

INSTALLATION MANUAL



WHOLE HOUSE FAN SYSTEMS
MODELS: S2, S3, S4, S5 (Generation 4)



ITEMS INCLUDED:

- Fan Assembly with steel support straps, hardware and 20 foot power cord
- Duct Support Straps & hardware
- Acoustic Flex Duct, 7 foot length with collars
- Gravity Damper Assembly
- "Eggcrate" style Inlet Grille (white) with mounting screws
- Wall Mount WTT Control (ON/OFF, 3 speed and 12-hour timer) and white Decora wall plate

This device MUST be installed by a qualified agency in accordance with the manufacturer's installation instructions. The definition of a qualified agency is: any individual, firm, corporation or company which either in person or through a representative is engaged in, and is responsible for, the installation and operation of HVAC appliances, who is experienced in such work, familiar with all the precautions required, and has complied with all the requirements of the authority having jurisdiction.

Please retain these instructions after installation.

Installed By: _____ Phone: _____ Installation Date: _____



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Thank you for purchasing a VentCool® ducted Whole House Fan by Field Controls. This fan has been designed to provide many years of natural, quiet, and energy-efficient cooling.

Please take a few minutes to read over this manual and its accompanying documents to make sure you are prepared to install the Whole House Fan system. In particular:

- The homeowner/resident should read the **WHERE TO LOCATE** section so that the fan will be correctly located to maximize its effectiveness and efficiency.
- The **VENTILATION REQUIREMENTS** section is also particularly important, as it describes the minimum attic ventilation necessary to operate the fan.
- The **INSTALLATION: GRAVITY DAMPER** section contains important information regarding the constraints within which this fan's gravity damper must be installed.

The Eggcrate Inlet Grille and Gravity Damper Assemblies come in different size openings. Verify which gravity damper component design is part of your Whole House Fan Assembly by actual measurement of the gravity damper opening section before beginning installation of gravity damper section.

Before installing this fan, inspect it and all of its parts for any damage it may have sustained during shipping. **DO NOT INSTALL DAMAGED EQUIPMENT.** If you suspect this fan has been damaged during shipping, contact Field Controls technical support by phone at 1.800.742.8368, or email at fieldtec@fieldcontrols.com.

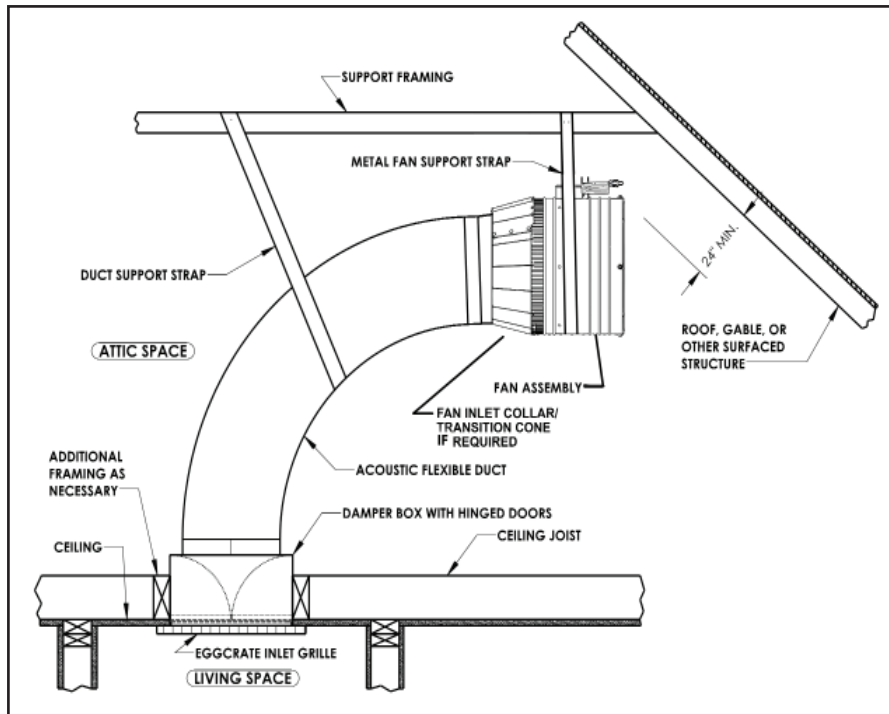
Whole House Fans are designed to be installed within a home's attic, which makes them and their sub-components difficult to access once installed. **TEST THIS FAN OUTSIDE OF THE ATTIC BEFORE INSTALLING IT PERMANENTLY.**

SAFETY CONSIDERATIONS



Some of the principles of safe installation and operation of this product are not immediately obvious. Read the following safety information before continuing further:

- Never operate this fan without windows or doors opened. Refer to specification table for required minimum Open Window Ventilation Area in square feet when operating whole house fan product.
- This fan is meant for general ventilation. It has NOT been designed to ventilate particle laden and/or explosive mixtures of air and must NOT be used for such.
- This fan is NOT for use in kitchens
- Before installing or servicing this fan, switch power off at the home's electrical panel to reduce the risk of damaging circuit boards, fire, electrical shock, or injury.
- Install this fan in accordance with this manual and all local codes and standards.



GRAVITY DAMPER INFORMATION

The VentCool Summit Series fan systems include gravity-closed gravity damper doors that are opened by air pressure created by fan operation. The dampers serve to block entry of air from the attic into the living space, and are provided with foam sealing and insulating material in the doors to reduce heat transfer from the attic space.



The Ventcool Summit Series Whole House Fan Systems have different gravity damper sizes, depending on the specific model to be installed. Verify which gravity damper size is provided with your system prior to beginning installation of the product.

ELECTRICAL REQUIREMENTS

The VentCool ECM Summit Series Whole-House Fan Systems require a 115 volt electrical power supply of minimum 15A ampacity and maximum 15 Amp circuit overcurrent protection. We strongly recommend providing a dedicated circuit for this fan system.

All electrical components, whether included with the VentCool system or supplied by others, must be rated for the fan system's electrical load requirements; please refer to the VentCool Summit Series specifications table for the electrical load requirements of the specific model to be installed.

All wiring and connections must be made according to this manual and all applicable electrical wiring codes and standards. All applicable electrical codes must be followed to the satisfaction of the local authority having jurisdiction.

VentCool Summit Series Whole House Fan Systems are shipped with a pre-wired 20 foot 115VAC power cord with Nema 5-15P plug and fan control module (FC3JF) prewired and installed on the fan assembly. The fan assembly directly connects to the Vencool digital wall control (WTT) system via 50 foot Plug&Play (P&P) cable. The P&P cable is equipped with RJ12 connectors that plug directly into the fan assembly control module and backside of the wall control display. The wall control display is mounted in the living space and is used for fan control (on/off, timer operation or temperature operation) of the whole house fan system. Refer to INSTALLATION: Wiring & Controls section for wiring and connection diagrams for the Ventcool Summit Series Whole House Fan (Generation 4) product line.

VENTILATION REQUIREMENTS

It is very important that the attic be sufficiently ventilated for the fan system to operate properly. Without adequate ventilation, hot air exhausted from the home cannot easily escape from the attic, which creates back-pressure that will substantially reduce the fan’s performance. Operating this fan in an attic with less net free ventilation area than recommended will decrease its airflow and energy efficiency.

For whole-house ventilation, we recommend a minimum of 1 square foot of “net free” ventilation area per 500 cfm at a fan’s highest speed for proper operation. **Refer to specification table for required Net Free Ventilation Area in attic at HVI fan rating.**

Net Free Ventilation Area can be provided by any combination of gable, eyebrow, roof cap, soffit, or ridge vents, or any other method of ventilating the attic space. The openings of most vents are partially obstructed by grilles, louvers, and/or screens. A vent’s “net free” ventilation area is the surface area of its opening minus the surface area of any grilles, louvers, or screening covering it. Different types of vents have different ratios of net free area to total area.

While most properly constructed homes have adequately ventilated attics, not all do. Because sufficient ventilation is a very strong factor in this fan’s performance, it is important that the home’s existing ventilation be verified before it is installed.

Manufacturers typically publish their vents’ net free ventilation areas and/or ratios in their products’ specification documents. If this information is unavailable, a ratio of 50% net free area to total area is usually a good rule of thumb. A notable exception to this rule of thumb are ridge vents. The industry standard net free ventilation area for ridge vents is 13% of the vent’s length in feet.

Since most attics have multiple vents, often of different types, it is necessary to count each vent, noting its type and size. Apply the appropriate ratio to the dimensions of each vent to find its net free area, and sum these values to find the attic’s total ventilation. An example of how these calculations are made is given in the table below:

Vent Type	Dimensions	Total Area	Net Free Area Ratio (“NFA”)	Net Free Ventilation Area (=Total Area x NFA)
Louver	24” x 24”	$24” \times 24” / 144 = 4 \text{ ft.}^2$	50%	$4 \text{ ft.}^2 \times .50 = 2 \text{ ft.}^2$
Ridge	10 feet	n/a	13%	$10 \text{ feet} \times .13 = 1.33 \text{ ft.}^2$
Round Soffit	10” diameter	$3.14 \times 5” \times 5” / 144 = .55 \text{ ft.}^2$	50%	$.55 \text{ ft.}^2 \times .50 = 0.28 \text{ ft.}^2$
Total Net Free Ventilation Area:				3.61 ft. ²

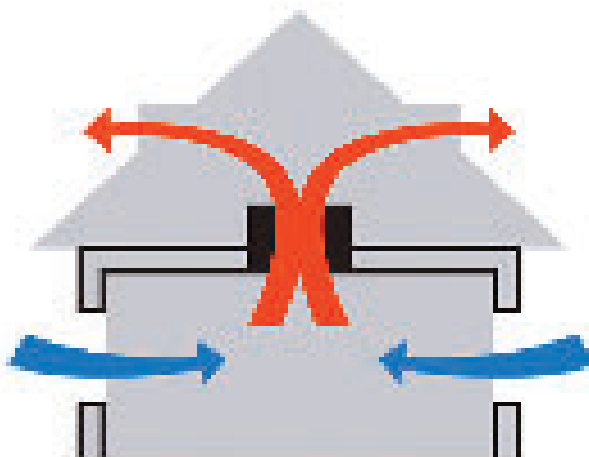
Please consult a roofing professional if the attic’s net free ventilation area remains uncertain. Additional ventilation may be required for proper operation of the fan system.

Refer to specification table for required minimum Open Window Ventilation Area in square feet when operating whole house fan. Without adequate Open Window Ventilation Area, the quantity of cooler air pulled into the home to be exhausted to attic may substantially reduce the fan’s overall performance.

WHERE TO LOCATE THIS FAN

The best location for this fan is determined by an understanding of its theory of operation: As a home heats up during the day, a large amount of heat is retained in its structure and contents. These materials give up their heat slowly and, in doing so, continue to heat the home's interior even though the outdoor temperature may, in fact, be very comfortable in the evening and at night. Thus, homeowners are forced to either endure the hot conditions inside of their homes or turn on their air conditioners and bear the expense thereof.

When operated properly, this whole house fan can resolve this dilemma by forcing the hot air inside a home out and drawing cool air from outside in. The illustration to the right depicts how this fan exhausts hot air into the attic and draws cool air into the house from outdoors through open windows and/or doors.



By running this fan through the night, homeowners can extract the maximum possible amount of heat from their home's structure and contents. This essentially "pre-cools" the home ahead of the rise in temperature the next day, which can reduce or even eliminate the need for air conditioning. This VentCool Whole House Fan has been designed specifically for quiet and efficient operation. As such, we strongly recommend homeowners run this fan through the night to reduce their energy expense.

With these principles of operation in mind, adhere to the following guidelines when choosing a location for this fan:

- Locate this fan in a central location, away from windows that will be opened during its operation. Installing this fan centrally promotes an even replacement of air throughout the home, and the longer the path of air travels from an open window to the fan, the greater the cooling effect.
- The damper provided with this fan can only be installed in a horizontal orientation, thereby requiring the unit to be installed in the ceiling.
- Locate this fan at the highest point possible. This exploits natural convection and helps the fan exhaust the hottest indoor air from the home.
- Typically, the ideal location for this fan in a two-story home is in the open area at the top of the stairs.
- Avoid locating this fan in a narrow space or over hard flooring as sound reflecting off of hard surfaces can amplify its perceived noise.
- Even though the Tahoe series fan systems are engineered to be extremely quiet, we specifically recommend against installing it in a bedroom as humans' perception of noise is far greater when the surrounding environment is quiet (such as within a bedroom at night).

INSTALLATION: GRAVITY DAMPER

GRAVITY DAMPER ORIENTATION NOTE

The ideal orientation of unit's gravity damper is in a level position. If necessary, however, the damper can be installed at a slight angle. **Before beginning the installation, make sure that the fan assembly is undamaged, and that the fan blade rotates freely. Brace or clamp the fan assembly to a secure object, and temporarily plug in the fan's power cord into a grounded power outlet to verify smooth and correct operation.**



Be aware that the fan is quite powerful and will draw in loose objects or debris, and will blow dirt, debris and other objects with force!



Use eye protection when operating the fan to avoid injury from blowing sand or debris! Keep hands and other objects away from the rotating fan blade!

TIP: Before beginning the installation, verify that the damper assembly is undamaged, and that the damper doors operate freely, opening and closing fully without binding or restriction.

1. From consideration of the principles of whole-house fan operation, determine the best general area for installation of the gravity damper assembly. The damper assembly is to be mounted in the attic with its bottom edge opening into and flush with the ceiling of the living space. The eggcrate inlet grille is to be mounted on the ceiling of the living space, covering and engaging with the opening of the damper assembly.
2. Using the cardboard from the fan system's packaging, or other suitable material, make a rectangular template for the rough opening of the damper assembly to these dimensions (making sure all sides are at right angles to each other):
 - a. Summit S2 and S3 models: 14-1/4" wide, 22-1/4" long
 - b. Summit S4 and S5 models: 14-1/4" wide, 30-1/4" long



FIGURE 1 - TEMPLATE

3. Take the template into the attic, above the general area for installation, and determine the exact desired location for the rough opening for installation of the damper assembly. There must be at least 36" of vertical clearance above the damper assembly location, and the damper assembly must be fastened to secure framing (ceiling joist, roof truss, or additional framing) along at least one long side or both short sides of the damper assembly! Add additional framing as required to support the weight of the damper assembly and duct.
 - a. For existing construction, the flanges surrounding the opening of the damper assembly may be removed for clearance (as with 16" on-center framing) and/or to allow the side or sides of the damper assembly to make direct contact with the framing used to support the damper assembly. Leave flanges in place if they will not be fastened to framing, if possible. Additional framing may be added after the damper assembly is placed into the rough opening, so the flanges can remain in place if space allows.
 - b. For new construction, before the ceiling drywall is hung, frame in a rough opening for installation of the damper assembly from below. Leave the assembly flanges in place and simply attach the damper assembly to the bottom of the framing using appropriate fasteners installed through the flanges. Skip all following steps regarding cutting the rough opening into the ceiling and proceed with installation of the duct and fan assembly.

4. Make sure that the exact location chosen for the rough opening will allow installation of the eggcrate inlet grille, and will not interfere with any lighting fixtures, smoke alarms, or other objects installed in the ceiling.
5. Remove any insulation from the area of the exact chosen location, and make sure that no wiring, plumbing, bracing or other building elements will interfere with the damper assembly installation.
6. With the template laying on top of the ceiling in the exact chosen location, mark the outline of the template onto the ceiling. If the ceiling hole is to be cut from below, drill or punch a small hole at each corner of the template, and mark the outline of the template from below the ceiling.

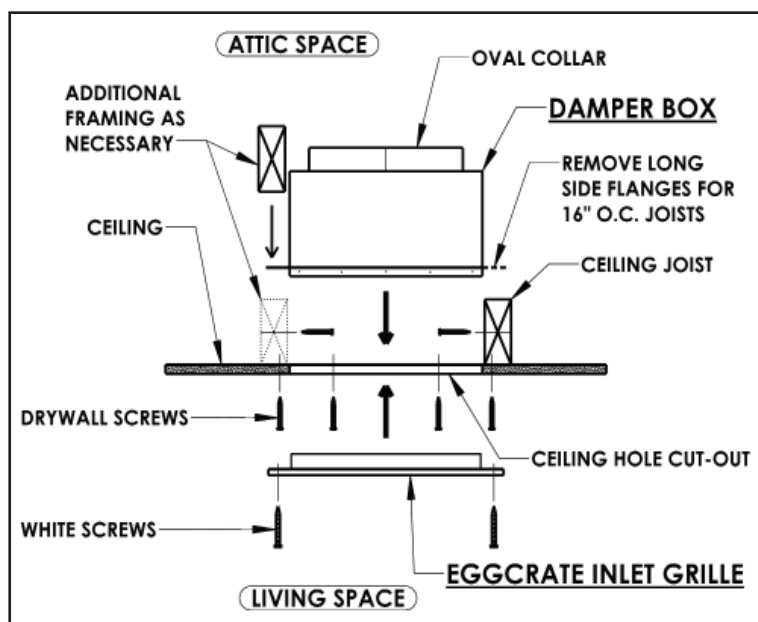


FIGURE 2 - DAMPER BOX INSTALLATION

7. Using a drywall saw or other appropriate device, carefully cut out the rough opening into the ceiling. Use care to avoid damaging the surrounding areas of the ceiling that will not be covered by the edges of the eggcrate inlet grille.
8. Place the fan assembly, flexible duct, and damper assembly in the attic space. If necessary, the fan and damper assemblies may be passed through the rough opening into the attic. It may be necessary to detach the flexible duct from the fan assembly to allow passage of the fan and duct into the attic space. It is recommended to pre-attach the flex ductwork to fan assembly prior to placing unit in attic.
9. Move the damper assembly into place in the rough opening, with the bottom edge of the assembly protruding into the opening. If more than two flanges were removed from the damper assembly for installation clearance, make sure that the bottom edge of the damper assembly does not protrude below the surface of the ceiling.
10. Attach the damper assembly to the framing by installing drywall screws (as supplied) or wood screws through the inside wall(s) of the damper assembly into the framing. If addition framing is to be added, place the framing over the damper assembly flanges and fasten in place.



If using fasteners long enough to penetrate through the framing, use extreme caution to avoid drilling into hidden wiring, plumbing, or other building elements of concern!

11. From below, install drywall screws through the ceiling and through the flanges of the damper assembly, and into any addition framing positioned above the flanges. Use care to avoid installing screws outside of the area that will be covered by the eggcrate inlet grille.
12. Hold the eggcrate grille in position on the ceiling, and install the included white screws through the holes in the flange of the grille, through the ceiling, and into the damper assembly flanges and/or framing above.



Make sure that the eggcrate grille mounting screws penetrate into either the damper box flanges or framing above, and that the grille is securely fastened in place!

INSTALLATION: FAN & DUCT

NOTES:

- The fan assembly must be soundly supported by attachment to structurally sound framing. Provide additional framing with minimum 2-by-4 lumber as needed for fan support.
 - The fan assembly should be positioned with at least 24" of free space in front of the fan, for air to be freely blown into the attic by the fan.
 - Position the fan with a slight upward angle and in a direction minimizing disturbance to attic insulation.
 - The acoustical duct should be installed with a gentle bend of close to 90 degrees, from vertical to nearly horizontal, to minimize fan sound inside the living space. It must not be kinked or bent sharply, especially where leading into the fan.
 - The acoustical duct must be installed with the air flow direction arrow (as marked on the duct) pointing downstream (towards the fan).
 - Refer to Figures 3A and 3B for Flex Duct to Fan Assembly Connection. Some models include a transition cone to be installed on the inlet side of the fan assembly BEFORE mating the flex duct to the fan assembly. Summit Models S2 and S5 require the transition cone. The transition cone is shipped loose with the flex duct and in the same box as the flex duct and fan assembly.
1. Lay the fan assembly on top of the ceiling joists, within a few feet of the damper assembly and underneath the area where the fan will be suspended in place.
 2. Rotate and brace the fan assembly so that the electrical handy-box on the fan is in the 12-o'clock position (on the top of the fan). This is important to avoid twisting the duct, while having the fan's electrical handy-box within the 10- to 2-o'clock position once installed.
 3. Fan Inlet Collar (Transition Cone) Installation for Models S2 and S5 (Refer to Figure 3B): Connect the transition cone to inlet side of fan assembly using 4 self-driving/self-tapping sheet metal screws provided in the hardware kit. Seal joint with approved duct tape, metal tape, mastic or other approved means.
 4. Adjust the flexible duct collar on the upstream end (fan side) of the duct to be as loose as possible which may require the removal of the slide rivet on the flex duct collar section for maximum opening (looseness). Install four (4) self-driving/self-tapping screws provided to secure the flex duct to fan assembly or transition cone connected to the fan assembly. (Refer to Figure 3B) Squeeze and position the other end of flex duct collar section over the oval-shaped collar on the damper box and secure in place using three (3) self-drilling/self-tapping screws provided. Note: that twisting the duct during assembly will cause the fan to try to roll out of position. Seal joint with approved duct tape, metal tape, mastic or other approved means.
 5. Lift and support the fan assembly into position beneath the rafters, truss structure or other framing to be used to support the fan, with the electrical handy box at approximately the twelve-o'clock position. Attach both ends of the metal fan support strap to the framing using a minimum of two screws for each end of the strap. 1" drywall screws and large washers are supplied; other fasteners of appropriate strength may also be used.

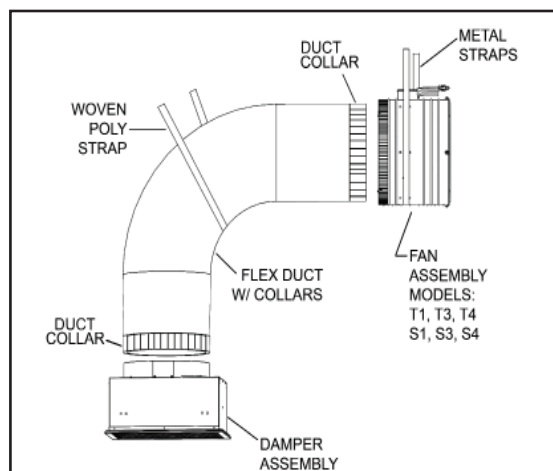


FIGURE 3A: FLEX DUCT TO FAN ASSEMBLY CONNECTION (MODELS: S3 and S4)

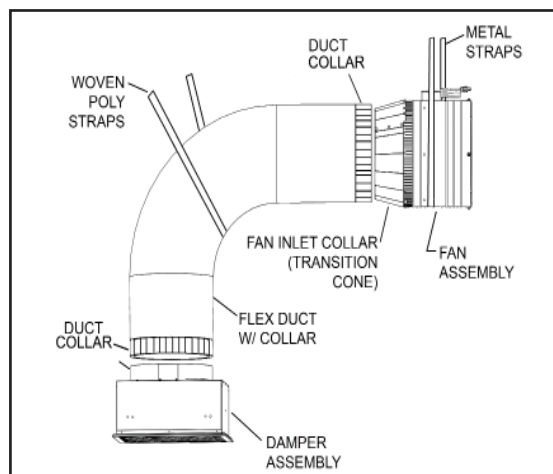


FIGURE 3B: FLEX DUCT TO TRANSITION CONE TO FAN ASSEMBLY CONNECTION (MODELS: S2 and S5)

6. Using the black woven poly strapping, support the acoustic flex duct by attaching the strapping to attic framing as shown. Fold each end over a large washer 2-3 times and fasten to the framing by driving the supplied 1" drywall screws or other appropriate fasteners through the washer and into the framing. The strapping may be cut to length with ordinary scissors if desired.
7. Replace the insulation around and over the damper assembly. Additional insulation may be added to further reduce heat transfer and fan noised from the attic to the living space.

INSTALLATION: WIRING & CONTROLS



The VentCool ECM Summit Series Whole-House Fan Systems require a 115 volt electrical power supply of minimum 15A ampacity and maximum 15 Amp circuit overcurrent protection.



All electrical components, whether included with the VentCool system or supplied by others, must be rated for the fan system's electrical load requirements; please refer to the VentCool Summit Series specifications table for the electrical load requirements of the specific model to be installed.



All wiring and connections must be made according to this manual and all applicable electrical wiring codes and standards. All applicable electrical codes must be followed to the satisfaction of the local authority having jurisdiction.



A dedicated circuit is strongly recommended for this fan system.



The Ventcool Summit (Generation 4) Whole House Fan is supplied pre-wired with a fan control module (FC3JF) installed on fan assembly. Refer to Diagram 1 for the Interconnection Cable Control Diagram. Refer to Diagram 2 for the fan assembly electrical box wiring diagram.

STANDARD WHF WALL CONTROLL INSTALLATION USING WTT PRODUCT

1. Install a dedicated 115VAC, 15 amp power outlet with in 15 foot of fan assembly location. Verify power voltage and terminal orientation.
2. In living area (upstairs living space), install a PLASTIC RETROFIT SINGLE GANG BOX roughly 5 feet off the floor for the whole house fan wall controller to be mounted in (Refer to FIGURE 4). **DO NOT INSTALL METAL GANG BOX.** Select a location that will best sense the temperature for the living space. Do not install box in a location where the temperature will be influenced such as in direct sunlight, on an exterior wall, etc...

Note: The wall controller kit comes standard with 50 feet of cable to connect between plastic box and the fan assembly. The maximum allowable cable length is 100 feet using a connector and two 50 foot cables. Contact Field Controls to purchase additional 50 foot cable and connector, if necessary.

3. Route the 50 foot plug&play cable between the plastic box and fan assembly. Refer to DIAGRAM 1 for cable connections. Plug the cable into the fan assembly fan control module (FC3JF) (Refer to FIGURE 5). Extend the cable out of the plastic retrofit box (refer to FIGURE 6).



FIGURE 4 - PLASTIC RETROFIT GANG BOX

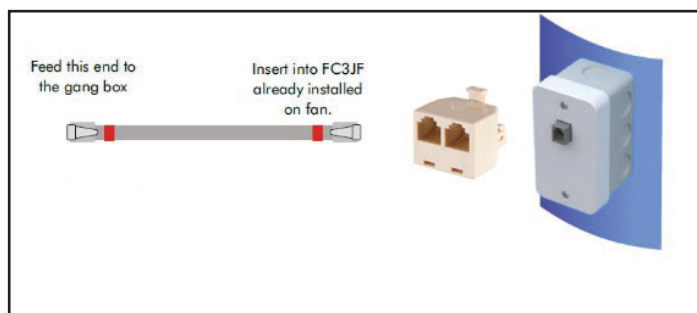


FIGURE 5 - PLUG CABLE TO FAN CONTROL MODULE

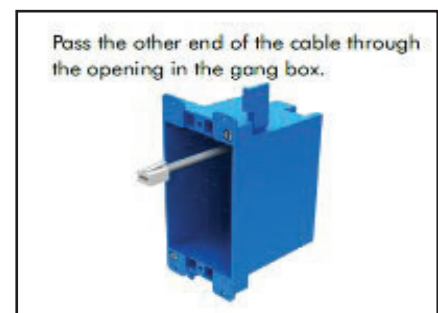


FIGURE 6 - EXTEND CABLE

4. Connect the cable to the wall control (WTT). Plug the cable into the "RED" RJ12 Connector on the back side of WTT. Refer to FIGURE 7 and DIAGRAM 1 for cable connections.
5. Attach the wall control (WTT) and cover plate to the plastic retrofit box (refer to FIGURE 8).

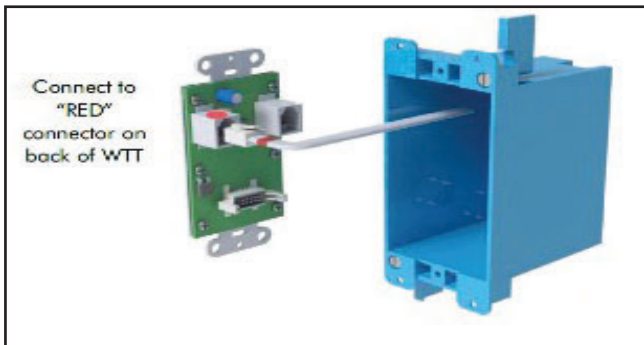


FIGURE 7 - PLUG CABLE TO WALL CONTROL

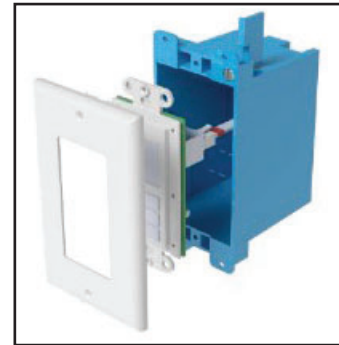


FIGURE 8 - ATTACH WALL CONTROL AND COVER PLATE

6. Set the number of fan speeds to three (3) speed operation on the wall control (WTT).

Note: The wall control (WTT) is factory set for two (2) speed operation from the factory.

 - a. Apply 115VAC power to fan assembly. The LCD on the wall control will lite up indicating power is applied to the system and cable interconnections are made.
 - b. Press and hold the MODE button for about 7 seconds until STimer is displayed.
 - i. Press and hold the MODE button again to display the number of speeds.
 - ii. Press and hold the ARROW UP button to increase fan speed to 3 speeds.

FUNCTIONAL SYSTEM CHECK

1. Verify fan power cord is plugged into dedicated 115VAC, 15 AMP outlet.
2. Turn ON dedicated fan assembly power outlet. LCD on wall control should lite up.
3. Verify fan blade rotation.
 - a. Press **ON/OFF** button on WTT to start whole house fan assembly.
 - b. Listen for fan to start.
 - c. Verify damper assembly doors open. If they do not open, manual push open doors, if you feel air pushing back towards you, fan motor is running backwards (ie: CW rotation). Refer to Change Fan Motor Rotation in Maintenance & Troubleshooting section to change motor rotation to CCW rotation. Correct fan motor rotation to CCW rotation before proceeding.



FIGURE 9 - WALL CONTROL WITH PLATE

4. Verify wall control is set to three (3) speed operation. Refer to item 6 in Installation: Wiring and Controls section to verify/modify number of fan speeds.
5. Return wall control to Temperature Control
 - a. Press **MODE** button on WTT then press **DOWN ARROW** button to select **TEMPERATURE CONTROL**.
6. Press **ON/OFF** button on WTT to turn off the whole house fan, if fan is still running.

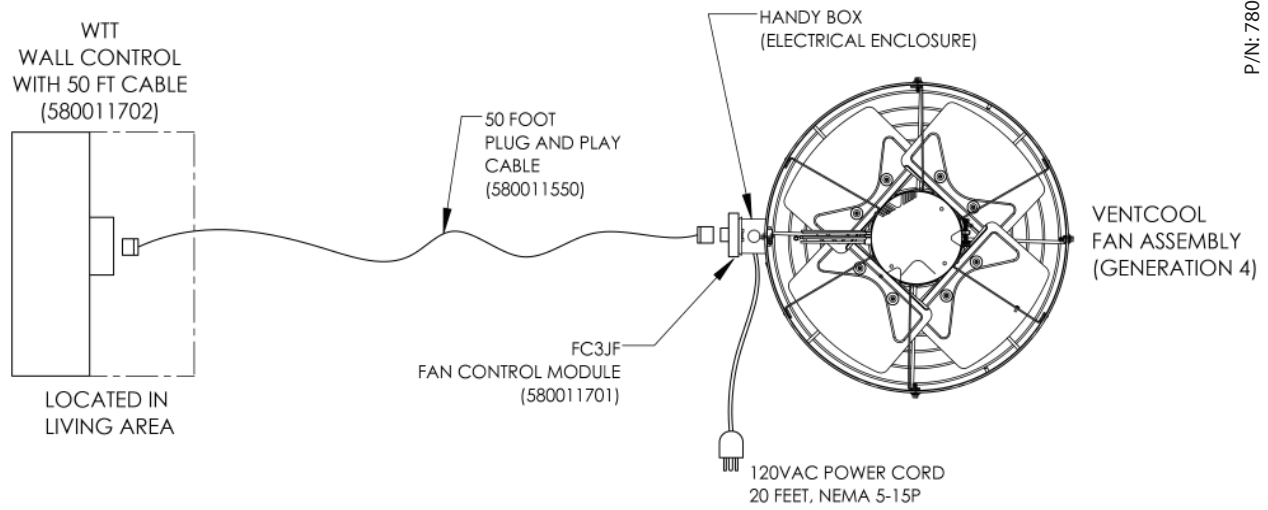


DIAGRAM 1: VC SUMMIT S2-S5 (GEN4) CONNECTION DIAGRAM

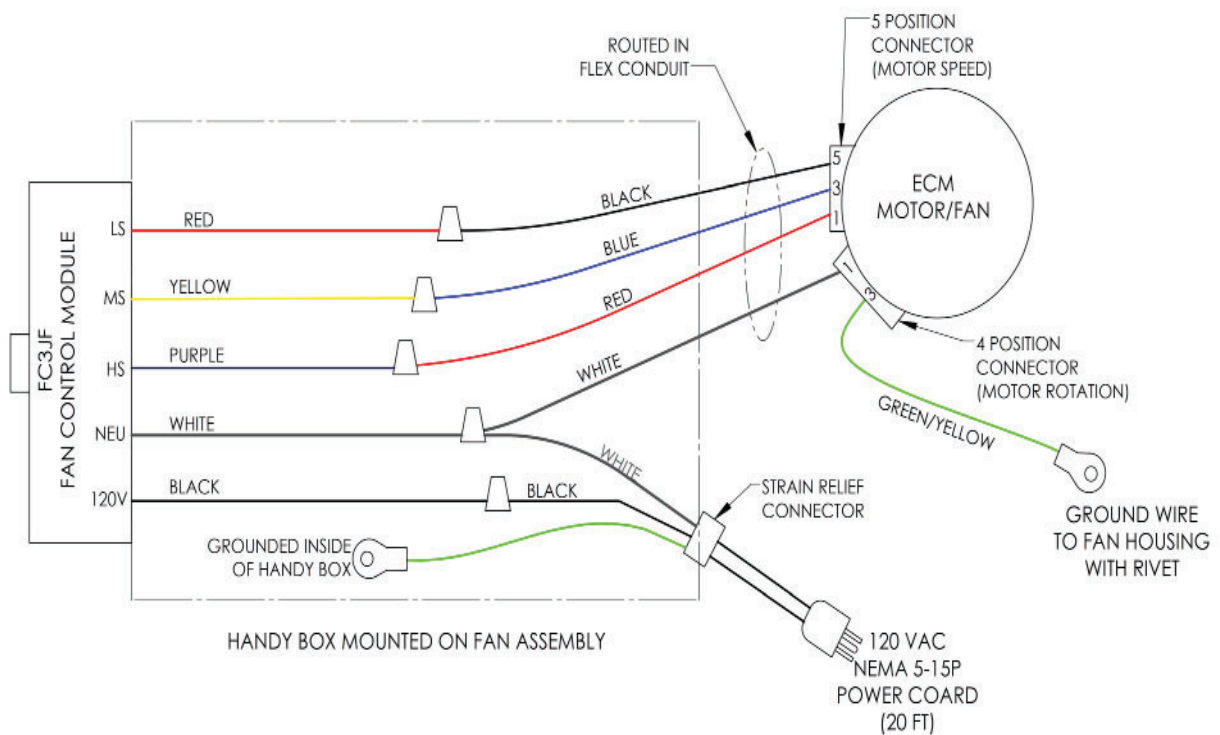


DIAGRAM 2: VC SUMMIT S2-S6.5 (GEN4) FAN WIRING

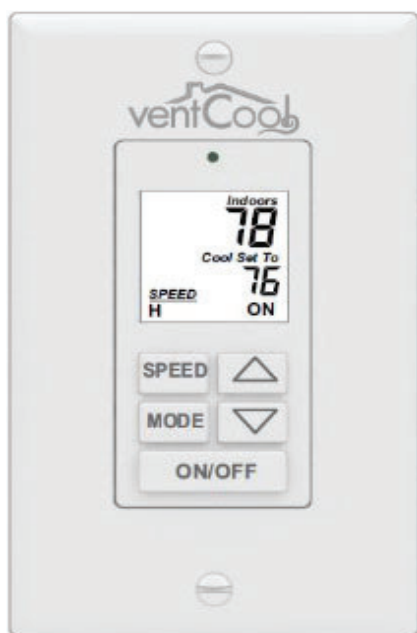


FIGURE 10 : STANDARD WALL CONTROL SYSTEM
(SPEED TEMPERATURE OR TIME)

OPERATION

Before starting this fan for the first time, verify that:

- All wiring and connection have been made according to this manual and all applicable wiring codes and standards.
 - No tools or construction debris have been left in, on or around the fan.
 - Dedicated 115VAC, 15 AMP power outlet has been properly installed and plug terminal outlet orientation is correct.
 - Wall control is installed properly. Plug&Play cable is installed and connected properly between wall control and fan assembly.
 - Open windows to allow for outside air to enter space.
 - Verify that Functional Check in INSTALLATION: WIRING & CONTROLS section has been completed prior to homeowner use.
 - Verify grille is installed below damper assembly.
1. Verify fan power cord is plugged into dedicated 115VAC, 15 AMP outlet.
 2. Turn ON dedicated fan assembly power outlet. LCD on wall control should light up.
 3. Press **ON/OFF** button on WTT to turn ON the whole house fan.

The wall control can operate in two different modes of operation: Temperature or Timer Control

Temperature control will allow the homeowner to set the indoor temperature at which the whole house fan system will turn off once temperature is reached. Timer control will allow the homeowner to set how much time in hours the whole house fan will operate before turning off.

Switching wall control between Temperature and Timer Control Modes:

1. Switch wall control to Temperature Control from Timer Control mode:
 - a. Press **MODE** button on WTT then press **DOWN ARROW** button to select **TEMPERATURE CONTROL**.
2. Switch wall control to Timer Control from Temperature Control mode:
 - a. Press **MODE** button on WTT then press **UP ARROW** button to select **TIMER CONTROL**.

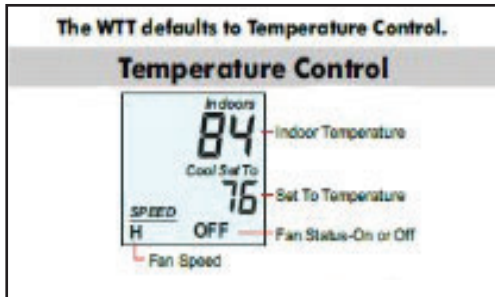


FIGURE 11- WTT DISPLAY IN TEMPERATURE CONTROL MODE

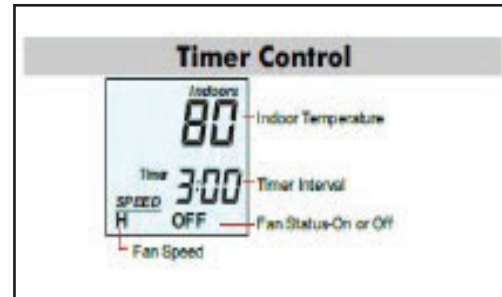


FIGURE 12- WTT DISPLAY IN TIMER CONTROL MODE

Temperature Control Mode: (refer to FIGURE 11)

Turn the FAN ON:

By pressing **ON/OFF** button. The fan will run until the indoor temperature drops below the **Set To Temperature** on the WTT display. By pressing the **ON/OFF** button while fan is operating will turn the fan OFF.

Adjusting the Temperature:

Press and hold the **ARROW UP** or **ARROW DOWN** buttons individually to change the **Set To Temperature** setting.

When the **Set To Temperature** is lower than the indoor temperature, the fan is ON and running (ON is blinking). When the **Set To Temperature** is above the indoor temperature, the fan is not running and ON is not blinking.

Safety Feature in Temperature Control Mode: The WTT **ON/OFF** button is pressed to turn the fan ON. In addition, the WTT has a built-in safety timer that will automatically turn the fan OFF after 8 hours of continuous operation in case the homeowner forgets the fan is running.

Adjust the Safety Feature Timer Hour Setting:

Press and hold **MODE** button for about 7 seconds until STimer is displayed. Press the **ARROW UP** or **ARROW DOWN** button to adjust the safety timer hours from 1 to 12 hours.

Adjusting Speed Control Setting:

Press the **SPEED** button then press the **ARROW UP** or **ARROW DOWN** button to adjust the fan speed.

Timer Control Mode: (refer to FIGURE 12)

Switch wall control to Timer Mode.

Turn the FAN ON:

By pressing **ON/OFF** button. The fan will run for Timer Interval on WTT display. By pressing the **ON/OFF** button while fan is operating will turn the fan OFF.

Adjusting the Timer Setting:

Press and hold the **ARROW UP** or **ARROW DOWN** buttons individually to adjust current *Timer Interval* setting. Note: If fan is operating, the new *Timer Interval* setting adjustment is temporary. Once time period times out, Timer Interval will revert back to original *Timer Interval* setting. But if fan is OFF and you adjust the *Timer Interval*, the new *Timer Interval* is saved as the permanent setting.

Adjusting Speed Control Setting:

Press the **SPEED** button then press the **ARROW UP** or **ARROW DOWN** button to adjust the fan speed.

IMPORTANT OPERATING TIPS

The following important tips for operating this fan have also been provided.

- NEVER operate this fan without also opening a window or door. Doing so can excessively depressurize the home.
- Only operate this fan when the outdoor air temperature is cooler than the indoor temperature.
- Make sure the home's air conditioner and furnace are OFF before turning on this fan. Running either of these together with this whole house fan wastes money because the fan will force expensively conditioned or heated air out of the home.
- We recommend running this fan through the night. The goal of using a whole house fan is to cool the entire home, not just the air inside it. Once heated, the home's structure and contents continue to radiate heat until reaching the temperature of the surrounding air. Running this fan through the night speeds up this cooling process and can then further "pre-cool" the home, reducing or eliminating the need to use air conditioning the next day.
- If the home has a basement, extra cooling can be achieved by drawing in air through the basement windows.
- This fan's cooling effect can be increased or concentrated in particular areas by adjusting the location of open windows. Visualize the path air will travel from the windows to your fan's opening. Generally, the longer the path, the more cooling.

MAINTENANCE & TROUBLESHOOTING

Make sure the appropriate circuit breaker(s) at the homes' electrical panel are turned OFF before servicing your whole house fan product(s).

Verify the fan assembly is securely mounted and straps are not wearing prematurely. Repair and replace as applicable.

Blocking of fan exhaust can cause it to fail prematurely and/or reduce the amount of air the fan can move. Keep the area in front of the fan exhaust unobstructed. No object should be closer than 24 inches to the face of the fan grille.

This fan has been factory tested. If problems are encountered, please take a few moments to run through the following troubleshooting procedures before calling for assistance:

- If the fan does not turn on and wall control (WTT) display is blank, check power to the unit and the verify that fan power cord is plugged in to active 115VAC outlet. Verify the 4 pin and 5 pin cable harnesses are connected to the ECM motor. Refer to Figure 14 showing proper installation of two motor cable harnesses.
- If the damper doors flap during operation, verify that appropriate windows are open in the home and that there is enough attic exhaust free space available. Either or both conditions will reduce whole house fan performance air flow.
- If the damper doors do not open or close, visually inspect the damper for any debris obstructing their movement. Inspect fan exhaust for obstruction.
- If Wall Control (WTT) display does not lite up. Verify fan power cord is plugged in to active 115VAC outlet. Verify 50 foot plug&play cable is completely plugged into fan control module and "red" RJ connector on back side of wall control device.
- The Wall Control (WTT) display indicates ON but the fan is not running. If ON is blinking and the WTT is in Temperature Control mode, make sure the Set To Temperature is a few degrees lower than indoor temperature. ON will blink when the fan is running.
- Fan is running but damper doors are not opening. Manually push open damper doors, if you feel excessive amount of air blower back towards you, the fan motor is running in CW rotation. Change motor rotation to CCW rotation. Refer to Change Fan Motor Rotation instructions in this section.
- The Wall Control (WTT) only allows for 1 or 2 speed operation and your system is a 3 speed system. Refer to Step 6 Set the Number of Fan Speeds in the INSTALLATION: WIRING AND CONTROL section to change number of fan speeds of the wall control (WTT) device.

If the suggestions above do not work, contact Field Controls technical support at 800.742.8368 or by email at fieldtec@fieldcontrols.com for further assistance. Technical manuals are available on our website at www.fieldcontrols.com.

CHANGE FAN MOTOR ROTATIONS

This product is equipped with an ECM motor that is designed to operate in a Counterclockwise (CCW) rotation. The motor can run in either Clockwise (CW) or Counterclockwise (CCW) rotation depending on installation of the 4 pin terminal (ie: the location of White [Neutral] wire in relationship to the rotation terminal on the motor) per Figure 13. The white wire should be inserted directly under the CCW notation on the motor as shown in Figure 14. Please note that white wire should be on same side as red wire of 5 position terminal as shown in Figure 14 photo.

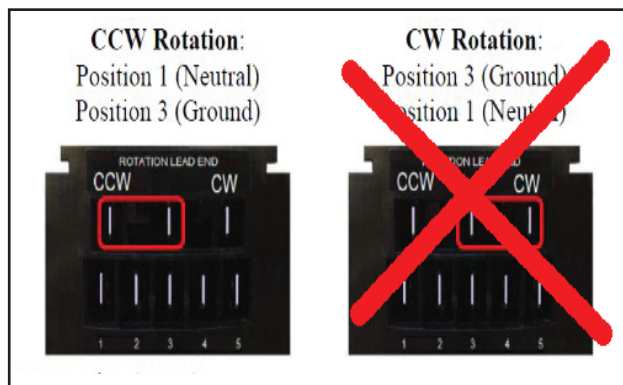


FIGURE 13: CCW MOTOR ROTATION TERMINAL

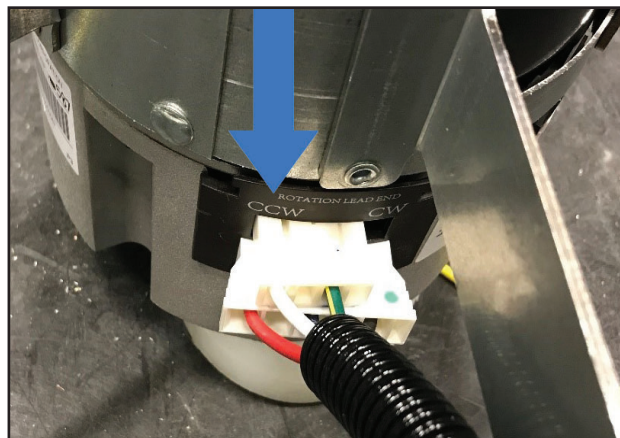


FIGURE 14: LOCATION OF WHITE WIRE
IN 4P CONNECTOR FOR CCW ROTATION

Optional Upgrade Components for Controlling your Ventcool Summit Series Whole House Fan (Generation 4):
Contact Field Controls Sales team for purchasing any of the following optional Upgrade components. These new products will be available in 2021.

Wireless Remote Control Kit (WLM-RTT) – p/n: 580011704

The Remote Control Kit is designed to work in conjunction with the wall control (WTT) product. The Remote Control provides wireless control of the whole house fan from anywhere in the home using the remote control. The kit includes a wireless plug in module (WLM), remote control (RTT) and set of batteries. The wireless plug in module connects directly to the backside of wall control (WTT) printed circuit board.

WiFi Plug-In Module (WFM) – p/n: 580011705

The WiFi Plug-In Module is designed to work in conjunction with the wall control (WTT) product. The WiFi Plug-In Module provides WiFi control of the whole house fan from anywhere using a smart phone, tablet or PC. The smart phone, tablet or PC is provided by owner. This control requires access to a wireless network within the home to communicate with a cloud based program on the smart device. The WiFi plug in module connects directly to the backside of wall control (WTT) printed circuit board.

WiFi Module (iM3) – p/n: 580011703

The WHF WiFi module is designed to work with the fan control module (FC3JF) installed on the fan assembly. The wall control (WTT) will be disconnected when the WiFi Module (iM3) is installed. The WiFi Module provides WiFi control of the whole house fan from anywhere using a smart phone, tablet or PC. The smart phone, tablet or PC is provided by owner. This control requires access to a wireless network within the home to communicate with a cloud based program on the smart device. The WiFi module connects directly to the plug & play cable from fan assembly.

SPECIFICATIONS*

Speed Settings:	3
Gravity Damper Rough Opening Dimensions:	S2 & S3 – 14.3 inches x 22.3 inches S4 & S5 - 14.3 inches x 30.3 inches
Grille Construction:	Aluminum Cube Core, Steel frame (White Powder Coated)
Fan Diameter:	S2 & S3 – 18.75 Inches Diameter S4 – 20.75 Inches Diameter S5 – 22.75 Inches Diameter
Duct Length:	7 feet
Duct Diameter:	S2 – 16 Inches S3 – 18 Inches S4 & S5 – 20 Inches
Electrical:	115VAC, 15 AMP DEDICATED POWER
Fan Motor: (HP/RLA)	S2 & S3 – ECM 1/3 HP / 3.5 & 3.4 AMPS S4 – ECM 1/2 HP / 5.7 AMPS S5 – ECM 3/4 HP / 9.4 AMPS
Damper Door Insulation:	R5 (COMPILED)
Installation:	Installs easily on 16 Inch or 24 Inch On-Center Framing O.C. framing
Attic Net Free Ventilation Area (SQ FT) **	S2 - 4.16 S3 - 4.42 S4 - 7.29 S5 - 8.43
Open Window Ventilation Area (SQ FT) **	S2 - 8.31 S3 - 8.84 S4 - 14.59 S5 - 16.85

*Due to our continual product improvement efforts, performance ratings and specifications are subject to change without notice.

** Attic Net Free Ventilation and Open Window Ventilation Areas are listed as minimum requirements. Actual lower ventilation areas may reduce fan's overall performance at high speed.

Item No.	Part Number	Description	Whole House Fan Model				
			S2	S3	S4	S5	
1	850101533	Fan Motor, 1/3 HP, 3 Speed	X				
2	850101550	Fan Motor, 1/2 HP, 3 Speed		X			
3	850101575	Fan Motor, 3/4 HP, 3 Speed			X		
4	602601481	Fan Inlet Cone, 18 to 16"	X				X
5	602601482	Fan Inlet Cone, 22 to 20"					X
6	602601451	Flexible Duct Assembly, 16" Dia	X				
7	602601452	Flexible Duct Assembly, 18" Dia		X			
8	602601453	Flexible Duct Assembly, 20" Dia			X		X
9	580011702	Wall Control Kit	X	X	X	X	X
10	580011701	Fan Control Module Kit	X	X	X	X	X
11	580011550	50 FT PNP Cable	X	X	X	X	X
12	620067020	Damper Assembly, 14"x22", 16" Dia Inlet	X				
13	620067030	Damper Assembly, 14"x22", 18" Dia Inlet		X			
14	620067065	Damper Assembly, 14"x30", 20" Dia Inlet			X		X
15	580011902	5 Pin Motor Wire Harness	X	X	X	X	X
	580011901	4 Pin Motor Wire Harness	X	X	X	X	X
16	602601472	Motor Fastener Kit	X	X	X	X	X
17	602601432	Fan Outlet Grille, 18" Dia	X	X			
18	602601434	Fan Outlet Grille, 20" Dia			X		
19	602601435	Fan Outlet Grille, 22" Dia				X	
20	602601471	Power Cord, 20 Ft Long	X	X	X	X	X
21	602601422	Fan Blade, 18" Dia	X				
22	602601423	Fan Blade, 18" Dia		X			
23	602601424	Fan Blade, 20" Dia			X		
24	650100115	Fan Blade, 22" Dia S5				X	
25	602601141	Egg Crate Return Air Grille, 22x16	X	X			
26	602601142	Egg Crate Return Air Grille, 30x16			X		X
27	602601475	Replacement Hardware Kit	X	X	X	X	X
28	602601476	Replacement Nylon Strapping	X	X	X	X	X
29	602601477	Strap, Fan Mounting Metal	X	X	X	X	X
30	580011503	Connector, F2F, RJ12 Straight, 6P6C	OPT	OPT	OPT	OPT	OPT
31	580011703	WiFi Module (IM3)	OPT	OPT	OPT	OPT	OPT
32	580011704	Wireless Remote Control Kit (WLM-RTT)	OPT	OPT	OPT	OPT	OPT
33	580011705	WiFi Plug-in Module Kit (WFM)	OPT	OPT	OPT	OPT	OPT

OPT - OPTIONAL

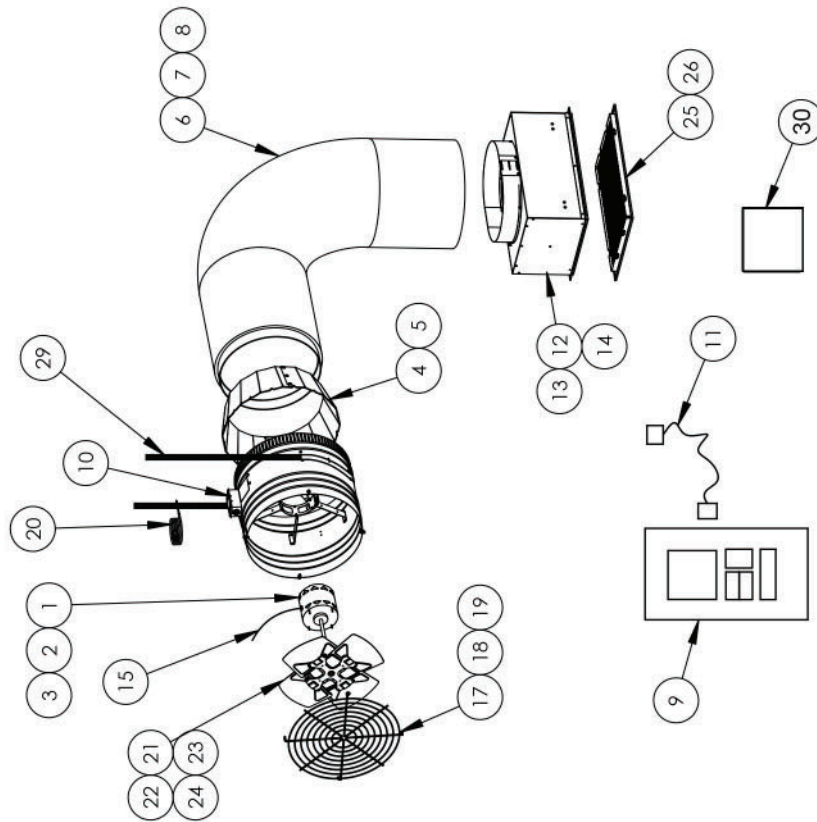


FIGURE 15 - VENTCOOL SUMMIT S2-S5 REPLACEMENT PARTS

This manual may be downloaded and printed from the Field Controls website (www.fieldcontrols.com)

WARRANTY

For warranty information about this or any Field Controls product, visit:

www.fieldcontrols.com/ventCool

Field Controls Technical Support

1.800.742.8368

fieldtec@fieldcontrols.com



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