

USER AND INSTALLER MANUAL

VENMAR AVS

X24 ERV ECM

X24 HRV ECM

X30 ERV ECM

X30 HRV ECM

VENMAR/VÄNEE

X24 ERV ECM-N

X24 HRV ECM-N

X30 ERV ECM-N

X30 HRV ECM-N

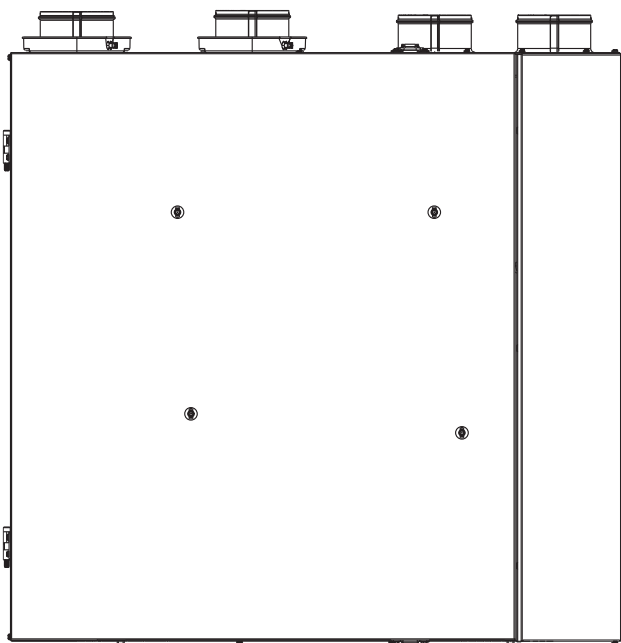
VÄNEE GOLD SERIES

G2400E ECM

G2400H ECM

G3000E ECM

G3000H ECM



VB0185

ABOUT THESE UNITS

1. New information about extended defrost setting, see page 14.
2. The only main wall controls compatible with these units are the X-Touch or Gold-Touch.
3. New balancing procedure, see page 15.
4. The terminal connectors for these units are already mounted to the electronic board.

⚠ RESIDENTIAL USE ONLY ⚠

READ AND SAVE THESE INSTRUCTIONS



These products earned the ENERGY STAR® by meeting strict energy efficiency guidelines set by Natural Resources Canada and the US EPA. They meet ENERGY STAR requirements only when used in Canada.

Please take note that this manual uses the following symbols to emphasize particular information:

⚠ WARNING

Identifies an instruction which, if not followed, might cause serious personal injuries including possibility of death.

CAUTION

Denotes an instruction which, if not followed, may severely damage the unit and/or its components.

NOTE: Indicates supplementary information needed to fully complete an instruction.

LIMITATION

For residential (domestic) installation only. Installation work and electrical wiring must be done by a qualified person in accordance with all applicable codes and standards, including fire-rated construction codes and standards.

⚠ WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSON(S) OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer.
2. Before servicing or cleaning this unit, disconnect the power cord from the electrical outlet.
3. This unit is not designed to provide combustion and/or dilution air for fuel-burning appliances.
4. When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.
5. Do not use this unit with any solid-state speed control device other than those specified in section 6.
6. This unit must be grounded. The power supply cord has a 3-prong grounding plug for your personal safety. It must be plugged into a mating 3-prong grounding receptacle, grounded in accordance with the national electrical code and local codes and ordinances. Do not remove the ground prong. Do not use an extension cord.
7. Do not install in a cooking area or connect directly to any appliances.
8. Do not use to exhaust hazardous or explosive materials and vapors.
9. When performing installation, servicing or cleaning this unit, it is recommended to wear safety glasses and gloves.
10. When applicable local regulation comprises more restrictive installation and/or certification requirements, the aforementioned requirements prevail on those of this document and the installer agrees to conform to these at his own expense.
11. Due to the weight of the unit, two installers are recommended to perform installation

CAUTION

1. To avoid prematurely clogged filters, turn the unit OFF during construction or renovation.
2. Please read specification label on product for further information and requirements.
3. Be sure to duct air outside – Do not intake/exhaust air into spaces within walls or ceiling or into attics, crawl spaces, or garage. Do not attempt to recover the exhaust air from a dryer or a range hood.
4. Intended for residential installation only in accordance with the requirements of NFPA 90B (for a unit installed in U.S.A.) or Part 9 of the National Building Code of Canada (for a unit installed in Canada).
5. Do not run any air ducts directly above or within 2 ft (0.61 m) of a furnace or its supply plenum, boiler, or other heat-producing appliances. If a duct has to be connected to the furnace return plenum, it must be connected 10' (3.1 m) away from plenum's connection to the furnace.
6. The ductwork is intended to be installed in compliance with all applicable local and national codes.
7. When leaving the house for a long period of time (more than two weeks), a responsible person should regularly check if the unit operates adequately.
8. If the ductwork passes through an unconditioned space (e.g.: attic), the unit must operate continuously except when performing maintenance and/or repair. Also, the ambient temperature of the house should never drop below 18°C (65°F).
9. At least once a year, the unit mechanical and electronic parts should be inspected by qualified service personnel.
10. Do not use your unit during construction or renovation of your house or when sanding drywall. Certain types of dust and vapors may damage your ventilation system.
11. During winter, make sure that the outside intake and exhaust hoods are free from any snow. During a big snow storm, check that your unit doesn't draw in any snow. If it does, turn the unit OFF for a few hours.
12. Since the electronic control system of the unit uses a microprocessor, it may not operate correctly because of external noise or very short power failure. If this happens, unplug the unit and wait approximately 10 seconds. Then, plug the unit in again.

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PRODUCT REGISTRATION CARD - FICHE D'ENREGISTREMENT DU PRODUIT

IMPORTANT: Please complete and return this questionnaire within 10 days of your purchase to the address below. Note that only the questions on this side of the page are mandatory. Your answers will be used for market research studies and reports, and will help us to better serve you in the future. **IMPORTANT:** Veuillez remplir ce questionnaire et nous le retourner dans les 10 jours suivant votre achat à l'adresse inscrite en bas de la page. Veuillez noter que seules les questions de ce côté-ci de la page sont obligatoires. Vos réponses serviront à des études de marché et nous aideront à mieux vous servir dans l'avenir.

First name - Prénom

Last name - Nom de famille

Address - Adresse

Apt. no. - App.

City - Ville

Province

Postal code - Code postal

Country - Pays

E-mail address - Courriel

Language preferred - Langue de correspondance

Telephone no. (day) - N° de téléphone (jour)

Telephone no. (evening) - N° de téléphone (soir)

Date of purchase - Date d'achat

Model no. - N° de modèle

Serial no. - N° de série

1. USING THIS UNIT

CAUTION

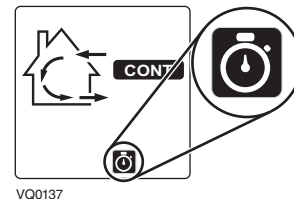
Before using this unit for the first time, please take the time to carefully read page 2 of this guide to ensure it is used safely and properly.

This unit performs a 30-second booting sequence at startup. Your main wall control indicates the progression of the booting sequence in percentage. No command will be taken until the unit is fully booted.

You can control your unit using one main wall control, and up to five optional 20/40/60-minute push-buttons, usually located in bathrooms.

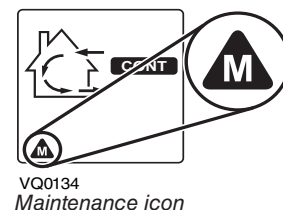
Activation of a 20/40/60-minute push-button overrides the current operation mode of the unit, including defrost cycles, and a timer icon will appear on the main control screen.

For more information on the controls, refer to the *Main and auxiliary wall control User Guide* included with your unit and available on our website.



2. USER SERVICING INSTRUCTIONS

This unit requires seasonal and annual maintenance. Your main wall control includes a maintenance reminder that lights up 4 times a year.



2.1 SEASONAL MAINTENANCE

1. Unplug the unit.
2. Undo both door latches and open the door.
3. Slide out both filters from the top of the recovery core.
4. Wash the filters with a mild soap and lukewarm water, rinse thoroughly and allow to dry completely.
5. Reinstall the filters in the unit.
6. Close the door and plug unit back. The unit will perform a 30-second booting sequence and will resume operating as previously set.
7. Reset the maintenance indicator by holding both the MODE and TURBO keys for 3 seconds.

Would you like to receive occasional informational e-mail offers including product updates and special promotions from us? Yes/No		Aimeriez-vous recevoir plus de détails sur nos promotions, offres de rabais et mises à jour de nos produits? Oui/Non	
What problem were you trying to solve with your purchase? (Check each one that applies to you.) ☐ Bad odors ☐ Dust ☐ Respiratory problems ☐ Mildew ☐ Allergies ☐ Excess of humidity ☐ No specific problems ☐ Temperature standardization ☐ Others ☐ Lack of fresh air	Please read the following list of criteria carefully. Indicate the importance of your purchase decision on a scale of 1 (less important) to 5 (most important). ☐ Price ☐ Heat recovery ☐ Warranty ☐ Controls ☐ Product design ☐ Ease of cleaning ☐ Ventilation capacity ☐ Manufacturer's reputation ☐ Filter maintenance indicator ☐ Ease of use ☐ Filtration quality ☐ Noise level ☐ Recirculation ☐ Other	Quels problèmes essayez-vous de résoudre par cet achat? (Cochez toutes les cases pertinentes) ☐ Mauvaises odeurs ☐ Poussières ☐ Problèmes respiratoires ☐ Moisissures ☐ Allergies ☐ Excès d'humidité ☐ Pas de problèmes spécifiques ☐ Uniformisation de la température ☐ Autres (Précisez SVP) ☐ Manque d'air frais	Veillez lire la liste des critères de sélection ci-dessous. Sur une échelle de 1 (étant le moins important) à 5 (étant le plus important), veuillez indiquer l'importance de chacun d'entre eux dans votre décision d'achat. ☐ Prix ☐ Récupération d'énergie ☐ Garantie ☐ Fonctions ☐ Design du produit ☐ Facilité de nettoyage ☐ Débit de ventilation ☐ Réputation du fabricant ☐ Indicateur d'entretien du filtre ☐ Simplicité d'utilisation ☐ Qualité de filtration ☐ Niveau de bruit ☐ Recirculation ☐ Autres (Précisez SVP) ☐ Récupération de chaleur
Who installed your unit? ☐ Home builder ☐ Friend / family ☐ Recommended installer ☐ Contractor ☐ Yourself	Qui a installé l'appareil? ☐ Constructeur de la maison ☐ Ami/membre de la famille ☐ Installateur recommandé ☐ Entrepreneur ☐ Vous-même		

Are you connected? Please do not hesitate to complete the product registration card via our Web site at www.bnv.ca

Enregistrez-vous en ligne! N'hésitez pas à remplir la fiche d'enregistrement du produit sur notre site Internet au www.bnv.ca

2.2 ANNUAL MAINTENANCE

1. Perform steps 1 and 2 from seasonal maintenance.
2. Slide both filters and the core out of the unit.
3. Clean the inside of the unit with a clean damp cloth and wipe dry.
4. Wash the filters with a mild soap and lukewarm water, rinse thoroughly and allow to dry completely.
5. Clean the recovery core as follows, according to the type of unit:

X24 HRV ECM	X24 HRV ECM-N	G2400H ECM	X24 ERV ECM	X24 ERV ECM-N	G2400E ECM
X30 HRV ECM	X30 HRV ECM-N	G3000H ECM	X30 ERV ECM	X30 ERV ECM-N	G3000E ECM
Soak the heat recovery core for 3 hours in a solution of lukewarm water and mild soap. Rinse and allow to dry.			CAUTION: DO NOT SOAK THE ENERGY RECOVERY CORE Remove the dust on the core using a vacuum cleaner and a soft brush attachment.		

6. Reinstall the core back into the unit.
7. Reinstall the filters back on the core.
8. Close the unit's door.
9. Clean the exterior hoods.
10. Plug the unit back. The unit will perform a 30-second booting sequence and will resume operating as previously set.
11. Reset the maintenance indicator by holding both the MODE and TURBO keys for 3 seconds.

3. USER'S TROUBLESHOOTING

Before trying any of the following, first try unplugging the unit and plugging it back. If the issue is not solved, refer to the table below.

PROBLEM		TRY THIS
1.	Nothing works.	• Make sure that the unit is plugged in. • Make sure that the unit is receiving power from the house circuit breaker or fuse.
2.	An error code starting with E0 (E01, E02, etc.) is displayed on the wall control.	• Make sure that the color coded wires have been connected to their appropriate place. • Make sure that the wires are correctly connected. • Press simultaneously and hold for 10 seconds the % HUM, MODE and TURBO keys to reset the wall control. The user preferences will have to be reset.
3.	An error code starting with E2 (E21, E22, etc.) is displayed on the wall control.	• Problem with the ventilation unit. Contact your installer.
4.	A 10-second countdown is displayed on the wall control.	• Wait for the end of the countdown without pressing any key.
5.	The snowflake icon is flashing on the wall control screen.	• The ventilation unit is in Protection mode; it will get out of this mode by itself. • If this situation occurs regularly, or when outdoor temperature is higher than -20°C, contact your installer.
6.	Condensation on windows (air too humid).	• Operate the unit on TURBO or CONT mode until the situation is corrected. • Leave curtains half-open to allow air circulation. • Store all firewood in a closed room with a dehumidifier or in a well ventilated room, or store the wood outdoors. • Do not adjust the thermostat of your heating system below 18°C (64°F).
7.	Inside air too dry.	• Temporarily use a humidifier. • Operate the unit in 20 min/h mode or in RECIRC. mode.
8.	Air too cold at the air supply grille.	• Make sure that the exterior hoods are not blocked. • Operate the unit in 20 min/h mode or in RECIRC. mode. • Install a duct heater.
9.	The main wall control does not work.	• The 30-second boot sequence is not completed. See Section 1.1 on page 4. • A 20/40/60-minute push button auxiliary control is in use. See Section 1.1 on page 4. • The protection mode overrides the main control operation (snowflake icon). Refer the main and auxiliary controls user guide. .

Contact customer service at 1-800-567-3855 for any unresolved issue.

4. WARRANTY

This unit is a high-quality product, built and packaged with care. The manufacturer warrants to the original purchaser of its product, that such product will be free from defects for the period stated below, from the date of original purchase. For all units, the warranty covers parts only against any operational defect. This is a 5-year warranty. Subject to performing the core maintenance according to the recommendations in this guide, the heat recovery core (HRV) has a limited lifetime warranty, and the energy recovery core (ERV) has a 10-year warranty. If any defect should occur, we urge you to read the user guide carefully. If the problem persists, observe the following rules:

RULES TO FOLLOW

If the unit is defective, contact your ventilation contractor (see address on your user manual cover page). The contractor will determine with you the reason for the defect, and if needed, do the replacement or repair. If ever it is impossible to reach your ventilation contractor, call 1-800-567-3855 (in North America); the personnel will be pleased to give you the phone number of a distributor or a service center near you.

REPLACEMENT PARTS AND REPAIR

In order to ensure your ventilation unit remains in good working condition, you must use the manufacturer's genuine replacement parts only. The manufacturer's genuine replacement parts are specially designed for each unit and are manufactured to comply with all the applicable certification standards and maintain a high standard of safety. Any third party replacement part used may cause serious damage and drastically reduce the performance level of your unit, which will result in premature failing. The manufacturer also recommends contacting a service depot certified by the manufacturer for all replacement parts and repair.

BILL OF PURCHASE

No replacement or repair covered by the warranty will be carried out unless the unit is accompanied by a copy of the original bill of purchase. Please retain your original.

MISCELLANEOUS COSTS

In each case, the labor costs for the removal of a defective part and/or installation of a compliant part will not be covered by the manufacturer.

CONDITIONS AND LIMITATIONS

These units are created for **residential use only** and must be used in a building as defined below:

- Building: All structures zoned and/or erected for the act, process or art of human or animal habitation and/or the storage or warehousing of goods.
- Residential use: Dwelling, lodging, suite: Building, or part of a building, intended to act as either the domicile to one or several people which can include general sanitary, food consumption and rest facilities. Buildings of only one room or a group of rooms including those occupied by a tenant or owner; comprise the lodgings, the individual rooms of the motels, hotels, rooming/lodging houses, boarding/half-way/foster homes, dormitories, and suites, as well as the stores and the business establishments constituted by only one room in a dwelling.
- Commercial use: Agricultural establishment, commercial establishment for assembly, care, or detention: Building or part of a building that does not contain a dwelling, situated on land dedicated to agriculture or farming and used primarily to shelter animals, or for the production, the storage or the treatment of agricultural or horticultural products or animal food. Building or part of a building, used for the display or retail of goods, professional or personal services, or commodities. Building, or part of a building used by persons gathering for civic activities, religious or political assembly, tourism, educational/vocational training, recreation or the consumption of food or drink. Building, or part of a building used to shelter persons of impaired physical or psychological states, persons requiring palliative care or medical treatments, or persons for reasons out of their control, cannot escape harm or threat of danger autonomously.
- Industrial use: Building, or part of a building, used for the assembly, the manufacture, the creation, the treatment, the repair or the storage of products and combustible materials and that contain fuels that when ignited or exploded in sufficient quantity may constitute a risk of fire.

The above warranty applies to all cases where the damage is not a result of poor installation, improper use, mistreatment or negligence, acts of God, or any other circumstances beyond the control of the manufacturer. Furthermore, the manufacturer will not be held responsible for any bodily injury or damage to personal property or real estate, whether caused directly or indirectly by the unit. This warranty supersedes all prior warranties.

CAUTION

Before installing this unit, please take the time to carefully read page 2 of this guide to ensure it is installed safely and properly.

5. INSTALLATION

5.1 LOCATING THE UNIT

Choose an **appropriate location** for the unit:

- So as to provide easy access to the interior cabinet for quarterly and annual maintenance. **Plan for a 27-in. clearance** in front of the unit for the door to open. If that is not possible, an 18-in. clearance is acceptable, in which case the door will have to be removed for maintenance to be performed.
- Within an area of the house where the **ambient temperature is kept between 18°C (65°F) and 40°C (104°F)**.
- Close to an exterior wall, so as to limit the length of the insulated flexible duct to and from the unit.
- Away from hot chimneys, electrical panel and other fire hazards.
- Allow for a power source (standard outlet) within 3 feet.
- Close to a drain. If no drain is close by, use a pail to collect run-off.

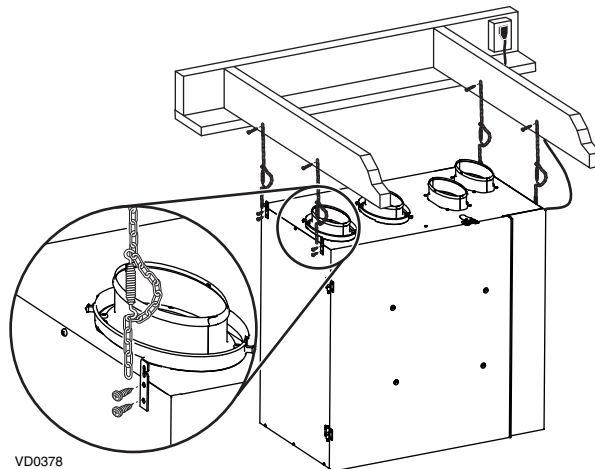
5.2 MOUNTING THE UNIT

CAUTION

Always make sure that the unit is level.

5.2.1 USING CHAINS AND SPRINGS

The unit can be hung using the provided chains and springs:



For the Installer

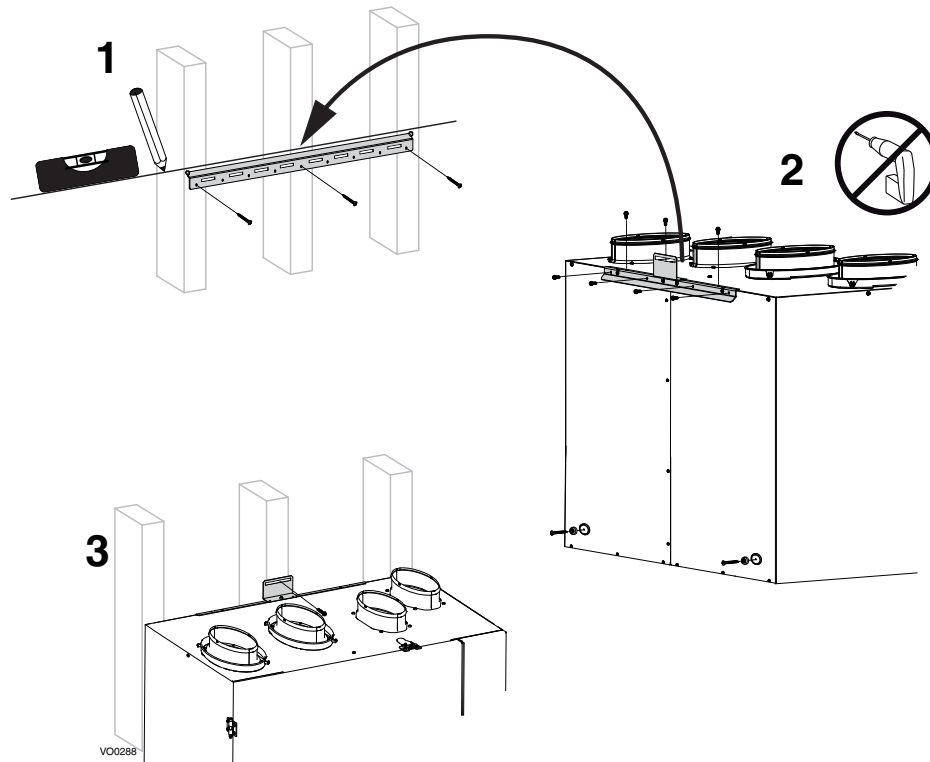
5.2.2 USING THE WALL BRACKETS

1. Trace a level line on the wall, approximately where the top of the unit will be.
2. Using the provided 1.5-in. screws and washers, install the longest of both brackets to the wall making sure to secure it to all of the available studs.

⚠ WARNING

The bracket must not be secured to the drywall only.

4. Using the provided 1.5-in. screws, assemble both spacers to the lower corners of the back of the unit.
5. Using the provided 3/8-in. screws, mount the two other brackets to the top back of the unit, as illustrated below. Do not use an electric screw driver.
6. Hang the unit to the bracket on the wall, and secure the smallest bracket to the wall, into a stud if possible.



5.3 INSTALLING THE DUCTWORK AND THE REGISTERS

⚠ WARNING

- **Never install a stale air exhaust register in a closed room where a combustion device operates, such as a gas furnace, a gas water heater or a fireplace.**
- **When performing duct connections, always use approved tools and materials. Respect all corresponding laws and safety regulations. Please refer to your local building code.**

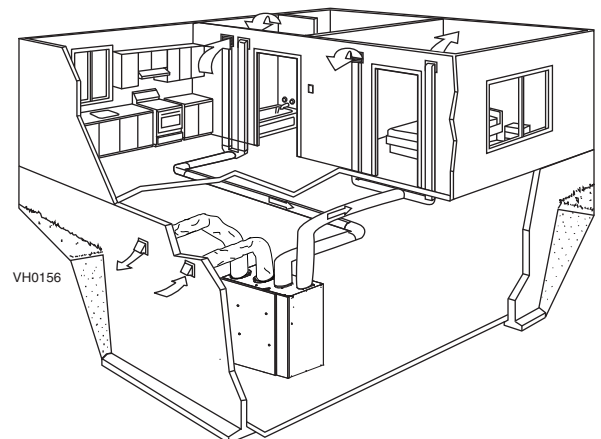
5.3.1 FULLY DUCTED SYSTEM

Stale air from building ductwork:

- Install registers in areas where contaminants are produced: Kitchen, bathrooms, laundry room, etc.
- Install registers on an interior wall, 6 to 12 inches (152 to 305 mm) away from the ceiling OR install them in the ceiling.
- Install the kitchen register at least 4 feet (1.2 m) away from the range.

Fresh air to building ductwork:

- Install registers in bedrooms, dining room, living room and basement.
- Install registers either in the ceiling or high on the walls with the airflow directed towards the ceiling.
- If a register must be installed in the floor, direct the air flow up the wall.



5.3.2 EXHAUST DUCTED SYSTEM - SUPPLY SIDE

CAUTION

When performing duct connections to the furnace supply duct, use metal ducts appropriately sized to support the additional airflow produced by the unit.

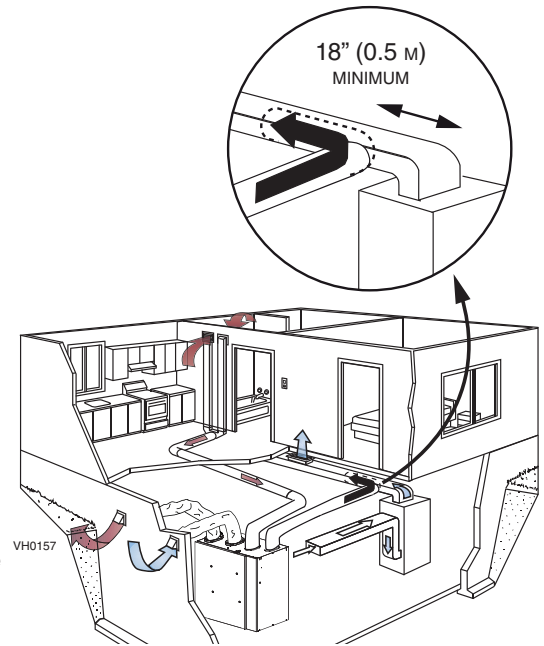
Stale air from building ductwork:

- Install registers in areas where contaminants are produced: Kitchen, bathrooms, laundry room, etc.
- Install registers on an interior wall, 6 to 12 inches (152 to 305 mm) away from the ceiling OR install them in the ceiling.
- Install the kitchen register at least 4 feet (1.2 m) away from the range.

Fresh air to building ductwork:

- Cut an opening into the furnace supply duct at least 18 inches (0.5 m) away from the furnace.
- Connect this opening to the fresh air to building port of the unit (use metal ducts, see illustration at right).
- Make sure that the unit duct forms an elbow inside the furnace ductwork.

NOTE : For this type of installation, it is recommended, however, not essential, that the furnace blower be synchronized with the unit.



5.3.3 EXHAUST DUCTED SYSTEM - RETURN SIDE

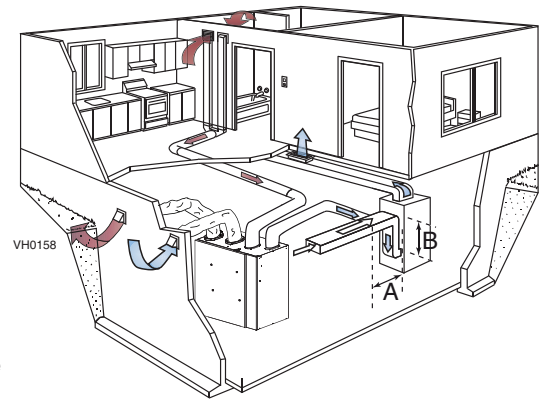
Stale air from building ductwork:

- Install registers in areas where contaminants are produced: Kitchen, bathrooms, laundry room, etc.
- Install registers on an interior wall, 6 to 12 inches (152 to 305 mm) away from the ceiling OR install them in the ceiling.
- Install the kitchen register at least 4 feet (1.2 m) away from the range.

Fresh air to building ductwork:

- Cut an opening into the furnace return duct at least 10 feet (3.1 m) (A + B) away from the furnace (A+B).
- Connect this opening to the fresh air to building port of the unit (see illustration at right) using metal ducting.

NOTE : For this type of installation, it is recommended, however, not essential, that the furnace blower be synchronized with the unit.



5.3.4 SIMPLIFIED INSTALLATION - RETURN/SUPPLY

Stale air from building ductwork:

- Cut an opening into the furnace return duct at least 10 feet (3.1 m) (A + B) away from the furnace.
- Connect this opening to the stale air from building port of the unit (as illustrated).

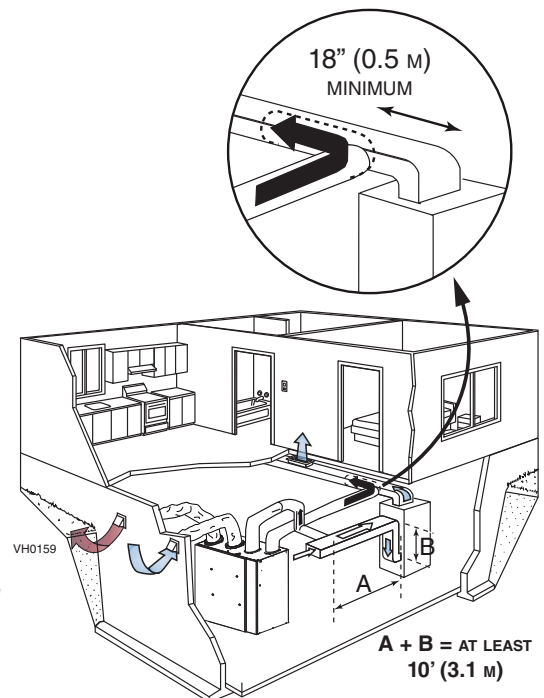
Fresh air to building ductwork:

CAUTION

When performing duct connections to the furnace supply duct, use metal ducts appropriately sized to support the additional airflow produced by the unit.

- Cut an opening into the furnace supply duct at least 18 inches (0.5 m) away from the furnace.
- Connect this opening to the fresh air to building port of the unit (use metal ducts, see illustration at right).
- Make sure that the unit duct forms an elbow inside the furnace ductwork.

NOTE : For this type of installation, it is recommended, however, not essential, that the furnace blower be synchronized with the unit.



For the Installer

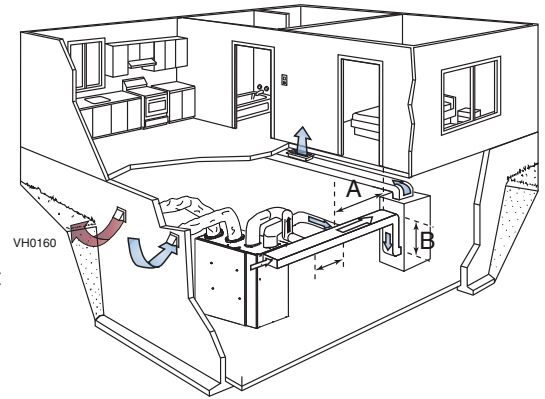
5.3.5 SIMPLIFIED INSTALLATION - RETURN/RETURN

Fresh air to building ductwork:

- Cut an opening into the furnace return duct at least 10 feet (3 m) away from the furnace.
- Connect this opening to the fresh air to building port of the unit (use metal ducts, see illustration at right).

Stale air from building ductwork:

- Cut an opening into the furnace return at least 3 feet (1 m) ahead of the fresh air to building ductwork connection to the furnace return.
- Connect this opening to the stale air from building port of the unit.
- Make sure that both connections to the furnace return duct are at least 3 feet (1 m) apart.



CAUTION

For this type of installation, the furnace must always be synchronized with the unit. See section 7.

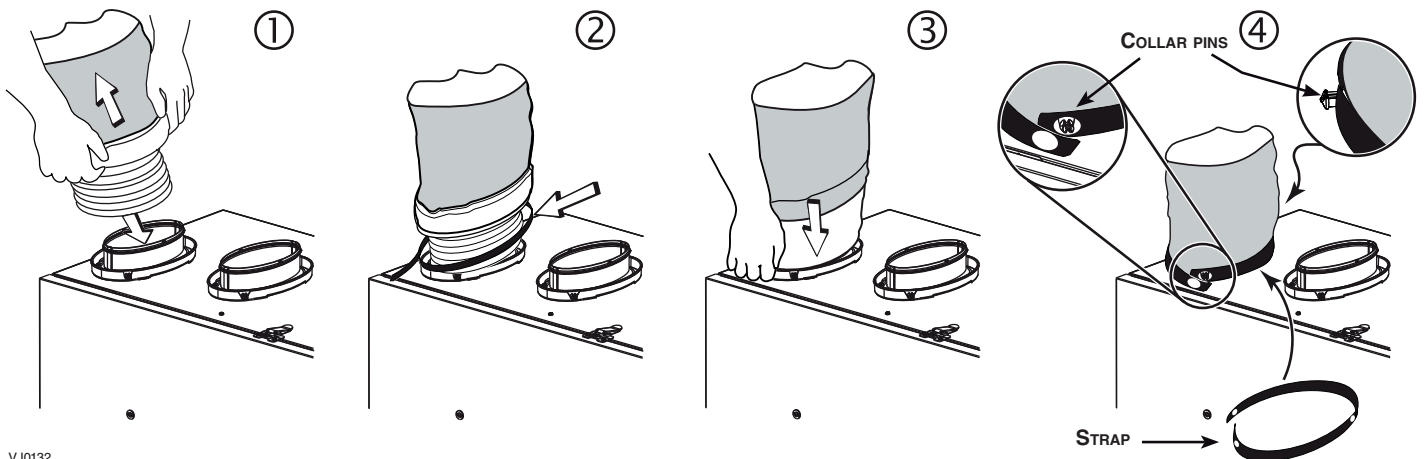
5.4 CONNECTING THE DUCTS TO THE UNIT

CAUTION

- If ducts have to go through an unconditioned space (e.g.: attic), always use insulated ducts.
- Make sure the vapor barrier on the insulated ducts does not tear during installation to avoid condensation within the ducts.
- Always use insulated ducts to connect the Fresh air from outdoors and Stale air to outdoors ports with the exterior hood(s).

5.4.1 INSULATED FLEXIBLE DUCTS

1. Pull back the insulation to expose the flexible duct.
2. Attach the flexible duct to the port using tie wrap.
3. Pull the insulation over the joint and tuck in between the inner and outer rings of the double collar.
4. Pull down the vapor barrier (shaded part in illustrations below) over the outer ring to cover it completely. Fasten in place the vapor barrier using the port strap (included in unit parts bag). To do so, insert one collar pin through the vapor barrier and first strap hole, then insert the other collar pin through the vapor barrier and center strap hole and close the loop by inserting the first collar pin in the last strap hole.



5.4.2 NON-INSULATED FLEXIBLE DUCTS

Use tie wraps to perform connections, then seal with duct tape.

5.4.3 NON-INSULATED RIGID DUCTS

To avoid transmission of vibrations, always use a 6-inch section of flexible duct to connect rigid ducts to the unit. Use tie wraps to perform connections, then seal with duct tape.

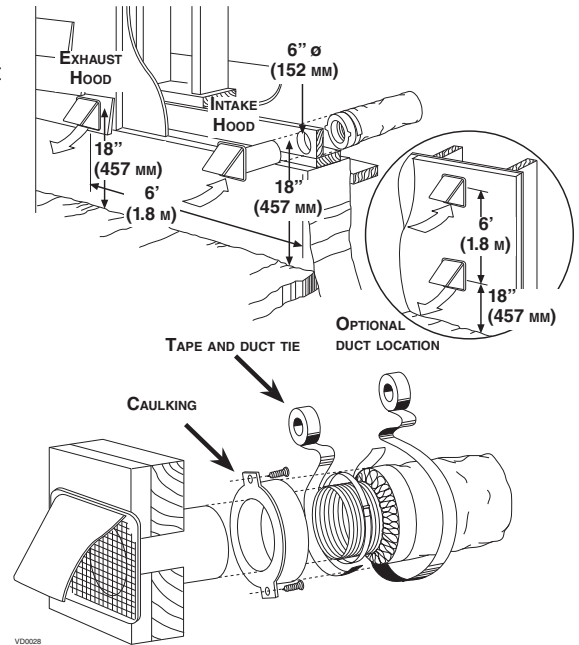
5.5 INSTALLING THE EXTERIOR HOODS

Refer to illustration at right to connect the insulated duct to the hoods. An “Anti-Gust Intake Hood” should be installed in regions where a lot of snow is expected to fall.

⚠ WARNING

Make sure that both hoods are at least 18 inches above the ground and that the intake hood is at least 6 feet (1.8 m) away from any of the following:

- Exhaust hood
- Dryer exhaust, high efficiency furnace vent, central vacuum vent
- Gas meter exhaust, gas barbecue-grill
- Any exhaust from a combustion source
- Garbage bin and any other source of contamination

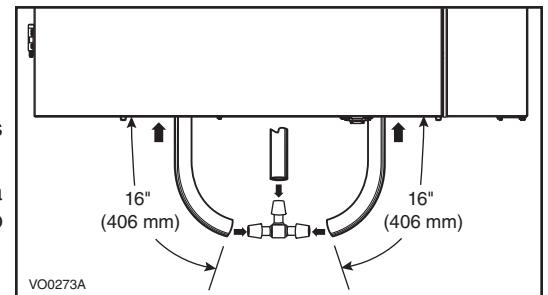


5.6 CONNECTING THE DRAIN

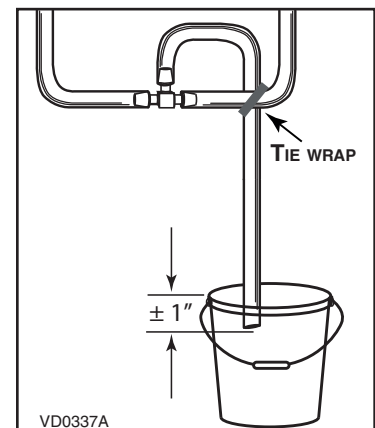
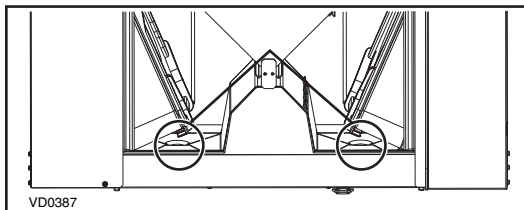
CAUTION

A drain tubing (included) must be installed for all HRV units. It is not required for ERV units, however, it is recommended in climates where the outdoor temperature can remain below -25°C (-13°F) over a 24-hour period for several days in a row, combined with an indoor humidity of 40% or higher.

1. Cut 2 sections of plastic tubing of at least 16" each.
2. Connect each one of them to the drain fittings located under the unit.
If installing a drain on an **ERV unit**, remove both drain plugs inside the unit before installing the tubing.
3. Join their other ends to the «T» junction and remaining tubing as illustrated. This will prevent the unit from drawing unpleasant odors from the drain source.
4. Run the tube to the floor drain or to an alternative drain pipe or pail. If using a pail to collect water, locate the tube end approximately 1" into the pail in order to prevent water from being drawn back into the unit.



LOCATION OF THE DRAIN PLUGS ON ERV UNITS



6. WALL CONTROLS

⚠ WARNING

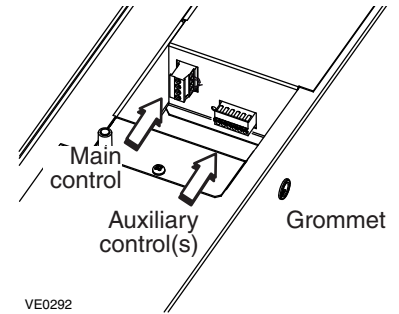
Always disconnect the unit before making any connections. Failure to disconnect power could result in electric shock or damage to the wall control or electronic module inside the unit.

CAUTION

Failure to comply with the following can cause erratic operation of the unit and/or the wall control:
Never install more than one main wall control per unit. Make sure that the wires do not short-circuit between themselves or by touching any other components on the wall control. Avoid poor wiring connections. To reduce electrical interference (noise) potential, do not run wall control wiring next to control contactors or near light dimming circuits, electrical motors, dwelling/building power or lighting wiring, or power distribution panel.

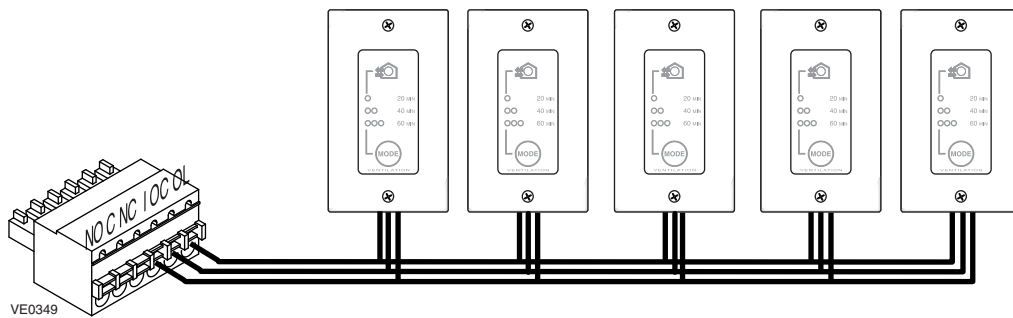
The terminal blocks needed to connect the wall controls are already installed on the electronic board. To access them, open the unit's side panel and remove the terminal blocks from the electronic board.

Run the wall control wires through the grommet before connecting them to the terminal blocks.



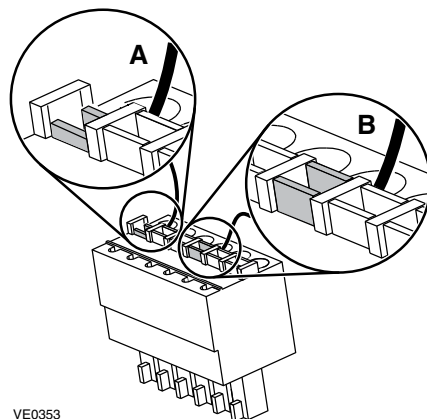
6.1 AUXILIARY WALL CONTROLS

Up to 5 20/40/60-minute auxiliary wall controls can be installed with this unit.



Proceed as follows to connect the auxiliary wall control cable(s) to the 6-position terminal block:

1. Strip the end of the cable.
2. Strip 1/4" off the end of 3 of the wires.
3. Insert the wires in their corresponding holes. A wire is correctly inserted when its orange receptacle is lower than another one without wire. On illustration below, wire **A** is correctly inserted, but wire **B** is not.



4. Reinstall the terminal block on the electronic board.
5. Refer to the controls' installation sheet for information on how to operate them.

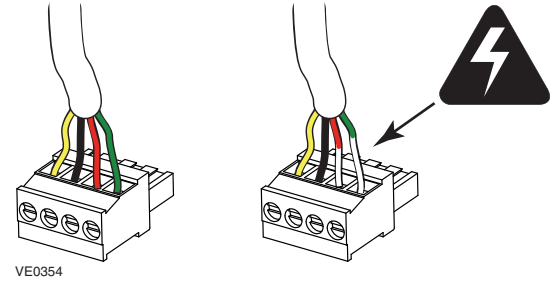
For the Installer

6.2 MAIN WALL CONTROL

The only main wall controls compatible with these units are the **X-Touch** and **Gold-Touch**. Only one main wall control can be installed for each unit.

Proceed as follows to connect the main wall control cable to the 4-position terminal block:

1. Strip the end of the cable.
2. Strip 1/4" off the end of the 4 wires. Do not strip longer than required.
3. Using a small flat blade screwdriver, connect each wire to its corresponding terminal by referring to the labels on the unit (YELLOW to Y; BLACK to B; RED to R; GREEN to G).
4. Reinstall the terminal block on the electronic board.
5. Refer to the controls' installation sheet for information on how to operate it.



7. ELECTRICAL CONNECTION TO THE FURNACE

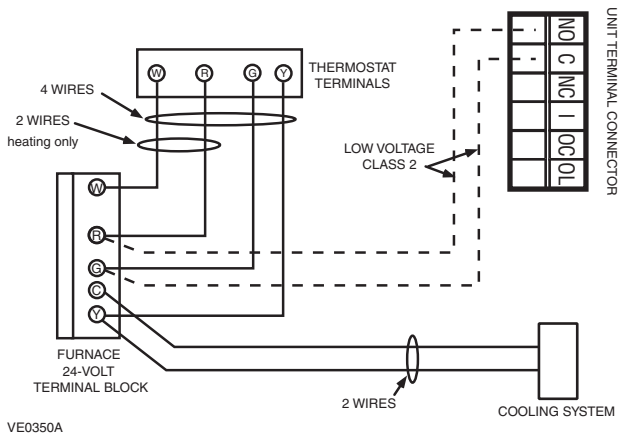
⚠ WARNING

Never connect a 120-volt AC circuit to the terminals of the furnace interlock (standard wiring). Only use the low voltage class 2 circuit of the furnace blower control.

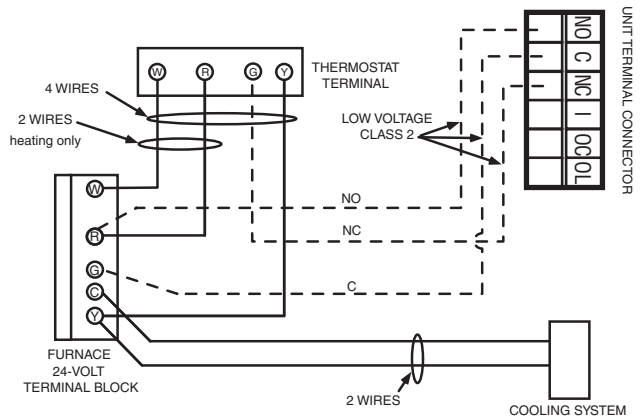
For a furnace connected to a cooling system:

On some older thermostats, energizing the "R" and "G" terminals at the furnace has the effect of energizing "Y" at the thermostat and thereby turning on the cooling system. If you identify this type of thermostat, you must use the ALTERNATE FURNACE INTERLOCK WIRING.

STANDARD FURNACE INTERLOCK WIRING



ALTERNATE FURNACE INTERLOCK WIRING



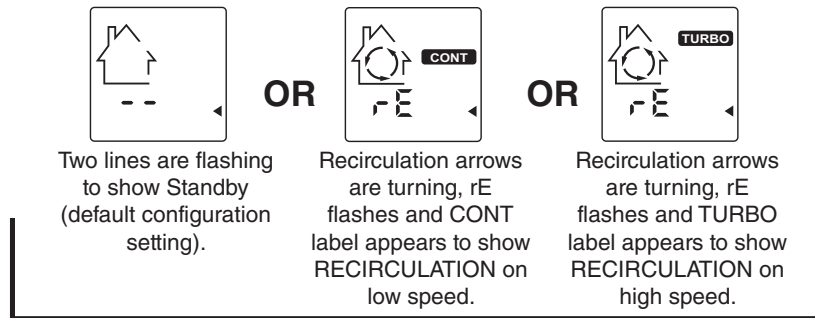
8. RECIRCULATION AND DEFROST SETTINGS

CAUTION

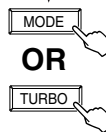
Set extended defrost on all units located in climates where the outdoor temperature typically remains below -25°C (-13°F) (i.e. Winnipeg, Regina, Quebec, Edmonton, Yellowknife, Whitehorse, Labrador City) over a 24-hour period for several days in a row, combined with an indoor humidity of 40% or higher.

Press and hold the **MODE** key for 3 seconds.

The LCD screen will show one of these configurations:

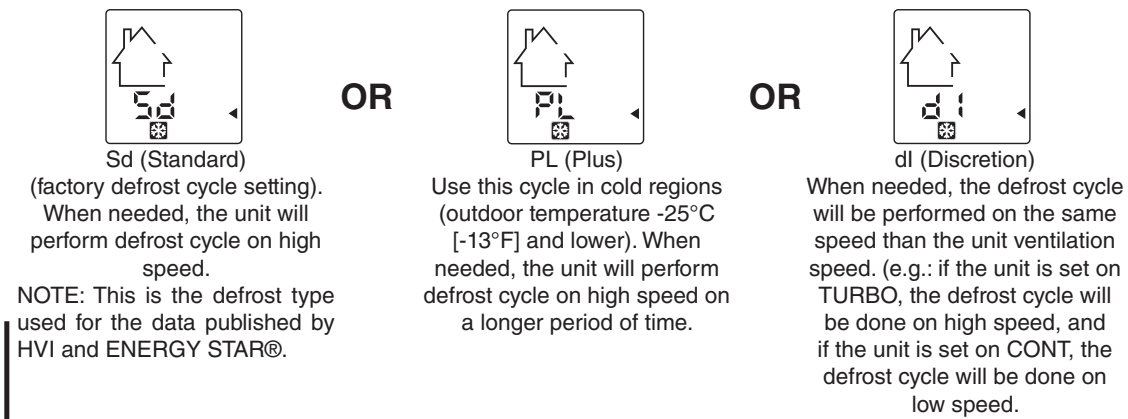


Use **MODE** or **TURBO** key to see all 3 configurations.

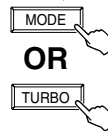


Press **% HUM** key to accept chosen configuration and go to setting defrost cycle type.

The LCD screen will show one of these defrost cycle types:



Use **MODE** or **TURBO** key to see all 3 defrost cycle type.



Press **% HUM** key to accept chosen defrost cycle type and go to software version display



LCD screen alternates between the house with circled arrows and the house without arrow. The numbers under the house are the software version number.

Press **% HUM** key OR wait 10 seconds to exit user setting menu.

9. BALANCING THE UNIT

9.1 BEFORE STARTING

What you need to balance the Unit:

- One X-Touch / Gold-Touch main wall control close to the unit.
- A magnehelic gauge capable of measuring 0 to 1 inch of water (0 to 250 Pa) and 2 plastic tubes.
- The balancing chart and preset speeds table of the unit; affixed on the unit, behind the small control panel.

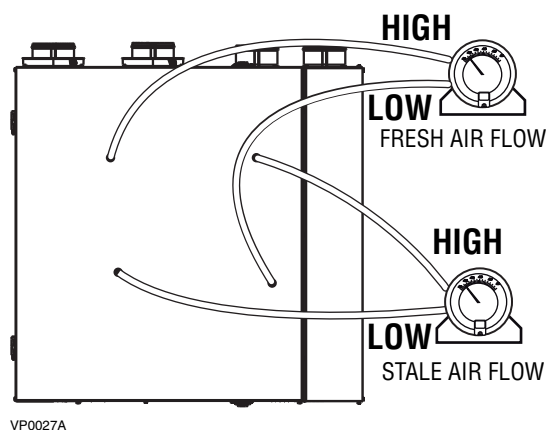
Before balancing the unit:

- Seal all the unit ductwork with tape. Close all windows and doors.
- Turn off all exhaust devices such as range hood, dryer and bathroom fans.
- Make sure all filters are clean (if it is not the first time the unit is balanced).

NOTE: Make sure that the furnace/air handler blower is ON if the installation is in any way connected to the ductwork of the cold air return. If not, leave furnace/air handler blower OFF.

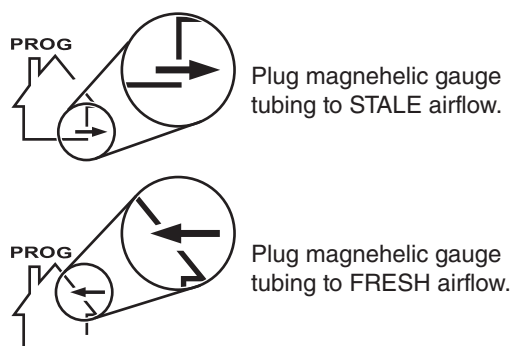
Installing the magnehelic gauge:

1. Place the magnehelic gauge on a level surface and adjust it to zero.
2. According to the airflow to be measured, connect tubing from gauge to STALE air flow or FRESH air flow pressure taps (see illustration at right).
3. Be sure to connect the tubes to their appropriate *high/low* fittings. If the gauge drops below zero, reverse the tubing connections.



Balancing Chart and Preset Speeds Table

Use the balancing chart on the unit to convert pressure (in. w.g.) values read by the magnehelic gauge to airflow (CFM) values. While balancing, the X-Touch/Gold-Touch wall control screen shows which pressure taps have to be used. Keep in mind that a difference between flows up to ± 10 cfm is acceptable. See example below.



UNIT BALANCING CHART

FLOW	FRESH	STALE
CFM	IN. W.G.	IN. W.G.
120	0.71	0.73
125	0.67	0.70
130	0.63	0.67
135	0.59	0.64
140	0.55	0.61
145	0.51	0.58
150	0.47	0.55

STALE reading value with its corresponding CFM

FRESH reading value with its corresponding CFM

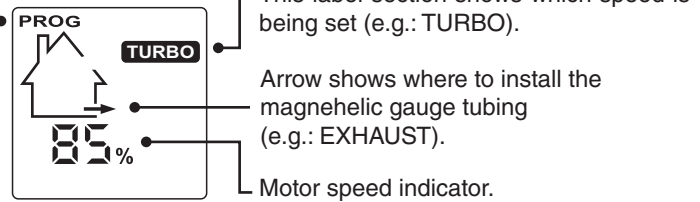
9.2 BALANCING THE UNIT

- 1 Connect an X-Touch/Gold-Touch main wall control to the unit. The control has to be close to the unit.

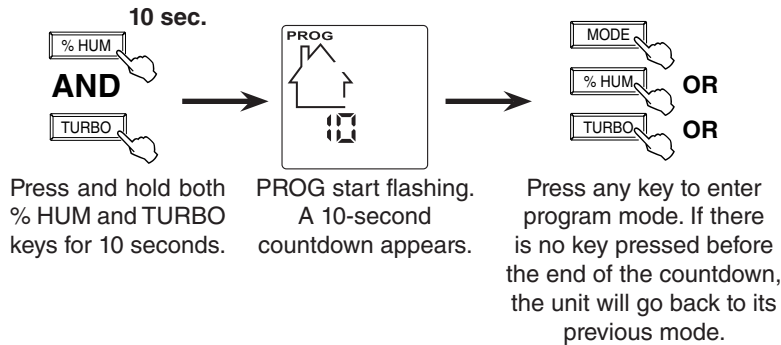
GENERAL INFORMATION ABOUT X-TOUCH/GOLD-TOUCH WALL CONTROL USAGE IN UNIT BALANCING PROCEDURE

-  Press on MODE key to raise the value.
-  Press on % HUM key to accept.
-  Press on TURBO key to lower the value.

PROG flashes on screen as long as you are in Program Mode Setting menus (preset speeds or custom speeds). It disappears from screen when all settings are done or when there is no change after 60 seconds.



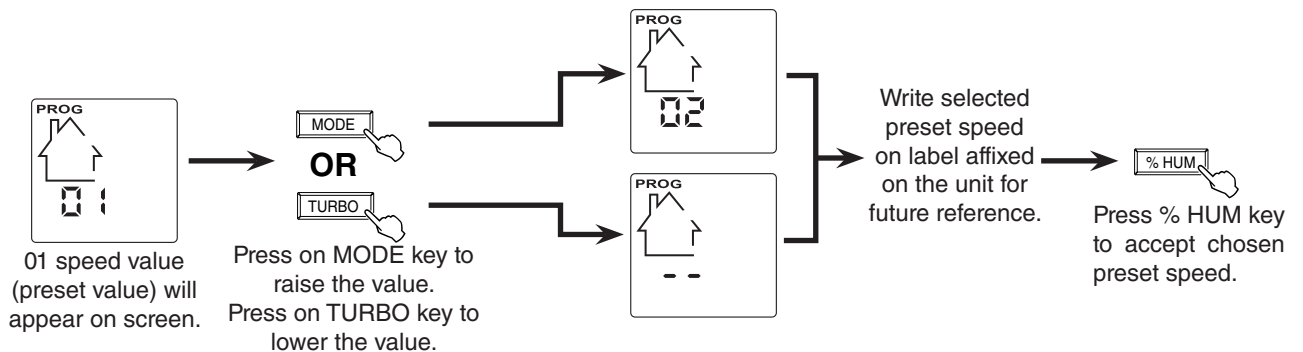
- 2 Enter Program Mode.



Choose between two options: • 01, 02, etc.: Preset speeds (balance the unit only, faster option)

- - -: Custom speeds (adjust TURBO speed and balance the unit, then set CONT, 20/40/60 min. control and RECIRC speeds).

- 3 Select the Preset speeds or Custom speeds.



NOTE: From 01 value, pressing on TURBO key will access to custom speed settings (see page 23).

- 4 Connect the magnehelic tubings to the unit (see 9.1).

For the Installer

- ⑤ If the unit speed is set close to its highest speed, we recommend to first measure and note both airflows.
- ⑥ Refer to the unit balancing chart to find the corresponding CFMs.
- ⑦ Determine which airflow should be adjusted (the higher airflow must be lowered to equalize the lower one).
See example below.

Pressure in. w.g.	Fresh CFM	Stale CFM
0.31	152	155
0.32	156	159
0.33	159	162
0.34	162	166
0.35	165	169
0.36	168	172
0.37	171	176
0.38	174	179
0.39	177	183
0.40	180	186
0.41	183	189
0.42	186	193
0.43	189	196
0.44	193	200
0.45	196	203
0.46	199	206
0.47	202	210
0.48	205	213
0.49	208	217
0.50	211	220
0.51	214	223
0.52	217	227
0.53	220	230
0.54	223	234
0.55	226	237

STALE reading
value with its
corresponding
CFM

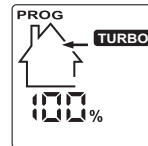
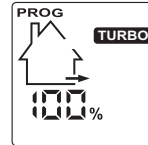
FRESH reading
value with its
corresponding
CFM

NOTE: At first airflow readings, for speed value 01, both stale and fresh airflow values displayed on control screen are 100%.

Before airflow adjustment

STALE airflow
reading:
0.41 in. w.g.,
189 CFM

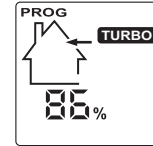
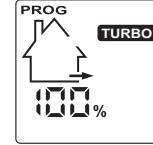
FRESH airflow
reading:
0.50 in. w.g.,
211 CFM



After airflow adjustment

STALE airflow
reading:
0.41 in. w.g.,
189 CFM

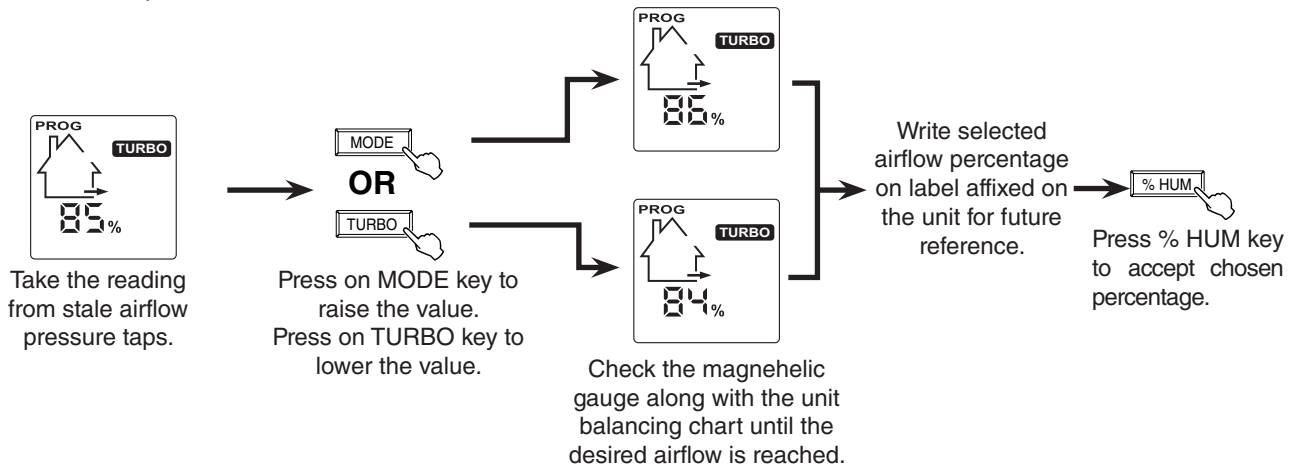
FRESH airflow
reading:
0.43 in. w.g.,
189 CFM



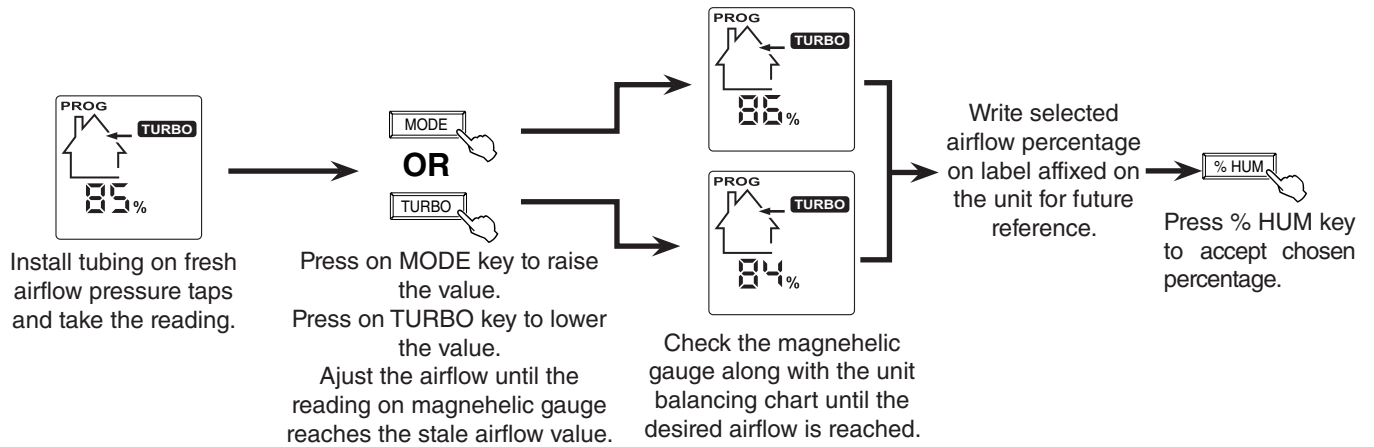
In that case, the FRESH
airflow must be lowered
to reach the STALE
airflow value.

- ⑧ Adjust stale air TURBO speed (or press % HUM key to keep it as is).

NOTE: The following shown values are example. The real values vary according to the preset speed chosen, the unit installation, etc.



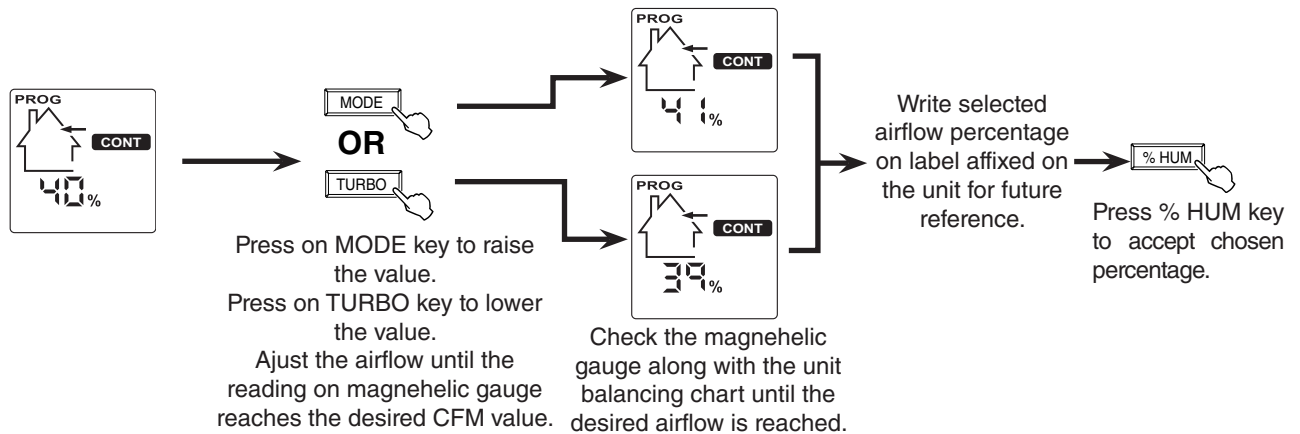
⑨ Adjust fresh air TURBO speed (or press % HUM key to keep it as is).



If you have selected the preset speed balancing at ②, the balancing procedure is completed.

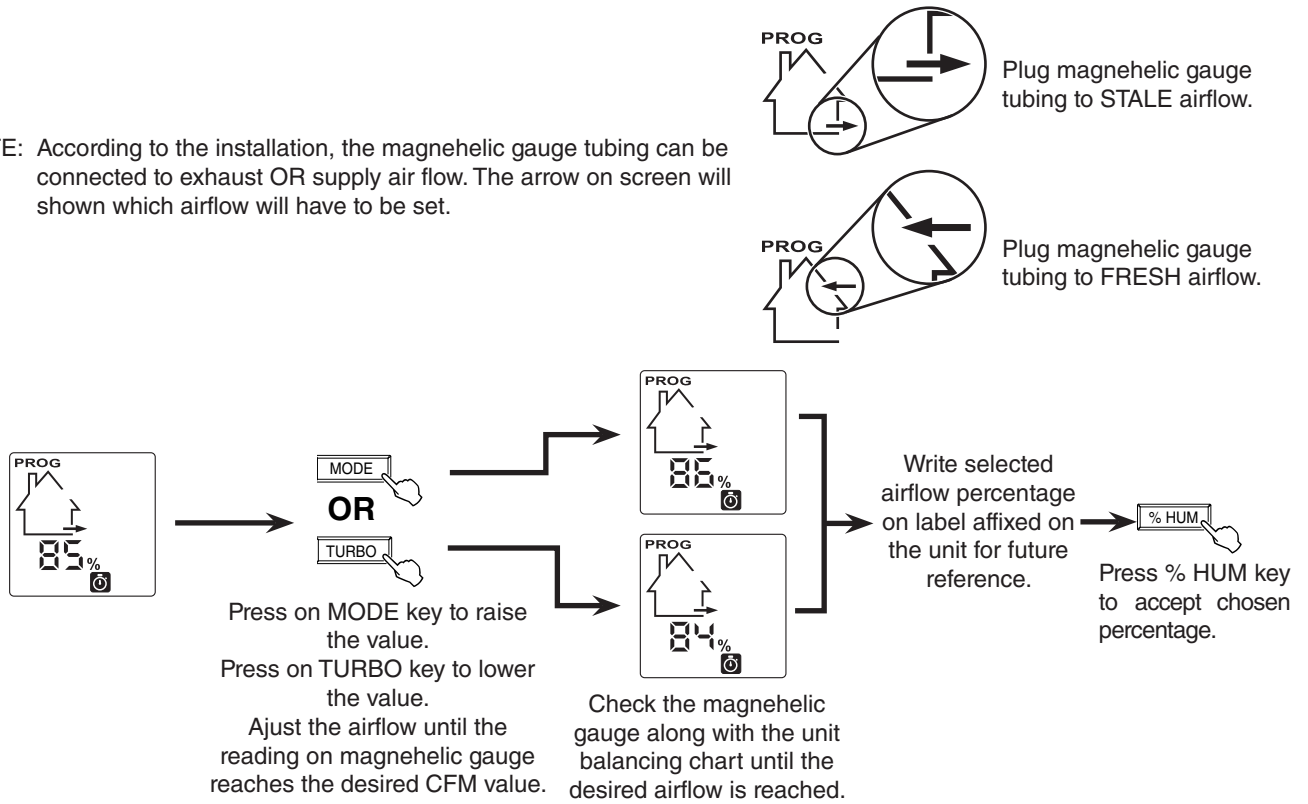
If you have selected the custom speed balancing, continue with the following:

⑩ Set CONT speed.

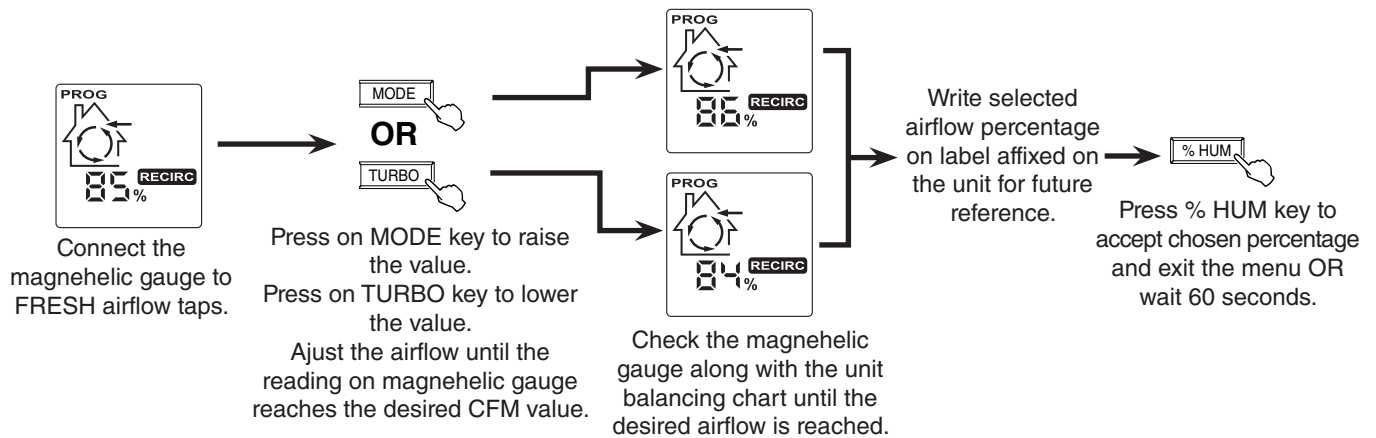


⑪ Set 20/40/60-minute control speed.

NOTE: According to the installation, the magnehelic gauge tubing can be connected to exhaust OR supply air flow. The arrow on screen will show which airflow will have to be set.

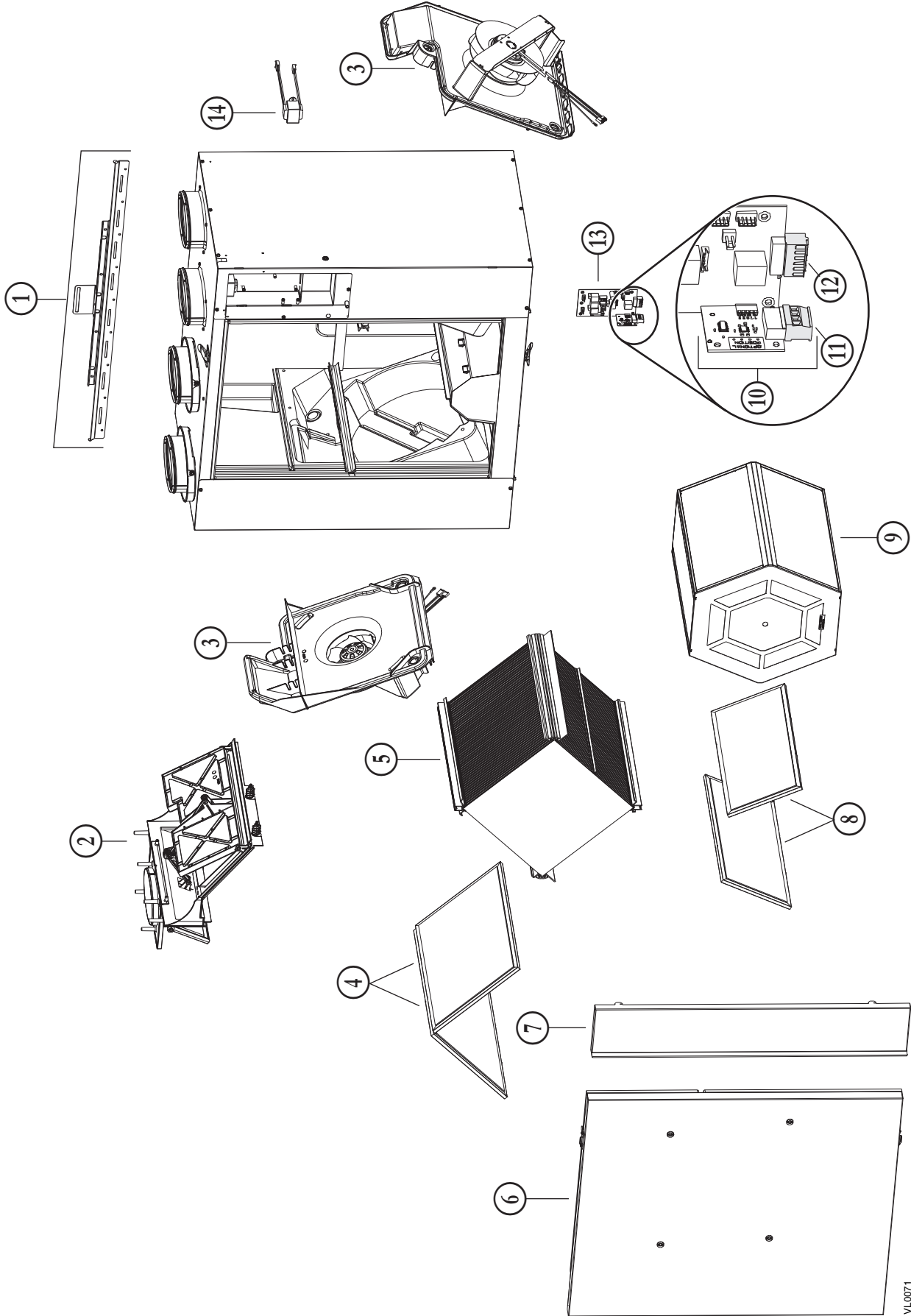


⑫ Set RECIRC speed.



The balancing procedure is completed.

The adjusted airflow values are stored in the unit. If needed, any X-Touch/Gold-Touch main control can be used to adjust the unit speeds and balance the unit again. If a power failure occurs, the unit will keep these setting values in memory. To change the setting values, go to step ⑥ and follow the procedure, the new values will replace the previous ones.



VL0071

No.	DESCRIPTION	QTY.	X24 ERV ECM	X24 HRV ECM	X30 ERV ECM	X30 HRV ECM	X24 ERV ECM-N	X24 HRV ECM-N	X30 ERV ECM-N	X30 HRV ECM-N	G2400E ECM	G2400H ECM	G3000E ECM	G3000H ECM
1	BRACKET KIT	1	63419	63419	63419	63419	63419	63419	63419	63419	63419	63419	63419	63419
2	DAMPER SYSTEM ASSEMBLY (INCLUDING 2 PLASTIC SCREWS)	1	63420	63420	63420	63420	63420	63420	63420	63420	63420	63420	63420	63420
3	BLOWER ASSEMBLY (INCLUDING 3 PLASTIC SCREWS)	2	63421	63421	63421	63421	63421	63421	63421	63421	63421	63421	63421	63421
4	HRV CORE FILTER (PAIR)	1		63426		63426		63426		63426		63426		63426
	ERV CORE FILTER (PAIR)	1			63433				63433				63433	
5	HEAT RECOVERY CORE	1		63422		63422		63422		63422		63422		63422
	ENERGY RECOVERY CORE	1			63425				63425				63425	
6	DOOR ASSEMBLY (INCLUDING NO. 16)	1	63429	63429	63429	63429	63429	63429	63429	63429	63428	63428	63428	63428
7	RIGHT PANEL	1	63432	62495	62498	62499	63432	62495	62498	62499	63430	62500	62502	62504
8	ERV CORE FILTER (PAIR)	1	63427				63427				63427			
9	ENERGY RECOVERY CORE	1	63424				63424				63424			
10	DAUGHTER BOARD (INCLUDING INO. 11)	1	63437	63437	63437	63437	63437	63437	63437	63437	63437	63437	63437	63437
11	PCB CONNECTOR (MAIN CONTROL)	1	63434	63434	63434	63434	63434	63434	63434	63434	63434	63434	63434	63434
12	PCB CONNECTOR (AUXILIARY CONTROL)	1	63435	63435	63435	63435	63435	63435	63435	63435	63435	63435	63435	63435
13	PCB (INCLUDING NOS. 10 & 12)	1	63436	63441	63442	63443	SV64392	SV64393	SV64394	SV64395	63436	63441	63442	63443
14	TRANSFORMER	1	63438	63438	63438	63438	63438	63438	63438	63438	63438	63438	63438	63438
*	WARM SIDE THERMISTOR KIT	1	62481	62481	62481	62481	62481	62481	62481	62481	62481	62481	62481	62481
*	DOOR MAGNETIC SWITCH	1	19060	19060	19060	19060	19060	19060	19060	19060	19060	19060	19060	19060
*	PLASTIC SCREW (SET OF 6)	1	63439	63439	63439	63439	63439	63439	63439	63439	63439	63439	63439	63439
*	HARDWARE KIT	1	22488	22488	22488	22488	22488	22488	22488	22488	22488	22488	22488	22488

* Not shown.

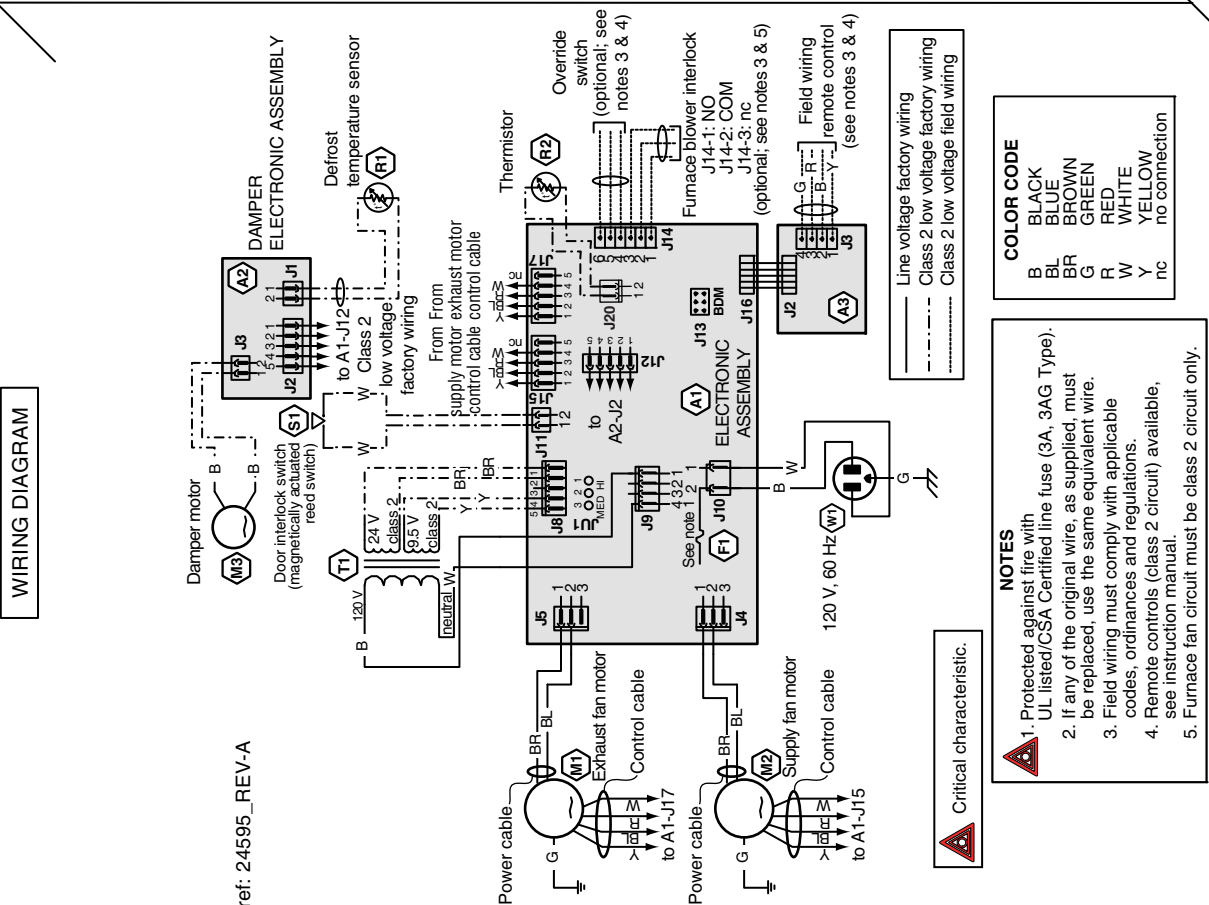
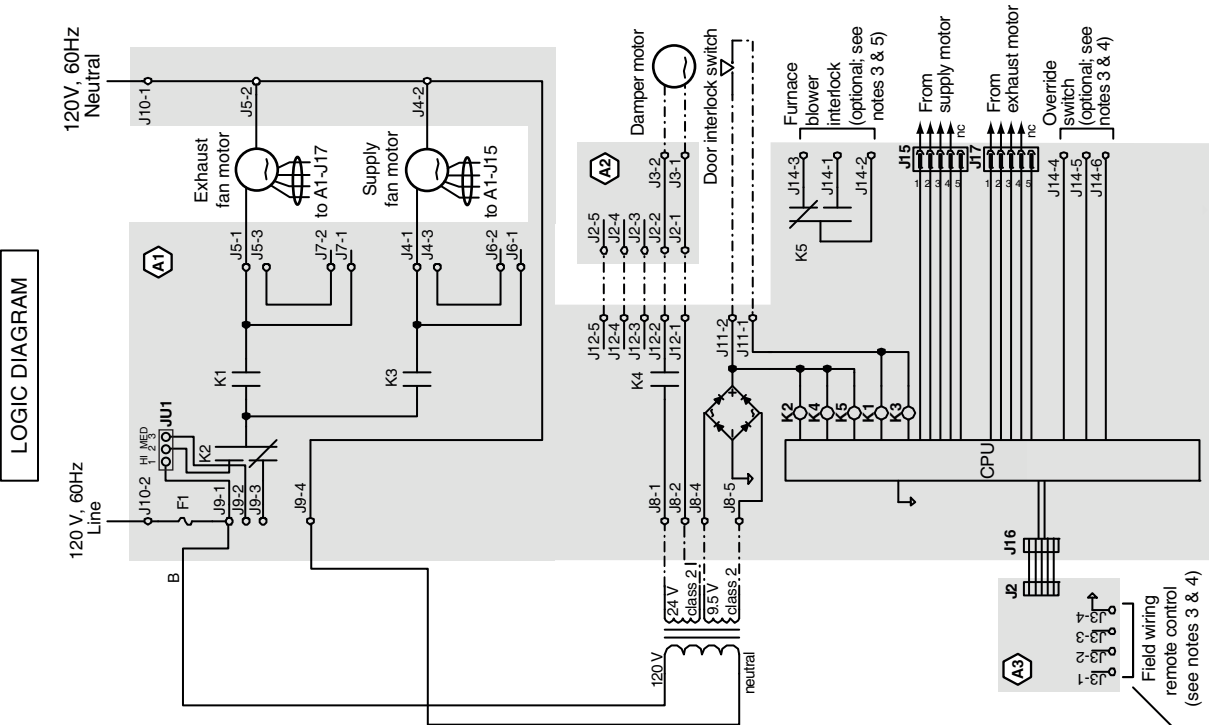
REPLACEMENT PARTS AND REPAIR

In order to ensure your ventilation unit remains in good working condition, you must use the manufacturer genuine replacement parts only. The manufacturer genuine replacement parts are specially designed for each unit and are manufactured to comply with all the applicable certification standards and maintain a high standard of safety. Any third party replacement part used may cause serious damage and drastically reduce the performance level of your unit, which will result in premature failing. The manufacturer recommends to contact a certified service depot for all replacement parts and repairs.

11. WIRING DIAGRAM

⚠ WARNING

- Risk of electric shocks. Before performing any maintenance or servicing, always disconnect the unit from its power source.
- This product is equipped with an overload protection (fuse). A blown fuse indicates an overload or a short-circuit situation. If the fuse blows, unplug the product from the outlet. Discontinue using the unit and contact technical support.



12. TROUBLESHOOTING

⚠ WARNING

Risk of electric shocks. Electronic board connections must be checked by qualified personnel only.

