

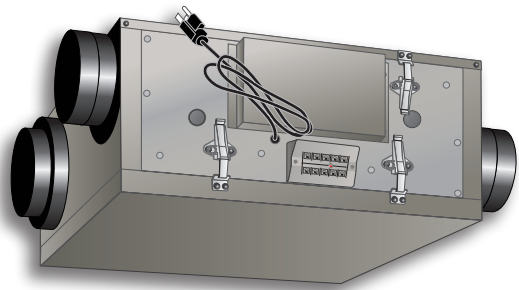
INDOOR AIR QUALITY

**HRV / ERV**

HEALTHY CLIMATE®

Heat / Energy Recovery Ventilator | 60Hz

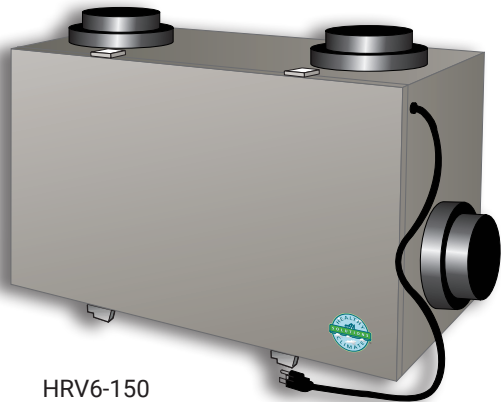
RESIDENTIAL  
PRODUCT SPECIFICATIONS (EHB)



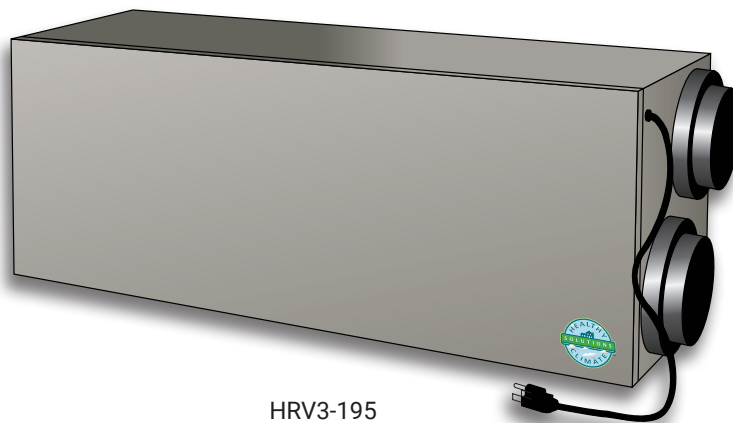
ERV5-130



HRV7-HEX095-TPD, HRV5-150-TPD,  
HRV5-200-TPD, HRV5-270-TPD-ECM,  
ERV5-150-TPD, ERV5-175-TPD

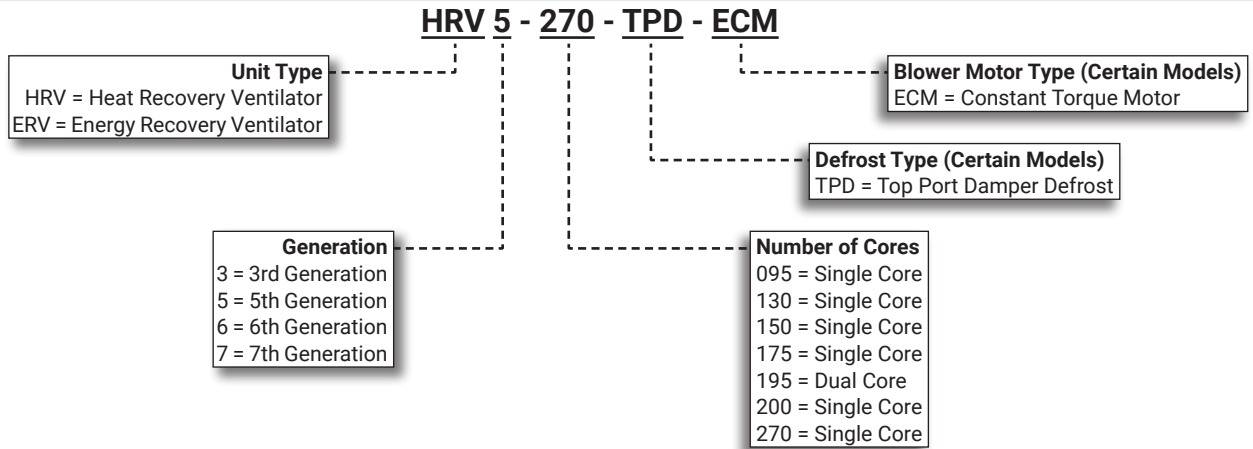


HRV6-150



HRV3-195

## MODEL NUMBER IDENTIFICATION



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## APPROVALS AND WARRANTY

### APPROVALS

- CSA certified to UL 1812 and CSA 22.2
- Certified by the Home Ventilating Institute (HVI)
- Conform to the Canadian Home Builders' Association R-2000 Standard and meet Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) standards
- Conform to CAN/ULC-S110-M1986 for non combustibile material and CAN/ULC-S102-M88 for flame spread rating and smoke developed classification
- Certain models have earned the ENERGY STAR® by meeting strict energy efficiency guidelines set by Natural Resources Canada and the US EPA

**NOTE** - See Specifications table for certified models.

- ISO 9001 Registered Manufacturing Quality System

### WARRANTY

- HRV Aluminum Core:
  - Limited lifetime warranty in residential applications
  - Limited one-year in non-residential applications
- ERV Enthalpic Core:
  - Limited ten year warranty in residential applications
  - Limited one-year in non-residential applications
- All other covered components:
  - Limited five year warranty in residential applications
  - Limited one-year in non-residential applications

**NOTE** - Refer to Lennox® Basic Limited Warranty at [www.Lennox.com](http://www.Lennox.com) for additional details.

## FEATURES

### INSTALLATION GUIDELINES

- Lennox recommends that the HRV/ERV unit be installed in a conditioned space
- If the unit is installed above a ceiling, a separate, secondary drain pan should also be installed under the unit
- If the unit is installed in an unconditioned area condensate lines must be protected against freezing temperatures

### **ENERGY STAR Certified Units**

- To ensure quiet operation of the ENERGY STAR certified HRV/ERV, each product model must be installed using sound attenuation techniques appropriate for the installation
- The way the heat/energy-recovery ventilator is installed can make a significant difference to the electrical energy usage
- To minimize the electricity use of the heat/energy-recovery ventilator, a stand-alone fully ducted installation is recommended
- If a simplified installation is used that operates the furnace air handler for room-to-room ventilation, an electrically efficient furnace that has an electronically commutated (EC) variable speed blower motor will minimize electrical energy consumption and operating cost
- Installation of a user-accessible control with the product model will improve comfort and may significantly reduce the product model's energy use

### APPLICATIONS

- Units are completely wired and include filters
- See System Sizing section on page 10 to determine the right model for the desired application
- If use of HRV/ERV with a dehumidifier and HEPA/Carbon Filtration for optimal Indoor Air Quality (IAQ) is desired, see Lennox Service & Application Notes "HEPA Filtration with Outdoor Air and a Dehumidifier"

### **HRV**

- Heat Recovery Ventilators (HRV) provide fresh, clean outdoor air with an energy saving temperature recovery of up to 90%
- HRV's are recommended in regions where normal humidity levels occur

**NOTE** - See Application Map on page 9

- Intake and exhaust air passes through a patented thermally conductive aluminum core where heat is transferred from exhaust air to incoming air

**NOTE** - HRV7-HEX095-TPD, HRV5-150-TPD, HRV6-150, HRV5-200-TPD and HRV5-270-TPD-ECM are top port models with four oval collars. See dimension drawings for additional information.

### **ERV**

- Energy Recovery Ventilations (ERV) exchange energy (temperature and humidity) from stale indoor air and transfer it to incoming outdoor fresh air
- During warm seasons the unit pre-cools and dehumidifies incoming fresh air
- During cool seasons the unit pre-heats and humidifies incoming fresh air
- Intake and exhaust air passes through an enthalpic core where heat and moisture are transferred from stale exhaust air to incoming fresh air

### **HRV / ERV**

- Centrifugal blowers bring in fresh outdoor air while at the same time exhausting an equal amount of stale indoor air
- A duct system distributes the fresh air and collects the stale air for removal from the building
- Unit airflow must be balanced for maximum efficiency

**NOTE** - Refer to Installation Instructions for unit air flow balancing details.

### CORE ASSEMBLY

#### **HRV Patented Aluminum Core**

- Aluminum plates have excellent heat transfer characteristics, are washable, corrosion resistant and durable
- Opposed dimples pressed into each plate ensure proper separation within each core
- Modular design ensures ease of service

#### **ERV Enthalpic Core**

- Enthalpic core has excellent latent and sensible heat transfer characteristics, are vacuum cleanable, corrosion resistant and durable
- UL recognized component
- Modular design ensures ease of service

### BLOWER

- Dual centrifugal style blowers with single dual shaft motor (HRV3-195, HRV6-150)
- Two backward curved centrifugal impellers with integral motors (HRV7-HEX095-TPD, HRV5-150-TPD, HRV5-200-TPD, HRV5-270-TPD-ECM, ERV5-150-TPD, ERV5-175-TPD)
- Two forward curved centrifugal impellers with integral motors (ERV5-130)
- Design allows easy access for servicing

#### **Blower Motor**

##### **(All models except HRV5-270-TPD-ECM)**

- Multi-speed direct drive PSC motor (up to 5 speed settings with optional control)

#### **Electronically Commuted (EC) Motors (HRV5-270-TPD-ECM Only)**

- Each airstream has an independent motorized electronically commuted (EC) motor with impeller for multiple fan speed operations. High cfm with minimum Watts/cfm

## FEATURES

### **DEFROST**

- The ERV/HRV has an electronically controlled defrost mechanism
- The defrost cycle is activated when the outdoor temperature drops below 27°F
- Defrost run times vary based on incoming fresh air temperature
- Three recirculating defrost modes are available:
  1. At 27°F HRV runs in defrost for 3 minutes and runs in ventilation for 25 minutes
  2. At -4°F HRV runs in defrost for 4.5 minutes and runs in ventilation for 17 minutes
  3. At -31°F HRV runs in defrost for 7 minutes and runs in ventilation for 15 minutes
- No remote device can override this defrost mode or selected speed until the cycle is complete
- After the defrost cycle is complete the unit defaults to previous settings
- If the cycle is complete and the thermistor continues to measure defrost temperature the defrost cycle is repeated

#### **Recirculating Damper Defrost**

(HRV5-150-TPD, HRV6-150, HRV5-200-TPD, HRV7-HEX095-TPD, HRV5-270-TPD-ECM, ERV5-150-TPD, ERV5-175-TPD, ERV5-130)

- During defrost a motor driven damper door mechanism closes off the supply air from outside allowing exhaust air to recirculate through the unit's core
- During defrost cycle no ventilation is occurring
- After the defrost period, the damper operates in the opposite direction to reopen the fresh air port
- Defrost cycle repeats until the temperature rises above 27°F

#### **Damper Defrost**

(HRV3-195 Models)

- During defrost a motor driven damper door mechanism closes off the supply air from outside allowing the fifth port to open, enabling warm room air to be drawn in from around the unit
- During defrost cycle stale air exhaust is still occurring
- After the defrost period, the damper operates in the opposite direction to reopen the fresh air port
- Defrost cycle repeats until the temperature rises above 27°F
- The defrost port can also be ducted to another location

### **CABINET**

- Constructed of 20 gauge pre-painted quartz gray steel
- Interior is lined with foil-faced polystyrene to eliminate noise, condensation and air loss
- Cabinet is designed for structural strength and long life
- Access panels are hinged, have quick release latches and can be completely removed for easy access to filters and core(s) for servicing
- Safety interlock switch automatically shuts off power to unit when access panel is opened
- Four polyester hanging straps provided with unit (ERV5-130 has 4 mounting brackets included)
- Condensate drain pans have drain connection (except ERV5-130)

#### **System Balancing**

- HRV7-HEX095-TPD, HRV5-270-TPD-ECM, HRV5-150-TPD, HRV6-150, HRV5-200-TPD, ERV5-150-TPD and ERV5-175-TPD models include a patented, balancing damper located in the intake and exhaust air stream collar
- HRV5-150-TPD, HRV6-150, HRV5-200-TPD, HRV7-HEX095-TPD, HRV5-270-TPD-ECM, ERV5-150-TPD and ERV5-175-TPD models include door port balancing capability. See installation instructions
- HRV3-195 and ERV5-130 models requires an optional field installed butterfly damper for system balancing
- See Optional Accessories

## OPTIONAL ACCESSORIES (MUST BE ORDERED SEPARATELY)

### AIR FILTER

- MERV 6 air filters are furnished in both exhaust and intake air streams
- Polyester filters are easily removed for cleaning
- Design and location of filters allows maximum filtration with minimum air resistance

**NOTE** - See Optional Accessories for MERV 13 filters.

### ELECTRICAL

#### Control Box

- Contains control circuit board and auto-transformer

#### Plug-in Electrical Connection

- Convenient 36 inch (approx. length) power cord with 3-prong 120VAC plug provided for easy electrical connection

### CONTROLS

#### Circuit Board

- Circuit board controls unit operation
- Dip Switches enable and disable defrost and recirculation and selection of maximum speed
- Up to five blower speeds and five modes of operation are available with optional wall mount controls

#### Self-Test

- When unit is energized, the HRV/ERV cycles through all speeds available, tests damper motor operation, and returns to the previous operational mode and speed selection

#### Dehumidistat Disable Feature

- The dehumidistat function will be disabled if the outdoor temperature exceeds 59°F for a 24-hour period
- The dehumidistat function will be re-enabled if the unit is unplugged or if the outdoor temperature drops below 59°F for a 24-hour period

#### Furnace/Air Handler Interlock Capability

- Built-in function on HRV/ERV allows unit to turn on/off furnace or air handler blower
- Refer to Installation Instructions for interlocking unit to furnace or air handler

**NOTE** - If connecting to an Lennox® S40 or E30 thermostat refer to the thermostat installation instructions for interlocking.

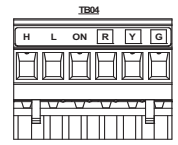
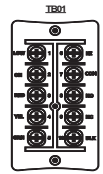
#### Terminal Block

- Control Board is wired to external terminal block located on side of unit
- Terminal block allows connection to various wall mount controls
- See Optional Accessories for complete listing of controls available
- Terminal block also allows interlock control connection to furnace or air handler

**NOTE** - The terminal block style will vary depending on the model ordered (TB01 or TB04)..

#### Thermostats and Controls (not furnished)

- Thermostats and controls are not furnished and must be ordered extra
- See Optional Accessories tables



## OPTIONAL ACCESSORIES (MUST BE ORDERED SEPARATELY)

### LENNOX® THERMOSTATS

**NOTE** - S40 and E30 Smart Thermostats can control HRV and ERV units without the need for a separate controller. The E30 Smart Thermostat requires firmware version 3.5 or higher and Smart Hub 2.0.

- Units can be setup based on house size and be configured for timed only or ASHRAE 62.2 ventilation modes on the touchscreen

#### S40 Smart Wi-Fi Thermostat (part of the Lennox® Residential Communicating Control System)

- Recognizes and connects to all Lennox® Communicating products to automatically configure and control the heating/cooling system (based on user-specified settings) for the highest level of comfort, performance and efficiency
- Recognizes model and serial number information for Lennox® Communicating products to simplify system setup
- Lennox Smart Room Sensors, Lennox Wireless Extenders and Lennox Smart Air Quality Monitor can be added to the system
- Smart home automation compatible with Amazon Alexa®, Google Assistant, Control4® and Building36®
- Sends service alerts and reminders
- Lennox Smart Thermostat App features Wi-Fi remote temperature monitoring and adjustment through a home wireless network apps for smartphones or tablets
- Lennox Smart Technician App allows installer to manage systems in the home
- Service Dashboard features online real-time monitoring and advanced diagnostics of installed Lennox® Communicating systems
- Simple easy-to-use touchscreen allows complete system configuration
- Scheduled maintenance alerts, system warnings and troubleshooting are also displayed on thermostat screen
- Easy to read 7 inch high definition color display (measured diagonally)
- Conventional outdoor units (not Lennox® Communicating) can easily be added and controlled by the S40 Thermostat
- Installer setup screens allow quick and simple system configuration without a manual, Installer can also run tests on complete system or individual components for easy maintenance and troubleshooting
- Serial communications bus (RSBus), with less wiring than a conventional heating/cooling system, allows system communication
- Uses standard 4-wire unshielded thermostat wiring
- High Definition Color Display with Subbase and wallplate furnished for easy installation

**NOTE** - S40 Smart Thermostat requires the use of the Equipment Interface Module (EIM) for ventilation control.



**NOTE** - See the Lennox® S40 Thermostat Product Specifications bulletin for more information.

#### E30 Smart Wi-Fi Thermostat

- Wi-Fi enabled, electronic 7-day, universal, multi-stage, programmable, touchscreen thermostat
- 3 Heat/2 Cool
- Auto-changeover
- Controls dehumidification during cooling mode and humidification during heating mode
- Offers enhanced capabilities including humidification / dehumidification / dewpoint measurement and control, Humiditol® control, and equipment maintenance reminders
- Easy to read 7 in. color touchscreen (measured diagonally)
- LCD display with backlight shows the current and set temperature, time, inside relative humidity, system status (operating mode and schedules) and outside temperature (optional outdoor sensor required)
- Smooth Setback Recovery starts system early to achieve setpoint at start of program period
- Compressor short-cycle protection (5 minutes)
- Up to four separate schedules are available plus Schedule IQ™
- One-Touch Away Mode - A quick and easy way to set the cooling and heating setpoints while away
- Smart Away™ - Uses geo-fencing technology to determine when the homeowner is within a predetermined distance from the home to operate the system when leaving, away and arriving
- Wi-Fi remote monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets
- Smart home automation compatible with Apple HomeKit™, Amazon Alexa®, Google Assistant and IFTTT
- Service Dashboard features online real-time monitoring of installed Lennox® thermostats
- High Definition Color Display, Mag-Mount, Smart Hub Controller, wallplate (for retrofit installations) furnished for easy installation
- See the Lennox® E30 Smart Wi-Fi Thermostat Product Specifications bulletin for more information



#### Remote Outdoor Temperature Sensor

- Used with the Lennox® Communicating thermostats and the Lennox® E30 Smart Thermostat
- When installed outdoors, sensor allows thermostat to display outdoor temperature



**NOTE** - Sensor is required for Enhanced Dehumidification Control (EDA) applications.

**NOTE** - The outdoor sensor is furnished as standard with Lennox® Communicating outdoor units, optional for conventional units.

## OPTIONAL ACCESSORIES (MUST BE ORDERED SEPARATELY)

### CONTROLS (continued)

#### Healthy Climate® Basic Wall Mount 2 Speed Dehumidistat/Ventilation Control

- ON/OFF button with indicator LED
- Dehumidistat with graduated LED indicators (20 to 60% relative humidity)

**NOTE** - Dehumidistat is off when no LEDs are lit.

- Fan Speed button for High, Low and Standby
- Compatible with Wireless 20 / 40 / 60 Minute Timer
- 3-wire, 20-gauge (min.), low-voltage wire connection
- Designed to be mounted in a standard 2 x 4 in. electrical box or surface mounted to a wall



#### Healthy Climate® Digital 5 Speed / 5 Mode Dehumidistat/Ventilation Control

Fully digital control determines when and how much fresh air will enter the home.

- 5-speed blower setting
  - Standby setting (blower speed 0)
  - Electronic dehumidistat
  - Five selectable modes of operation:
    1. Continuous Ventilation
    2. <sup>1</sup> 20 min. Ventilation / 40 min. Recirculation
    3. 20 min. Ventilation / 40 min. Off
    4. 10 min. Ventilation / 50 min. Off
    5. <sup>1</sup> Continuous Recirculation
  - 20 / 40 / 60 high speed override button
  - Compatible with Wireless/Wired 20 / 40 / 60 Minute Timer
  - Instruction card inserted in control
  - Easy-to-read backlit LCD screen
  - Service Indicator
  - 3-wire, 20-gauge (min.), low-voltage wire connection
  - Slim-line design
- <sup>1</sup> **NOTE** - Recirculation mode not available on all models.



**Healthy Climate® Wired 20 / 40 / 60 Minute Timer**  
Remotely located timer allows 20, 40 or 60 minute operation.

- One-touch button activates high speed
- 3 indicator LED's show timer status
- Lockout feature eliminates tampering
- 3-wire, 20-gauge (min.), low-voltage wire connection
- Installs in a standard 2 x 4 in. electrical box



#### Healthy Climate® Wireless 20 / 40 / 60 Minute Timer

Remotely located timer allows 20, 40 or 60 minute wireless operation when paired with the Wall Mount Dehumidistat/Ventilation Control or the Digital 5 Speed / 5 Mode Control.

- 40 ft. range
- One-touch button activates high speed
- 3 indicator LED's show timer status
- No wiring, timer is paired with the main control
- Multiple timers can be paired to a single main control
- Designed to be mounted in a standard 2 x 4 in. electrical box or surface mounted to a wall
- Battery (CR2450) lithium button type is furnished.



#### Healthy Climate® Wireless Repeater

The Wireless Repeater is used to extend range of the Wireless Timer.

- Installed halfway in-between the Wireless Timer and the main control if the timer is out of range
- Plugs directly into a 120V power outlet
- LED indicates connection status:
  - Green = Connected to the wall control
  - Flashing = Moderate connection to the wall control
  - Red = No connection to the wall control
- Multiple Repeaters can be paired to a single main control



### INDOOR AIR QUALITY

#### MERV 13 High Efficiency Filters

- MERV 13 (Minimum Efficiency Reporting Value based on ASHRAE 52.2)
- Includes four filters
- Installed on the fresh air intake

**NOTE** - Recommended replacement every 3 months.

## OPTIONAL ACCESSORIES (MUST BE ORDERED SEPARATELY)

### AIR BALANCING TOOLS

#### Optional Accessories

##### Butterfly Balancing Damper

- 6 or 7 in. diameter



##### Backdraft Damper

- 5 or 6 in. diameter
- Spring-loaded damper is installed on the Stale Air to Outside ducting
- See System Applications

##### Door Port Gauge Tube Set (HRV5-150-TPD/TPF, HRV6-150, HRV5-200-TPD, HRV7-HEX095-TPD, HRV5-270-TPD-ECM, ERV5-150-TPD & ERV5-175-TPD Models Only)

- Includes two connection hoses and two rubber fittings and instructions



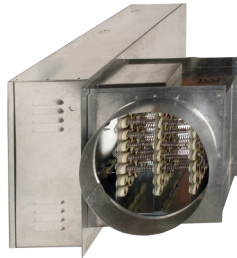
**NOTE** - Magnehelic gauge or digital manometer (reading down to 0 with resolution of 0.001 in. w.g.) is not furnished and must be field supplied.

### DUCTWORK

#### Optional Accessories

##### Duct Heaters

- Duct heaters are available to temper incoming fresh air after heat recovery
- Heaters have built-in electronic modulating controller and air flow/temperature sensor to proportionally adjust the heating load to match the exact capacity required while minimizing operating costs
- Available in 6 inch (1 or 2 kW) and 7 inch (2 kW) diameter sizes
- Voltage/Phase - 120/1
- H x W x L - 8-1/2 x 11-1/2 x 12-1/2 in.



##### Flexible Ducts - Insulated or Non-Insulated

- Non-insulated ducts are available for connection to optional circular grilles
- Constructed of aluminum foil/polyester laminate and metalized polyester film around a steel wire helix
- Fully insulated fiberglass ducts have an "R" value of 4.2 and are available for connection to outside weatherhoods (refer to local codes)



##### Hinged Kitchen Exhaust Grille

- Louvered panel is hinged for easy access to washable aluminum grease filter
- Size - 6 x 10 in. in white



##### Round Diffusers

- White molded plastic grilles are available for room air distribution
- Grilles are adjustable for room to room system balancing
- Compression spring tab clips into round duct
- Available in 4, 5, 6 and 8 inch diameters



##### Weatherhood Kit

- Two furnished per kit, one for intake air and one for exhaust air
- Labeled for easy identification
- Fully adjustable for different wall thickness
- Complete with 1/4 in. mesh bird screen, two 12 in. sleeves with insulating duct collars
- Hinged hood allows easy cleaning of screen
- White finish. Available in 5, 6, and 7 inch diameters



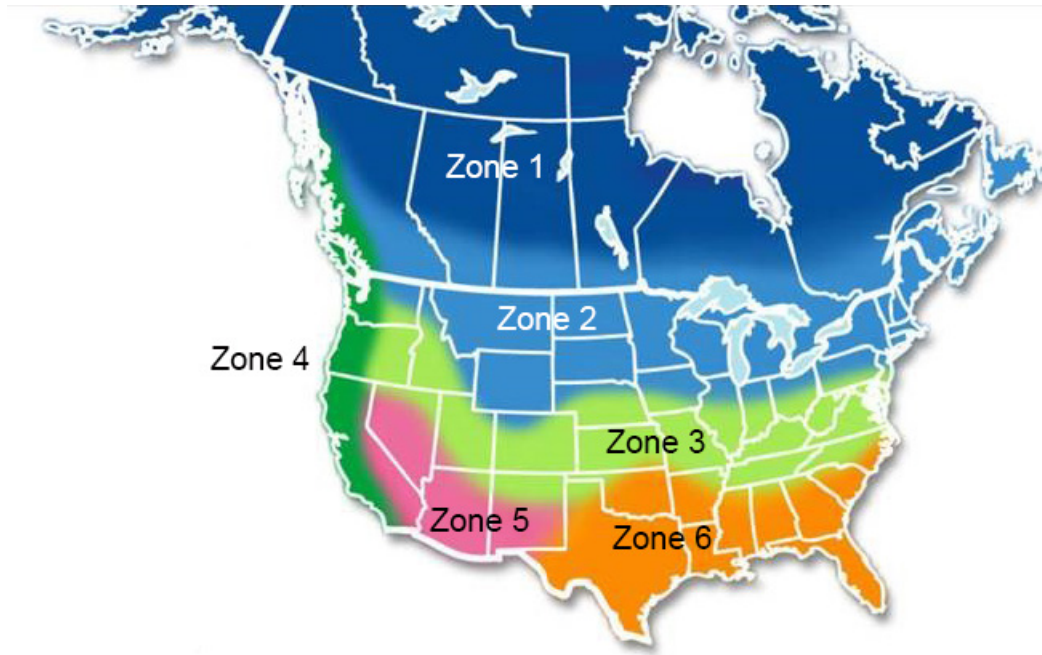
##### Dual Hood







- Dual Hood only requires a single 6 inch diameter penetration in the exterior wall for the fresh air intake and stale air exhaust connections
- Stale air is exhausted from the front of the hood while fresh air intake is from the bottom of the hood
- Compatible with 5 in. or 6 in. duct
- See dimension drawing on page 21
- See pressure drop charts on page 17





## APPLICATION MAP



	ZONE 1	True North - Cold Winter and Dry Summer - <b>HRV</b>	HRV is best for a very cold and prolonged winter.
	ZONE 2	US - Canada Border - Cold Winter and Hot Humid Summer - <b>HRV or ERV</b>	HRV is best for a cold or prolonged winter. ERV will help reduce the AC load in the summer by transferring moisture.
	ZONE 3	Central US - Moderate Climate - <b>HRV or ERV</b>	HRV and ERV will work equally well. ERV will help reduce the AC load in the summer by transferring moisture.
	ZONE 4	Marine Climate - <b>HRV or ERV</b>	Humidity and temperature are moderated by HRV or ERV.
	ZONE 5	Arid Climate - Hot and Dry - <b>HRV</b>	HRV will transfer energy summer and winter. With little moisture to transfer an ERV is not needed.
	ZONE 6	Gulf Region - Hot and Humid Climate - <b>ERV</b>	ERV is recommended. Primary benefit is transferring energy and moisture throughout summer and winter.

**NOTE** - All HRV and ERV models have an integrated defrost system for cold climates.

ERV is recommended in regions where high outdoor humidity causes air conditioning operation for dehumidification more frequently than heating system operation.

## SYSTEM SIZING

### SIZING A CENTRAL VENTILATION SYSTEM

- The HRV and ERV is part of a central ventilation system
- The system can include multiple fans such as kitchen range hoods and bathroom exhaust fans in addition to the HRV or ERV
- An HRV can be used in place of a bathroom exhaust fan and provide supplemental ventilation in the kitchen (it cannot be used as a range hood)
- Therefore determining the required Ventilation cfm will depend on the application and standard/method used for calculation

#### Method #1

##### Size the HRV/ERV to provide 1/3 air change per hour - International Residential Code (IRC) 2006

- This method requires determining the volume of the home and then providing enough air flow to have one complete air change every 3 hours
- Example: A home has 2000 square feet of conditioned floor space and 8 ft. ceilings
- The volume is  $2000 \times 8 = 16,000$  cubic feet. To obtain required airflow in cfm, multiply by 1/3 and divide by 60 minutes/hour: Required airflow, cfm =  $16,000 \text{ cu. ft.} \times 1/3 \text{ ACH} / 60 \text{ minutes/hr} = 88 \text{ cfm}$

#### Method #2

##### Use a Room Count to find the required airflow - CSA-F326

- Determine the number of bedrooms and add 1. Multiply this by 10 cfm. An additional 10 cfm is required for every other room in the house. An unfinished basement requires 20 cfm
- Example: A home with 4 bedrooms, 2 bathrooms, living room, kitchen, dining room and basement requires 120 cfm

#### Method #3

##### ASHRAE (American Society of Heating Refrigeration and Air Conditioning Engineers) Standard 62.2-2016

- This standard describes the minimum ventilation required based on the ASHRAE 4.1a Quick Reference Chart
- Example a 2000 square foot home with 4 bedrooms from ASHRAE 4.1 a quick reference chart predicts 98 cfm

#### Method #4

##### Home Ventilating Institute (HVI):

- HVI recommends using the minimum ventilation rate as specified by ASHRAE 62.2 and adding 2 cfm/100 sq. ft. of floor area
- Example a 2000 square foot home with 4 bedrooms from ASHRAE 4.1a Quick Reference Chart predicts 98 cfm + 40 cfm = 138 cfm

**WHOLE BUILDING VENTILATION AIR REQUIREMENTS**  
**ASHRAE 4.1a (I-P) Quick Reference Chart**

Floor Area sq. ft.	No. of Bedrooms				
	1	2	3	4	5
	cfm	cfm	cfm	cfm	cfm
<500	30	38	45	53	60
501 - 1000	45	53	60	68	75
1001 - 1500	60	68	75	83	90
1501 - 2000	75	83	90	98	105
2001- 2500	90	98	105	113	120
2501 - 3000	105	113	120	128	135
3001 - 3500	120	128	135	143	150
3501 - 4000	135	143	150	158	165
4001 - 4500	150	158	165	173	180
4501 - 5000	165	173	180	188	195

## SYSTEM SIZING

### Method #5

#### Custom method to achieve a target VOC's level in homes

- Ventilation or source control may be required above the ASHRAE rates if there are significant sources; or to achieve specific concentration level(s) of chemical(s) of interest [for instance achieving  $<20 \text{ } \mu\text{g}/\text{m}^3$  of formaldehyde (HCHO) as recommended by the CDC/HUD and NIOSH for occupied trailers]
- If ventilation rates other than mentioned above are desired, dealers may wish to obtain the services of a certified IAQ consultant to obtain guidance and laboratory measurements of chemical(s) of concern both before and after installation and operation of additional ventilation to insure that the target concentration(s) of chemical(s) of concern are achieved
- Dealers and homeowner need to be aware that reaching specific concentration target(s) may be an iterative process
- For instance if there are multiple furnace/air handlers in the home, ventilation may be added to one or more of the indoor units to start with, and if the desired level(s) of chemical(s) of concern are not obtained, additional ventilation can be added to the additional indoor units or more rigorous source control measures implemented (i.e. removing contaminant sources from the home)
- One option is to size the HRV/ERV based on low speed fan operation or 20 minute/hour operation to one of the above methods which will allow ventilation to be easily increased by changing a controller setting if desired

**NOTE** - Dealer should always calculate increased load requirement due to ventilation and insure that HVAC system is sized appropriately to handle both sensible (temperature) and latent (humidity) loads.

Note - In some locations, a standalone dehumidifier may be required to handle the increased latent (humidity) load to prevent increased humidity in the home.

### SIZING A CENTRAL VENTILATION SYSTEM

#### SUMMARY OF THE ABOVE CALCULATIONS USING VARIOUS METHODS

**Method 1** - Cubic Volume - 88 cfm

**Method 2** - Room Count - 120 cfm

**Method 3** - ASHRAE 62.2 - 98 cfm

**Method 4** - HVI Recommendation - 138 cfm

**Method 5** - Custom calculation. Size on one of above methods on low speed fan or 20 minute/hour operation. After measuring chemical(s) of concern, adjust operation accordingly

- All methods were calculated using the same 2,000 sq. ft. with 8 ft. ceiling house as an example
- Choose the cfm which satisfies the code requirement of your area and application
- All sizing is done based on HIGH fan speed data but normal operation is constant LOW fan speed with times of HIGH fan speed from a timer, dehumidistat or wall control
- Typically a 0.3 in. w.g. static is used for choosing the correct model (however your duct design would negate the static you want to use for the calculated cfm) for your installation design, see exact model specifications for details (HVI certified data for the unit)

**NOTE** - It is always recommended a proper duct design is done.

## SYSTEM SIZING

### **SETUP WITH LENNOX® S40 OR E30 THERMOSTAT**

- Determine ventilation cfm required based on local code or one of the above methods
- Select an HRV or ERV model which can deliver approximately 25% more than the required cfm at high speed for the designed static pressure, or 0.3 in. w.g. for the default static pressure
- After installation, balance the HRV or ERV on high speed and maximum capacity, making sure that the blower system is operating
- Use Door Port Balancing method (using a manometer with an accuracy of  $\pm 0.02$  in. w.g. and a resolution of 0.001) or pitot tube to measure the cfm
- This is the cfm to set in the S40 or E30 installer HRV/ERV screen, "Ventilation Rate for High Speed"
- For low speed (speed 1), use a pitot tube to measure the cfm of fresh air and stale air. Use the higher cfm value to set in the S40 or E30 installer HRV/ERV screen, "Ventilation Rate for Low Speed"

**NOTE** - S40 Smart Thermostat requires the use of the Equipment Interface Module (EIM) for ventilation control. See Optional Accessories.

### **SETUP WITH BASIC OR DELUXE CONTROL**




- Determine ventilation cfm required based on local code or one of the methods above
- Select an HRV or ERV model which can deliver the required cfm at high speed for the designed static pressure, or 0.3 in. w.g. for the default static pressure
- After installation, balance the HRV or ERV on high speed to the required cfm making sure the blower system is operating

**NOTE** - Dealer should always calculate increased load requirement due to ventilation and insure that HVAC system is sized appropriately to handle both sensible (temperature) and latent (humidity) loads.

**NOTE** - In some locations, a standalone dehumidifier may be required to handle the increased latent (humidity) load to prevent increased humidity in the home.

# SPECIFICATIONS

# HRV

		Model No.	HRV7-HEX095-TPD		HRV6-150		HRV5-150-TPD	
		No. of Cores	Single		Single		Single	
<sup>1</sup> ENERGY STAR® Certified (Canada Only)								
<sup>2</sup> Performance			%	cfm	%	cfm	%	cfm
Adjusted Sensible Recovery Efficiency @ 32°F			79	64	82	64	70	64
Sensible Recovery Efficiency @ 32°F			75	64	75	64	65	64
Adjusted Sensible Recovery Efficiency @ -13°F			68	66	73	68	63	70
Sensible Recovery Efficiency @ -13°F			65	66	70	68	60	70
Blower	<sup>2</sup> Air Flow / <sup>3</sup> Watts vs. Static Pressure (high speed)	0.1 in. w.g.	108	66	170	232	186	103
		0.2 in. w.g.	104	66	159	227	174	103
		0.3 in. w.g.	95	66	148	223	163	104
		0.4 in. w.g.	89	66	138	220	150	103
		0.5 in. w.g.	81	66	123	209	140	103
		0.6 in. w.g.	70	66	---	---	127	101
		0.7 in. w.g.	59	65	---	---	114	99
		0.8 in. w.g.	49	64	---	---	102	96
		0.9 in. w.g.	36	63	---	---	89	94
		1.0 in. w.g.	---	---	---	---	74	92
		Number of Speeds Available (with S40/E30 or Basic Control)			2		2	
Number of Speeds Available (with Digital Control)			5		5		5	
Defrost type			Recirculating		Recirculating		Recirculating	
Door Port Balancing			Yes		Yes		Yes	
Balancing Damper in Intake and Exhaust Collar			Yes		Yes		Yes	
Duct Ports	Connections (No.) & diameter - inch		(2) 5 outside (oval) (2) 5 inside (oval)		(2) 6 outside (round) (2) 6 inside (round)		(2) 5 outside (oval) (2) 5 inside (oval)	
Condensate drain (o.d.) - in. (includes tee)			(2) 1/2		(2) 1/2		(2) 1/2	
Shipping weight - lbs.			63		71		54	

## ELECTRICAL DATA

<sup>3</sup> Voltage		120 volts - 60 Hertz - 1 phase					
<sup>3</sup> Blower HP (PSC type)		1/10		1/10		1/20	
<sup>2</sup> Fan Watts/CFM - HVI Maximum Rated Test @ 32°F		cfm	Watts	cfm	Watts	cfm	Watts
		64	65	64	72	64	47
<sup>3</sup> Amp Rating		0.5		1.4		0.94	

NOTE - Effectiveness is based on temperature difference between the two air streams. Efficiency includes parasitic losses from fan operation.

<sup>1</sup> This product earned the ENERGY STAR® by meeting strict energy efficiency guidelines set by Natural Resources Canada and the US EPA. This product meets ENERGY STAR requirements only when used in Canada.

<sup>2</sup> Certified by the Home Ventilating Institute (HVI) according to test procedures developed by HVI members and based on internationally recognized standards. For performance ratings at other conditions not shown, please visit the [HVI website](#).

<sup>3</sup> Not an HVI certified data point.

SPECIFICATIONS		HRV						
		Model No.	HRV5-200-TPD		HRV3-195		HRV5-270-TPD-ECM	
		No. of Cores	Single		Dual		Single	
<sup>1</sup> ENERGY STAR® Certified (Canada Only)			No		No		No	
<sup>2</sup> Performance			%	cfm	%	cfm	%	cfm
Adjusted Sensible Recovery Efficiency @ 32°F			82	64	87	64	77	64
Sensible Recovery Efficiency @ 32°F			76	64	80	64	75	64
Adjusted Sensible Recovery Efficiency @ -13°F			73	102	70	110	71	72
Sensible Recovery Efficiency @ -13°F			70	102	68	110	70	72
<b>Blower</b>	<sup>2</sup> Air Flow / <sup>3</sup> Watts vs. Static Pressure (high speed)		<b>cfm</b>	<b>Watts</b>	<b>cfm</b>	<b>Watts</b>	<b>cfm</b>	<b>Watts</b>
	0.1 in. w.g.		203	137	220	140	278	241
	0.2 in. w.g.		193	138	210	133	271	242
	0.3 in. w.g.		182	137	193	126	267	243
	0.4 in. w.g.		170	137	176	119	261	246
	0.5 in. w.g.		159	136	155	111	254	246
	0.6 in. w.g.		146	136	131	101	248	244
	0.7 in. w.g.		133	134	108	92	242	249
	0.8 in. w.g.		121	132	83	81	233	249
	0.9 in. w.g.		106	131	55	74	227	249
	1.0 in. w.g.		91	129	---	---	218	251
Number of Speeds Available (with S40/E30 or Basic Control)			2		2		2	
Number of Speeds Available (with Digital Control)			5		5		5	
<b>Defrost type</b>			Recirculating		Damper		Recirculating	
<b>Door Port Balancing</b>			Yes		No		Yes	
<b>Balancing Damper in Intake and Exhaust Collar</b>			Yes		No		Yes	
<b>Duct Ports</b>	Connections (No.) & diameter - inch		(2) 6 outside (oval) (2) 6 inside (oval)		(2) 6 outside (round) (2) 7 inside (round) (1) 6 defrost (round)		(2) 6 outside (oval) (2) 6 inside (oval)	
<b>Condensate drain (o.d.) - in. (includes tee)</b>			(2) 1/2		(2) 1/2		(2) 1/2	
<b>Shipping weight - lbs.</b>			67		96		68	

ELECTRICAL DATA								
		<sup>3</sup> Voltage	120 volts - 60 Hertz - 1 phase					
		<sup>3</sup> Blower HP (PSC type)	1/10		1/10		1/10 (ECM)	
<sup>2</sup> Fan Watts/CFM - HVI Maximum Rated Test @ 32°F			<b>cfm</b>	<b>Watts</b>	<b>cfm</b>	<b>Watts</b>	<b>cfm</b>	<b>Watts</b>
			64	61	64	67	64	22
		<sup>3</sup> Amp Rating	1.4		1.5		2.1	

NOTE - Effectiveness is based on temperature difference between the two air streams. Efficiency includes parasitic losses from fan operation.


<sup>1</sup> This product earned the ENERGY STAR® by meeting strict energy efficiency guidelines set by Natural Resources Canada and the US EPA. This product meets ENERGY STAR requirements only when used in Canada.

<sup>2</sup> Certified by the Home Ventilating Institute (HVI) according to test procedures developed by HVI members and based on internationally recognized standards. For performance ratings at other conditions not shown, please visit the [HVI website](#).

<sup>3</sup> Not an HVI certified data point.

# SPECIFICATIONS

ERV

		Model No.		ERV5-130		ERV5-150-TPD		ERV5-175-TPD		
		No. of Cores		Single		Single		Single		
<sup>1</sup> ENERGY STAR® Certified (Canada Only)		No		No						
<sup>2</sup> Performance		%	cfm	%	cfm			%	cfm	
Adjusted Sensible Recovery Efficiency @ 32°F		78	64	81	89	83	66			
Sensible Recovery Efficiency @ 32°F		71	64	75	89	75	66			
Adjusted Sensible Recovery Efficiency @ -13°F		62	64	68	78	66	68			
Sensible Recovery Efficiency @ -13°F		57	64	65	78	62	68			
Latent Efficiency @ 95 °F		35	64	43	83	49	64			
Total Efficiency @ 95 °F		41	64	49	83	51	64			
Blower	<sup>2</sup> Air Flow / <sup>3</sup> Watts vs. Static Pressure (high speed)	0.1 in. w.g.	cfm	Watts	cfm	Watts	cfm	Watts		
		0.1 in. w.g.	136	156	172	149	193	141		
		0.2 in. w.g.	131	153	161	148	182	141		
		0.3 in. w.g.	127	150	153	148	172	140		
		0.4 in. w.g.	122	147	144	148	161	140		
		0.5 in. w.g.	116	144	133	148	150	139		
		0.6 in. w.g.	112	140	125	146	140	138		
		0.7 in. w.g.	105	137	117	145	127	137		
		0.8 in. w.g.	99	134	106	144	117	135		
		0.9 in. w.g.	93	133	97	142	104	134		
		1.0 in. w.g.	84	130	87	141	91	131		
Number of Speeds Available (with S40/E30 or Basic Control)		2		2		2				
Number of Speeds Available (with Digital Control)		5		5		5				
Defrost type		Recirculating		Recirculating		Recirculating				
Door Port Balancing		No		Yes		Yes				
Balancing Damper in Intake and Exhaust Collar		No		Yes		Yes				
Duct Ports	Connections (No.) & diameter - inch	(2) 5 outside (round) (2) 5 inside (round)		(2) 5 outside (oval) (2) 5 inside (oval)		(2) 6 outside (oval) (2) 6 inside (oval)				
Condensate drain (o.d.) - in. (includes tee)		---		(2) 1/2		(2) 1/2				
Shipping weight - lbs.		45		46		63				
<b>ELECTRICAL DATA</b>										
<sup>3</sup> Voltage		120 volts - 60 Hertz - 1 phase								
<sup>3</sup> Blower HP (PSC type)		1/10		1/20		1/20				
<sup>2</sup> Fan Watts/CFM - HVI Maximum Rated Test @ 32°F		cfm	Watts	cfm	Watts	cfm	Watts			
		95	101	110	99	114	110			
<sup>3</sup> Amp Rating		1.4		1.7		1.4				

NOTE - Effectiveness is based on temperature difference between the two air streams. Efficiency includes parasitic losses from fan operation.

<sup>1</sup> This product earned the ENERGY STAR® by meeting strict energy efficiency guidelines set by Natural Resources Canada and the US EPA. This product meets ENERGY STAR requirements only when used in Canada.

<sup>2</sup> Certified by the Home Ventilating Institute (HVI) according to test procedures developed by HVI members and based on internationally recognized standards. For performance ratings at other conditions not shown, please visit the [HVI website](#).

<sup>3</sup> Not an HVI certified data point.

OPTIONAL ACCESSORIES - ORDER SEPARATELY							HRV
	Model No.	HRV7- HEX095-TPD	HRV5-150- TPD	HRV6-150	HRV3-195	HRV5-200- TPD	HRV5-270- TPD-ECM
<b>Air Filters - MERV 13 (4 per order)</b>		<b>21V13</b>	<b>20A91</b>	<b>21V13</b>	<b>20A91</b>	<b>21V13</b>	<b>21V13</b>
<b>Air Balancing Tools</b>	Door Port Gauge Tube Set	<b>Y2207</b>	<b>Y2207</b>	<b>Y2207</b>	N/A	<b>Y2207</b>	<b>Y2207</b>
<b>Backdraft Damper</b>	5 in. diameter	<b>Y3728</b>	<b>Y3728</b>	---	---	---	---
	6 in. diameter	---	---	<b>Y3727</b>	<b>Y3727</b>	<b>Y3727</b>	<b>Y3727</b>
<b>Butterfly Damper</b>	6 inch diameter	Furnished	Furnished	Furnished	---	Furnished	Furnished
	7 inch diameter	---	---	---	Field Provided	---	---
<b>Communicating Controls</b>	S40 Smart Thermostat	<b>22V24</b>	<b>22V24</b>	<b>22V24</b>	<b>22V24</b>	<b>22V24</b>	<b>22V24</b>
	<sup>1</sup> Equipment Interface Module	<b>22X18</b>	<b>22X18</b>	<b>22X18</b>	<b>22X18</b>	<b>22X18</b>	<b>22X18</b>
	E30 Smart Thermostat	<b>20A65</b>	<b>20A65</b>	<b>20A65</b>	<b>20A65</b>	<b>20A65</b>	<b>20A65</b>
	<sup>2</sup> Remote Outdoor Air Temperature Sensor	<b>X2658</b>	<b>X2658</b>	<b>X2658</b>	<b>X2658</b>	<b>X2658</b>	<b>X2658</b>
<b>Controls</b>	Basic 2 Speed Control	<b>Y8249</b>	<b>Y8249</b>	<b>Y8249</b>	<b>Y8249</b>	<b>Y8249</b>	<b>Y8249</b>
	Digital 5 Speed/4 Mode Control	<b>27C77</b>	<b>27C77</b>	<b>27C77</b>	<b>27C77</b>	<b>27C77</b>	<b>27C77</b>
	Wired 20/40/60 Minute Fan Timer	<b>Y2169</b>	<b>Y2169</b>	<b>Y2169</b>	<b>Y2169</b>	<b>Y2169</b>	<b>Y2169</b>
	<sup>3</sup> Wireless 20/40/60 Minute Fan Timer	<b>Y8251</b>	<b>Y8251</b>	<b>Y8251</b>	<b>Y8251</b>	<b>Y8251</b>	<b>Y8251</b>
	Wireless Repeater	<b>Y8252</b>	<b>Y8252</b>	<b>Y8252</b>	<b>Y8252</b>	<b>Y8252</b>	<b>Y8252</b>
<sup>4</sup> <b>Dual Hood</b>		<b>Y3813</b>	<b>Y3813</b>	<b>Y3813</b>	<b>Y3813</b>	<b>Y3813</b>	<b>Y3813</b>
<b>Duct Heaters</b>	6 in. diameter (1 kW)	<b>97E73</b>	<b>97E73</b>	<b>97E73</b>	<b>97E73</b>	<b>97E73</b>	<b>97E73</b>
	6 in. diameter (2 kW)	<b>20N16</b>	<b>20N16</b>	<b>20N16</b>	<b>20N16</b>	<b>20N16</b>	<b>20N16</b>
	7 in. diameter (2 kW)	<b>97E74</b>	<b>97E74</b>	<b>97E74</b>	<b>97E74</b>	<b>97E74</b>	<b>97E74</b>
	Voltage/Phase (60 Hz)	120/1	120/1	120/1	120/1	120/1	120/1
	Amps - 1 kW Heater	8.3	8.3	8.3	8.3	8.3	8.3
	Amps - 2 kW Heaters	16.7	16.7	16.7	16.7	16.7	16.7
<sup>5</sup> <b>Flexible Ducts - No. &amp; dia. - in.</b>		(2) 6	(2) 5	(2) 6	(2) 6	(2) 6	(2) 6
<b>Hinged Kitchen Exhaust Grille</b>		<b>18N48</b>	<b>18N48</b>	<b>18N48</b>	<b>18N48</b>	<b>18N48</b>	<b>18N48</b>
<b>Round Diffusers</b>	4 in. diameter	<b>92E54</b>	<b>92E54</b>	<b>92E54</b>	<b>92E54</b>	<b>92E54</b>	<b>92E54</b>
	5 in. diameter	<b>92E55</b>	<b>92E55</b>	<b>92E55</b>	<b>92E55</b>	<b>92E55</b>	<b>92E55</b>
	6 in. diameter	<b>92E56</b>	<b>92E56</b>	<b>92E56</b>	<b>92E56</b>	<b>92E56</b>	<b>92E56</b>
	8 in. diameter	<b>56N81</b>	<b>56N81</b>	<b>56N81</b>	<b>56N81</b>	<b>56N81</b>	<b>56N81</b>
<sup>6</sup> <b>Weatherhood Kit (2 per kit)</b>	5 in. diameter	<b>92E66</b>	<b>92E66</b>	<b>92E66</b>	<b>92E66</b>	<b>92E66</b>	<b>92E66</b>
	6 in. diameter	<b>95P07</b>	<b>95P07</b>	<b>95P07</b>	<b>95P07</b>	<b>95P07</b>	<b>95P07</b>
	7 in. diameter	<b>17N11</b>	<b>17N11</b>	<b>17N11</b>	<b>17N11</b>	<b>17N11</b>	<b>17N11</b>

<sup>1</sup> Required with S40 Smart Thermostat for ventilation control.

<sup>2</sup> Remote Outdoor Temperature Sensor is used with conventional (Lennox® Non-Communicating) outdoor units (sensor is furnished with Lennox® Communicating outdoor units). Allows the thermostat to display outdoor temperature. Required in dual-fuel and EDA applications

<sup>3</sup> Wireless Timer (**Y8251**) is only compatible with Basic or Digital Control. For S40 or E30 use Wired Timer (**Y2169**).

<sup>4</sup> See Dual Hood Pressure Drop/Airflow Charts for applications.

<sup>5</sup> Contact your Territory Manager for additional information.

<sup>6</sup> Two Required, one for fresh air intake, one for stale air exhaust.



**OPTIONAL ACCESSORIES - ORDER SEPARATELY**

**ERV**

Model No.		ERV5-130	ERV5-150-TPD	ERV5-175-TPD
<b>Air Filters - MERV 13 (4 per order)</b>		<b>20A90</b>	<b>20A91</b>	<b>20A91</b>
<b>Backdraft Damper</b>	6 in. diameter	<b>Y3727</b>	<b>Y3727</b>	<b>Y3727</b>
<b>Butterfly Damper</b>	6 inch diameter	Furnished	Furnished	Furnished
<b>Communicating Controls</b>	S40 Smart Thermostat	<b>22V24</b>	<b>22V24</b>	<b>22V24</b>
	<sup>1</sup> Equipment Interface Module	<b>22X18</b>	<b>22X18</b>	<b>22X18</b>
	E30 Smart Thermostat	<b>20A65</b>	<b>20A65</b>	<b>20A65</b>
<sup>2</sup> Remote Outdoor Air Temperature Sensor	<b>X2658</b>	<b>X2658</b>	<b>X2658</b>	
<b>Controls</b>	Basic 2 Speed Control	<b>Y8249</b>	<b>Y8249</b>	<b>Y8249</b>
	Digital 5 Speed/4 Mode Control	<b>27C77</b>	<b>27C77</b>	<b>27C77</b>
	Wired 20/40/60 Minute Fan Timer	<b>Y2169</b>	<b>Y2169</b>	<b>Y2169</b>
	<sup>3</sup> Wireless 20/40/60 Minute Fan Timer	<b>Y8251</b>	<b>Y8251</b>	<b>Y8251</b>
	Wireless Repeater	<b>Y8252</b>	<b>Y8252</b>	<b>Y8252</b>
<sup>4</sup> <b>Dual Hood</b>		<b>Y3813</b>	<b>Y3813</b>	<b>Y3813</b>
<b>Duct Heaters</b>	6 in. diameter (1 kW)	<b>97E73</b>	<b>97E73</b>	<b>97E73</b>
	6 in. diameter (2 kW)	<b>20N16</b>	<b>20N16</b>	<b>20N16</b>
	7 in. diameter (2 kW)	<b>97E74</b>	<b>97E74</b>	<b>97E74</b>
	Voltage/Phase (60 Hz)	120/1	120/1	120/1
	Amps - 1 kW Heater	8.3	8.3	8.3
	Amps - 2 kW Heaters	16.7	16.7	16.7
<sup>5</sup> <b>Flexible Ducts - No. &amp; dia. - in.</b>		(2) 6	(2) 6	(2) 6
<b>Hinged Kitchen Exhaust Grille</b>		<b>18N48</b>	<b>18N48</b>	<b>18N48</b>
<b>Round Diffusers</b>	4 in. diameter	<b>92E54</b>	<b>92E54</b>	<b>92E54</b>
	5 in. diameter	<b>92E55</b>	<b>92E55</b>	<b>92E55</b>
	6 in. diameter	<b>92E56</b>	<b>92E56</b>	<b>92E56</b>
	8 in. diameter	<b>56N81</b>	<b>56N81</b>	<b>56N81</b>
<sup>6</sup> <b>Weatherhood Kit (2 per kit)</b>	5 in. diameter	<b>92E66</b>	<b>92E66</b>	<b>92E66</b>
	6 in. diameter	<b>95P07</b>	<b>95P07</b>	<b>95P07</b>
	7 in. diameter	<b>17N11</b>	<b>17N11</b>	<b>17N11</b>

<sup>1</sup> Required with S40 Smart Thermostat for ventilation control.

<sup>2</sup> Remote Outdoor Temperature Sensor is used with conventional (Lennox® Non-Communicating) outdoor units (sensor is furnished with Lennox® Communicating outdoor units). Allows the thermostat to display outdoor temperature. Required in dual-fuel and EDA applications

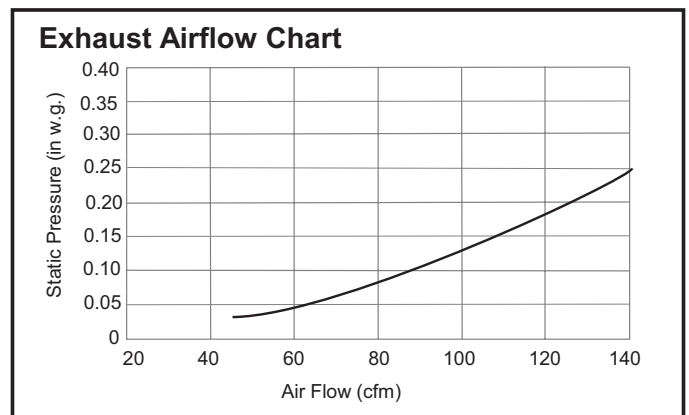
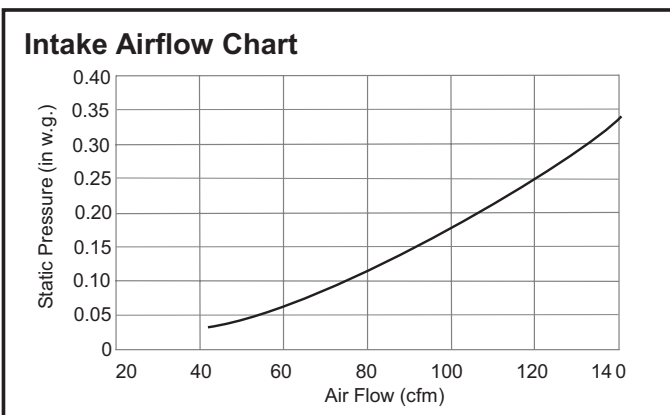
<sup>3</sup> Wireless Timer (**Y8251**) is only compatible with Basic or Digital Control. For S40 or E30 use Wired Timer (**Y2169**).

<sup>4</sup> See Dual Hood Pressure Drop/Airflow Charts for applications.

<sup>5</sup> Contact your Territory Manager for additional information.

<sup>6</sup> Two Required, one for fresh air intake, one for stale air exhaust.

**DUAL HOOD PRESSURE DROP/AIRFLOW CHARTS**



## BLOWER DATA

### FOR OPTIONAL CONTROLS (Factory Tested)

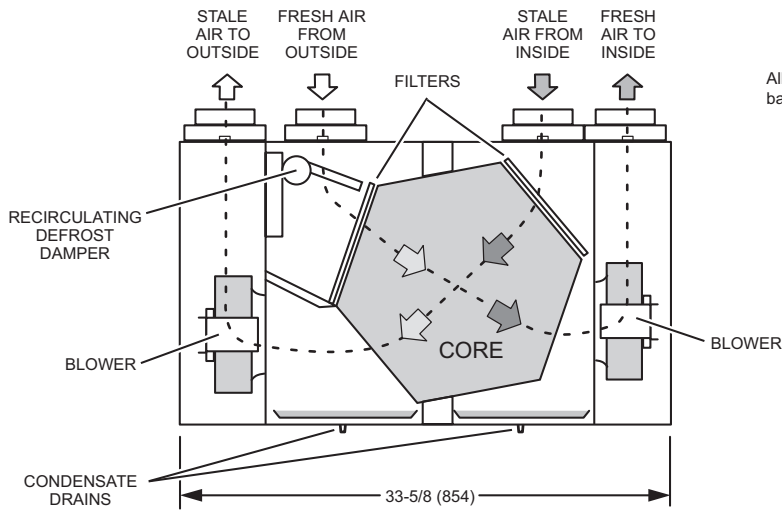
Model No.	HRV7-HEX095-TPD	HRV5-150-TPD	HRV6-150	HRV3-195	HRV5-200-TPD	HRV5-270-TPD-ECM	ERV5-130	ERV5-150-TPD	ERV5-175-TPD
<b>Air Flow vs. Static Pressure</b>									
<b>in. w.g.</b>	<b>Speed 4 - Medium-High (cfm)</b>								
0.10	98	155	153	167	189	249	117	127	n/a
0.20	95	148	141	159	170	239	112	119	138
0.30	89	139	131	150	153	228	110	112	123
0.40	80	129	117	140	136	217	105	105	112
0.50	70	118	96	124	120	204	98	96	101
0.60	60	105	80	110	106	190	95	89	88
0.70	---	91	---	93	91	176	88	80	74
0.80	---	76	---	---	78	160	80	---	62
<b>in. w.g.</b>	<b>Speed 3 - Medium (cfm)</b>								
0.10	95	139	144	142	161	209	100	100	n/a
0.20	90	130	130	136	141	198	96	98	115
0.30	80	120	120	127	123	185	92	90	101
0.40	72	109	106	118	108	171	89	82	90
0.50	60	96	88	103	92	155	84	75	75
0.60	---	81	---	92	77	137	80	64	63
0.70	---	65	---	72	64	118	75	---	50
0.80	---	48	---	---	52	97	---	---	---
<b>in. w.g.</b>	<b>Speed 2 - Medium-Low (cfm)</b>								
0.10	88	129	127	115	127	158	N/A	N/A	n/a
0.20	80	112	116	107	108	142	N/A	N/A	89
0.30	70	96	106	100	90	123	N/A	N/A	75
0.40	60	82	97	90	73	101	N/A	N/A	60
0.50	---	67	86	81	60	75	N/A	N/A	47
0.60	---	53	---	66	48	45	N/A	N/A	---
0.70	---	39	---	---	38	---	N/A	N/A	---
0.80	---	---	---	---	---	---	N/A	N/A	---
<b>in. w.g.</b>	<b>Speed 1 - Low (cfm)</b>								
0.10	70	82	108	88	100	106	63	66	n/a
0.20	58	69	100	80	78	79	60	60	61
0.30	45	56	91	73	60	45	57	54	48
0.40	36	44	78	63	46	---	53	45	35
0.50	---	31	---	56	32	---	50	37	---
0.60	---	---	---	43	---	---	44	---	---
0.70	---	---	---	---	---	---	---	---	---
0.80	---	---	---	---	---	---	---	---	---

## BLOWER DATA WITH OPTIONAL DUAL HOOD

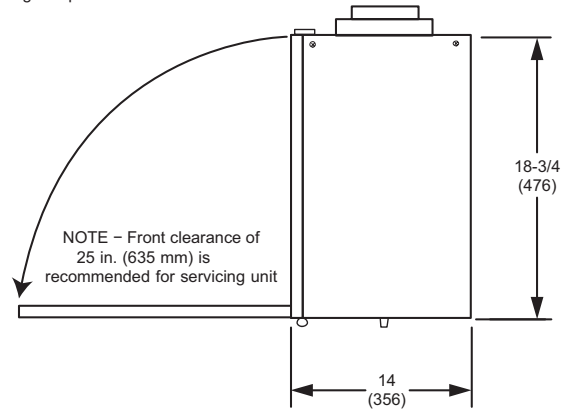
NOTE - Perform all calculations for duct sizing in the usual manner (taking into account measured and equivalent lengths).

Model No.	Airflow (cfm) at Nominal External Static Pressure - in. w.g.			Compatible with Dual Air Hood?
	0.30	0.40	0.50	
HRV7-HEX095-TPD	78	70	59	Yes
HRV5-150-TPD	115	104	95	Yes
HRV6-150	115	103	87	Yes
HRV3-195	125	114	107	Yes
HRV5-200-TPD	128	120	110	Yes
HRV5-270-TPD-ECM	N/A	N/A	N/A	No
ERV5-130	118	113	112	Yes
ERV5-150-TPD	117	104	93	Yes
ERV5-175-TPD	140	129	103	Yes

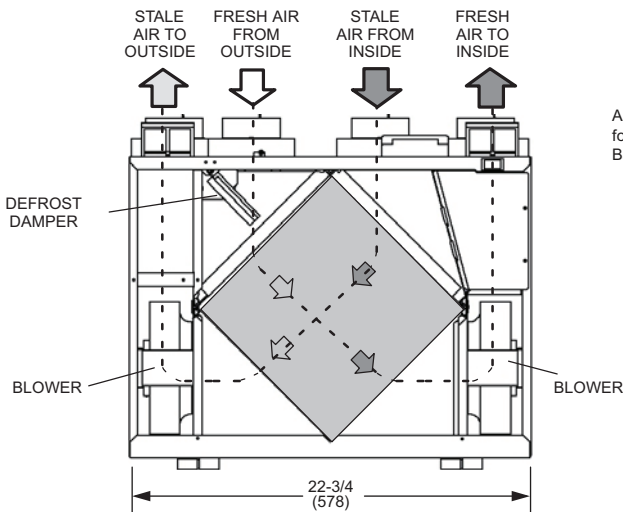
**HRV7-HEX095-TPD HEAT RECOVERY VENTILATORS**



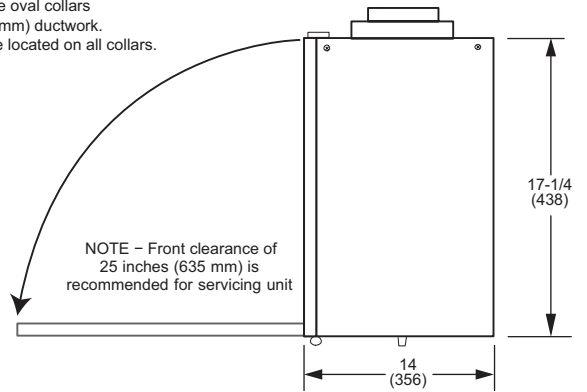
All duct connections are oval collars for use with 5 in. (125 mm) ductwork, balancing dampers are located on all collars.



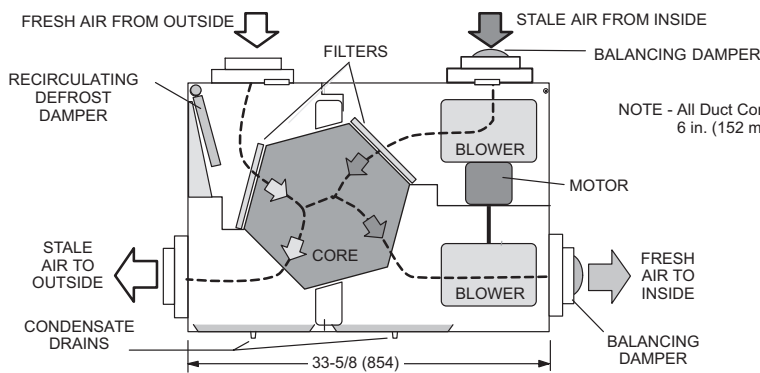
**HRV5-150-TPD HEAT RECOVERY VENTILATORS**



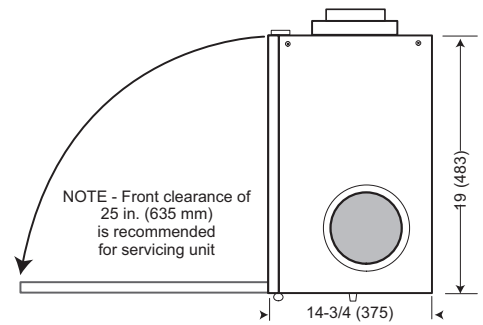
All duct connections are oval collars for use with 5 in. (125 mm) ductwork. Balancing Dampers are located on all collars.



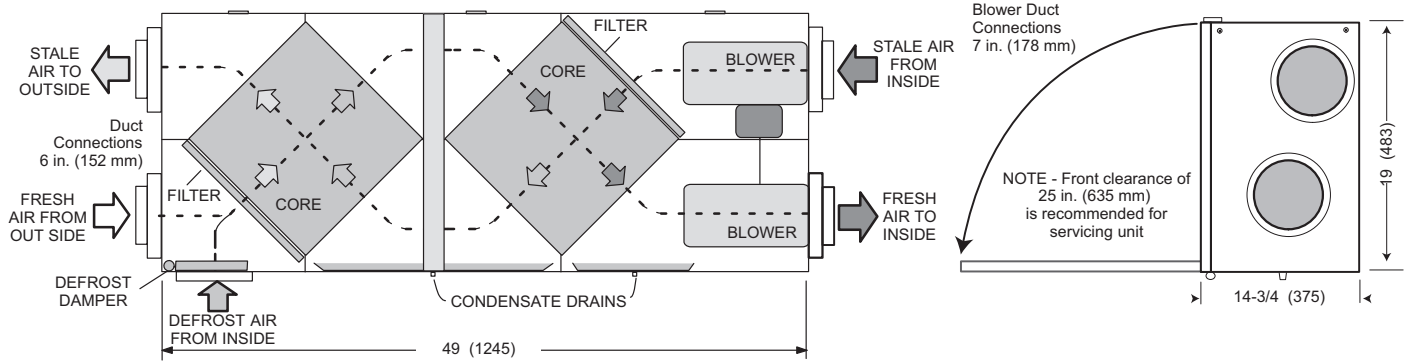
**HRV6-150 HEAT RECOVERY VENTILATORS**



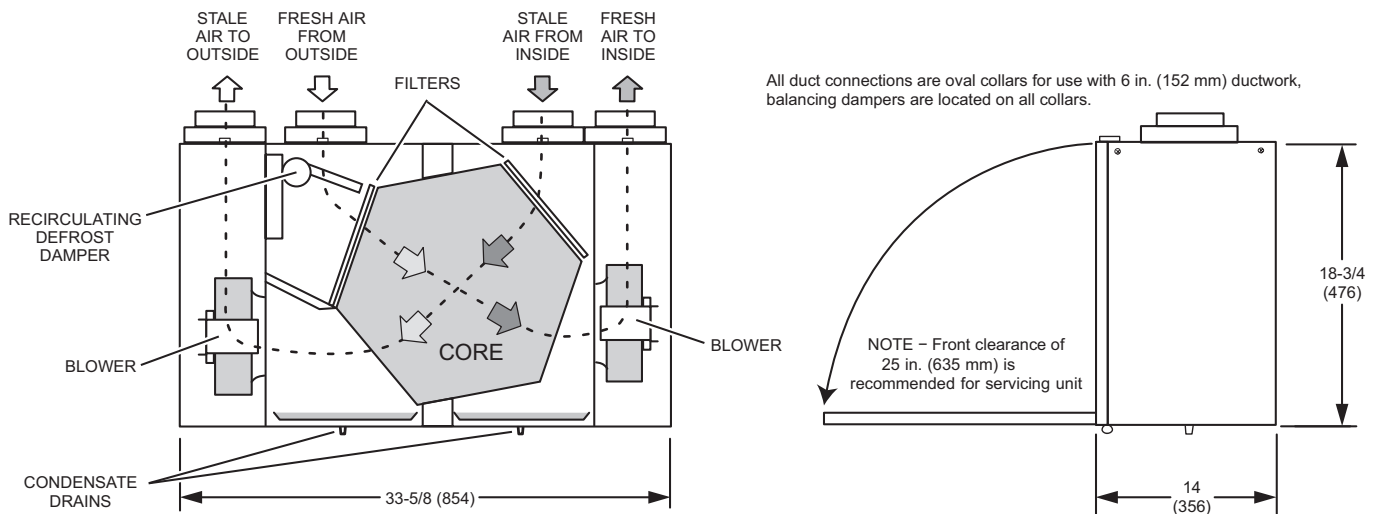
NOTE - All Duct Connections 6 in. (152 mm)



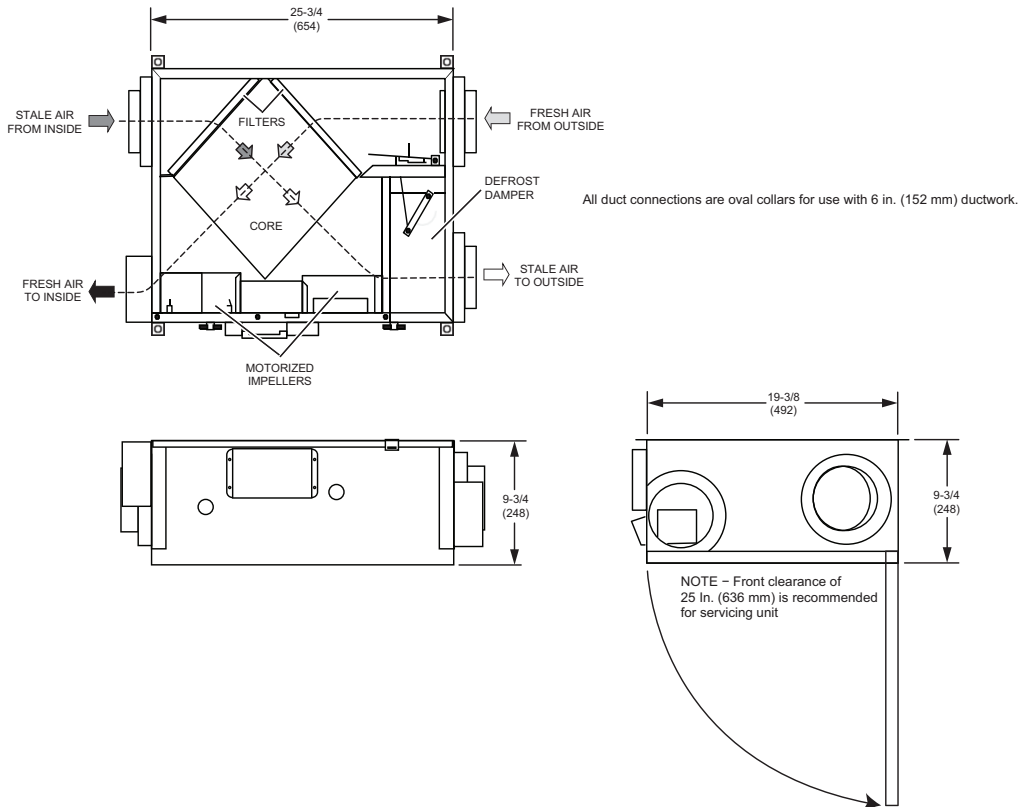
**HRV3-195 HEAT RECOVERY VENTILATORS**



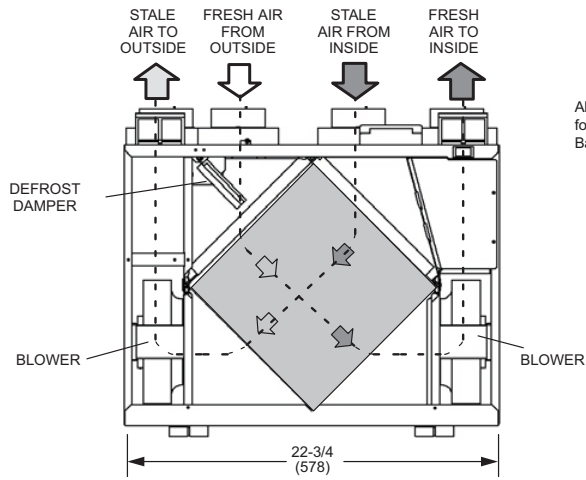
**HRV5-200-TPD AND HRV5-270-TPD-ECM HEAT RECOVERY VENTILATORS**



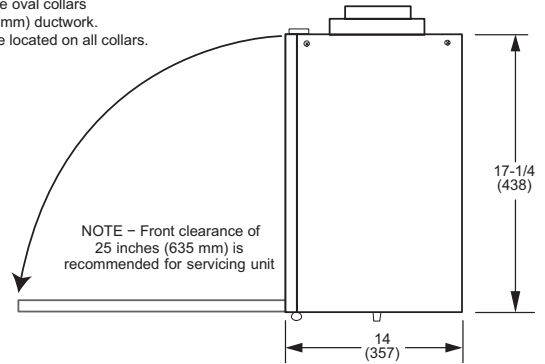
**ERV5-130 ENERGY RECOVERY VENTILATOR**



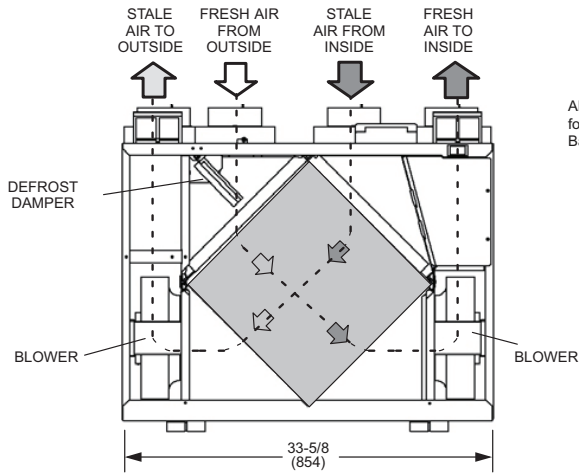
**ERV5-150-TPD ENERGY RECOVERY VENTILATOR**



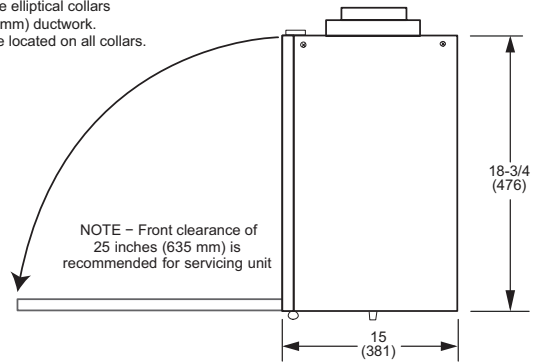
All duct connections are oval collars for use with 5 in. (127 mm) ductwork. Balancing Dampers are located on all collars.



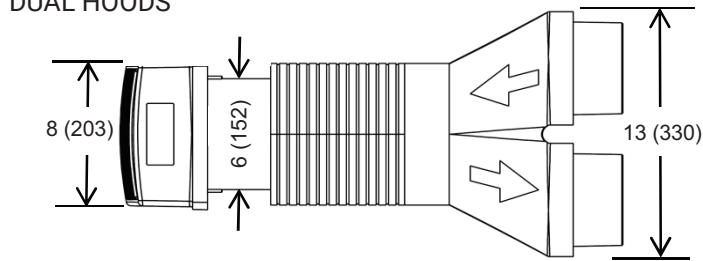
**ERV5-175-TPD ENERGY RECOVERY VENTILATORS**



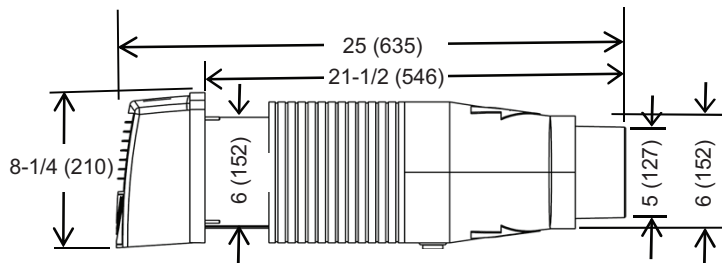
All duct connections are elliptical collars for use with 6 in. (152 mm) ductwork. Balancing Dampers are located on all collars.



**DUAL HOODS**



**TOP VIEW**

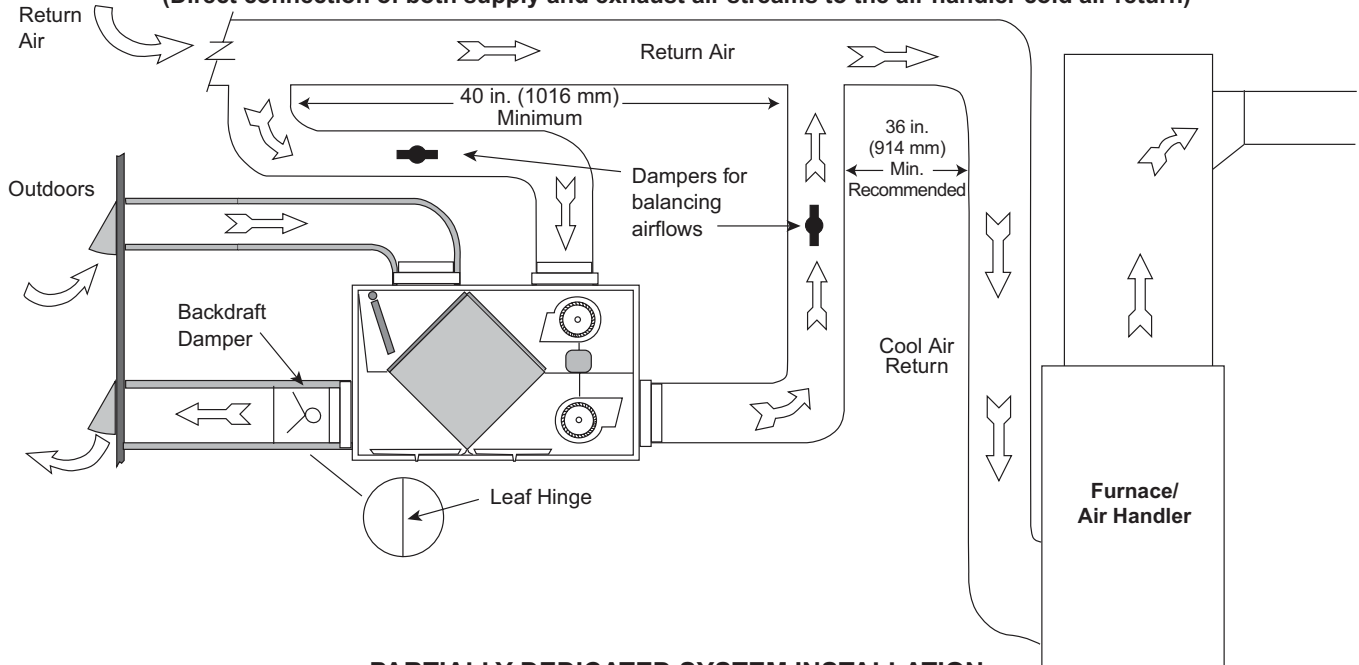


**SIDE VIEW**

# TYPICAL SYSTEM APPLICATIONS

## SIMPLIFIED INSTALLATION (Return/Return Method)

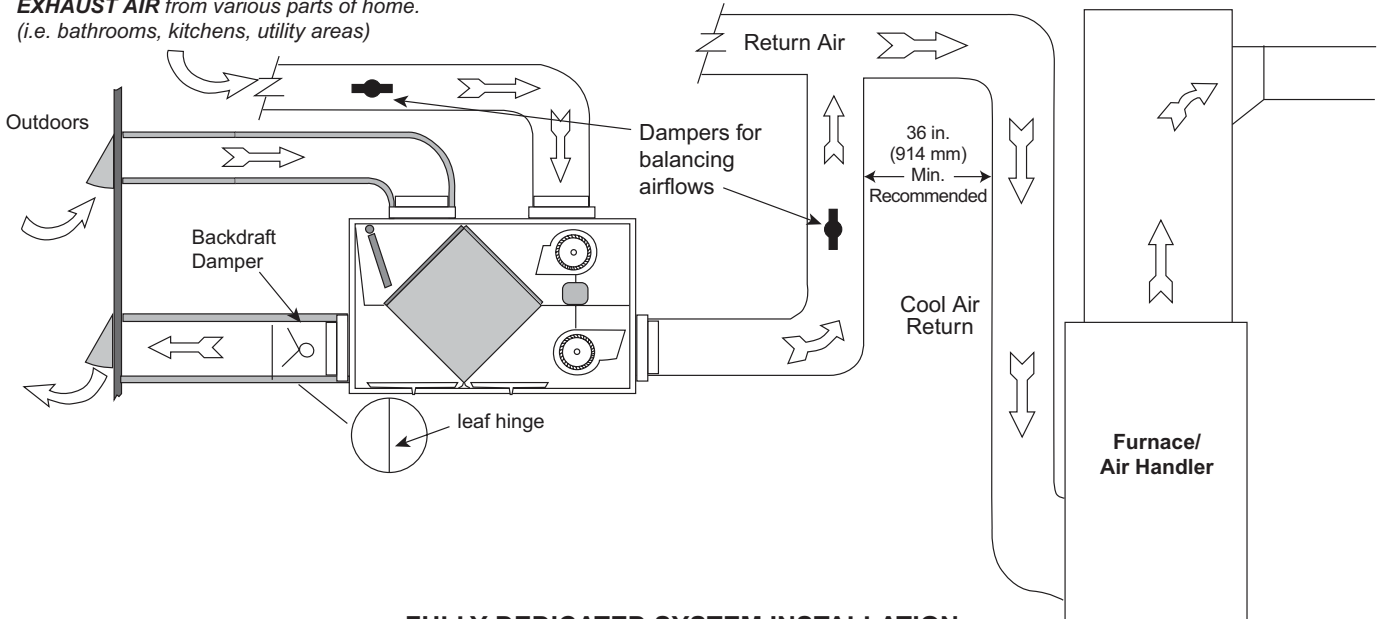
(Direct connection of both supply and exhaust air streams to the air handler cold air return)



## PARTIALLY DEDICATED SYSTEM INSTALLATION

(Direct connection of supply air stream to the air handler cold air return)  
(Stale air drawn from key areas of home)

**EXHAUST AIR** from various parts of home.  
(i.e. bathrooms, kitchens, utility areas)

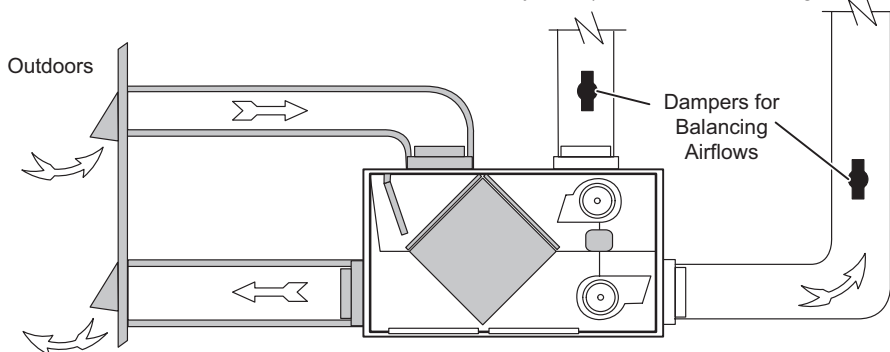


## FULLY DEDICATED SYSTEM INSTALLATION

(Fresh air supplied to main living areas of house. Stale air drawn from key areas of home)

Stale air from various parts of home (i.e. bathrooms, kitchens, utility areas)

Fresh air to house - main living areas, bedrooms, living room, rec. room, etc.





## REVISIONS

Sections	Description of Change
Document	Removed S30 Thermostat (product discontinued).



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