



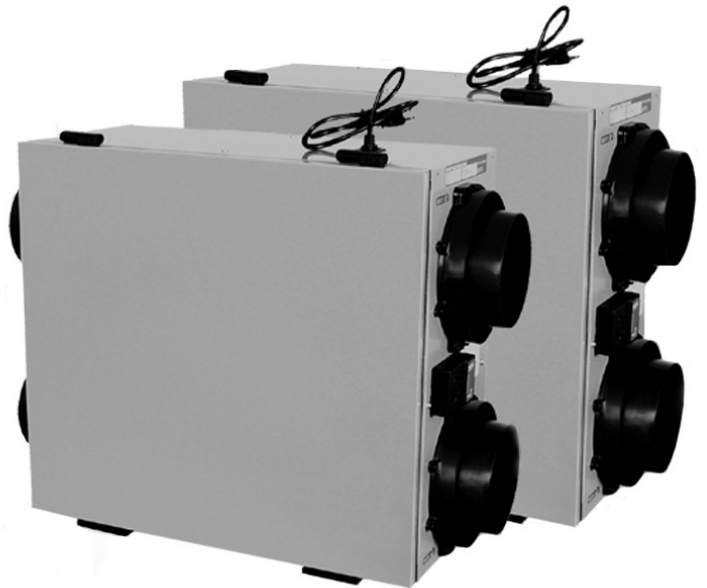
HR SERIES HEAT RECOVERY VENTILATOR (HRV)

Home Owners Guide

Models HR100V, HR160H & HR220H
RESIDENTIAL USE ONLY



HR100V



HR160H & HR220H



READ AND SAVE THIS GUIDE

ABOUT S&P

S&P is the world's leading producer of air movement products. S&P manufactures and supplies fans, dampers, louvers and recovery ventilators (ERVs & HRVs). These products are used in various industries including residential, commercial, industrial and institutional buildings.

At S&P we take pride in the fact that our customers receive only the very highest levels of customer service and care. Our internal and external technical and customer service teams are on-hand to provide professional and experienced application advice to enable our customers to apply our products to their particular ventilation and air movement applications. As the USA & Canada sales, marketing and distribution division of the Soler & Palau Ventilation Group of companies we are committed to providing only the very highest levels of customer service. Our commitment in providing only the very highest standards of customer service is key to our company strategy.

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1. OPERATION & MAIN FUNCTIONS

Your ventilation system has been engineered & designed to improve your indoor air quality by reducing during the winter time, excess humidity or other contaminants in your home and replacing this air by fresh filtered air from the outdoors. During colder seasons, the units heat recovery core (polypropylene core) will reclaim the heat from the outgoing stale air and use this heat to temper the incoming fresh air, which reduces the cost of effectively ventilating your home during winter.

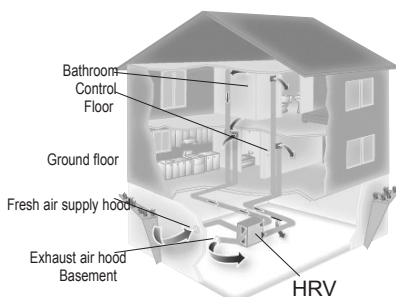
Note: Reverse process occurs in the summer months.

System Installation

(example only)

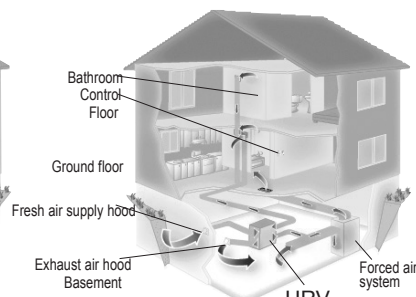
Independent system

FIGURE 1



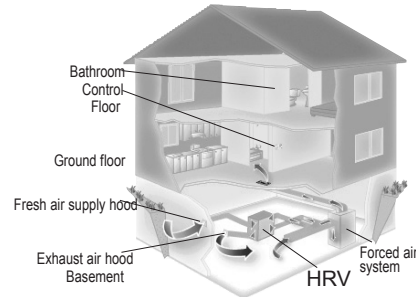
Exhaust at the source with forced air system

FIGURE 2



Exhaust and supply in the return

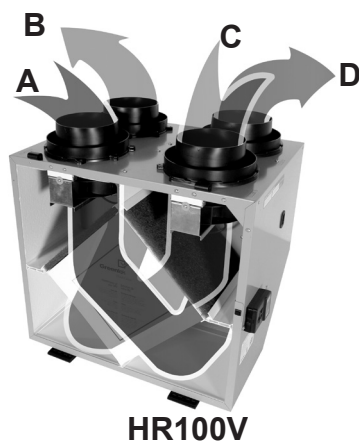
FIGURE 3



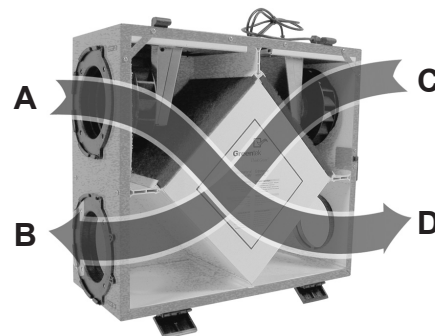
2. DESCRIPTION

VENTILATION SYSTEM

- A. Fresh air from outside
- B. Exhaust air to outside
- C. Exhaust air from home
- D. Fresh air to home



HR100V



HR160H & HR220H

- **Fresh Air from Outside Port (A):** Inlet for fresh outdoor air.
- **Exhaust Air to Outside Port (B):** Outlet for exhausting stale, humid & contaminated air to the outdoors after transferring its heat to the recovery core.
- **Exhaust Air From Home Port (C):** Exhausts stale, humid & contaminated air to the outside from multiple location of the home or from the return air of the forced air system, prior to passing throu the heat recovery core. Ex: Bathroom, laundry room etc.
- **Fresh Air to Home Port (D):** Introduces & distributes clean & fresh air to your home. The homes fresh air ports are normally installed in the main living areas or in the return/supply duct of the forced air system. Ex: Living room, bedrooms, recreation rooms etc.
- **Duotrol™ Systems:** Selects your ventilation modes™ (OFF, CONT or INTER), also to adjust your continuous airflow rates: Increasing (+)/Decreasing (-).
- **Motors(2):** Designed with high performance and reliability, they are maintenance free for your comfort and peace of mind.
- **Synthetic Filters:** Capture the largest particle & protects your heat recovery core from potential obstruction by these particles.
- **Heat Recovery Core:** A polypropylene cross-flow type it is designed to transfer the heat between both exhaust & supply air streams without allowing any contamination or mixing of both air streams to maximize the efficient and improve your indoor air quality.
- **Condensate Drain Pan & Drainage Hose:** Captures the water that accumulates during the heat transfer and defrosts sequence in the fall, winter & early spring seasons. Drain hose is connected to the drain pan and serves as drainage for the accumulation of water. It is normal during summer months to find no condensation in drain pan or in drainage hose.
- **Automatic Defrost Sequence:** The defrost sequence is electronically controlled to measure the incoming outdoor air temperature, the sequence is activated at -5°C (23°F) and colder and the duration is for 5 minutes then returns to normal operation for 25 minutes. This system eliminates that the heat recovery core doesn't build with ice or freezes.
- **Defrost sequence:** Supply fans shuts down, the exhaust fan speed increases pending the measured outside temperature.

3. OPERATING THE DUOTROL™ SYSTEM

Our Duotrol™ System is state of the art technology simplified for quick and easy operation. The Duotrol™ System serves two purposes:

1. Acts as a mode selector in run mode (OFF, CONT & INTER)



- **OFF:** When the selector switch is in the OFF position the ventilation system will not come on even if there's a request for ventilation from any remote controllers.
- **CONT:** When the selector switch is in the CONT position the ventilation system will exhaust stale indoor air to the outside and will introduce fresh outdoor air continuously on low speed except when there is a request for ventilation by one of the remote controllers then the ventilation system will exchange at high speed. (Recommended for maximum indoor air quality.)
- **INTER:** When the selector switch is in the INTER position the ventilation system will only run on high speed when there is a request for ventilation. At this time the unit will run on high speed until the level of humidity is below the set point, The HRT-3 timer has completed its time period or once the cycles per hour has completed its cycle.

TIP: During hot and humid days, it is recommended that you put the system on INTERM mode. This will reduce the amount of warm and humid fresh air coming inside the house.

Note: The HRRD-3P will override any setting on the Duotrol™ all except when in the OFF position.

2. Acts as a variable speed selector



When the (+) button is pushed this will increase the CONT speed of both ventilation system motors from the previous settings.

Note: When the LED stops blinking the unit is at its maximum high speed.

IMPORTANT: If speed setting is too high, extreme dryness can occur in home during winter months. If speed setting is too high, extreme humidity levels can occur during hot humid days. When the (-) button is pushed this will decrease the CONT speed of both ventilation system motors from the previous settings.

Note: When the LED stops blinking the unit is at its minimum low speed.

IMPORTANT: If speed setting is too low, above normal humidity, stale and contaminated air levels can occur in home.

4. OPERATING YOUR WALL CONTROLS

Adjusting your HRRD Series Humidity Sensor Dial should be set accordingly or relative to the outside conditions. During winter season the Humidity Sensor Dial should be set within the comfort zone range (60% COMFORT ZONE 30%). If the home has excess dryness, adjust the Humidity Sensor Dial towards the higher settings. (Turn counter clockwise). If excess humidity is encounter turn the Humidity Sensor Dial to a lower setting. (Turn clockwise). Determining the humidity level in your home (turn the round humidity sensor dial counter clockwise to the OFF position, then turn it back clockwise slowly until you hear "click". The click is the approximate level of relative humidity.

Note: The comfort zone for relative humidity is between 60% and 30%; please adjust accordingly to your needs or requirements.

4. OPERATING YOUR WALL CONTROLS (CONT)

HRRD-1

DEHUMIDISTAT



Features

- Dehumidistat to select the humidity level
- Comes complete with Relative Humidity Sensor Dial.
- Compatible with HR100V, HR160H and HR220H

RELATIVE HUMIDITY SENSOR DIAL (OFF/60%/COMFORT ZONE/30%):

- Overrides the ventilation system to high speed once the level of humidity is above the set point.
- If the ventilation system is in CONT or INTERM mode the ventilation system will automatically return to its original mode once the level of humidity is below the set point.

Note: By turning the relative humidity Sensor Dial to the OFF position does not turn off the ventilation system. It only deactivates the relative humidity sensor.

HRRD-3P

DEHUMIDISTAT



Features

- Dehumidistat to select the humidity level
- Speed Control (OFF, NORMAL and REDUCED)
- Mode Control (INTERM and CONT)
- Green LED light on = OVERRIDE
- Orange LED light on = CONT/INTERM
- Comes complete with Relative Humidity Sensor Dial, Speed Control Selector Switch and Mode Selector Switch.
- Compatible with HR100V, HR160H and HR220H

RELATIVE HUMIDITY SENSOR DIAL (OFF/60%/COMFORT ZONE/30%):

- Overrides the ventilation system to high speed once the level of humidity is above the set point.
- If the ventilation system is in CONT or INTERM mode the ventilation system will automatically return to its original mode once the level of humidity is below the set point.

Note: By turning the relative humidity Sensor Dial to the OFF position does not turn off the ventilation system. It only deactivates the relative humidity sensor.

VENTILATION REDUCTION SELECTOR SWITCH (OFF/NORMAL/REDUCED):

- **OFF** – Sends command to turn off the ventilation system.
- **NORMAL** – The ventilation system operates on installers set speeds (CONT and OVERRIDE)
- **REDUCE** – The ventilation system operates at 30% reduction in CONT and 15% in OVERRIDE set speed

Note: Reduce mode will not decrease below the maximum low speed of the ventilation system.

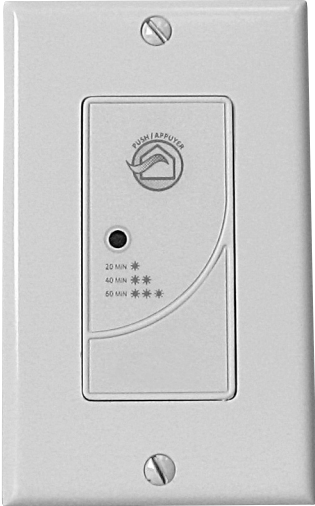
MODE SELECTOR SWITCH (INTERM/CONT):

- **INTERM** – Ventilation is halted meaning, automatically stopping and starting at intervals the ventilation system from a command from a remote wall controls.
- **CONT** – Provides a continuous ventilation rate. The ventilation system will increase to high from command of remote wall controls. (Recommended for maximum indoor air quality.)

4. OPERATING YOUR WALL CONTROLS (CONT)

HRT-3

PUSH BUTTON TIMER



Features

- 20/40/60 minutes exchange
- Green LED light on = OVERRIDE
- Comes complete soft touch button and integrated LED indicator light.
- Compatible with HR100V, HR160H and HR220H

HRT-3 PUSH BUTTON TIMER (20/40/60 MINUTES HIGH SPEED EXCHANGE)

- Press the button once the LED comes on then release, this activates the ventilation system to high speed for **20 minutes**.
- Press the button until the LED blinks 2 times then release, this activates the ventilation system to high speed for **40 minutes**.
- Press the button until the LED blinks 3 times then release, this activates the ventilation system to high speed for **60 minutes**.
- To **turn off** press button once, this will deactivate HRT-3 push button time and your ventilation system will return to previous settings.

TIPS: The HRT-3 model push button timer allows the homeowner control of the indoor humidity level in room were excess humidity is produced (Ex: Bathroom, kitchen & laundry room).

TIPS: Always leave a small gap when closing curtains and blinds in the winter months, this will allow proper circulation and will reduce or eliminate condensation that occurs when warm air is trapped between window, curtains & blinds.

CAUTION: IT IS POSSIBLE (AND NORMAL) TO EXPERIENCE CONDENSATION ON YOUR WINDOWS WHEN DRASTIC CHANGES IN INDOOR OR OUTDOOR TEMPERATURES OCCUR, WHEN EXCESS HUMIDITY IS CREATED OR UPON CLOSING CURTAINS AND BLINDS.

5. TROUBLESHOOTING

Problem	Solution
HRV not running	<ul style="list-style-type: none">• Verify breaker in electrical box.• Verify that dehumidistat or switch on HRV are activated to supply power to unit.• Unplug HRV, verify if controller is wired correctly to the connection box on the side of the unit.• Verify low voltage box (Duotrol™) on the unit.
Air too dry	<ul style="list-style-type: none">• Increase humidity level on the dehumidistat.• Switch ventilation mode from CONT to INTERM.• Install a humidifier.
Air too humid	<ul style="list-style-type: none">• Reduce the humidity level on the controller.• Verify if dryer is venting in basement.• Verify if heating wood is stored in basement.• Wait for outside temperature to change. Ex. Summer can be extremely humid.• Verify balancing of the HRV or ERV.

6. MAINTENANCE

SERVICING THE VENTILATION SYSTEM

Filters

Four times a year or as needed, vacuum the filters. Replace filters once a year.

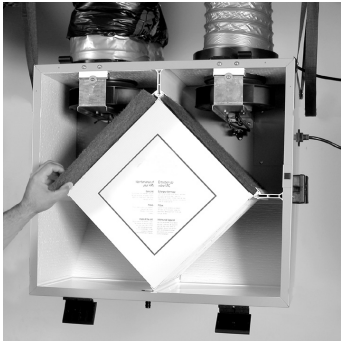
Heat Recovery Core Unit

Once a year or as needed, vacuum the four surfaces, let soak in warm water for three hours, then spray rinse and let dry.

Inside the Unit

Once a year or as needed, clean the interior of the unit (walls and drain pan) with a mild and non abrasive soap. It is recommended to use products that are environmentally-friendly.

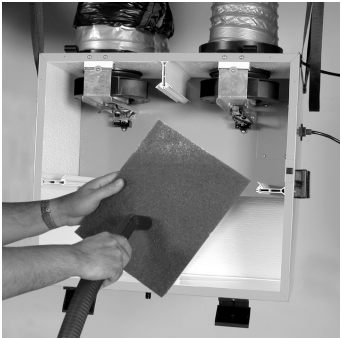
Servicing HR100V



1. Slide out the filters.



2. Slide out the energy core.

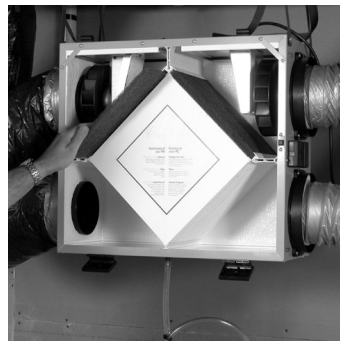


3. Vacuum the filters.

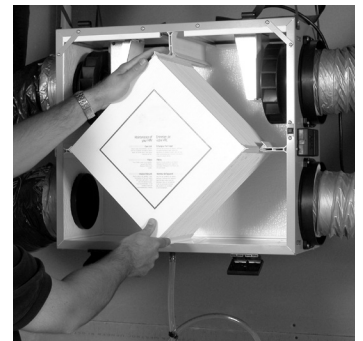


4. Wash the walls of the unit.

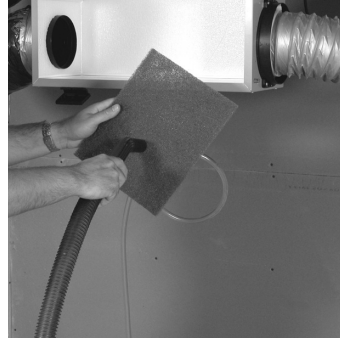
Servicing HR160H or HR220H



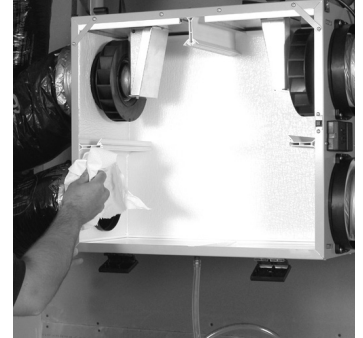
1. Slide out the filters.



2. Slide out the energy core.



3. Vacuum the filters.



4. Wash the walls of the unit.

