

2 Unit Preparation

- Inspect the exterior of the unit for shipping damage.
- Unit should never operate while the building is still in construction.
- Unit is shipped with its door covered with a cardboard for protection during construction. Leave the cardboard on until painting.

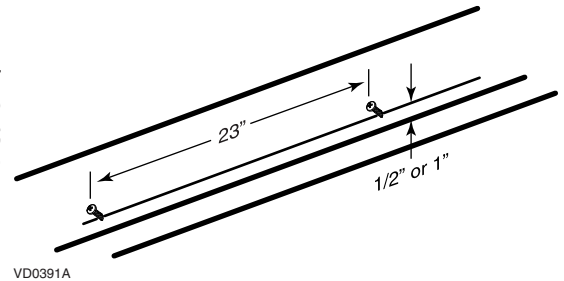
3 Installation

3.1 Positioning the Unit

- Unit can be installed between 24" on-center trusses, on top of 24" on-center trusses or under the ceiling, using brackets. A set of 4 brackets is included in the hardware kit, along with the necessary screws.
- A standard 3-prong electrical outlet has to be available within 28" of the unit and must be connected to its own dedicated circuit.
- Allow a 12" clearance for the door, core and filters to be removed for maintenance.

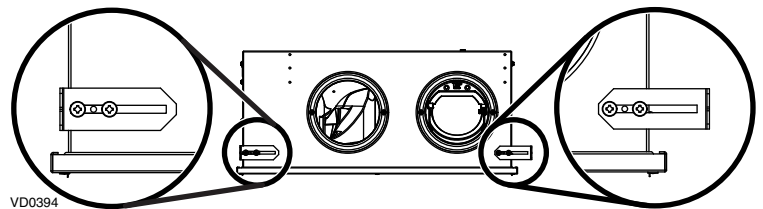
3.1.1 Installation in the ceiling (between 24" on-center trusses)

1. Trace a level line on both trusses, at 1/2" or 1" from the bottom, for the unit bracket location (1/2" will allow the unit door perimeter to lay on ceiling material while 1" will result in flush mount installation; see **A** and **B** in next page). On one truss, screw half way on level line two no. 8 x 1 1/2" provided screws, leaving 23" between each other.



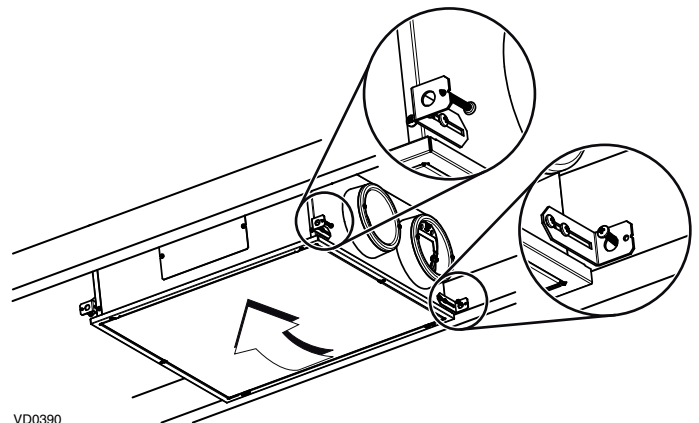
2. Mount the 4 brackets to the unit as illustrated at right, using two no. 10 x 5/8" screws provided for each bracket.

TIP: Screw half way the screws to allow adjustment between trusses, see insets at right (left shows the minimum distance and right the maximum distance).



3. Hang the lightest side of the unit on the screws mounted on the truss using the larger holes of the brackets.

4. Lift the other side of the unit and secure it to the other truss using one no. 8 x 1 1/2" screw per bracket, inserted through the smaller hole of the brackets.

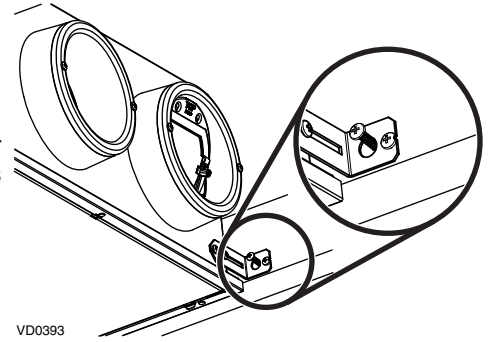


3 Installation (cont'd)

3.1 Positioning the Unit (cont'd)

3.1.1 Installation in the ceiling (between 24" on-center trusses) (cont'd)

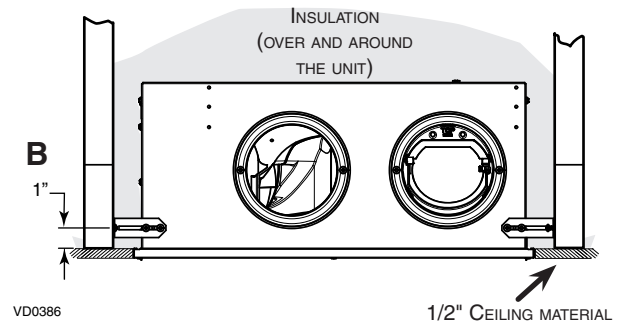
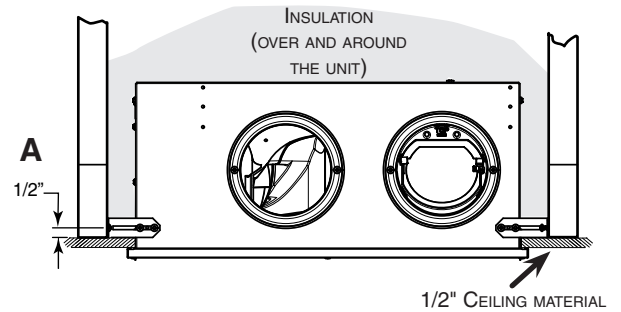
5. Secure the first brackets installed to the truss using one no. 8 x 1½" screw per bracket, inserted through their smaller hole, then tighten completely the brackets screws to the unit.



CAUTION

When installed in the attic, insulation must be spread over the unit.

6. Spread the insulation over the unit (and around, as for **B** at right).

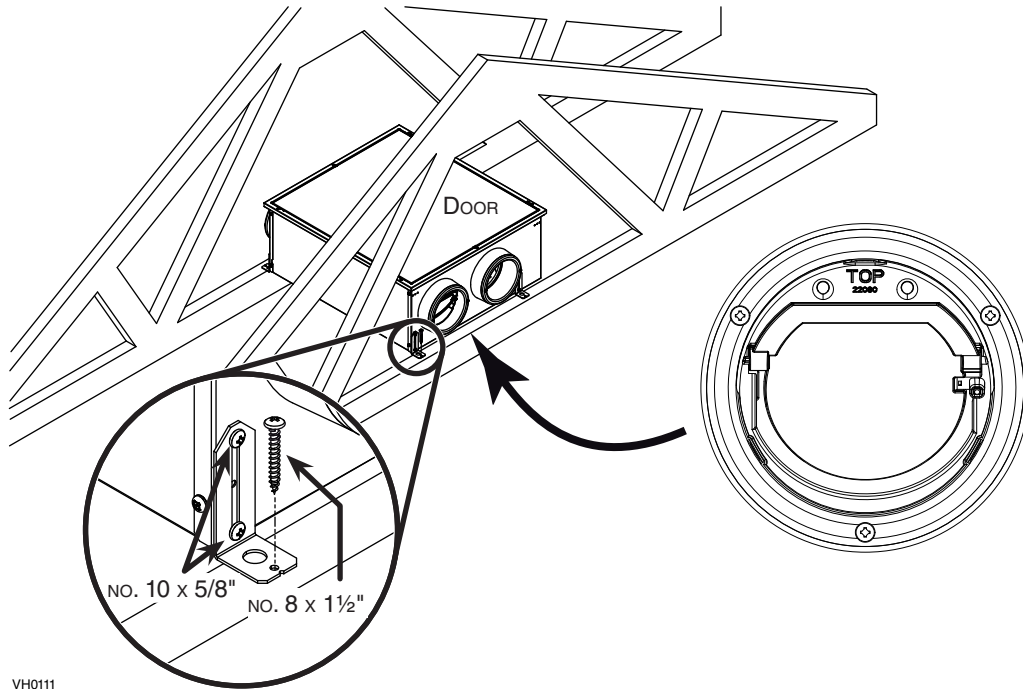


3 Installation (cont'd)

3.1 Positioning the Unit (cont'd)

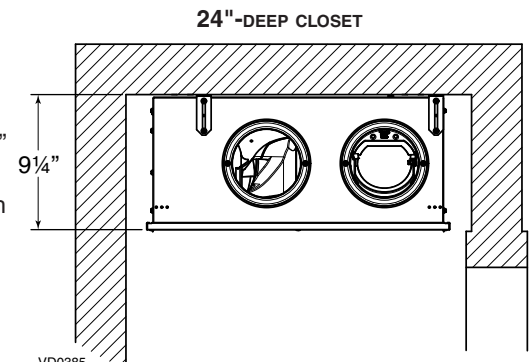
3.1.2 Installation in the attic (unit having its door on top)

1. Rotate the backdraft damper 180° (no tool required) so that it falls in closed position and the word "TOP" engraved on the damper is up once the unit is in place.
2. Mount the brackets to the unit as illustrated below using two no. 10 x 5/8" screws provided for each bracket.
3. Secure the unit to the trusses using one no. 8 x 1½" screw provided for each bracket.
4. **IMPORTANT:** If the attic is not ventilated and without radiant barrier sheathing, insulation material must be added around and over the unit. Ensure access is kept for product maintenance.



3.1.3 Installation under the ceiling (in a living area)

1. Mount the brackets to the unit as illustrated above using two no. 10 x 5/8" screws provided for each bracket.
2. Secure unit to the ceiling using two no. 8 x 1½" screws provided for each bracket, making sure not to secure it into drywall alone.



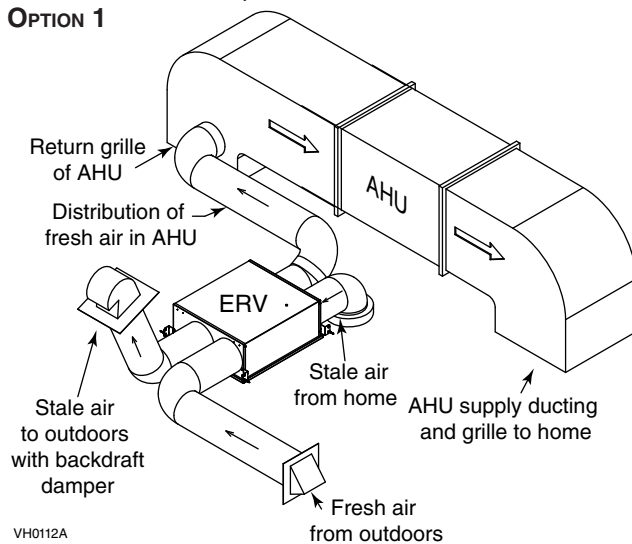
3 Installation (cont'd)

3.2 Combining with an AHU

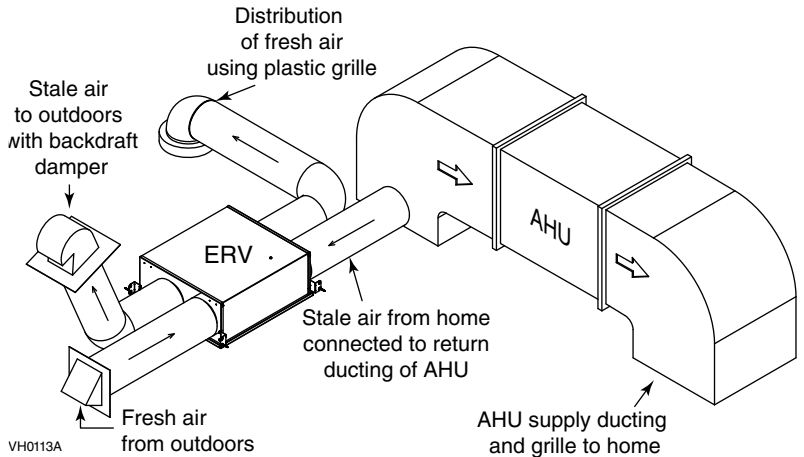
3.2.1 Recommended configurations

When the distribution of fresh air from the ERV is connected to the return of an AHU (such as in the image below, on the left), the connection should be done **as close as possible from one AHU return grille** to ensure proper functioning of the built-in fresh air damper.

OPTION 1



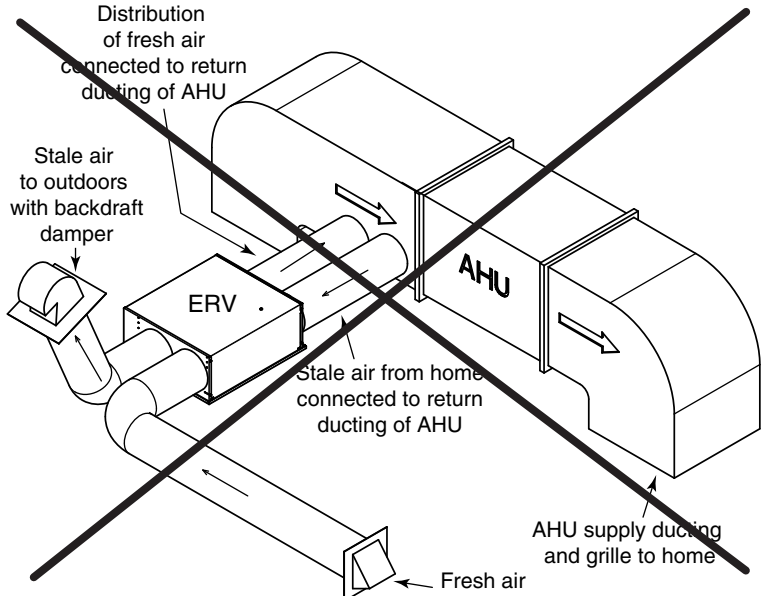
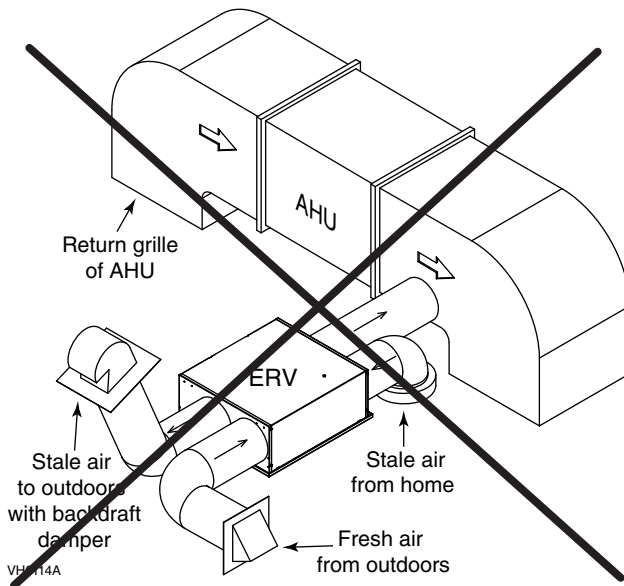
OPTION 2



3.2.2 Prohibited configurations

Distribution of fresh air from the ERV in the distribution ducting from the AHU (such as in the image below, on the left) may cause condensation issues during cooling season and must be avoided.

Connecting both distribution of fresh air from the ERV and stale air exhaust in the AHU return ducting (such as in the image below, on the right) must be avoided.



3 Installation (cont'd)

3.3 Installing the Registers, Ductwork and Hoods

3.3.1 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.

Refer to applicable building codes to plan where the stale air exhaust registers and fresh air distribution registers should be installed. Below are some general recommendations.

Stale air exhaust registers:

- Install the stale air exhaust registers where the contaminants are produced: bathroom (up to 2), kitchen, living room, etc. Position the registers as far from the stairway as possible and in such a way that the air circulates in all the lived-in spaces in the house.
- If a register is installed in the kitchen, it must be located at least 4 feet away from the cooking appliances.
- Install the registers on an interior wall, 6 to 12 inches below the ceiling OR in the ceiling.

Fresh air distribution registers (Option 2 in 3.2.1):

- Install the fresh air distribution registers in bedrooms, dining rooms, living rooms and basement, if applicable.
- Keep in mind that the fresh air registers must be located as far as possible from the ERV stale air registers.
- Install the registers on an interior wall, 6 to 12 inches below the ceiling OR in the ceiling.
- If a register must be floor installed, direct the airflow up the wall.

3.3.2 Ductwork

⚠ WARNING

When performing duct connections, always use approved tools and materials. Respect all corresponding laws and safety regulations. Please refer to your local building code.

CAUTION

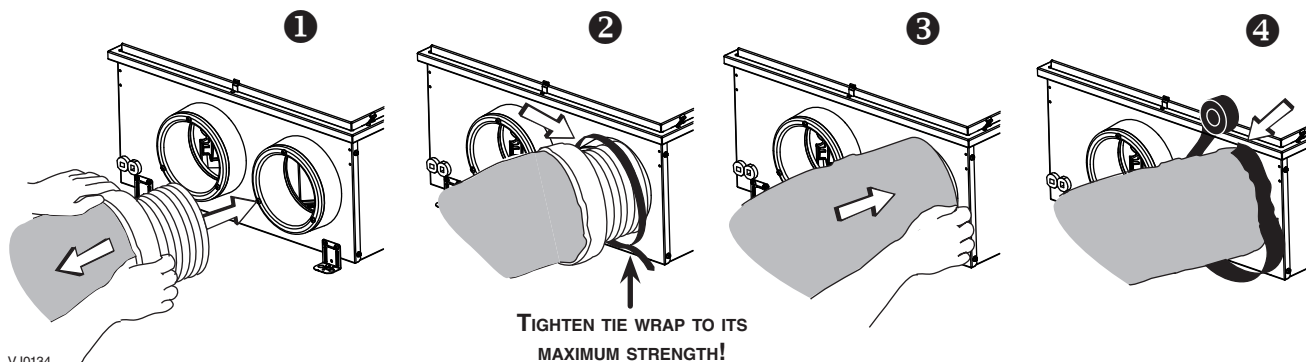
If ducts have to go through an unconditioned space (e.g.: attic), always use insulated ducts.

- All units ports should be connected to 6" ducts, but can be connected to larger ducts using an appropriate transition.
- If you have to connect rigid ducts to the unit, use a short length (approximately 6") of flexible duct to avoid transmission of vibrations. Use a tie wrap and foil tape to connect the flexible duct to the port and to the rigid duct.
- Never use screws to connect rigid ducting to the ports.

Connecting insulated flexible ducts to the ports:

1. Pull back the insulation to expose the flexible duct.
2. Attach the flexible duct to the port using a tie wrap; ensure tie wrap is tighten to its maximum strength.
3. Pull the insulation over the joint, then pull the vapor barrier (shaded part in illustrations below) over the insulation. Make sure that the vapor barrier does not tear due to manipulation to avoid condensation within the ducts.
4. Apply foil 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 in cold climates due to condensation on the exterior surface of the duct.

NOTE: If sealant mastic has to be used over the foil tape as an extra sealing layer, use water based mastic to ensure material compatibility with the port.



3 Installation (cont'd)

3.3 Installing the Registers, Ductwork and Hoods (cont'd)

3.3.3 Hoods

Refer to applicable building codes to plan where the stale air exhaust hood and fresh air distribution hood should be installed. Below are some general recommendations.

⚠ WARNING

Make sure the intake hood is at least 6 feet away from any of the following:

- **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**

- There must be a minimum distance of 6' between the hoods to avoid cross-contamination.
- Hoods must be at least 18" above the ground.
- Exhaust hood must have a backdraft damper.

3.4 Connecting the Controls (energized by unit, low voltage)

- Controls are not included with this unit.
- Unit may be connected to a dry contact Standby switch if desired. In such case, unit remains powered on, but is put in Standby mode when the switch is turned on.
- This ERV can replace up to 2 bath fans. Where this is the case, unit should be connected to a 20-minute override control in each bathroom.

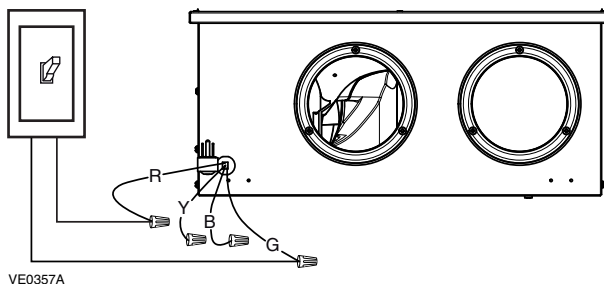
3.4.1 Connecting unit to a Standby switch

Install the dry contact Standby switch in a convenient place and connect it to unit as follows.

CAUTION

Ensure all unused wires are capped off.

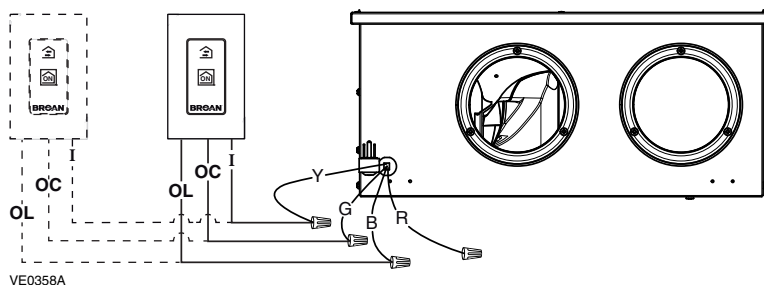
Switch position	Unit mode
Dry contact opened	Unit will run in the selected mode Refer to 4.1
Dry contact closed	Unit is kept in Standby mode



R RED
Y YELLOW
B BLACK
G GREEN

3.4.2 Connecting unit to 1 or 2 Broan VB20W 20-minute push-button control(s)

1. Install the 20-minute push-button control in the bathroom(s) following instructions included with the control.
2. Connect it to unit as follows.



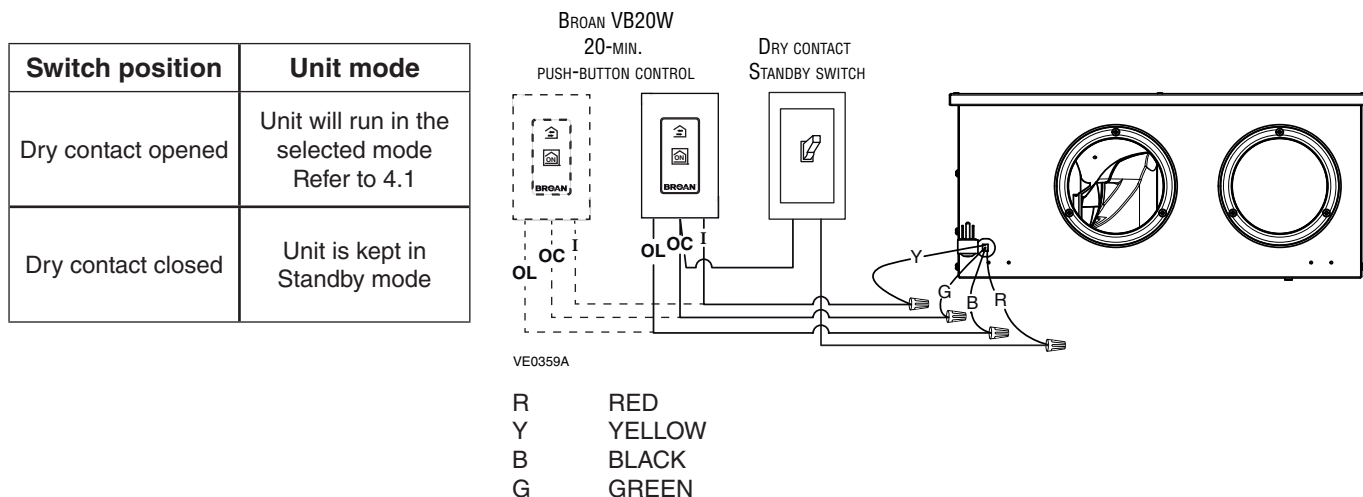
R RED
Y YELLOW
B BLACK
G GREEN

3 Installation (cont'd)

3.4 Connecting the Controls (energized by unit, low voltage) (cont'd)

3.4.3 Connecting unit to a Standby switch AND 1 or 2 Broan VB20W 20-minute push-button control(s)

1. Install the 20-minute push-button control in the bathroom(s) following instructions included with the control.
2. Install the Standby switch in a convenient place.
3. Connect both with the unit as follows.



This connection allows the operation of VB20W push-button controls even if the dry contact standby switch is turned off.

3.5 Installing a Tandem® Transition* Kit

CAUTION

If using a Tandem Transition, a backdraft damper must be installed on the stale air to outdoors duct. If this causes an interruption in the duct insulation, insulation must be added around the backdraft damper to avoid condensation.

If desired, a Tandem transition kit can be used instead of 2 exterior hoods.

- An additional backdraft damper (not included) must be installed on the **stale air to outdoors** duct following common best practice. Should the backdraft damper cause an interruption in the insulation of the stale air to outdoors duct, make sure that insulation is added around the backdraft damper to avoid condensation.
- The joist opening needed to install the Tandem® transition must be 9¾" minimum. 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. VTYIK1).

*Patented.

