

Installation Manual Manuel d'installation Manual de Instalación

Item #: 401452
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RVF Model

Exterior-Mount Fan

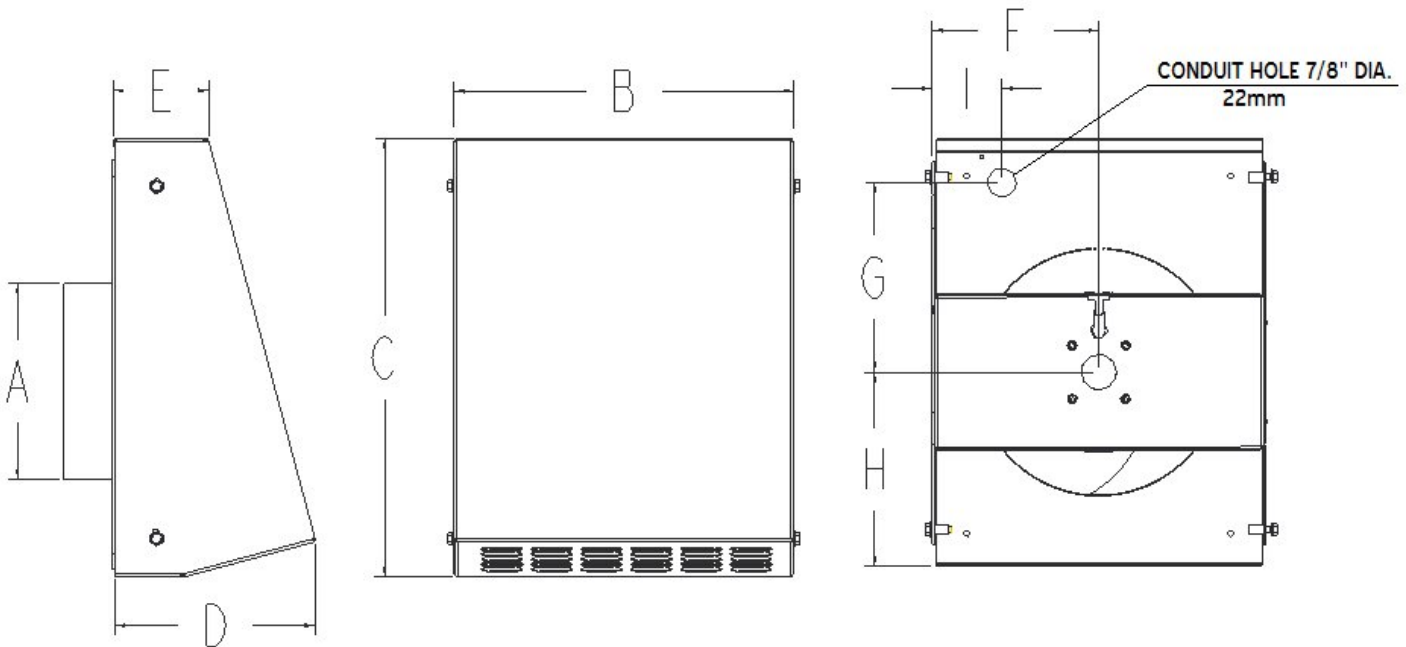
Ventilateur à montage extérieur

Ventilador a montaje exterior



				
Note	Warning / Important note	Information	Technical information	Practical tip

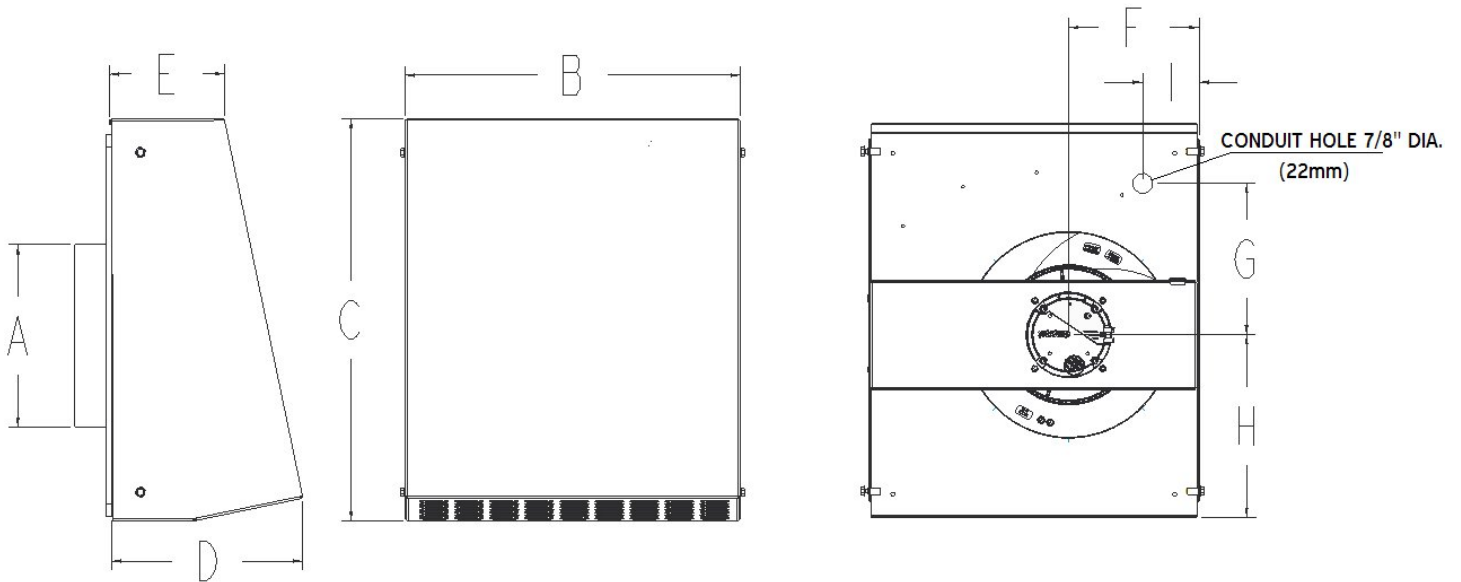
Dimensions - Dimensions- Dimensiones



Model/Modèle/Modelo	A	B	C	D	E	F	G	H	I
RVF 4	4	10 1/4	13	6	2 3/4	5 1/8	6 1/2	4 1/16	1
RVF 4XL	4	10 1/4	13	6	2 3/4	5 1/8	5 1/4	5 1/4	1
RVF 4XL-EC	4	10 1/4	13	6	2 3/4	5 1/8	5 3/4	5 7/8	2 1/8
RVF 6	6	10 1/4	13	6	2 3/4	5 1/8	5 1/4	5 9/32	1
RVF 6XL	6	14 1/4	17	6	2 3/4	7 1/8	7 3/8	7 1/16	1
RVF 8XL	8	14 1/4	17	6	2 3/4	7 1/8	7 3/8	7 1/16	1

Dimensional information is in inches – Toutes les dimensions sont en pouces – Dimensiones en pulgadas

Dimensions - Dimensions- Dimensiones



Model/Modèle/Modelo	A	B	C	D	E	F	G	H	I
RVF 6XL-EC	6	14 1/4	17	8	4 7/8	5 5/8	6 1/2	7 13/16	2 1/2
RVF 8XL-EC	8	14 1/4	17	8	4 7/8	5 5/8	6 1/2	7 13/16	2 1/2
RVF 10-EC	10	17 7/8	21 1/4	10	5 7/8	8 1/8	8 1/16	9 1/8	2 3/4
RVF 10	10	17 7/8	21 1/4	10	5 7/8	8 1/8	8 1/16	9 1/8	2 3/4
RVF 10L	10	17 7/8	21 1/4	10	5 7/8	8 1/8	8 1/16	9 1/8	2 3/4
RVF 10XL	10	17 7/8	21 1/4	10	5 7/8	8 1/8	8 1/16	9 1/8	2 3/4

Dimensional information is in inches – Toutes les dimensions sont en pouces – Dimensiones en pulgadas

WARNINGS

Do not connect power supply until fan is completely installed. Make sure electrical service to the fan is locked in "off" position.

1. Remove unit from packaging and inspect within 15 days after receipt. If damaged, report damage to carrier. Do NOT operate this unit with visible damage to the blower or impeller assembly
2. All products with A/C motors installed are suitable for use with solid state speed control. (example: RVF4, RVF4XL, RVF6, RVF6XL, RVF8XL, RVF10, RVF10L, & RVF10XL).
3. All products with EC motors installed can be speed controlled via 0-10V or PWM signal (potentiometer provided)
4. This unit has rotating parts and safety precautions should be exercised during installation, operation and maintenance.
5. CAUTION: "For General Ventilation Use Only. Do Not Use To Exhaust Hazardous Or Explosive Materials and Vapors."
6. **WARNING!** To reduce the risk of fire, electric shock, or injury to persons- observe the following:
 - a. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
 - b. Before servicing or cleaning, switch power off at the service panel and lock service panel to prevent fan from being switched on accidentally.
 - c. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
 - d. Sufficient air flow is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) and the local code authorities.
 - e. When cutting or drilling into a wall or ceiling, do not damage electrical wires or other hidden utilities.
 - f. Ducted fans must always be vented to the outdoors.
 - g. Install fan at least five feet above the floor.
 - h. NEVER place a switch where it can be reached from a tub or shower.
7. **WARNING!** Check voltage at the fan to see if it corresponds to the motor nameplate.
8. Guards must be installed when this fan is within reach of personnel or within seven (7) feet of working level or when deemed advisable for safety.

AVERTISSEMENTS

Ne pas brancher la source d'énergie avant que l'installation du ventilateur soit complète. S'assurer que le courant électrique au ventilateur soit interrompue (en position "off")

1. Retirer l'appareil de l'emballage et inspecter dans les 15 jours après la réception. Si est endommagé, rapporter les dommages au transporteur. Ne pas utiliser cet appareil avec des dommages visible au ventilateur ou à l'ensemble de rotor.
2. Tous les produits avec des moteurs AC installés sont adaptés pour une utilisation avec commande de vitesse à semi-conducteur.
3. La vitesse de tous les produits avec des moteurs C.E installés peut être contrôlée via 0-10V ou signal PWM
4. Cet appareil contient des pièces rotatives et des précautions doivent être prises durant l'installation, l'opération et l'entretien.
5. ATTENTION: "Pour ventilation générale seulement. Ne pas utiliser pour l'évacuation de matériaux ou de vapeurs dangereux ou explosifs.
6. **AVERTISSEMENT!** Afin de réduire les risque d'incendie, de choc électrique ou de blessures corporelles, observer ce que suit:
 - a. Utiliser seulement l'appareil tel que prévu par le fabricant. Communiquer avec le manufacturier pour toute question.
 - b. Avant de procéder à l'entretien ou au nettoyage de l'appareil, interrompre le courant au panneau central et refermer la porte pour ne pas que l'on remette le courant de façon accidentelle.
 - c. Les travaux d'installation et de raccordement électrique doivent être effectués par des personnes qualifiées conformément aux codes et normes applicables, y compris les codes de protection contre les incendies.
 - d. L'apport d'air de combustion requis pour le fonctionnement sécuritaire d'équipement à combustion pourrait être affecté par le guide du fabricant pour équipement de chauffage ainsi que les normes de sécurité telles que celles qui sont publiées par la National Fire Protection Association (NFPA), l'American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), ainsi que les autorités locales.
 - e. En taillant ou en perforant les murs et les plafonds, attention de ne pas endommager les fils électriques ou autres appareils dissimulés.
 - f. Les ventilateurs à conduits doivent toujours être ventilés vers l'extérieur.
 - g. Installer le ventilateur à au moins cinq pieds du plancher.
 - h. NE JAMAIS installer un interrupteur où il pourrait être accessible d'un bain ou d'une douche.
7. **AVERTISSEMENT!** Vérifier le voltage au ventilateur afin de voir s'il correspond à l'indication sur la plaque du moteur.
8. Des barrières de sécurité doivent être installés lorsque le ventilateur sera accessible par du personnel, s'il est situé dans un rayon d'au moins sept pieds de l'aire de travail, ou lorsque considéré nécessaire aux fins de sécurité.

ADVERTENCIAS

No conecta la alimentación eléctrica hasta tanto quede el ventilador totalmente instalado. Compruebe que la alimentación eléctrica del ventilador este asegurada en la posición "off" (desactivado).

1. Remueva la unidad del empaque e inspecciónela dentro de los 15 días de su recibo. Si está dañada, reporte el daño al transportador. NO opere esta unidad con daños visibles al conjunto del ventilador o del impulsor.
2. Todos los productos con motores A/C instalados son adecuados para su uso con control de velocidad de estado sólido. (por ejemplo, RVF4, RVF4XL, RVF6, RVF6XL, RVF8XL, RVF10, RVF10L, & RVF10XL).
3. Todos los productos con motores EC instalados pueden ser de velocidad controlada vía 0-10V o señal PWM (potenciómetro provisto)2. Todas las unidades son adecuadas para su uso con control de velocidad de estado sólido
4. Esta unidad tiene piezas rotativas; se deben tomar precauciones de seguridad durante la instalación, operación y mantenimiento.
5. PRECAUCIÓN: "Sólo para Uso General de Ventilación. No Utilizar para Extraer Materiales y Vapores Peligrosos o Explosivos".
6. **ADVERTENCIA!** Para reducir el riesgo de incendio, conmoción eléctrica o lesiones personales, observe lo siguiente:
 - a. Sólo utilice esta unidad en al forma contemplada por el fabricantes. Si tiene cualquier pregunta, diríjase a la fábrica.
 - b. Antes de hacerle ningún mantenimiento o limpieza a la unidad, desconecte la alimentación en el tablero de control y ciérrela con llave para impedir que se active accidentalmente.
 - c. Los trabajos de instalación y cableado deben ser realizados por personal calificado conforme todos los códigos y normas del caso incluso construcción contra incendios.
 - d. Hay que proveer un caudal suficiente de aire para la debida combustión y desalojo de gases a través de la chimenea de los equipos quemadores de combustible para evitar la contracorriente. Guíese por las indicaciones y normas de seguridad del fabricante, tales como las publicadas por la National Fire Protection Association (NFPA-Asociación Nacional de Incendios) y la American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE-Sociedad Americana de Ingenieros de Calefacción, Refrigeración y Aire Acondicionado), así como las autoridades competentes de la localidad.
 - e. Al cortar o perforar paredes y techos, tenga cuidado de no dañar el cableado eléctrico y demás servicios ocultos.
 - f. Los ventiladores con conducto siempre deben tener salida al exterior.
 - g. Instálese por lo menos a 152 cm por encima del piso.
 - h. JAMAS coloque un interruptor donde pueda alcanzarse desde una bañera o ducha.
7. **ADVERTENCIA!** Compruebe la tension de línea a la entrada del ventilador, para verificar que corresponda al voltaje de placa del motor.
8. Hay que instalar guardas donde quiera que se instale el ventilador al alcance del personal, si se encuentra a menos de 213 cm del piso de trabajo, o bien cuando se considere necesario por motivos de seguridad.

Fan installation

Step 1

When selecting the fan mounting location, the following criteria should be considered: a) type of application; b) proximity to fresh air intakes; c) sound created by fan operation.

a) For dryer boosting applications, fan must be mounted a minimum of 12 linear feet from the dryer outlet. If the fan is mounted closer than the recommended 12 feet, it will develop enough pressure to pull wet lint through the duct system causing buildup on the impeller and clogging of the vents in the discharge cover.



To prevent the possibility of fire hazards when using a booster fan in conjunction with a gas fired dryer, booster fan flow must not exceed the dryer fan capacity. Typical resident dryer fans produce 160 cfm.

For range venting applications, sufficient access for periodic cleaning of exhausted grease from the wall and fan discharge cover should be provided.



In order to minimize operational noise, only the RVF4 should be used for direct, through-the-wall, systems. The larger units (RVF4XL, RVF8XL) should only be used in conjunction with ducted systems.

b) With any exhaust system, the fan should be located a minimum of 6 feet horizontally and 8 feet vertically from any fresh air intakes for HVAC systems, heat recovery systems, etc. to prevent re-entrainment of exhaust air streams. Windows that are frequently opened during moderate seasons may also be considered fresh air intakes.

c) Although system noise at the point of exhaust will be virtually silent, windows and other structural openings may be sources for noise entry during fan operation. Proximity to windows and openings should be considered.

Select the location on the exterior wall where the fan is to be mounted. Make a hole through the wall that is 1/2" larger than the diameter of the fan duct connection collar. A short piece of rigid duct (not included) approximately 2" longer than the wall thickness is recommended for use as an extension through the wall.

Step 2

Remove the four screws securing the white fan discharge cover and remove the cover. Place the fan against the wall, as centered as possible on the wall opening, then mark the location of the four backplate mounting holes and the electrical knockout. Drill a hole for the electrical service that is 1/8" larger than the size of conduit to be used. A 1" diameter electrical service opening is provided on the fan backplate (see dimensional drawing on Page 1). When mounting the fan on a masonry wall, drill 7/32" holes for the four anchors and mounting screws (provided). Tap the anchors flush into the holes. When mounting the fan on a wood surface, wood screws should be used.



If the fan is to be mounted on a wall surface which is Lapped Siding, a mounting frame made from 1x1 board may be necessary for a flush fit (see I-2).

Step 3

Before mounting the fan, bring the electrical supply through the wall. Attach the extension collar to the fan duct connection collar. The connection should be as air tight as possible to prevent leakage from the wall cavity. Apply a generous amount of polyurethane caulk to the exterior side of the fan housing backplate (except the bottom so that water that leaked in can drain back out). This will ensure an airtight/waterproof connection between the fan and the wall surface. If a mounting frame is used in conjunction with lapped siding, be certain to apply a generous amount of caulk between the frame and the wall as well as the fan backplate and the frame. Mount the fan to the wall.



Be certain to make an airtight seal around all interior wall penetrations before attaching duct work.

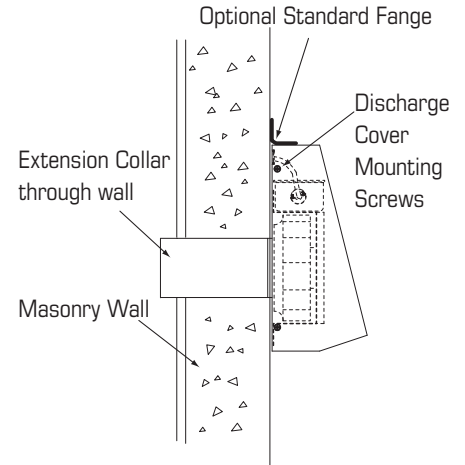


Figure 1

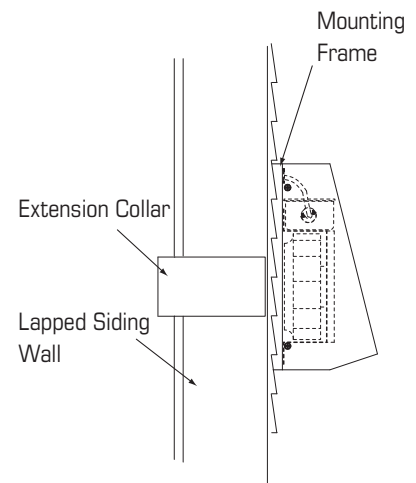


Figure 2

For use with DB10 Pressure Switch



See DB10 Pressure Switch installation manual for complete installation instructions

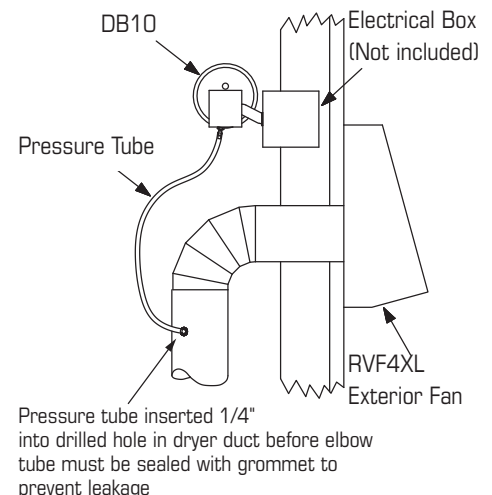


Figure 3

Wiring Instructions

Step 1.

Remove the screws securing the terminal box cover plate. Depending on the model, the wiring compartment is either located on the motor mounting bracket (figure 4) or will be located out of the air stream on the back side of the scroll (figure 5 & figure 6). The RVF series is factory wired to the terminal block. Except for the supply power installation, no additional field wiring is necessary.

Step 2.

A 3/8-inch romex cable clamp (not supplied) is needed to secure the incoming power supply to the exhaust fan (see illustration on figure 4, 5 & 6). Begin by installing the romex cable clamp through either the electrical box (figure 4) or through the conduit hole as shown on figure 5 & 6. Thread the nut on the connector until firmly tight. Route the power supply cable through the romex clamp. The field wiring locations are indicated below and are labeled

'L' for line voltage (black wire), 'N' for neutral (white wire), and GND for ground (green wire). Firmly secure each incoming wire to the proper terminal post using a small flat head screw driver. CAUTION- maximum terminal block screw torque is 7lb-in (0.79 Nm).

Step 3.

Secure the power cable by tightening the romex clamp and replace the fan terminal box cover.

Figure 4 – Models: RVF4, RVF4XL, RVF6, RVF6XL, RVF8XL

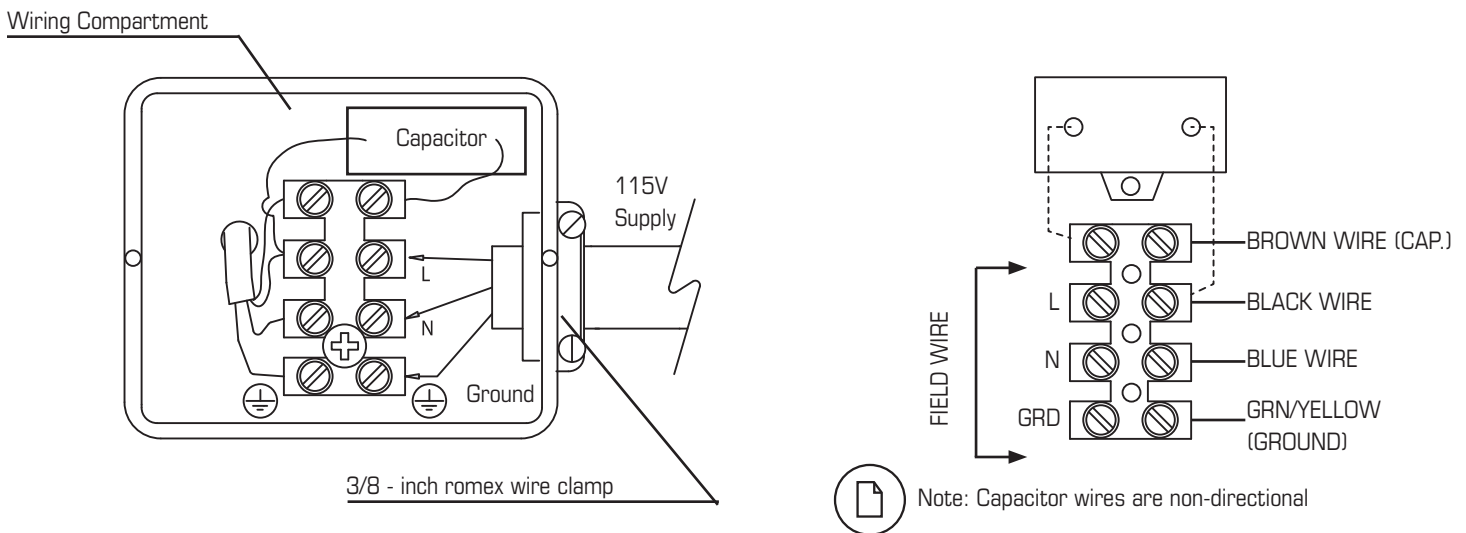


Figure 5 – Models: RVF10, RVF10L, RVF10XL

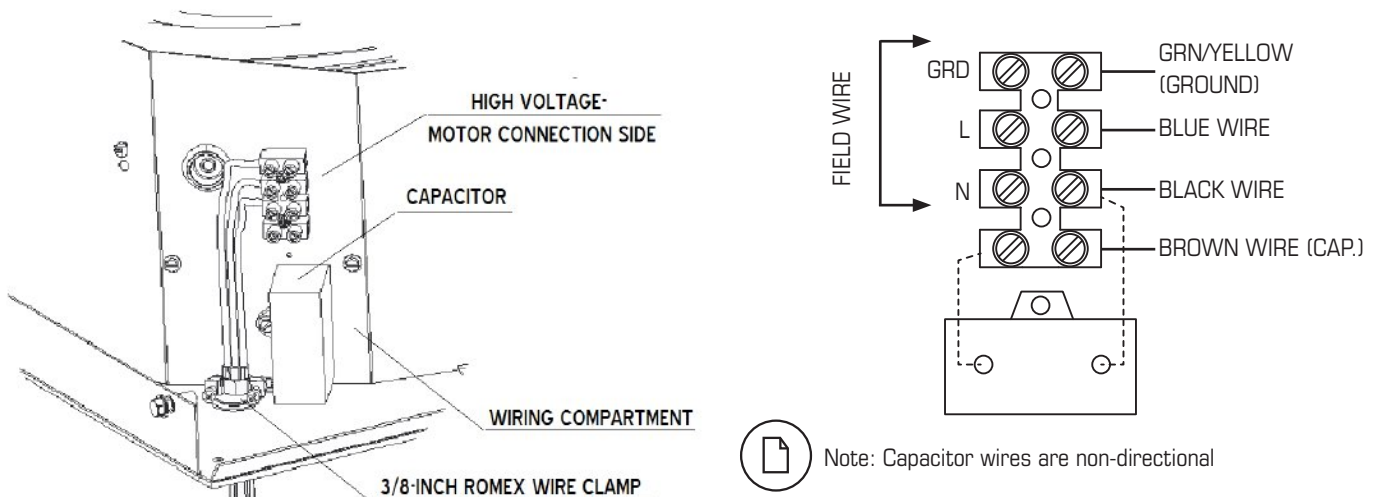
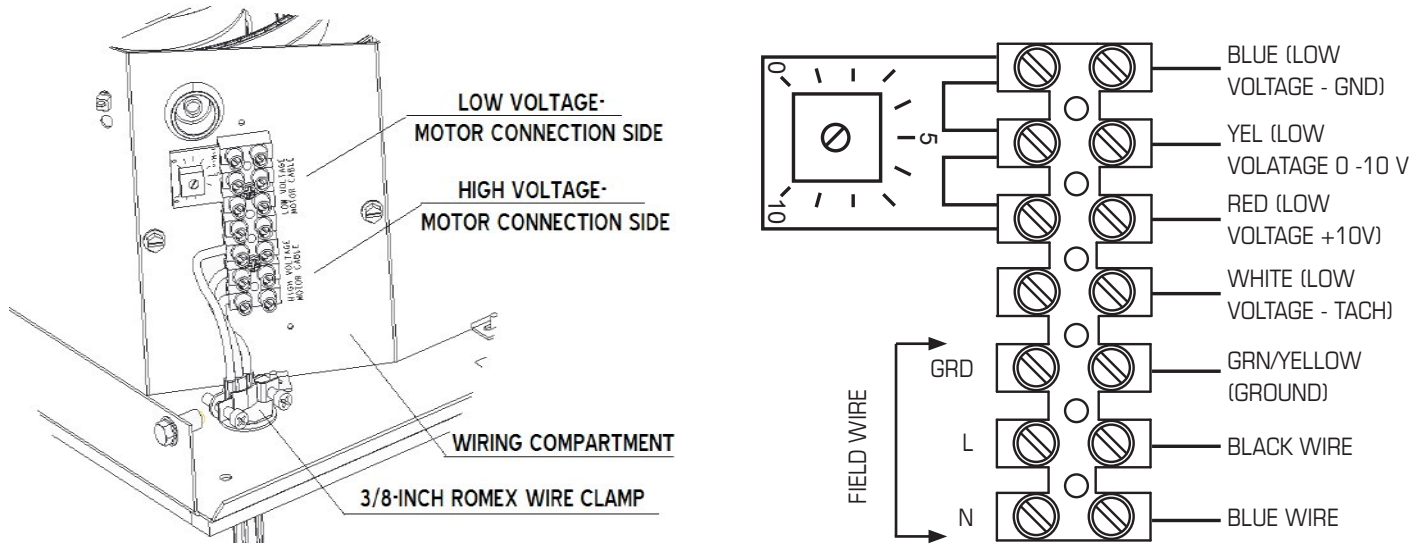


Figure 6 – Models: RVF4XL-EC, RVF6XL-EC, RVF8XL-EC, RVF10-EC



Alternate Control Options: Products Containing EC Motors

Connection to Building Management System

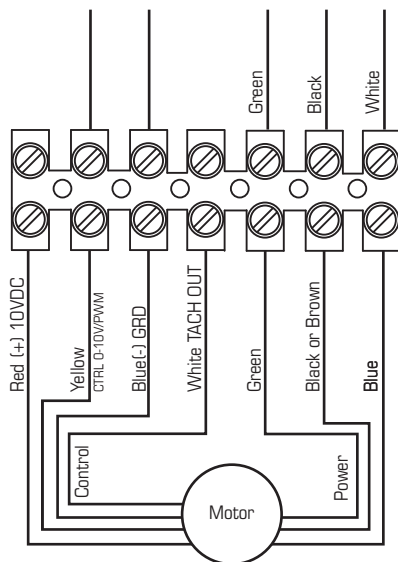


Figure 7

External Motor Speed Controller

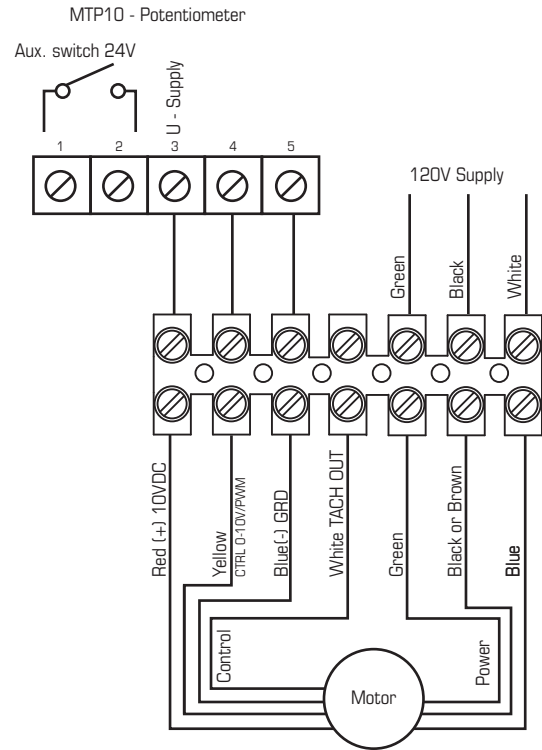


Figure 8

For applications such as multi bathroom exhaust where multi location switching is desired, refer to figure 8 for proper wiring.

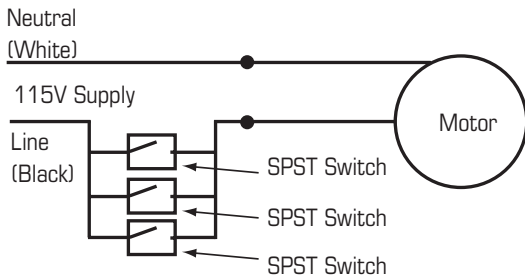


Figure 9

Troubleshooting

If fan fails to operate, please check the following:

1. Consult wiring diagrams (page four of these instructions) to insure proper connection.
2. Check motor lead wiring, capacitor leads and incoming supply leads to insure definite contact.
3. If possible, use a meter to test for continuity across the fan motor leads. In order to do this, the capacitor must be disconnected (do not test the capacitor it will not meter continuity). If motor leads show continuity, consult manufacturer for a replacement capacitor.

Maintenance

1. Since fan bearings are sealed and provided with an internal lubricating material, no additional lubrication is necessary.
2. When using in a dryer boosting application, DISCONNECT POWER SUPPLY and check impeller periodically for lint buildup.

No other maintenance is necessary.