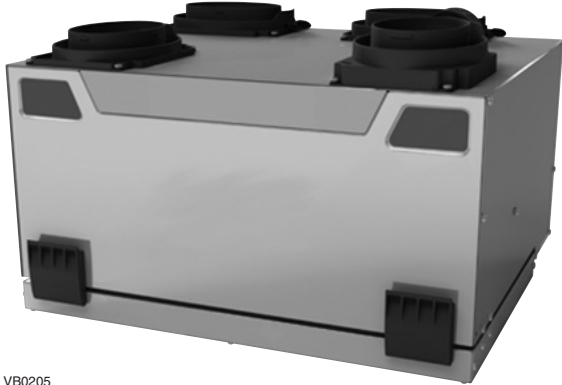


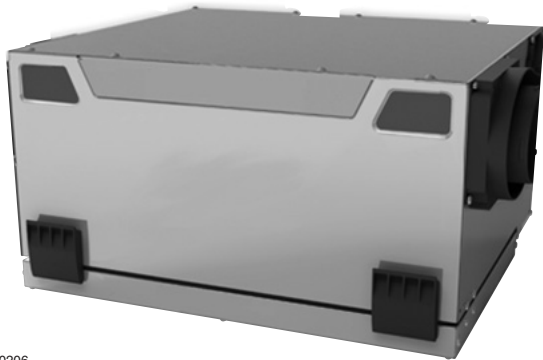
USER AND INSTALLER MANUAL



VB0205

TOP PORTS UNITS

	HRV	ERV
Constructo 1.0	41502	41506
C12	41552	41556
60H	41602	41606
60H+	41652	41656



VB0206

SIDE PORTS UNITS

	HRV	ERV
Constructo 1.0	41500	41504
C12	41550	41554
60H	41600	41604
60H+	41650	41654

⚠ 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 6.2.
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 expenses
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 appliance. 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		
<input type="text"/>		<input type="text"/>		
Address - Adresse	Apt. no. - App.	City - Ville	Province	Postal code - Code postal
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Country - Pays	E-mail address - Courriel		Language preferred - Langue de correspondance	
<input type="text"/>	<input type="text"/>		<input type="text"/>	
Telephone no. (day) - N° de téléphone (jour)	Telephone no. (evening) - N° de téléphone (soir)		Date of purchase - Date d'achat	
<input type="text"/>	<input type="text"/>		<input type="text"/>	
Model no. - N° de modèle	Serial no. - N° de série			
<input type="text"/>	<input type="text"/>			

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.

1.1 INTEGRATED CONTROL

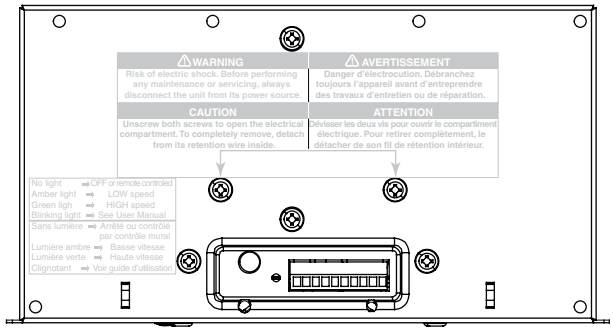
Unit Booting Sequence

The unit's booting sequence is similar to a personal computer's booting sequence. Each time the unit is plugged in after being unplugged, or after a power failure, it will perform a 30-second booting sequence before starting to operate. **No command will be taken until the unit is fully booted.**

This unit is equipped with an **integrated control**, located on the recessed side of the electrical compartment, under the unit.

- Use the integrated push-button to go from OFF to Low Speed, to High Speed, and back to OFF.
- The color of the LED indicator shows what speed the unit is running in:

LED COLOR	RESULTS
AMBER	Unit is in Low speed
GREEN	Unit is in High speed
NO LIGHT	Unit is OFF or controlled by a main control



VD0182

For more convenience, this unit can also be controlled using an optional wall control. **When using an optional main control, unit must be set to OFF using the integrated control.**

For more information about their operation modes refer to the *Main and auxiliary wall control User Guide*, included with the ventilation unit and also available at www.vanee.ca or www.venmar.ca.



Would you like to receive occasional informational e-mail offers including product updates and special promotions from us? **Yes/No**

What problem were you trying to solve with your purchase? (Check each one that applies to you.)

- Bad odors
- Respiratory problems
- Excess of humidity
- Temperature standardization
- Lack of fresh air
- Dust
- Mildew
- Allergies
- No specific problems
- Others

Who installed your unit?

- Home builder
- Recommended installer
- Friend / family
- Contractor
- Yourself

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
- ___ Warranty
- ___ Product design
- ___ Ventilation capacity
- ___ Filter maintenance indicator
- ___ Filtration quality
- ___ Recirculation
- ___ Heat recovery
- ___ Controls
- ___ Ease of cleaning
- ___ Manufacturer's reputation
- ___ Ease of use
- ___ Noise level
- ___ Other

Aimeriez-vous recevoir plus de détails sur nos promotions, offres de rabais et mises à jour de nos produits? **Oui/Non**

Quels problèmes essayez-vous de résoudre par cet achat? (Cochez toutes les cases pertinentes)

- Mauvaises odeurs
- Problèmes respiratoires
- Excès d'humidité
- Uniformisation de la température
- Manque d'air frais
- Poussières
- Moisissures
- Allergies
- Pas de problèmes spécifiques
- Autres (Précisez SVP)

Qui a installé l'appareil?

- Constructeur de la maison
- Installateur recommandé
- Ami/membre de la famille
- Entrepreneur
- Vous-même

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
- ___ Garantie
- ___ Design du produit
- ___ Débit de ventilation
- ___ Indicateur d'entretien du filtre
- ___ Qualité de filtration
- ___ Recirculation
- ___ Récupération de chaleur
- ___ Récupération d'énergie
- ___ Fonctions
- ___ Facilité de nettoyage
- ___ Réputation du fabricant
- ___ Simplicité d'utilisation
- ___ Niveau de bruit
- ___ Autres (Précisez SVP)

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. USER SERVICING INSTRUCTIONS

⚠ WARNING

- **Risk of electric shock. Before performing any maintenance or servicing, always disconnect the unit from its power source.**
- **When cleaning the unit, it is recommended to wear safety glasses and gloves.**

2.1 QUARTERLY MAINTENANCE

1. Turn the unit off and unplug it.
2. HRV UNITS: wait one minute before opening the door to allow water to drain out of the unit.

⚠ WARNING

Water or small debris could fall out when opening the door.

3. Open the door and remove it.
4. Clean the inner side of the door and dry it.
5. Remove both filters.
6. Wash both core filters under lukewarm water with mild soap. Rinse thoroughly and let dry completely.
7. Slide the clean and dry filters back in the unit making sure that they are held in place by the filter retaining wire.
8. Reinstall the door and close it.
9. Plug unit back. The unit will return to its previous setting after a 30-second booting sequence.

2.2 ANNUAL MAINTENANCE

1. Perform steps 1 to 6 of Quarterly Maintenance.
2. Hold the core and remove it by rotating both core retaining brackets.

⚠ WARNING

Always hold the core while rotating the core retaining brackets.

3. Clean the recovery core as follows :

CONSTRUCTO 1.0 HRV C12 HRV	60H HRV 60H+ HRV	CONSTRUCTO 1.0 ERV C12 ERV	60H ERV 60H+ ERV
<ul style="list-style-type: none"> • Let it soak for 3 hours in a mixture of warm water and mild soap (dishwashing liquid). • Rinse lightly. • Allow it to dry. 		<ul style="list-style-type: none"> • Remove the dust using a vacuum cleaner with a soft brush attachment. <p>CAUTION: DO NOT SOAK THE ENERGY RECOVERY CORE IN WATER</p>	

4. Clean the inside walls of the unit using a damp cloth, and wipe with a clean dry one.
5. Slide the cleaned core in the unit, making sure that the core's retaining brackets are pivoted back to their original position, and that the arrows on the core label point towards the motors.
6. Slide the clean and dry filters back in the unit making sure that they are held in place by the filter retaining wire.
7. Reinstall the door and close it.
8. Clean the exterior hoods.
9. Plug unit back. The unit will return to its previous setting after a 30-second booting sequence.

3. USER'S TROUBLESHOOTING

PROBLEM	TRY THIS
Nothing works.	<ul style="list-style-type: none"> • Check if the unit is plugged in and receiving power from the house circuit breaker or fuse.
Condensation on windows (air too humid).	<ul style="list-style-type: none"> • Operate the unit on maximum speed ventilation until the situation is corrected. • Leave curtains half-open to allow air circulation. • Store all firewood in a closed room with a dehumidifier, in a well ventilated room, or store outdoors. • Do not adjust the thermostat of your heating system below 18°C (64°F).
Inside air too dry.	<ul style="list-style-type: none"> • Temporarily use a humidifier. • Operate the unit in recirculation mode (if available).
Air too cold at the air supply grille.	<ul style="list-style-type: none"> • Check if the exterior hood is blocked. • Operate the unit in low speed ventilation or in intermittent or recirculation mode (if available). • Install a duct heater.
The LED of the integrated control is blinking RED.	<p>a) The door is open and the unit is not unplugged. Close the door and press once on the integrated control push button to reset the unit.</p> <p>b) There is a problem with the exhaust motor. The unit is OFF. Contact your installer.</p>
The integrated control push button does not work.	<ul style="list-style-type: none"> • The 30-second boot sequence is not completed. See section 1.1. • If the booting sequence is completed and the push-button still doesn't work, contact your installer.

4. WARRANTY

This ventilation unit is a high quality product, built and packaged with care. The manufacturer warrants to the original purchaser of its product, that such products will be free from defects for the period stated below, from date of original purchase. For all units, the warranty covers parts only against any operational defect. This is a 5-year warranty, except for HRV Constructo 1.0, ERV Constructo 1.0, 60H HRV and 60H ERV; these three units having a 2-year warranty. Subject to performing the core maintenance according to the manufacturer's recommendations, the heat recovery core (HRV) has a limited lifetime warranty, and the energy recovery core (ERV) has a 5-year warranty. If any defect should occur, we urge you to read this 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 manual's 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 (North America); the personnel will be pleased to give you the phone number of a distributor or 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 that you contact 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.

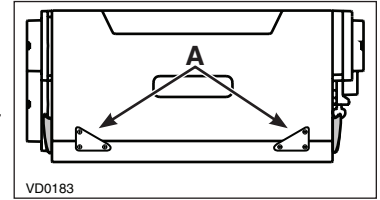
CAUTION

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 PREPARING THE UNIT

- Remove and discard the transport brackets (A).
- Open the door, discard both polystyrene foam fillers, and remove the hardware kit from the unit.
- Set both Fresh air to building and Stale air to outdoors port dampers wide open by turning their thumb screw clockwise.
- If needed, the door latches can be moved from the sides to the front of the unit. To do so, unlatch the latches, unscrew them and screw them back on the front of the unit, using the predrilled holes.

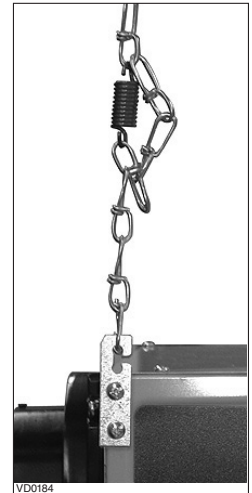


5.2 LOCATING THE UNIT

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

- Within an area of the house where the **ambient temperature is kept between 10°C (50°F) and 40°C (104°F)**
- So as to provide easy access to the interior cabinet for quarterly and annual maintenance
- Close to an exterior wall, so as to limit the length of the insulated flexible duct to and from the unit
- Close to a drain. If no drain is close by, use a pail to collect run-off
- Away from hot chimneys, electrical panel and other fire hazards
- Allow for a power source (standard outlet)

Hang the unit with the 4 chains and springs provided (see illustrations at right). If needed, the hooks can be installed lower on the unit.



CAUTION

Make sure that the unit is level.

5.2.1 ATTIC INSTALLATION

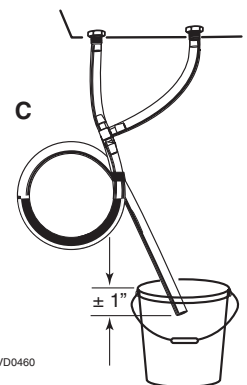
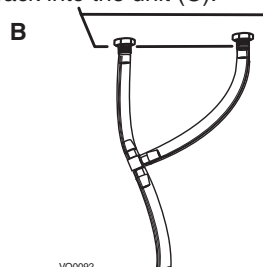
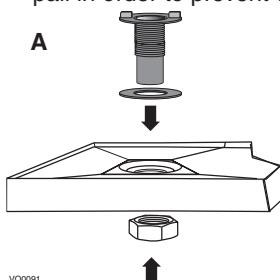
The 5 types of installation explained in section 5.4 can be used for an installation in the attic. However, to get the most of your ERV unit, the ambient temperature around it should be conditioned. If the unit has to be installed in an unconditioned space, like an attic, the heat gains or losses could increase the operation costs of the unit.

CAUTION

- **Due to the potential temperature difference between the attic and the rest of the house, all unit ducts must be insulated.**
- **The attic temperature must always be above 0°C (32°F) and under 65°C (149°F).**

5.3 CONNECTING THE DRAIN (CONSTRUCTO 1.0 HRV, C12 HRV, 60H HRV AND 60H+ HRV)

1. From the inner side of the door, punch out both drain holes using one end of the provided drain tubing.
2. Install one plastic drain fitting per drain hole as illustrated below (A). Hand tighten the nuts; do not use tools.
3. Cut 2 sections of plastic tubing, about 12-inches long each, and attach them to each drain fitting.
4. Attach the other end of these 2 sections as well as the remaining drain tubing to the provided "T" coupling as illustrated below (B).
5. Using a tie wrap, make a water trap loop in the tube to prevent the unit from drawing unpleasant odors from the drain (C).
6. Run the tube to a drain or to a 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 (C).



5.4 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.**

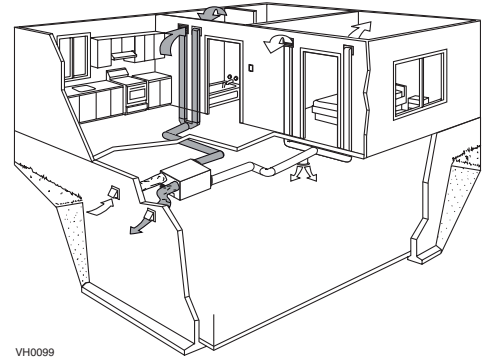
5.4.1 FULLY DUCTED SYSTEM

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.



5.4.2 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.

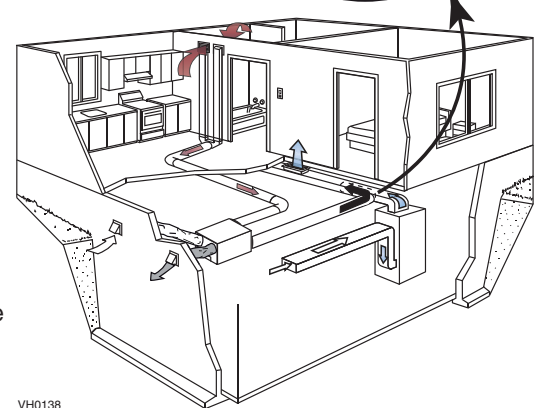
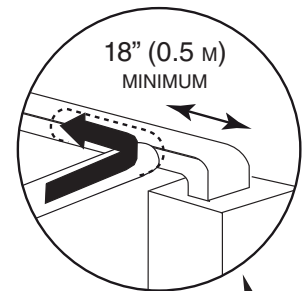
Stale air from building ductwork:

- 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 HRV/ERV (use metal ducts, see illustration at right).
- Make sure that the HRV/ERV 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.



5.4.3 EXHAUST DUCTED SYSTEM - RETURN SIDE

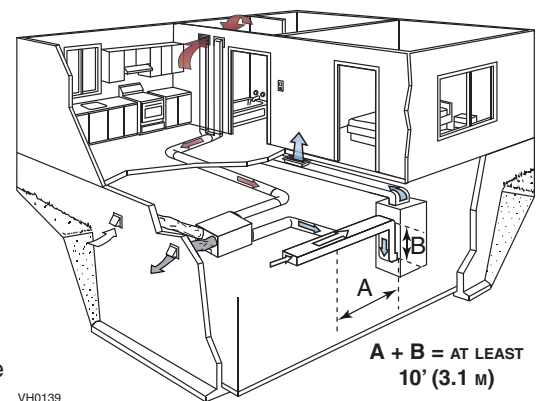
Stale air from building ductwork:

- 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) away from the furnace (A+B).
- Connect this opening to the fresh air to building port of the HRV/ERV (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.



For the Installer

5.4.4 SIMPLIFIED INSTALLATION - RETURN/SUPPLY

CAUTION

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

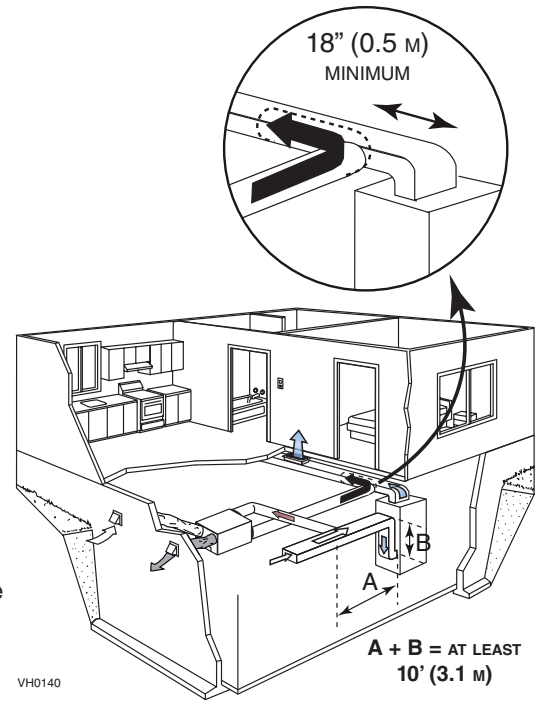
Stale air from building ductwork:

- 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 HRV/ERV (as illustrated).

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 HRV/ERV (use metal ducts, see illustration at right).
- Make sure that the HRV/ERV 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.



VH0140

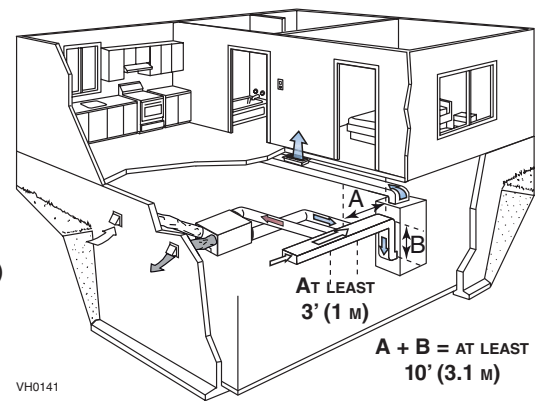
5.4.5 SIMPLIFIED INSTALLATION - RETURN/RETURN

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 HRV/ERV (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 HRV/ERV.
- Make sure that both connections to the furnace return duct are at least 3 feet (1 m) apart.



VH0141

CAUTION

For this type of installation, the furnace must always be synchronized with the unit. See section 8.

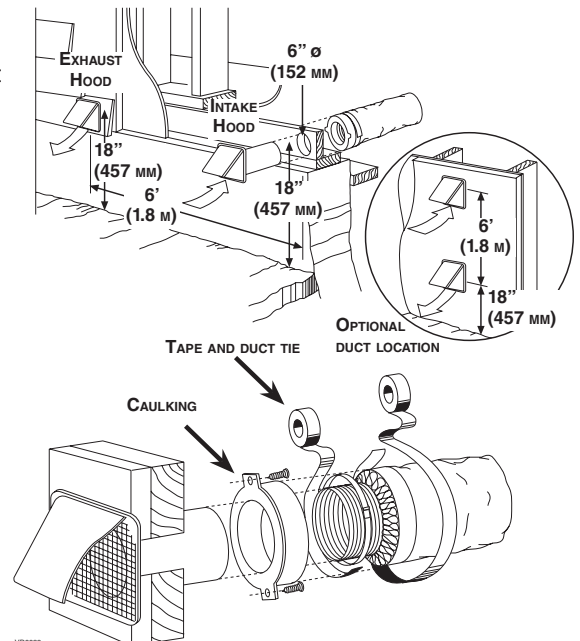
5.5 INSTALLING THE EXTERIOR HOODS

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



VD0028

For the Installer

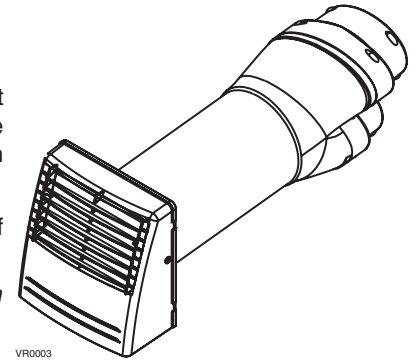
5.6 INSTALLING DUAL EXTERIOR HOOD USING TANDEM®* TRANSITION KIT (OPTIONAL)

If desired, a Tandem transition kit can be used instead of 2 exterior hoods; but take into account this device will generate approximately an additional 0.2 in.w.g. static pressure depending on the installation. If using the Tandem hood, we recommend using 6-in. ducts to minimize the reduction caused by the tandem hood restriction.

The minimum joist opening needed to install the Tandem® transition is 9¾". The maximum height of the Tandem transition is 8¾".

To connect the insulated flexible ducts to the Tandem transition (*Exhaust air to outdoors* and *Fresh air from outdoors*), follow the instructions included with the Tandem transition kit (part no.14690).

*Patented.



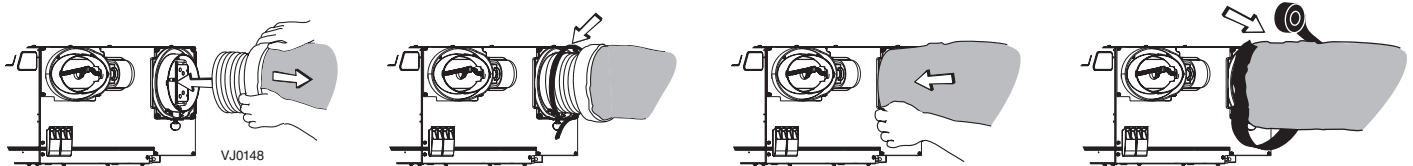
5.7 CONNECTING THE DUCTS TO THE UNIT

CAUTION

- **Make sure that the balancing dampers are wide open before connecting the ducts to the ports.**
- **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.**

5.7.1 INSULATED FLEXIBLE DUCTS

1. Pull back the insulation to expose the flexible duct.
2. Attach the flexible duct to the port using a tie wrap.
3. Pull the insulation over the joint and tuck it in between the inner and outer rings of the double collar, then pull down the vapor barrier (shaded part in illustrations below) over the insulation and over the outer ring of the double collar.
4. Apply duct tape to the joint making an airtight seal. Avoid compressing the insulation when pulling the tape tightly around the joint. Compressed insulation loses its R value and causes water dripping due to condensation on the exterior surface of the duct.



5.7.2 NON-INSULATED RIGID DUCTS

CAUTION

Do not use screws to connect the rigid ducts to the ports.

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.

6. CONTROLS

6.1 SETTING EXTENDED DEFROST FOR C12 HRV, C12 ERV, 60H+ HRV AND 60H+ ERV

All units are factory set to normal defrost. In cold areas where the outdoor temperature can drop to -27°C and lower, it may be necessary to set extended defrost. To do so:

- During the first 2 seconds of the booting sequence, while the integrated control LED is GREEN, press and hold the push-button for 3 seconds.
- The LED will turn AMBER and blink to indicate that the extended defrost has been successfully set.
- The LED will then shut OFF and turn RED; this means that the booting sequence has resumed.

For the Installer

6.2 ELECTRICAL CONNECTION TO OPTIONAL WALL CONTROLS

Use the chart below to verify compatibility with the optional controls before making any connection.

	Main Controls	Auxiliary Controls
CONSTRUCTO 1.0 HRV CONSTRUCTO 1.0 ERV C12 HRV C12 ERV	<ul style="list-style-type: none"> Altitude Deco-Touch Lite-Touch Constructo 	<ul style="list-style-type: none"> Dehumidistat 20/40/60-minute push-button timer 20-minute lighted push-button 60-minute crank timer
60H HRV 60H ERV 60H+ HRV 60H+ ERV	<ul style="list-style-type: none"> Platinum Deco-Touch Lite-Touch Bronze 	

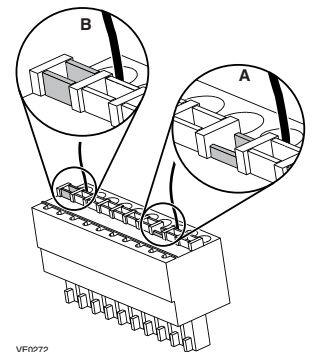
⚠ WARNING

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

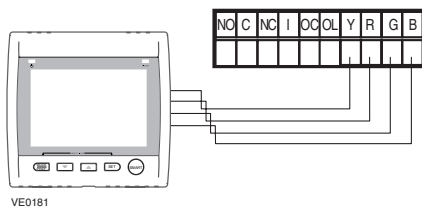
CAUTION

Never install more than one optional 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.

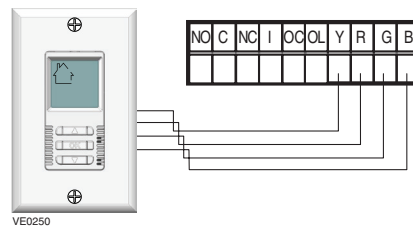
- Use the terminal connector included in the installation kit to perform the electrical connection for main and optional wall controls.
- Make sure all wires are correctly inserted in their corresponding holes in the terminal block. A wire is correctly inserted when its orange receptacle is lower than another one without wire. On the picture below, wire **A** is correctly inserted, but wire **B** is not.
- Once the connections have been made, insert the terminal connector in the recessed side of the electrical compartment.



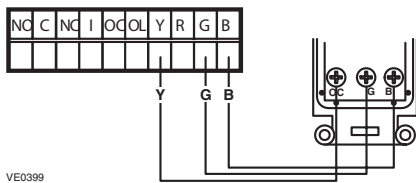
6.2.1 ALTITUDE OR PLATINUM



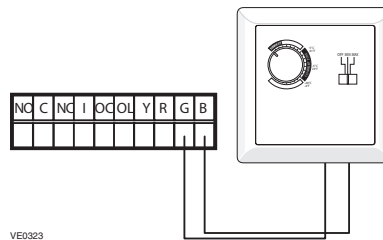
6.2.2 DECO-TOUCH



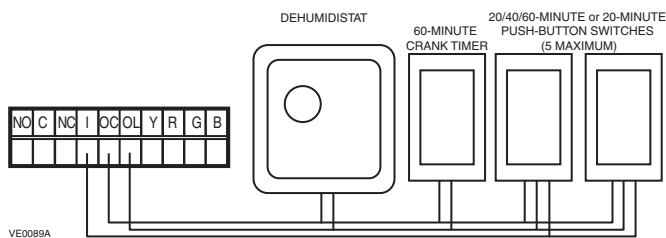
6.2.3 LITE-TOUCH CONSTRUCTO, SIMPLE-TOUCH CONSTRUCTO, LITE-TOUCH BRONZE OR SIMPLE-TOUCH BRONZE



6.2.4 CONSTRUCTO OR BRONZE



6.2.5 OPTIONAL AUXILIARY CONTROLS



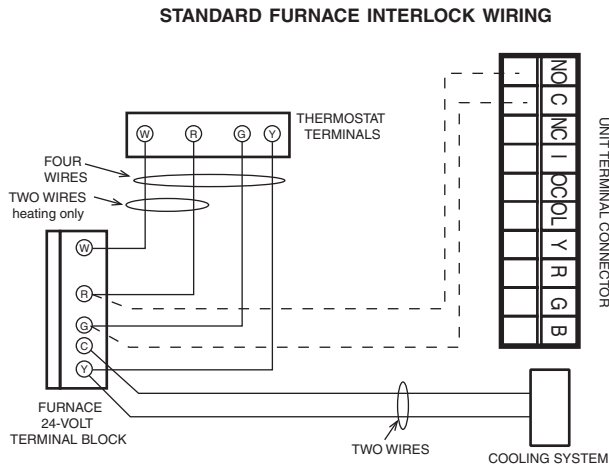
7. CONNECTION TO THE FURNACE

⚠ WARNING

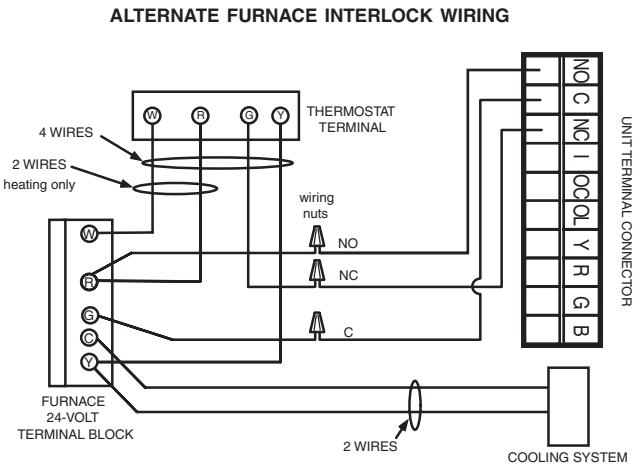
Never connect a 120-volt AC circuit to the terminals of the furnace interlock (standard wiring). Only use the low voltage class 2 circuit of the furnace blower control.

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.



VE0108A



8. BALANCING THE UNIT

PREPARATION

Follow these steps to ensure accurate measurements:

- Seal all the ductwork with tape. Close all windows and doors.
- Turn off all exhaust devices such as range hood, dryer and bathroom fans.
- Make sure the balancing dampers are fully open by turning clockwise the thumb screw located on the Stale air to outdoors and Fresh air from outdoors ports.
- If the installation is in any way connected to the ductwork of the cold air return of a furnace/air handler, make sure that the furnace/air handler blower is ON. If not, leave furnace/air handler blower OFF.
- If the outside temperature is below 0°C/32°F, make sure the unit is not running in defrost while balancing by waiting 10 minutes after plugging the unit in.
- Set the unit to high speed.

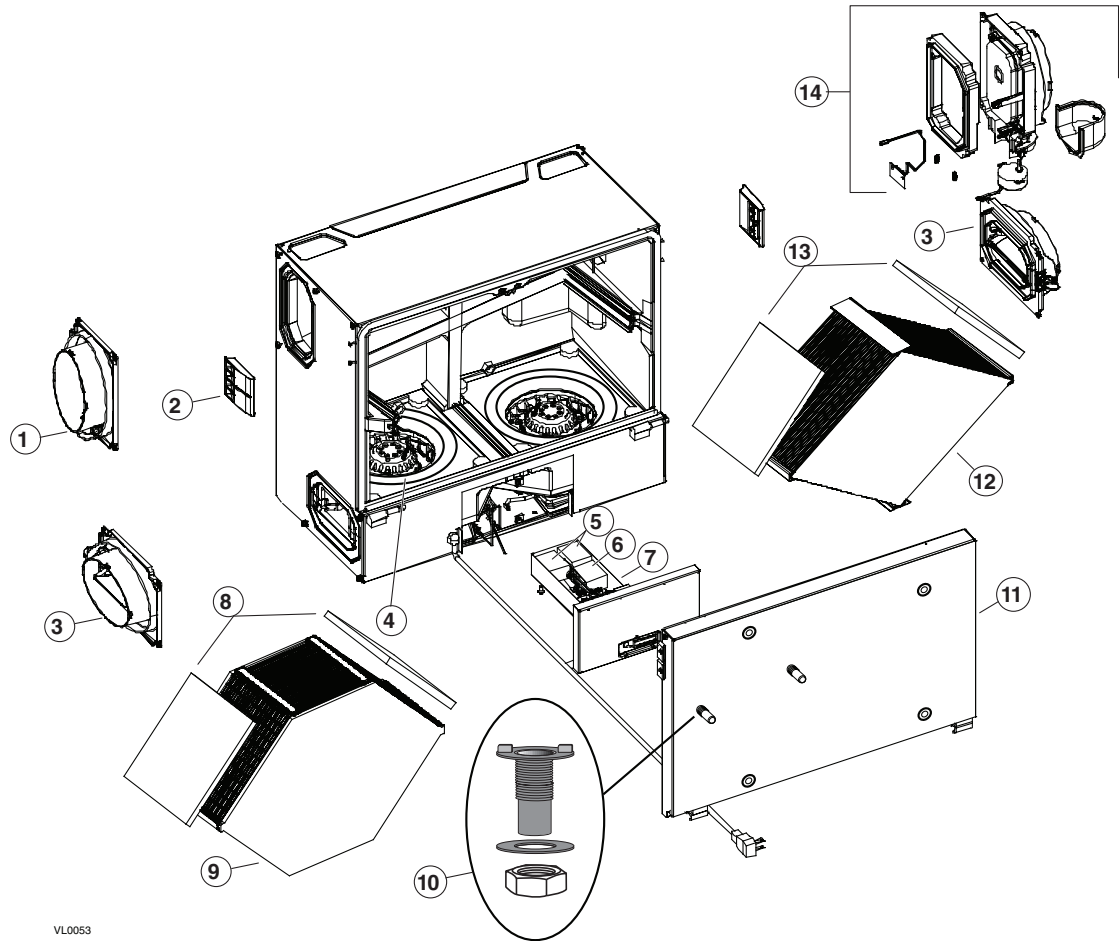
BALANCING PROCEDURE

1. Place the magnehelic gauge on a level surface and adjust it to zero.
2. Connect tubing from gauge to EXHAUST airflow pressure taps (see diagram on unit door).
3. Be sure to connect the tubes to their appropriate high/low fittings. If the gauge drops below zero, reverse the tubing connections.
4. Note the CFM value from balancing chart on the unit.
5. Repeat steps 3 and 4, but to FRESH airflow pressure taps.
6. Using the appropriate adjustable balancing damper, lower the highest value so it matches the lowest value. A difference up to ±10 cfm is acceptable.
7. Secure both dampers in place with a fastening screw (included in the hardware kit).
8. Write the required airflow information on a label and stick it near the unit for future reference (date, maximum speed air flows, your name, phone number and business address).

9. SERVICE PARTS

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. Also, the manufacturer recommends to contact a certified service depot for all replacement parts and repairs.



VL0053

No.	DESCRIPTION	PART No.	Model															
			41550	41552	41650	41652	41554	41556	41654	41656	41500	41502	41504	41506	41600	41602	41604	41606
1	Oval port (fits 5" diameter ducts)	16040	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	Door latch with screws	16035	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	Oval port with integrated balancing damper	16041	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4	Motor & wheel assembly (5 µF motor capacitor and inlet ring included)	18301	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
5	Capacitor 5 µF (Qty.: 2)	16042	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	Capacitor 18 µF	61127	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	Electronic board	62257	1	1	1	1	1	1	1	1								
		16038									1	1	1	1	1	1	1	1
8	ERV foam filter (2)	16031					1	1	1	1			1	1			1	1
9	ERV core (incl. 2 filters)	16033					1	1	1	1			1	1			1	1
10	Drain connector kit	03203	1	1	1	1												
11	Door assembly	16094	1	1			1	1			1	1	1	1				
		16095			1	1				1	1				1	1	1	1
12	HRV core (with 2 foam filters)	18300	1	1	1	1					1	1			1	1		
13	HRV foam filter (Qty.: 2)	16032	1	1	1	1					1	1			1	1		
14	Motorized damper port assembly	16029	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
*	ES Transformer	18302	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
*	PCB Connector	16416	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

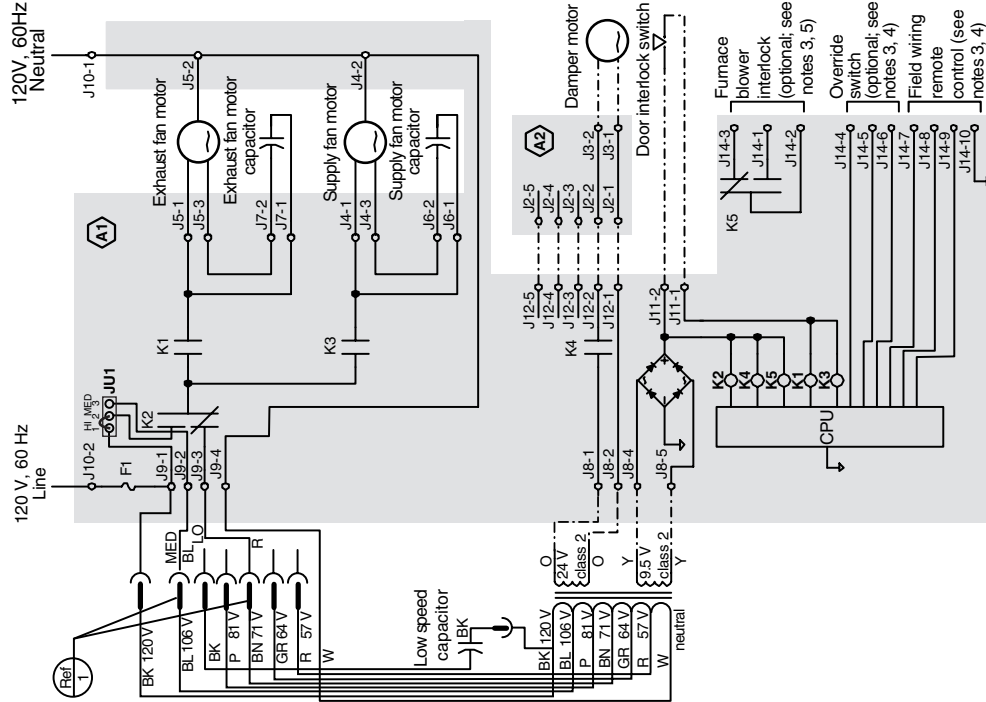
* NOT SHOWN.

10. WIRING DIAGRAM

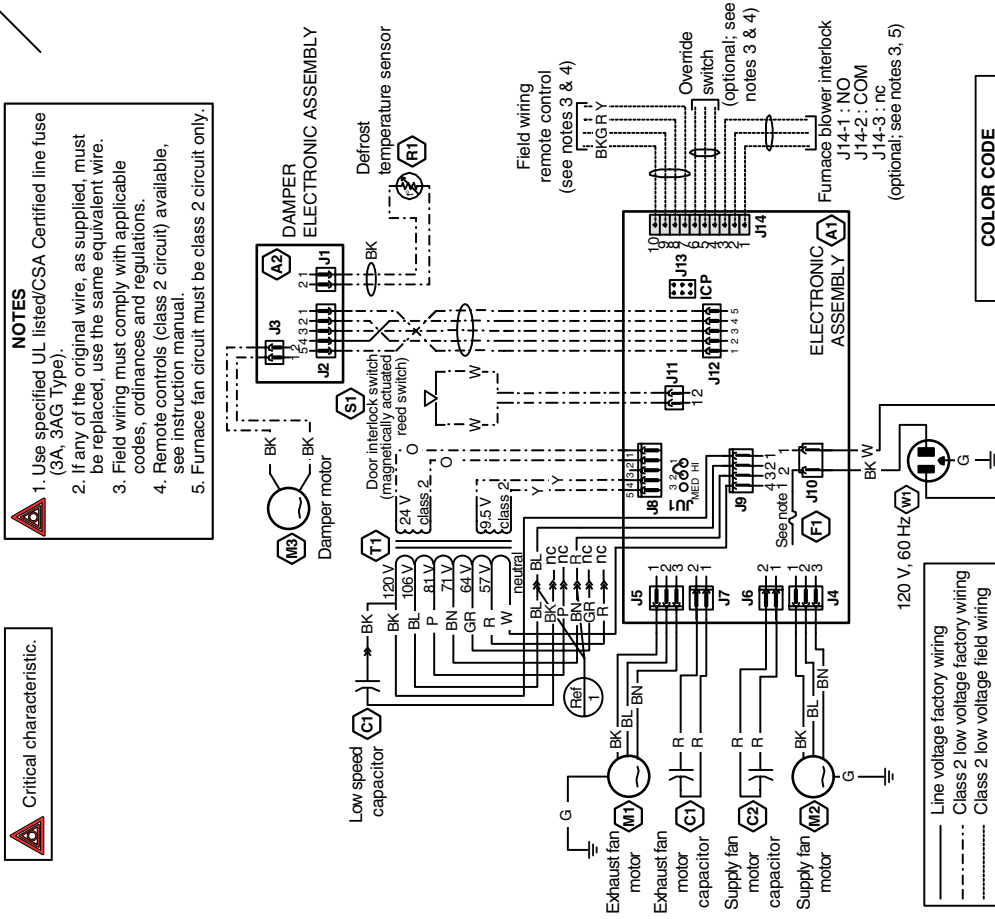
⚠ WARNING

- 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 and check the polarity and voltage output from the outlet. Replace the fuse as per the servicing instructions (refer to wiring diagram for proper fuse rating) and verify the product. If the replaced fuse blows, it may be a short-circuit and the product must be discarded or returned to an authorized service center for examination and/or repair.

LOGIC DIAGRAM



WIRING DIAGRAM



- NOTES**
1. Use specified UL listed/CSA Certified line fuse (3A, 3AG Type).
 2. If any of the original wire, as supplied, must be replaced, use the same equivalent wire.
 3. Field wiring must comply with applicable codes, ordinances and regulations.
 4. Remote controls (Class 2 circuit) available, see instruction manual.
 5. Furnace fan circuit must be class 2 circuit only.

⚠ Critical characteristic.

COLOR CODE

BK	BLACK
BL	BLUE
BN	BROWN
G	GREEN
GR	GREY
O	ORANGE
P	PURPLE
R	RED
W	WHITE
Y	YELLOW
nc	no connection

FAN MOTORS SPEED SELECTION

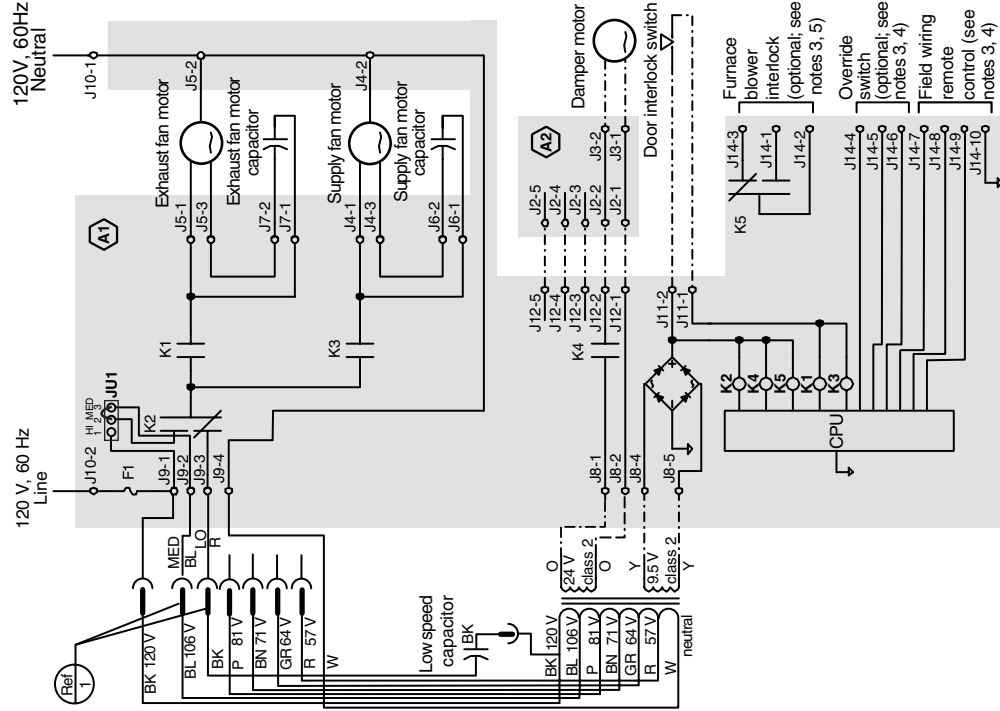
SETTING	Ref 1	LOW SPEED SETTING
Factory shipped	BK → B	Low (71V)
Optional Low 1	P → B	Low (81V)
Optional Low 2	G → B	Low (64V)
Optional Low 3	BK → B	Low (Low speed capacitor)

— Line voltage factory wiring
 - - - Class 2 low voltage factory wiring
 ····· Class 2 low voltage field wiring

⚠ WARNING

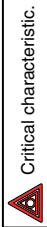
- Risk of electric shocks. Before performing any maintenance or servicing, always disconnect the unit from its power source.
- This product is equipped with an overload protection (fuse). A blown fuse indicates an overload or a short-circuit situation. If the fuse blows, unplug the product and check the polarity and voltage output from the outlet. Replace the fuse as per the servicing instructions (refer to wiring diagram for proper fuse rating) and verify the product. If the replaced fuse blows, it may be a short-circuit and the product must be discarded or returned to an authorized service center for examination and/or repair.

LOGIC DIAGRAM

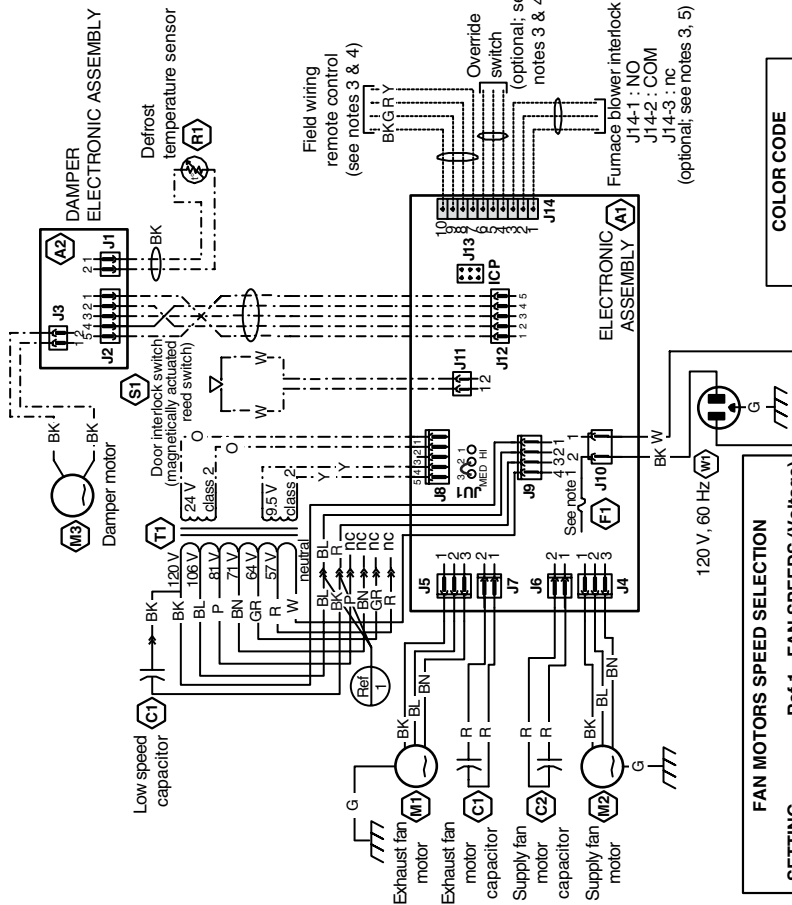


WIRING DIAGRAM

- NOTES**
1. Use specified UL listed/CSA Certified line fuse (3A, 3AG Type).
 2. If any of the original wire, as supplied, must be replaced, use the same equivalent wire.
 3. Field wiring must comply with applicable codes, ordinances and regulations.
 4. Remote controls (class 2 circuit) available, see instruction manual.
 5. Furnace fan circuit must be class 2 circuit only.



- Line voltage factory wiring
- Class 2 low voltage factory wiring
- Class 2 low voltage field wiring



COLOR CODE

BK	BLACK
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BN	BROWN
G	GREEN
GR	GREY
O	ORANGE
P	PURPLE
R	RED
W	WHITE
Y	YELLOW
nc	no connection

FAN MOTORS SPEED SELECTION

SETTING	Ref 1	FAN SPEEDS (Voltage)
Factory shipped	BL → BL BK → BK	Low - High (106)
Med-High select	BL → BL GR → GR	Med (64) - High (106)
Low-Med select	P → BL BK → BK	Low - Med (81)

Setting for test purpose only

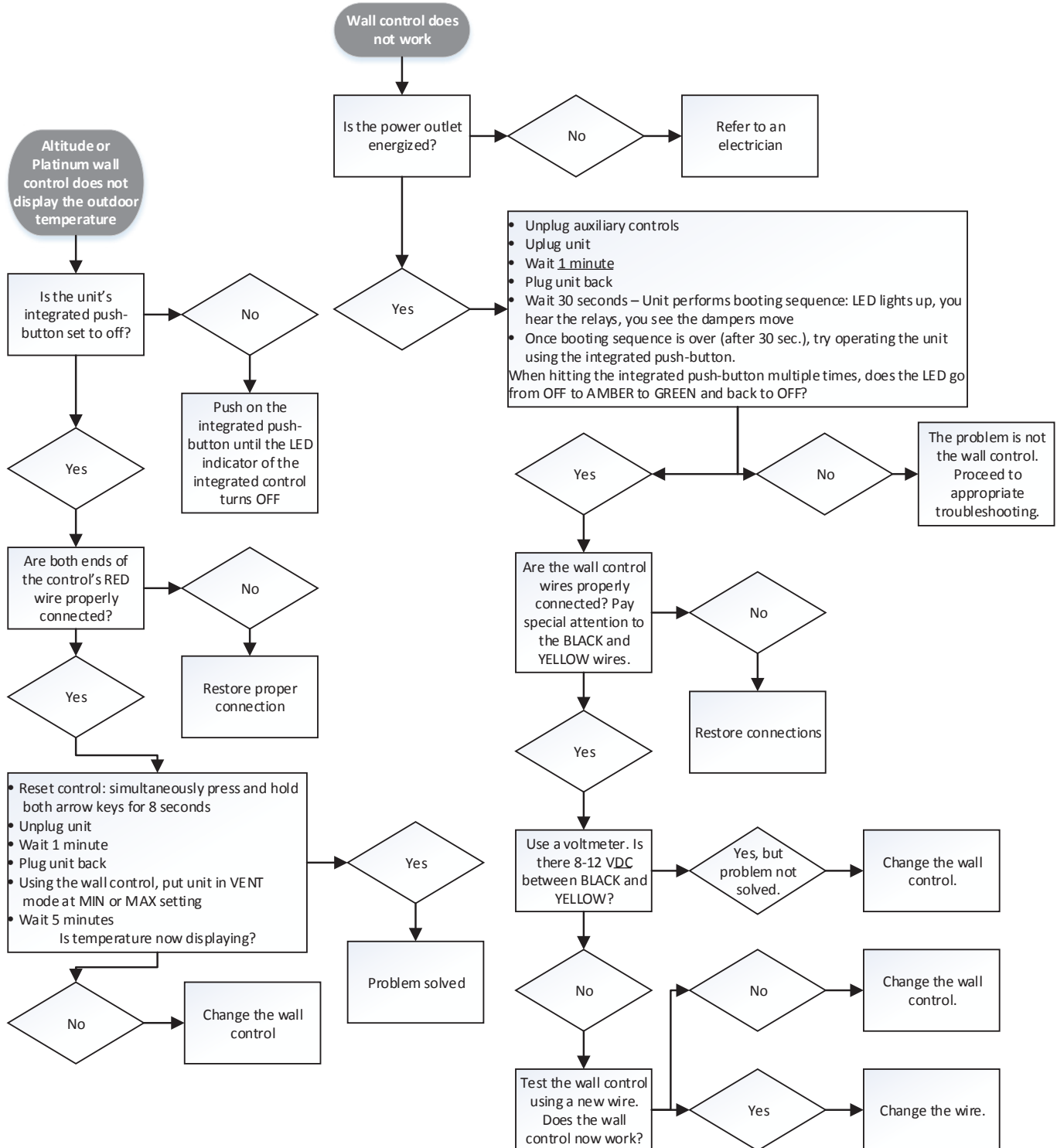
Ref 1	JU1	Setting
BL → BL BK → BK	HI MED LO	Low - High (120)

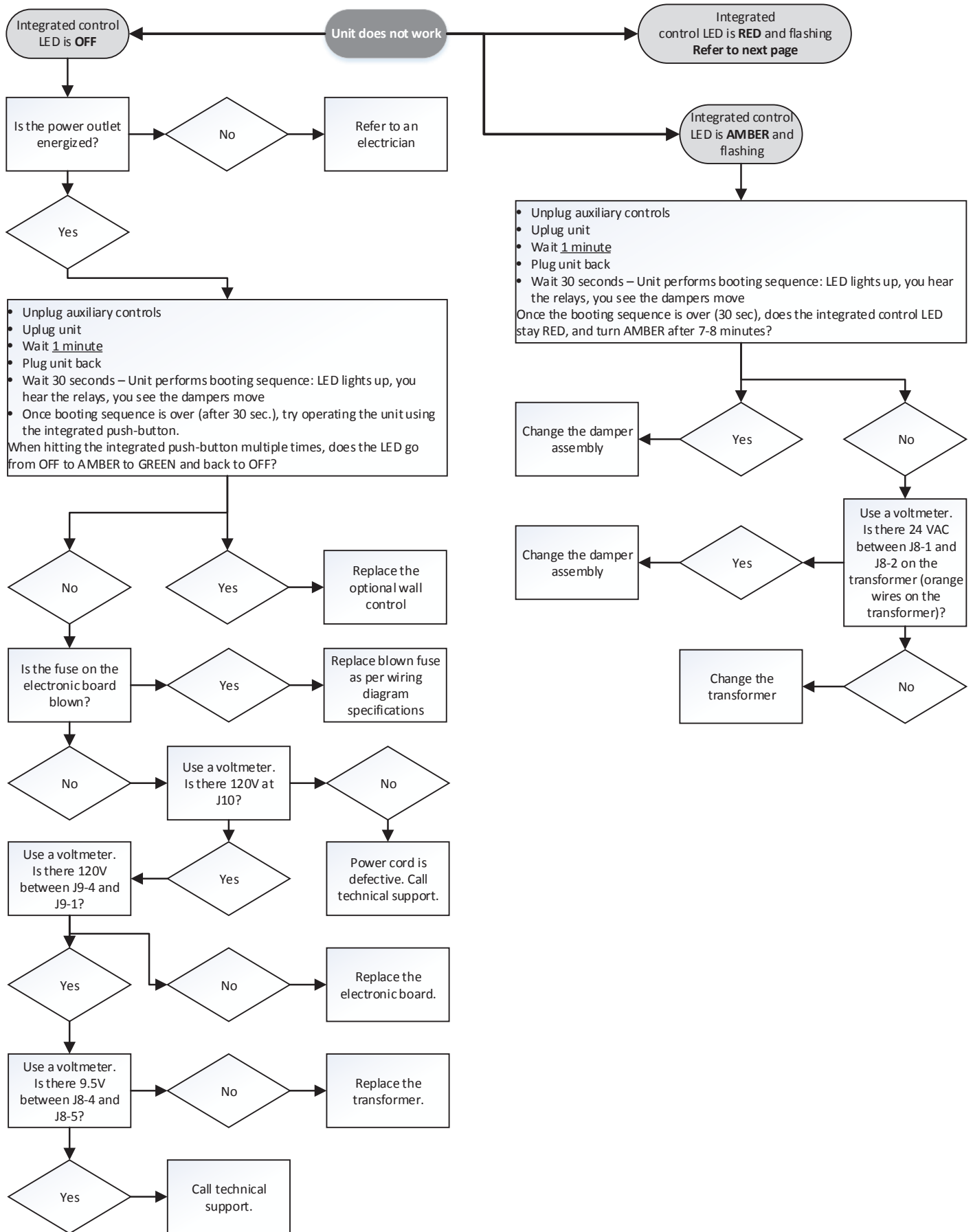
11. TROUBLESHOOTING

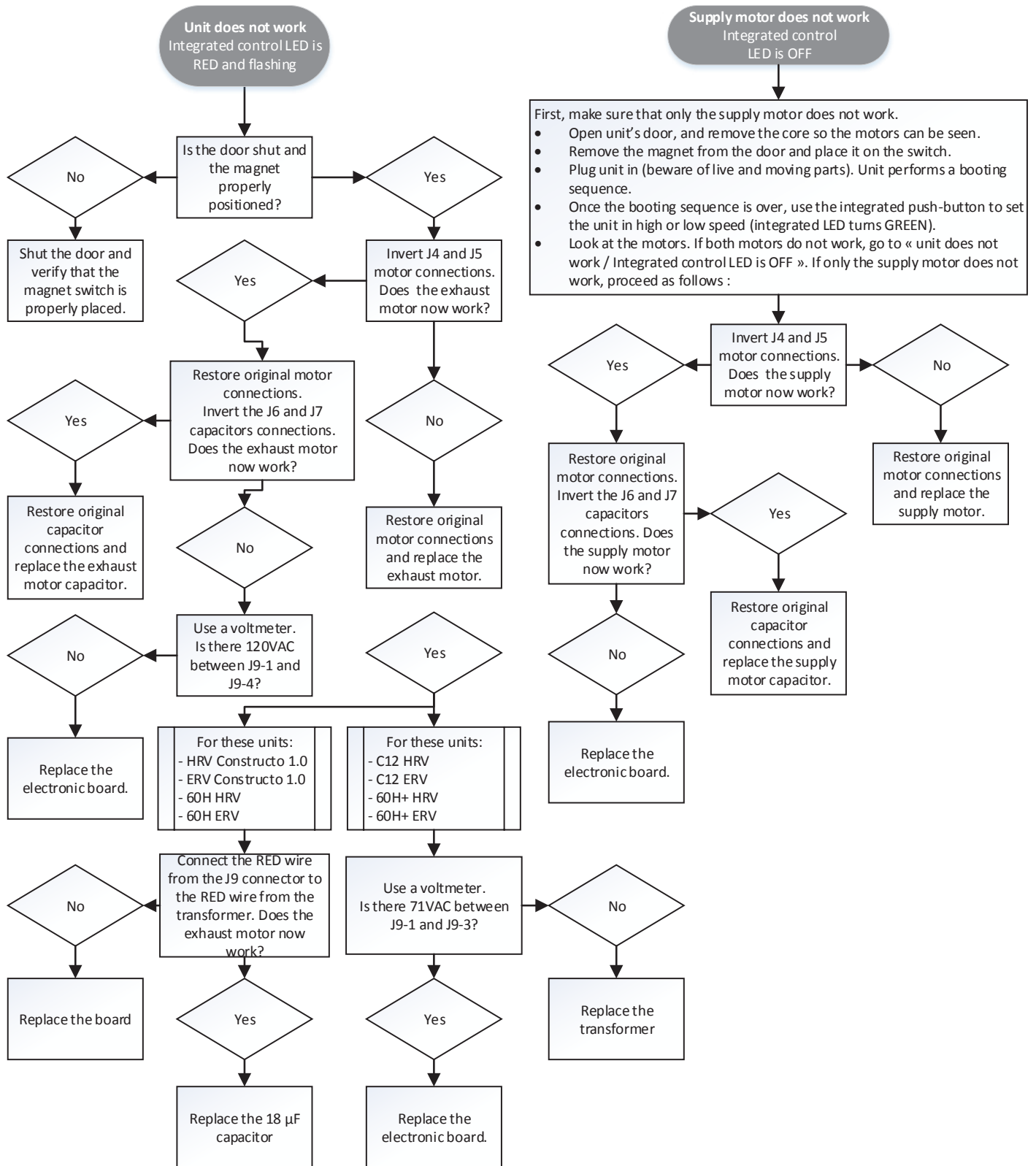
If the unit does not work properly, reset the unit by unplugging it for one minute and then replug it. If it still not working properly, refer to table below.

If the integrated control LED of is flashing, the unit sensors detected a problem. See the table below to know the nature of the problem.

LED SIGNAL	ERROR TYPE	ACTION	UNIT STATUS
LED flashes GREEN	Thermistor error	Replace the entire motorized damper port assembly (fresh air from outdoors port)	Unit works but will defrost frequently
LED flashes AMBER	Damper error	Go to page 17	Unit does not work
LED flashes RED	<ul style="list-style-type: none"> The door is open and the unit is not unplugged Exhaust motor error 	<ul style="list-style-type: none"> Put a magnet over the door switch or close the door and press once on the integrated control push button to reset the unit. Go to page 18 	Unit does not work







SERVICE TECHNICIANS ONLY: If you require assistance or have questions after performing the following troubleshooting, call :
 In presence of a Constructo 1.0 HRV, Constructo 1.0 ERV, C12 HRV or C12 ERV unit : 1-800-649-0372
 In presence of a 60H HRV, 60H ERV, 60H+ HRV or 60H+ ERV unit: 1-888-908-2633