.

Recirculation Mode

Some units are equipped to Recirculate the air in your home without Ventilating.

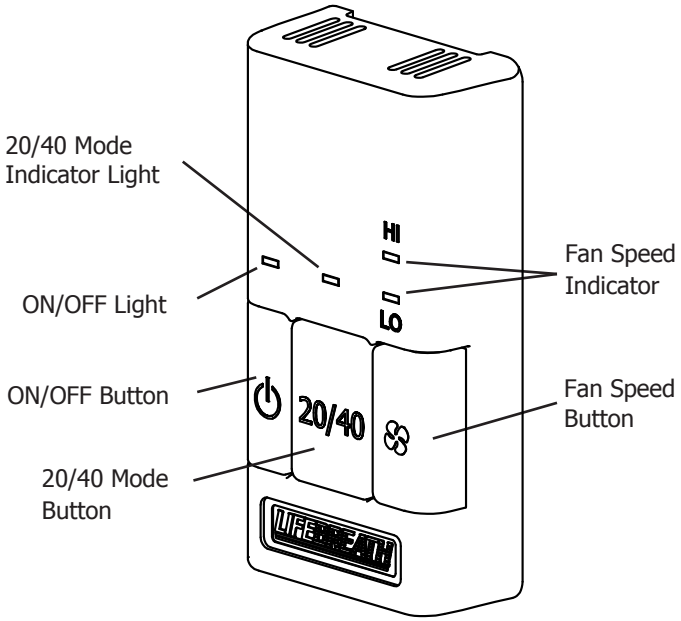
To activate Recirculation mode, press and release the Mode button ⚙ until the ◌ Recirculation "Indicator Light" is ON.

Recirculation is in LOW fan Speed.

Optional Lifebreath Ventilation Control - Part #99-BC04

Key Features:

- 2 speed fan setting (LOW / HIGH)
- Standby setting (fan OFF)
- 20/40 mode
- Compatible with 99-DET02 Wireless Timers
- Slim-line design
- Connect to 3 wire 20 gauge low voltage wire



BC04 Operating Instructions:

Turning on the Control
Press and release the ON/OFF button ⏻. The light above will illuminate.

Setting the Ventilation Speed
Press and release the Fan button to select LOW or HIGH fan speed. The corresponding "Indicator Light" will illuminate. If both LO and HI indicator lights are off, the fan is OFF but will turn ON if required by a remote Timer (if installed).

Setting 20/40 Mode
After a fan speed has been selected, press and release the 20/40 button. The "Indicator Light" will turn ON and the control will be in 20/40 mode.

20/40 mode is a repeating cycle. The fan will run at the set speed, LO or HI, for 20 minutes then turn OFF for 40 minutes.

Some units are equipped to Recirculate air in your home during the 40 minute cycle with no Ventilation. The control will automatically detect this feature and Recirculate air during the 40 minute cycle at the selected fan speed.

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 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 optional **Lifebreath DXPL02, BC02 and BC03 Controls** have an adjustable dehumidistat which can be set to achieve a further dehumidification effect from your HRV. 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 will revert back to its previous setting.

We suggest operating the HRV 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 60 being high and 20 being low. 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.

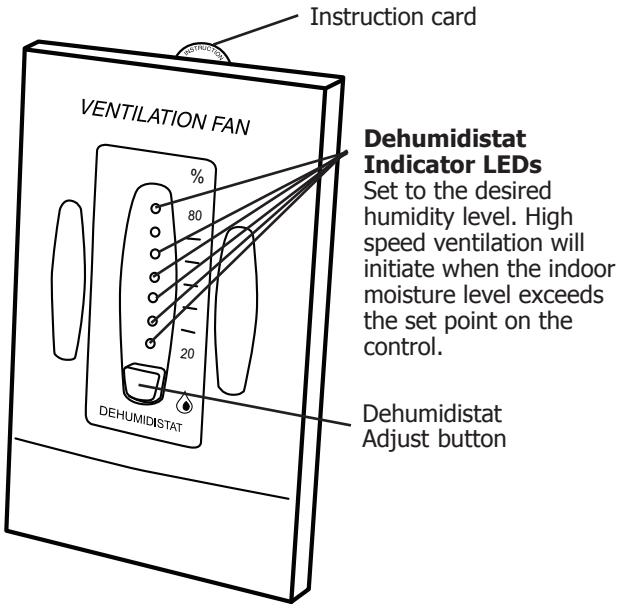
Dehumidistat Notes:
The dehumidistat function will be disabled if outdoor temperatures exceed 15°C (59°F) for a 24 hour period.

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.

Optional Lifebreath Dehumidistat - Part #99-DH01

Key Features

- The Dehumidistat measures the indoor humidity level and will initiate high speed ventilation when the moisture level in the building exceeds the set point on the control.
- Once the humidity in the building is reduced, the HRV will revert back to its previous setting.
- The Dehumidistat should be set to OFF for all season except the heating season.
- Connect to 3 wire 20 gauge low voltage wire.



Humidity Control

Your HRV will produce a dehumidifying effect when outdoor humidity levels are lower than indoor humidity levels. Never use the Dehumidistat feature when outdoor temperatures are above 59 F (15 C).

Note: The indoor humidity level is measured at the control.

Setting the Dehumidistat

Press and release the Dehumidistat button until the Dehumidistat Light is at the desired setting. After 5 seconds the Dehumidistat light will either flash or be on continuous.

A flashing light indicates the humidity level is higher than the setting and the unit is operating on high speed ventilation. A continuous light indicates the humidity level is lower than the setting. Refer to the unit's Operation & Installation Manual for instructions on how the Dehumidistat works.

Note - Only 1 Dehumidistat should be active on a system.

Installation of the Main Control

The **Lifebreath Digital Control 99-DXPL02** is to be surface mounted onto a wall and the **Lifebreath Ventilation Controls 99-BC02, 99-BC03 and 99-BC04** may either be installed onto a flush mounted electrical switch box or surface mounted onto a wall. Only one master control should be installed to a ventilation system (the face plate on this illustration may not be exactly the same as yours).

1. **For DXPL02 control**, 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 (Figures B or C). Be careful not to damage face plate contact pins.
3. **For DXPL02 control**, place the back plate of the control in the desired location on the wall and pencil mark the wall with the right and left screw holes (Figure D).
4. **For BC02, BC03 or BC04 controls**, place the back plate of the control in the desired location on the wall and pencil mark the top and bottom screw holes (Figure E or F). For mounting the control without a Decora plate, break off top and bottom tabs and refer to Figure F for mounting.
5. Remove the back plate from the wall and mark the center hole for the wires in the middle of the screw holes. Refer to Figure D, E or F for dimensions.
6. Drill (two) 1/8 in holes for the screws and wall anchors (Figure D, E or F). **For DXPL02 control**, drill a 1 in hole in the center (Figure D). For **BC02, BC03 or BC04 controls**, cut in a 3/4 in by 1 in oval hole in the wall (Figure E or F).
7. Pull 3 wire 20 gauge (min.) 100 ft length (max.), through the opening in the wall.
8. Connect red, green, and yellow to the wiring terminals located on the back plate (Figure D, E or F).
9. Attach the back plate to the wall using two supplied screws and anchors.
10. Attach the face plate to the back plate (Figure B or C). Note: Be careful to correctly align the face plate to avoid damaging the face plate contact pins.
11. **For DXPL02 control**, insert the operating instructions card into the control (Figure A).
12. Connect the 3 wire 20 gauge (min.) 100 ft length (max.) to the terminal block located on ventilator (Red #3, Yellow #4 and Green #5).

ATTENTION

Pay special attention not to damage the Contact Pins when attaching and detaching the Face Plate. (Figures B or C)

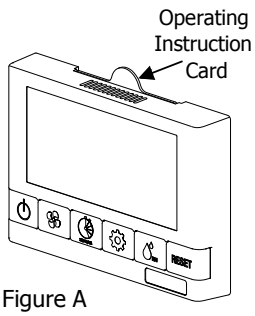


Figure A

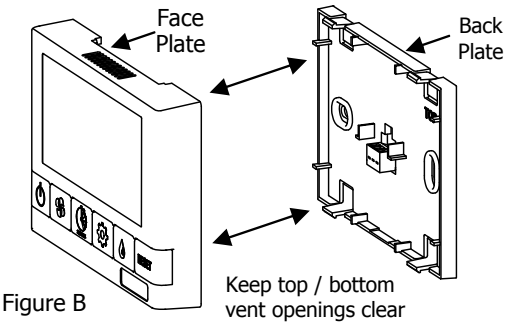
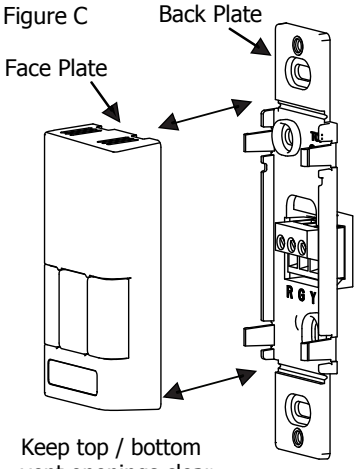


Figure B



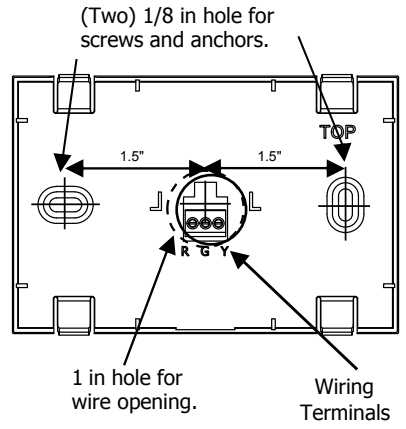


Figure D

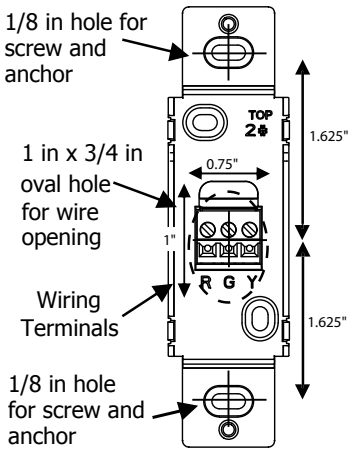


Figure E

Alternate Wall Mount

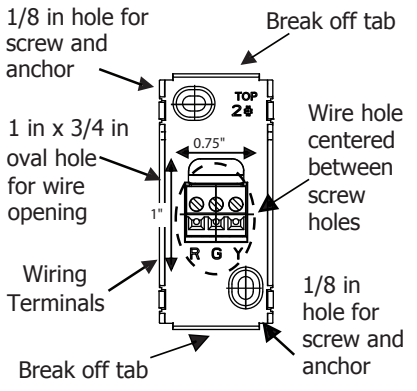


Figure F

Installation of Optional Main Control - Part #99-DH01

The **Lifebreath Dehumidistat** may be installed onto a flush mounted 2" x 4" electrical switch box or it may be surface mounted onto 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 wire 20 gauge (min.) 100 ft length (max.) to the digital controls terminal block located on the side of the unit.

ATTENTION

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

Figure A - Face Plate

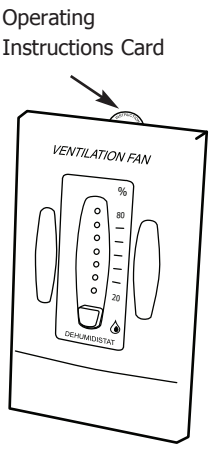


Figure B
Side View

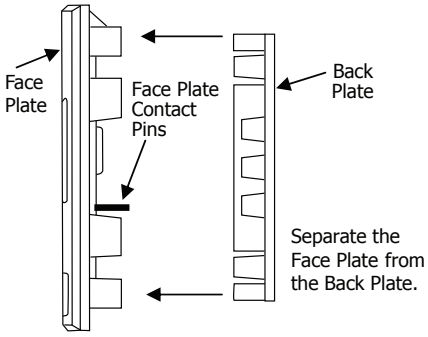


Figure C
Front View of Back Plate

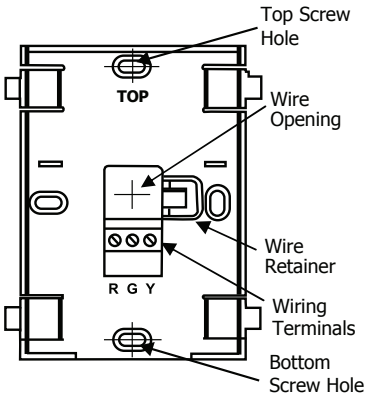


Figure D
Drill holes in
wall

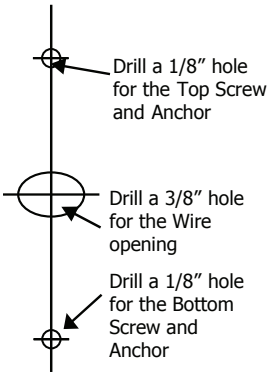
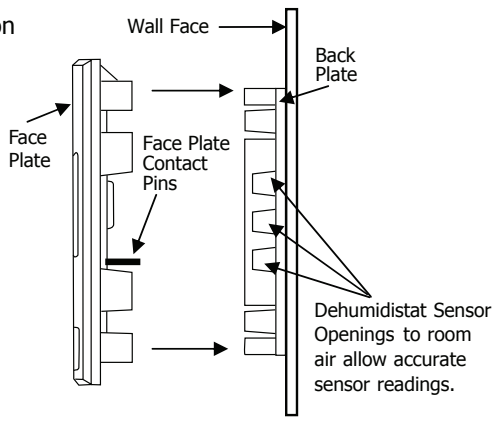


Figure E
Correct Installation
of Back Plate



Optional Lifebreath Wireless Timer - Part #99-DET02

The timer will override the operational mode (regardless of the settings) and initiate HIGH speed Ventilation. Upon completion of the timer cycle, the HRV will return to your selected operational mode and speed setting.

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

The Wireless Timers are to be surface mounted onto a wall. Multiple Wireless Timers may be installed in a ventilation system. To increase the range of a Wireless Timer, a RX02 Repeater should be used.

ATTENTION

The Wireless Timers and Repeaters must be matched to the main wall control of the HRV. This process is called "Pairing". Multiple Timers and Repeaters can be paired to a single wall control.

Figure A

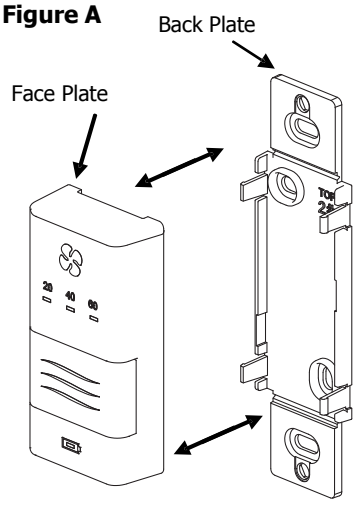
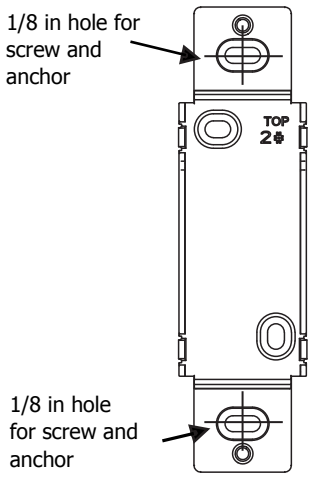


Figure B



Pairing:

1. Turn on the main wall control by pressing the ON/OFF button ⏻ and remove the battery from Timer.
2. ***DET02 with DXPL02 Controls:*** Press the left and right buttons simultaneously on the main wall control (⏻ and RESET buttons). The screen will go blank and the wireless symbol will appear flashing on the bottom right of the display. This indicates that the main control is now in pairing mode. (Figure D)
3. ***DET02 with BC02, BC03 and BC04 Controls:*** Press the left and right buttons simultaneously on the main wall control (⏻ and either ⚙ or fan buttons, depending on the main control). The bottom row of 3 LED's will begin flashing. This indicates that the main control is now in pairing mode.(Figure E)
4. Keep the Timer within 16" of the main wall control when pairing.
5. Install the battery in the DET02 Timer. All four lights on the Timer will immediately flash 5 times, then only the red battery light will remain on for approximately 12 seconds after which the "40" light flashes the rev code. 20, 40, 60 lights will flash until paired or will stop if not paired within 12 seconds. If pairing was not successful you now must return to step 1 to restart the pairing process.
6. Press the ⏻ button on the main wall control to exit pairing mode when Timers have been successfully paired.

Alternate Wall Mount **Figure C**

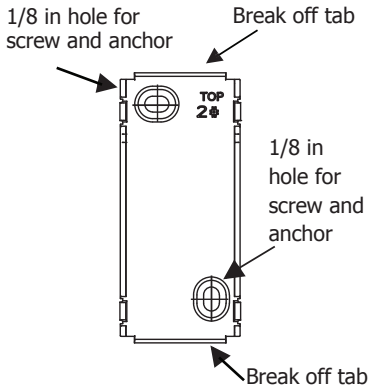
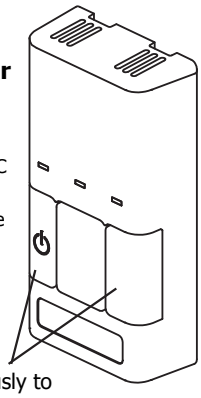


Figure D

BC02, BC03 or BC04 Control

NOTE: Your BC control may look different than the one shown.



Press Simultaneously to Initiate Pairing Mode

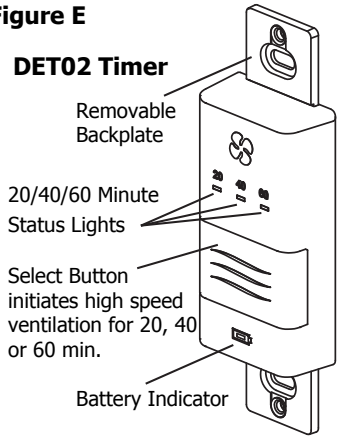
To pair additional DET02 Timers with the same wall control, or if pairing was not successful, repeat steps 1-6.

When paired, the DET02 Timers can be moved and installed elsewhere. Estimated range of the Timer is 40' with no obstructions. A RX02 Repeater may be installed to increase the range of the Timers.

Test if pairing was successful by pressing the Select Button and listen for the HRV to initiate HIGH fan speed Ventilation.

Figure E

DET02 Timer

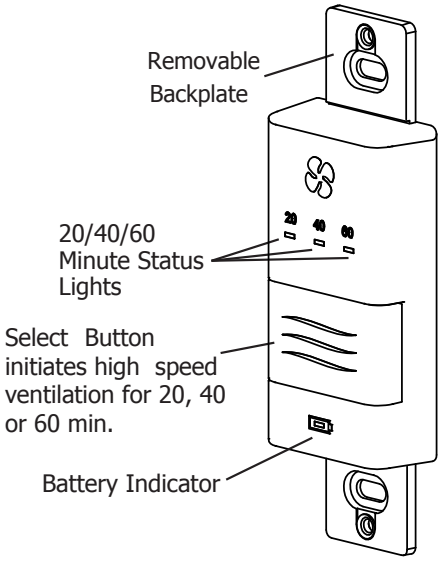


Un-pairing:

1. Remove the battery from the back of the DET02 Timer
2. Press and hold the Select Button on the front of the Timer
3. While holding the Select Button, reinsert the battery in the Timer. Continue holding the Select Button until the LED under "40" begins flashing. The DET02 Timer will now be unpaired with the main wall control.

Installation of Wireless Timer

1. Separate the Face Plate from the Back Plate by firmly pulling apart (Figure A).
2. For mounting the control without a Decora plate, break off top and bottom tabs and refer to Figure C for mounting.
3. Place the Back Plate of the control in the desired location on the wall and pencil mark the top and bottom screw holes (Figure B or C). Drill two 1/8" holes.
4. Attach the Back Plate to the wall using the 2 supplied screws and anchors.
5. Attach the Face Plate to the Back Plate (Figure A).



Overview of Lifebreath Wireless 20/40/60 Minute Timer

Initiates HIGH speed Ventilation for 20, 40 or 60 minutes. The 20/40/60 minute Status Lights indicate HIGH speed operation.

Wireless Timers have an estimated range of 40' with no obstructions. To increase the range of a Wireless Timer a 99-RX02 Repeater may be used.

Using the Wireless Timer

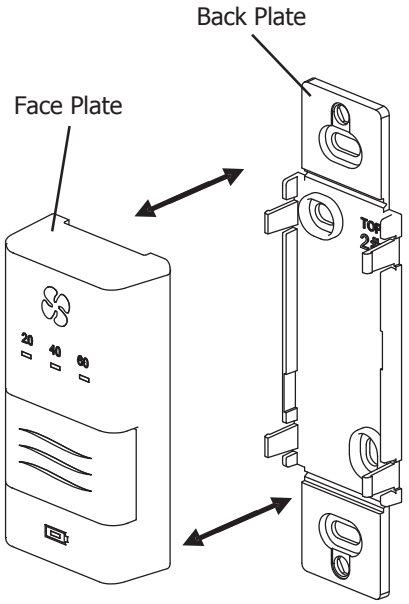
When paired to the main wall control, the Wireless Timer may be moved to a remote location in the home such as a bathroom.

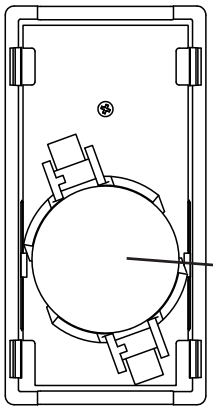
Pressing the Select Button on the Timer will initiate HIGH speed fan operation. The corresponding Status Light will illuminate under the number on the Timer to indicate either 20, 40 or 60 minutes of HIGH speed fan operation. To cancel the call for HIGH speed fan operation, press the Select Button until the Status Lights are no longer illuminated.

Replacing the Battery

When the battery needs to be replaced in the Wireless Timer, the red LED Battery Indicator will illuminate.

To replace the battery, first remove the Face Plate by pulling it off the wall. On the back of the Timer Face Plate the battery will be exposed. Replace the battery and re-attach the Face Pate to the Back Plate. Be careful not to damage the tabs on the Back Plate when re-attaching the Face Plate.





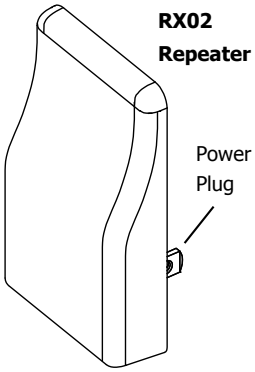
Back of 99-DET02 Face Plate

Optional Lifebreath Wireless Repeater - Part #99-RX02

Installation and Pairing of Wireless Repeaters: 99-RX02

The RX02 Repeaters are to be plugged directly into a 120V power outlet.

1. Turn on the main wall control by pressing the ON/OFF button ⏻.
2. Press the left and right buttons simultaneously on the main wall control (⏻ and either ✣ or ⚙ buttons, depending on the main control). The bottom row of 3 LED's will begin flashing. This indicates that the main control is now in pairing mode.
3. The RX02 Repeater must be powered within 16" of the main wall control for pairing. If an outlet is not available an extension cord should be used to power the repeater initially for pairing.
4. Plug the RX02 Repeater into the power outlet. The green light will flash after approximately 12 seconds indicating that the repeater is paired with the main wall control.
5. Press the ON/OFF button on the main wall control to exit pairing mode and the Repeater may now be unplugged and moved to its permanent location.



To pair additional RX02 Repeaters with the same wall control, repeat steps 1-5 until all Repeaters have been paired.

When installed in its permanent location, the green LED will remain solid to indicate the best location and the Repeater can be moved farther if required. The green LED will flash to indicate it is in a good location. A red light indicates the Repeater is out of range and needs to be moved closer to the main wall control.

NOTE: Wireless Repeaters cannot be used in a network to extend the range of another Wireless Repeater.

Optional Lifebreath 20/40/60 Minute Timer - Part #99-DET01

Operating your Lifebreath 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.

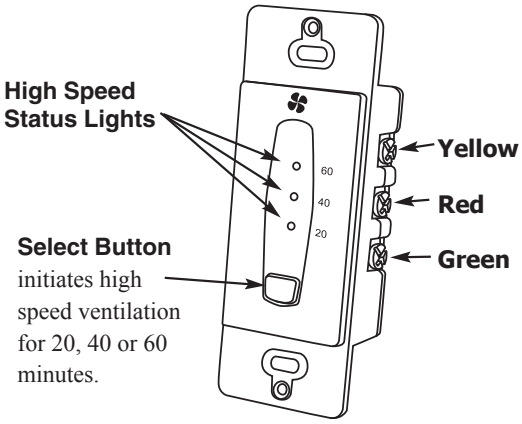
The High Speed Status Light will flash during the last 5 minutes of the cycle.

The timer 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.

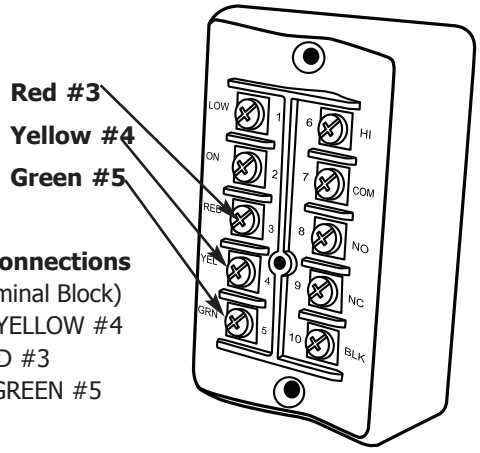
The timer can be set to lockout mode by pressing and holding the Select Button for five seconds. After five seconds, the High Speed Status Light will flash; release the Select Button. The timer is now in lockout mode. If the Select Button is pressed during lockout mode the High Speed Status Light will 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**

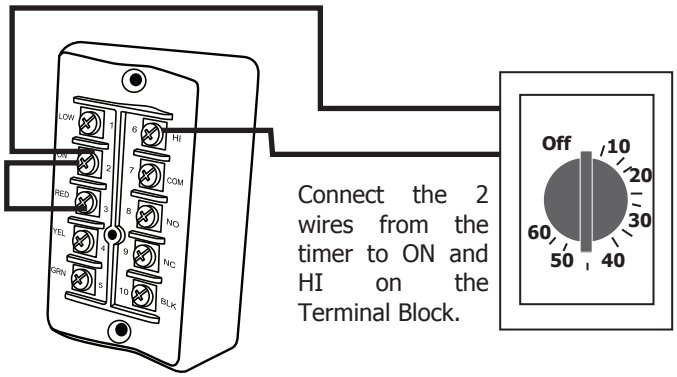


Terminal Block Connections
(from Timer to Terminal Block)
Yellow on timer to YELLOW #4
Red on timer to RED #3
Green on timer to GREEN #5

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.

2 wire timers require a jumper wire between ON and RED on the terminal block.



Connect the 2 wires from the timer to ON and HI on the Terminal Block.

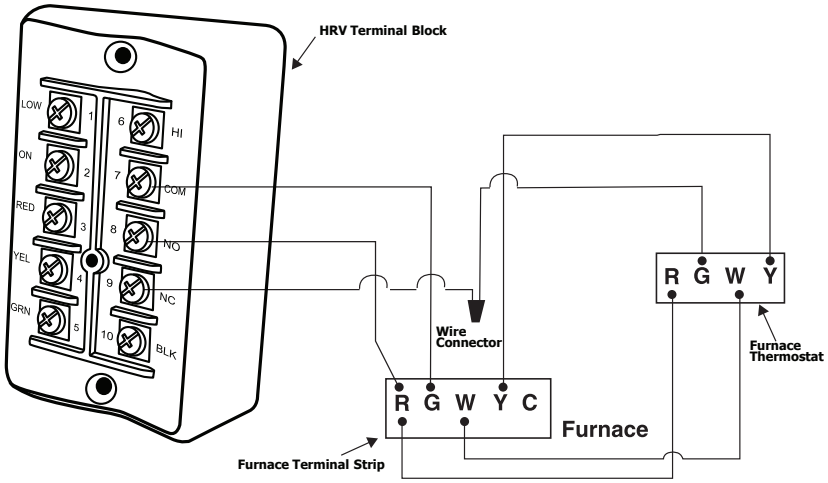
Interlocking the HRV to an Air handler/Furnace Blower

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

The HRV 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

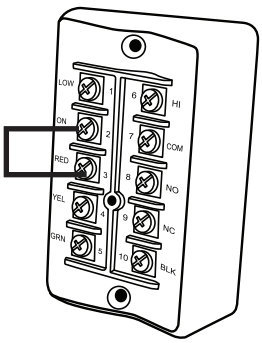
Consideration should be given to competing airflows when connecting the HRV in conjunction with an Air Handler/Furnace Blower system.



Setting "Standby" when using a Main Control

The HRV 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 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)

⚠ 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 by the end user may occur if the unit is modified from "fully-off" to "standby-off".

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

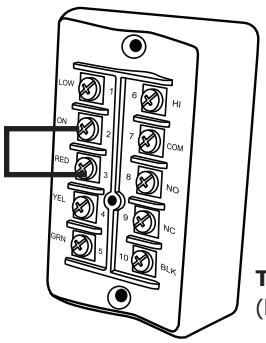
A jumper must be in place between 2 (ON) and 3 (RED) on the Terminal Block to activate the HRV for timers and/or dry contact controls.

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)

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

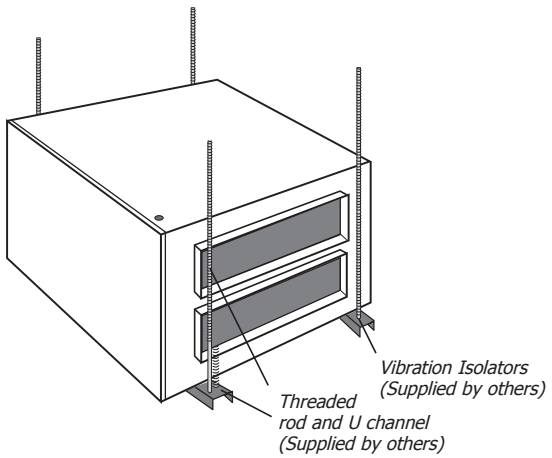
Location of the HRV for Mounting

The HRV 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 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.

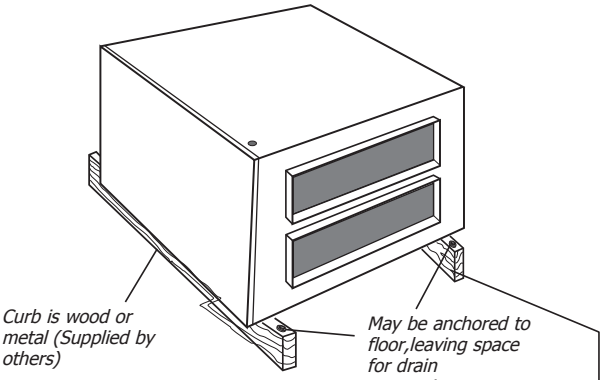
A minimum clearance of 30 inches (76 cm) in front of the HRV is recommended to service the heat exchanger cores and the filters. The HRV may be mounted on an equipment platform providing the drain hoses are clear and there is sufficient space to open the doors for servicing.

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 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 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

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 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 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 to an Airhandler/ Furnace blower in this manual). The HRV exhaust take-off connection must be at least 3 ft (1 m) upstream from the HRV supply duct if both are connected to the same duct run.

A damper located just prior to the HRV 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 may be directly connected to the return air duct of the forced air system. Check the air flow balance of the HRV with the air handler blower both "ON" and "OFF" to determine that it does not imbalance the HRV 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 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, the designer and installer should be aware of local codes that may require smoke detectors and/or firestats in the HVAC or HRV ductwork.

Because an HRV 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

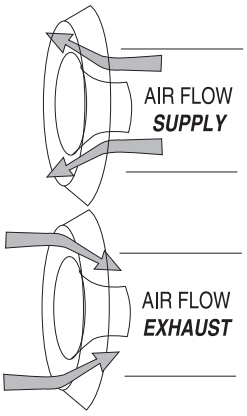
The use of balancing dampers or adjustable grilles as supply air diffusers and air exhaust covers are recommended. TECHGRILLES™ are round, efficient, sound absorbing devices available in 4", 5", 6" and 8" (100, 125, 150, and 200 mm) models.

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

In the balanced airflow system, the HRV 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.

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

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 as it is drawn back to the air handler. Fresh air supplied by the HRV 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 supply and exhaust ducts between the return air plenum and the HRV.

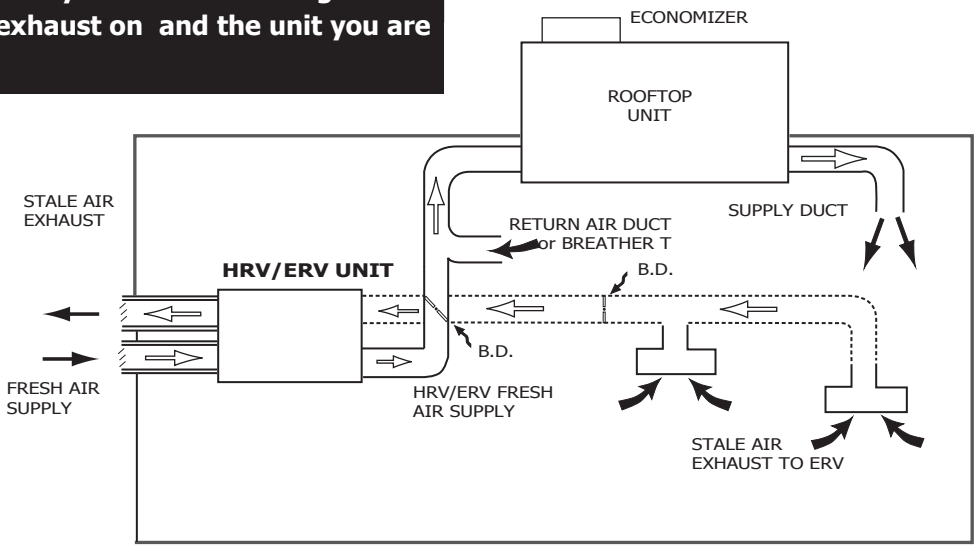
NOTE: At no time should the air handler T.E.S.P. on the return duct exceed that of the HRV .

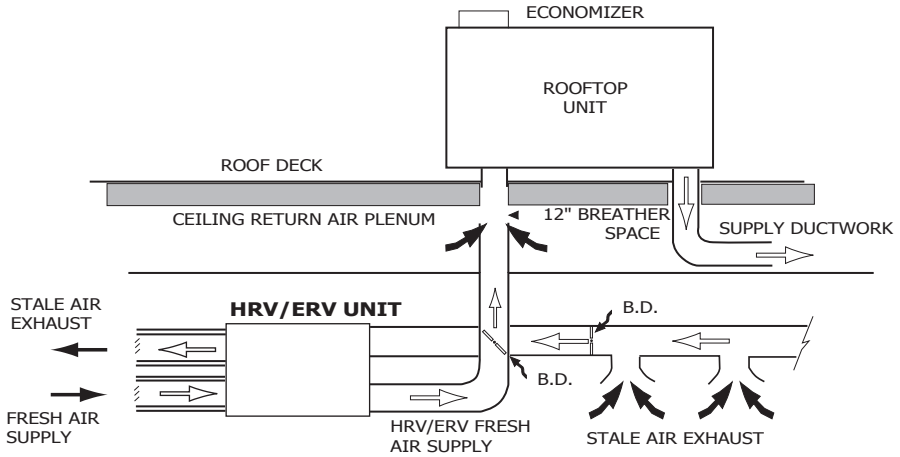
ATTENTION

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

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

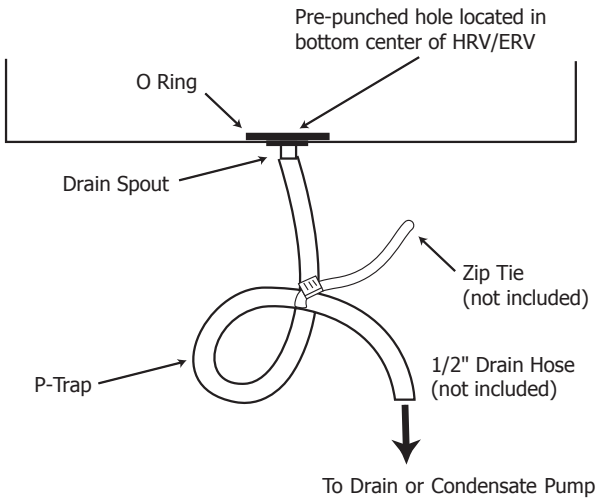
CAUTION ⚠

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 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 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.

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.

Pitot Tube Air Flow Balancing - Commercial

It is necessary to have balanced air flows in an HRV. 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 may not operate at its maximum efficiency
- A negative or positive air pressure may occur in the building
- The unit may not defrost properly
- Failure to balance HRV 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.

Read the Application Warning on the front of this manual!

Prior to balancing, ensure that:

1. All sealing of the ductwork system has been completed.
2. All of the HRV'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 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 adjusted back to match the lower reading. See **Adjusting the Airflow**.
7. Return unit to appropriate fan speed for normal operation

BALANCING PROCEDURE

The following is a method of field balancing an HRV using a Pitot tube, advantageous in situations when flow stations are not installed in the ductwork. Procedure should be performed with the HRV 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 itself and the forced air furnace or air handler if applicable. This will provide the maximum pressure that the HRV 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 manometer capable of reading 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 manometer). Adjust the higher airflow by reducing the fan speed (see "Adjusting the Airflow"). 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

$$= [3.14 \times (6" \div 12)^2] \div 4$$

$$= 0.2 \text{ square feet}$$

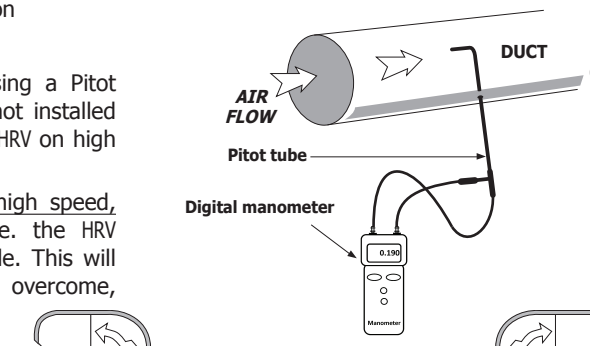
The airflow is then:
640 ft./min. X 0.2 square feet = 128 cfm

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

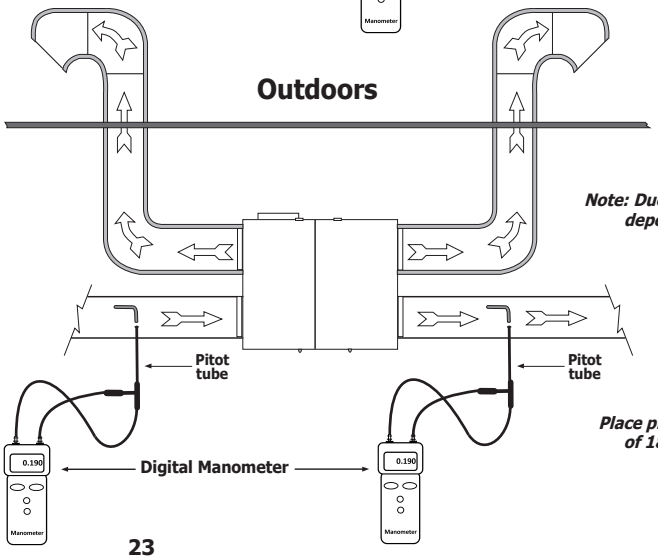
DUCT DIAM. (inches)	**CROSS SECTION AREA** (sq. ft.)
5 (127 mm)	0.14
6 (152 mm)	0.20
7 (178 mm)	0.27

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



Pitot Tube Air Flow Balancing Kit
c/w digital manometer, Pitot tube, hose and tool bag.
PART NO. 99-BAL-KIT



Note: Duct connections may vary, depending on model.

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

Servicing your HRV 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.

Core

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.

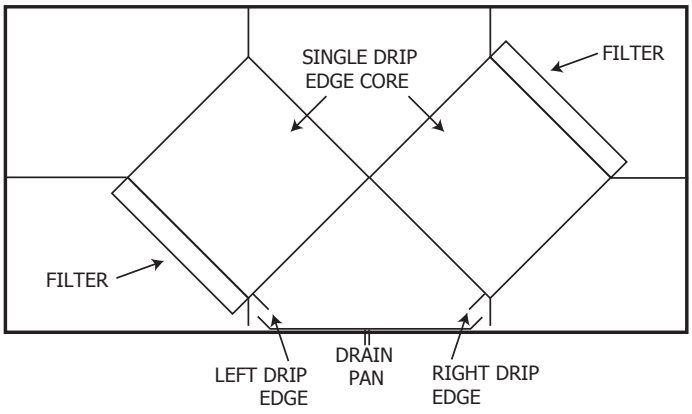
The core is removed by carefully pulling the core outward from the unit, sliding it evenly along its "H channel" supports found in each corner of the core. Note the core may have some resistance when sliding out. Avoid tilting the core as this will result in its edges catching the H channel and temporarily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

FRONT VIEW



ATTENTION

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

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). Refer to **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 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 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 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 weatherhoods (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.

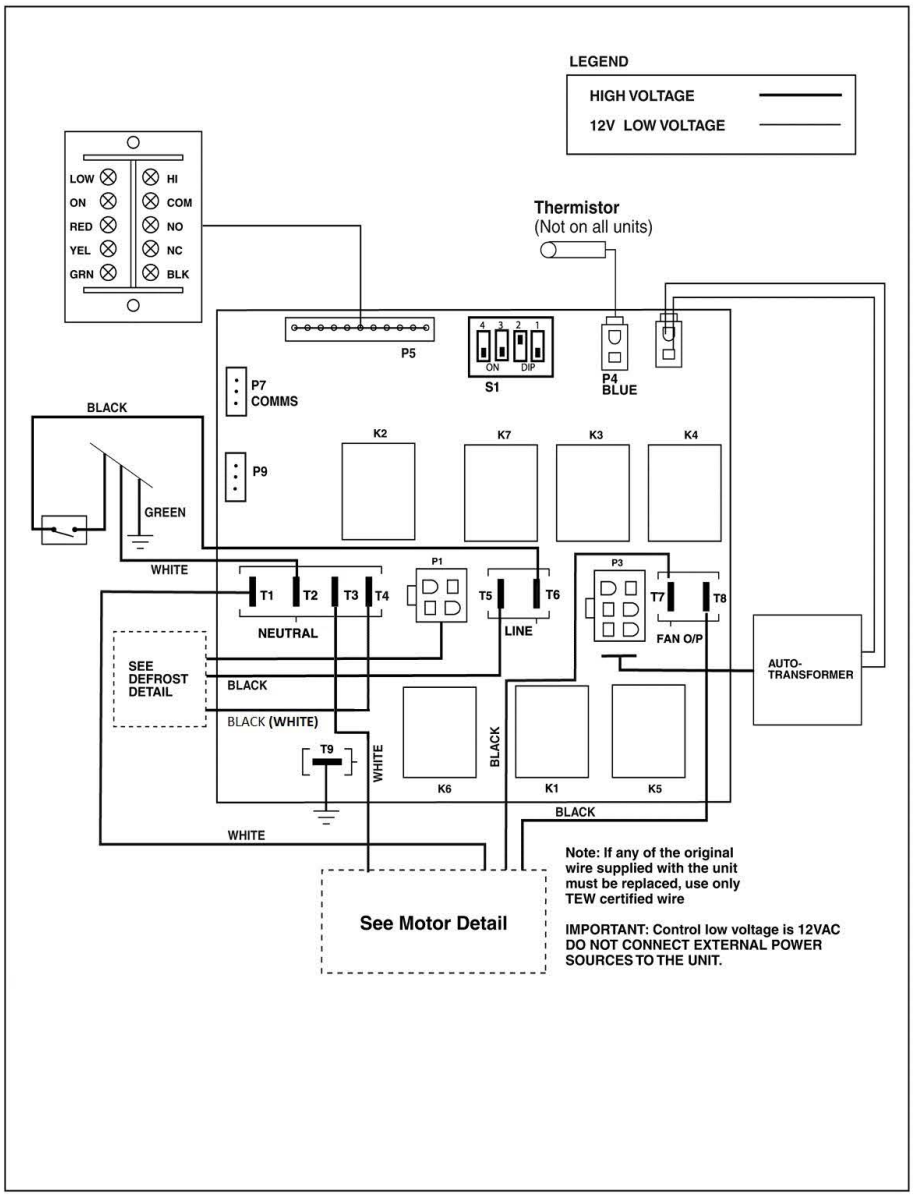
General Maintenance

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.

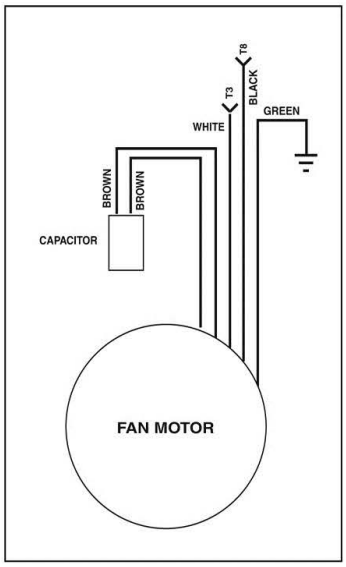
Wipe the inside of the cabinet to remove dust and cob webs as needed.

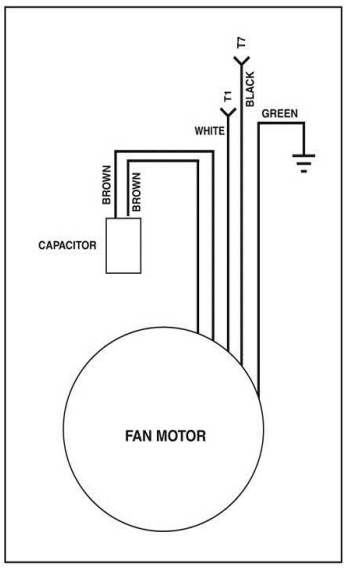
It is a good idea to keep a service/maintenance log of the unit.

CAUTION: ELECTRICAL CONTROL PANEL, SERVICE BY ELECTRICIAN ONLY

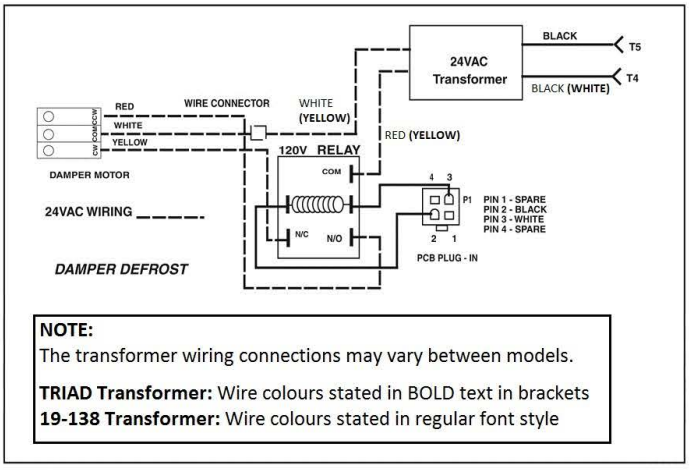


FAN MOTOR DETAILS





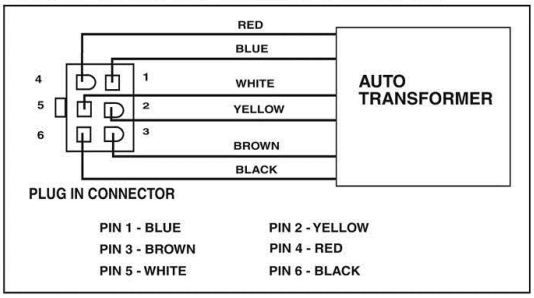
DEFROST DETAILS



NOTE:
The transformer wiring connections may vary between models.

TRIAD Transformer: Wire colours stated in BOLD text in brackets
19-138 Transformer: Wire colours stated in regular font style

AUTO-TRANSFORMER DETAIL



59-TI-126

COMMERCIAL LIFEBREATH®
HEAT RECOVERY VENTILATORS

• 2 Year Limited Warranty • 15 Year HRV 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 should it 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