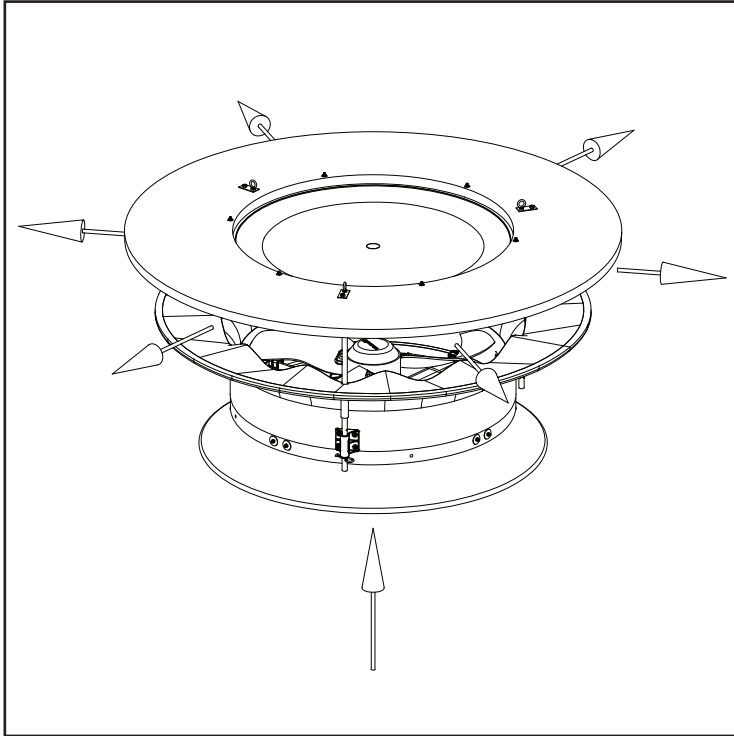


36" VARIO FAN

Horizontal Airflow
Circulation Fan
Bottom Inlet

Instruction Manual



36" Vario Fan

Horizontal Airflow Circulation Fan

Models: RV-VAR36P3G



36" Vario Fan Horizontal Circulation Fan

Instructions for Use and Maintenance

Thank You:

Thank you for purchasing a Munters Vario Fan. Munters equipment is designed to be the highest performing, highest quality equipment you can buy. With the proper installation and maintenance it will provide many years of service.

Please Note:

To achieve maximum performance and insure long life from your Munters product it is essential that it be installed and maintained properly. Please read all instructions carefully before beginning installation.

Warranty:

For Warranty claims information see the "Warranty Claims and Return Policy" form QM1021 available from the Munters Corporation office at 1-800-227-2376 or by e-mail at aghort.info@munters.com.

Conditions and Limitations:

- Products and Systems involved in a warranty claim under the "Warranty Claims and Return Policy" shall have been properly installed, maintained and operated under competent supervision, according to the instructions provided by Munters Corporation.
- Malfunction or failure resulting from misuse, abuse, negligence, alteration, accident or lack of proper installation or maintenance shall not be considered a defect under the Warranty.

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Unpacking the Equipment

1.

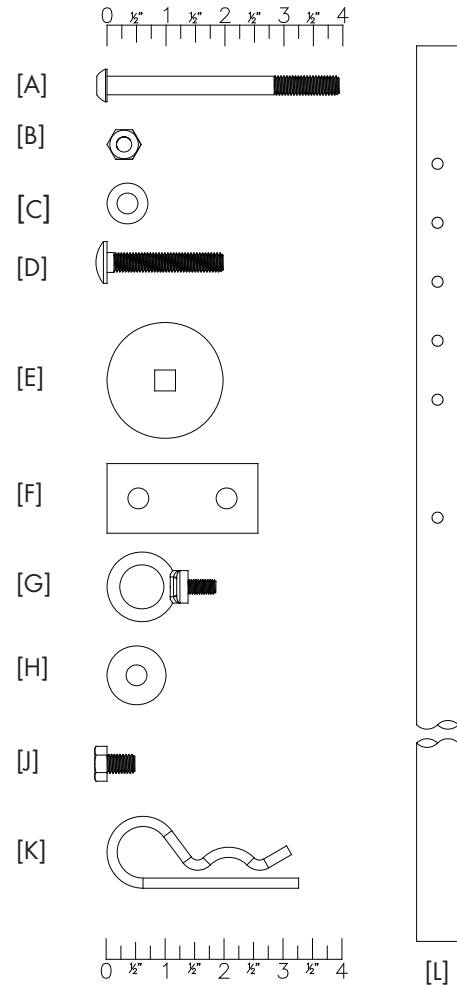
1.1 Parts List

Each 36" Vario Fan Includes:

- 1 - Fan Cassette Assembly
- 1 - Air Deflector Outer Ring, PL
- 1 - Air Deflector Center Disc, PL
- 3 - Height Adjustment Guides
- 1 - Hardware Package:

Hardware Package for Vario:

ID	Qty.	Description
[A]	6	M6 x 100mm Bolt
[B]	9	M6 Hex Nut
[C]	6	M6 x 18mm Flat Washer
[D]	3	M6 x 50mm Carriage Bolt
[E]	3	M6 Carriage Washer
[F]	3	30mm x 60mm Plate
[G]	3	M6 x 24mm Eye Bolt
[H]	3	M6 x 35mm Flat Washer
[J]	3	M6 x 10mm Hex Bolt
[K]	3	Hairpin Cotter, 4mm Dia.
[L]	3	Height Adjustment Rod, 26"L.



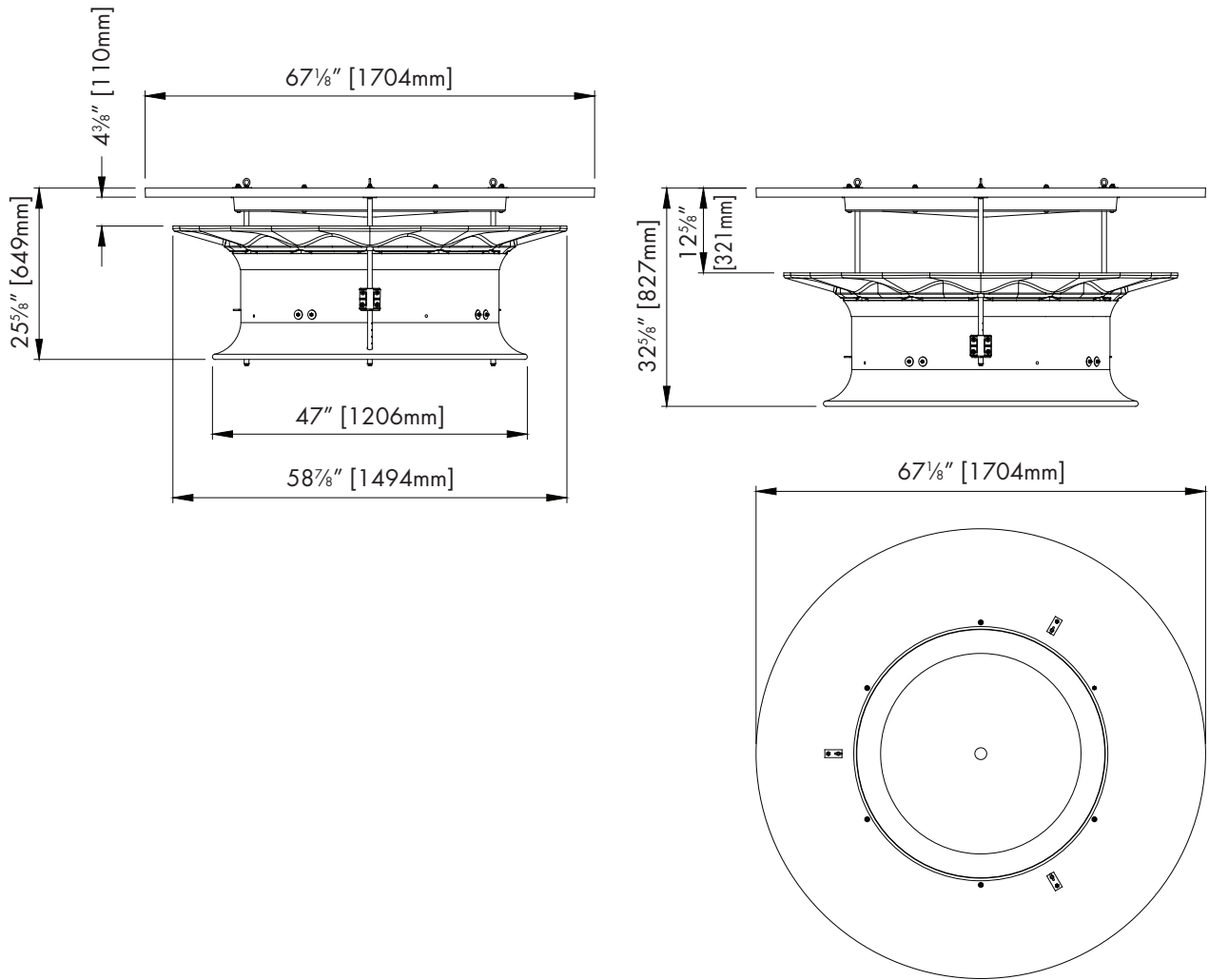
1.2 Fan Dimensions

Fan Specifications: 60Hz

Power: 230/460 VAC

Phase: 3

Amps: 4.2/2.4



1.3 Tools required for installation

10mm Socket

4mm Allen Wrench

Installation Instructions

2.

2.1 Fan Assembly

Step 1

Find the Air Deflector Outer Ring and lay it on a flat surface. Lay the Air Deflector Disc with the raised center pointing up and fasten pieces together using (6) Bolts [A], Washers [C] and Nut [B]. *See Figure 1.*

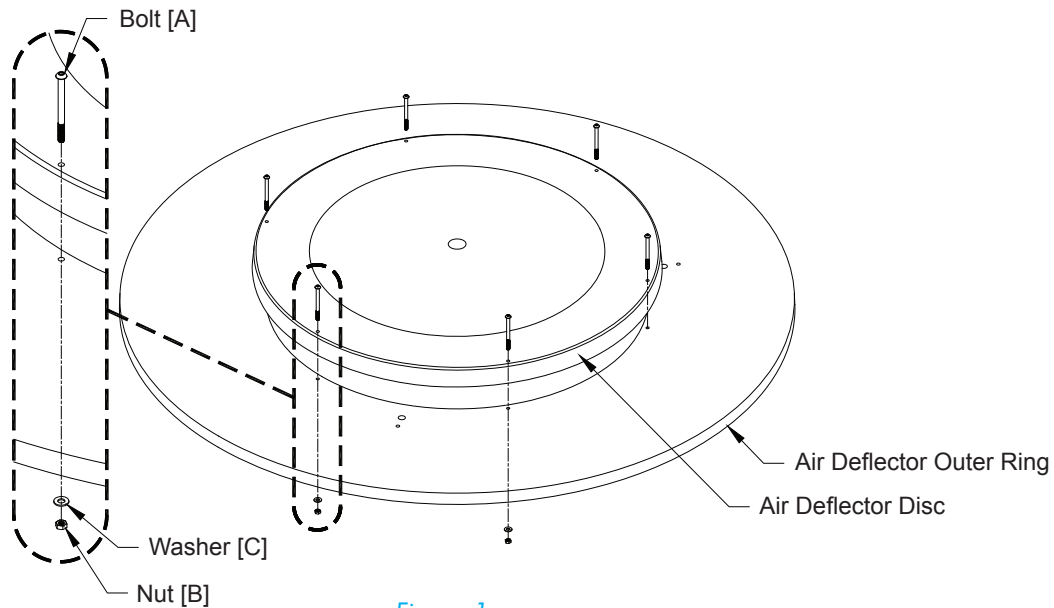


Figure 1

Step 2

Turn Air Deflector Assembly over so that the Outer Ring is upward. Align (3) 30mm x 60mm Plates [F] over (3) sets of holes in Outer Ring with the 2 holes in Plate line up with holes in Outer Ring. Fasten Plates [F] to Outer Ring through the outer hole with Carriage Bolt [D], Carriage Washer [E] and Nut [B]. *See Figure 2.*

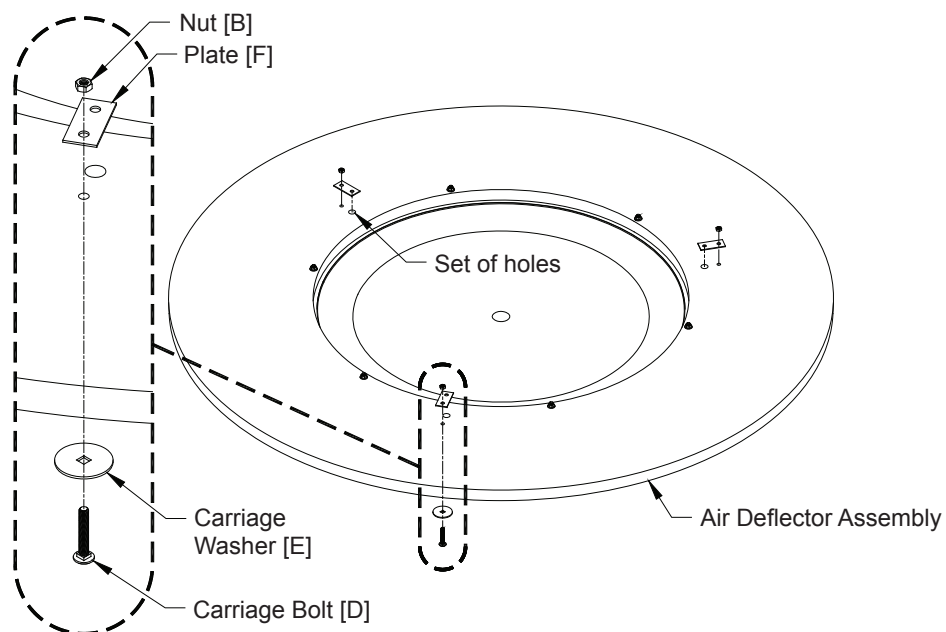


Figure 2

Step 3

Insert (3) Height Adjustment Rod [L] into the large holes in underside of Air Deflector and fasten with (3) Eye Nuts [G] through Plate [F]. Make sure the Adjustment Holes are away from the Air Deflector.

See *Figure 3*.

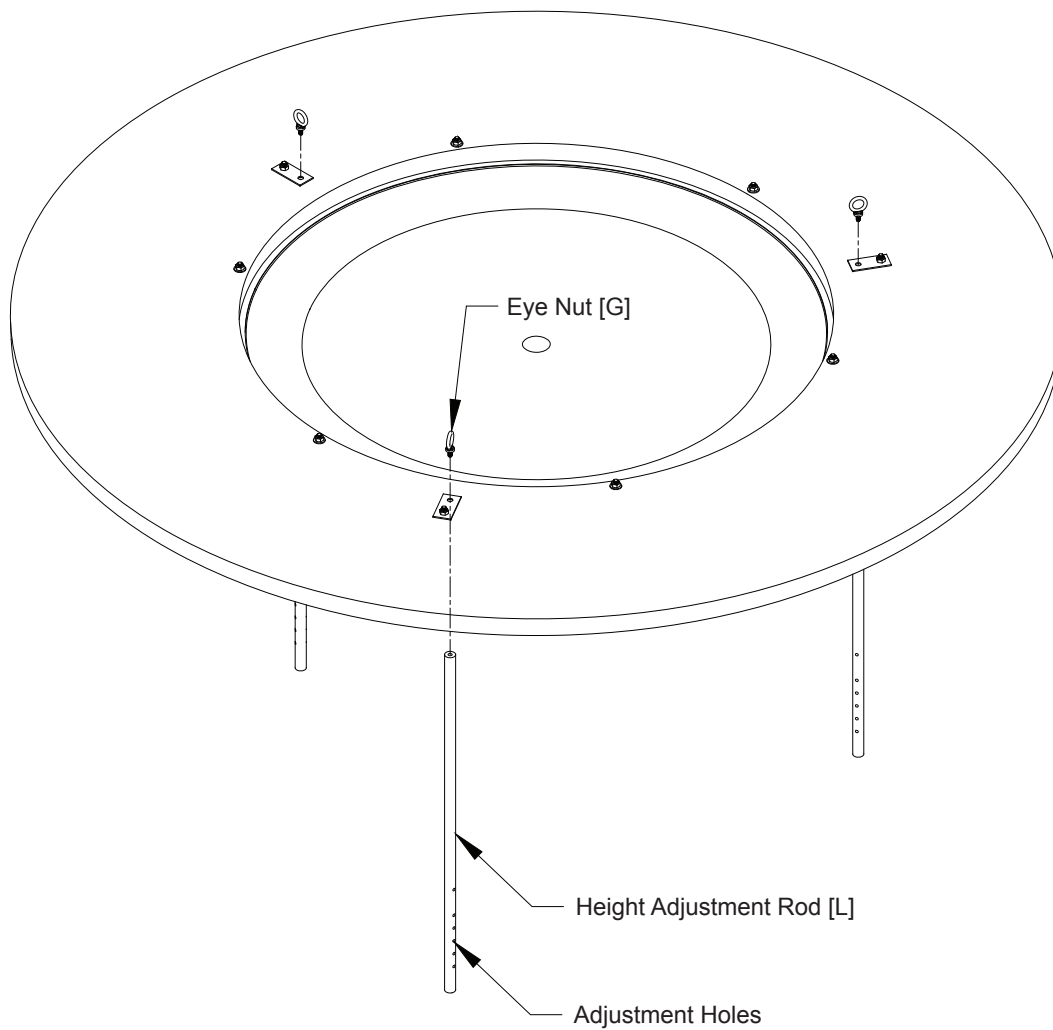


Figure 3

Step 4

Locate Fan Cassette Assembly and set it on a flat surface with Guard down. Insert the Height Adjustment Rods of the Air Deflector Assembly through the holes in the Fan Assembly and through the Rod Guide.

See Figure 4.

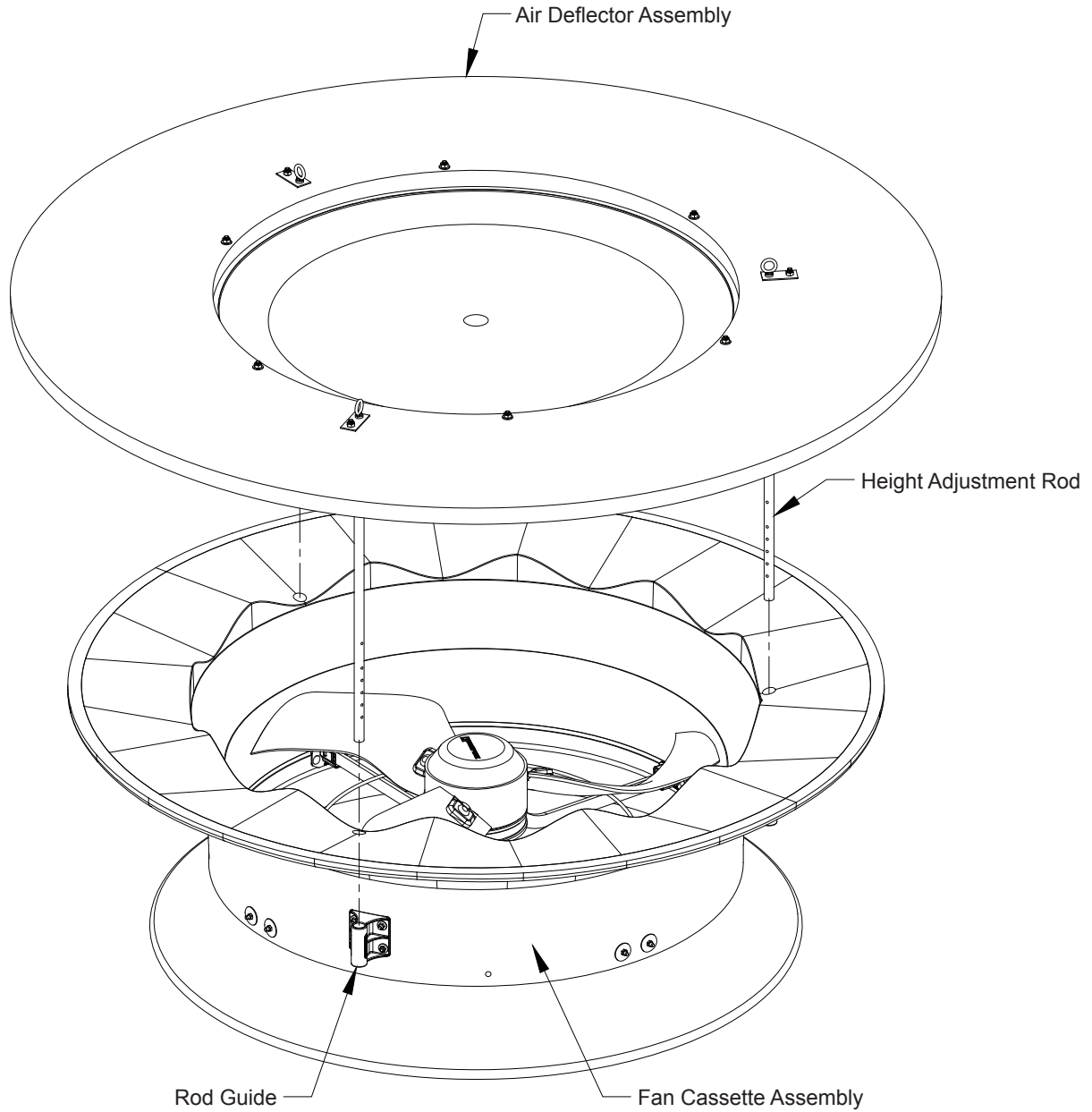


Figure 4

Step 5

Slide the Air Deflector Assembly and Fan Cassette Assembly together until the upper hole in the Height Adjustment Rod shows below the Rod Guide and insert Hairpin Cotter [K] in each Rod to hold the Fan Assembly in place. Fasten Bolt [J] and Washer [H] to bottom of each Rod. *See Figure 5.*

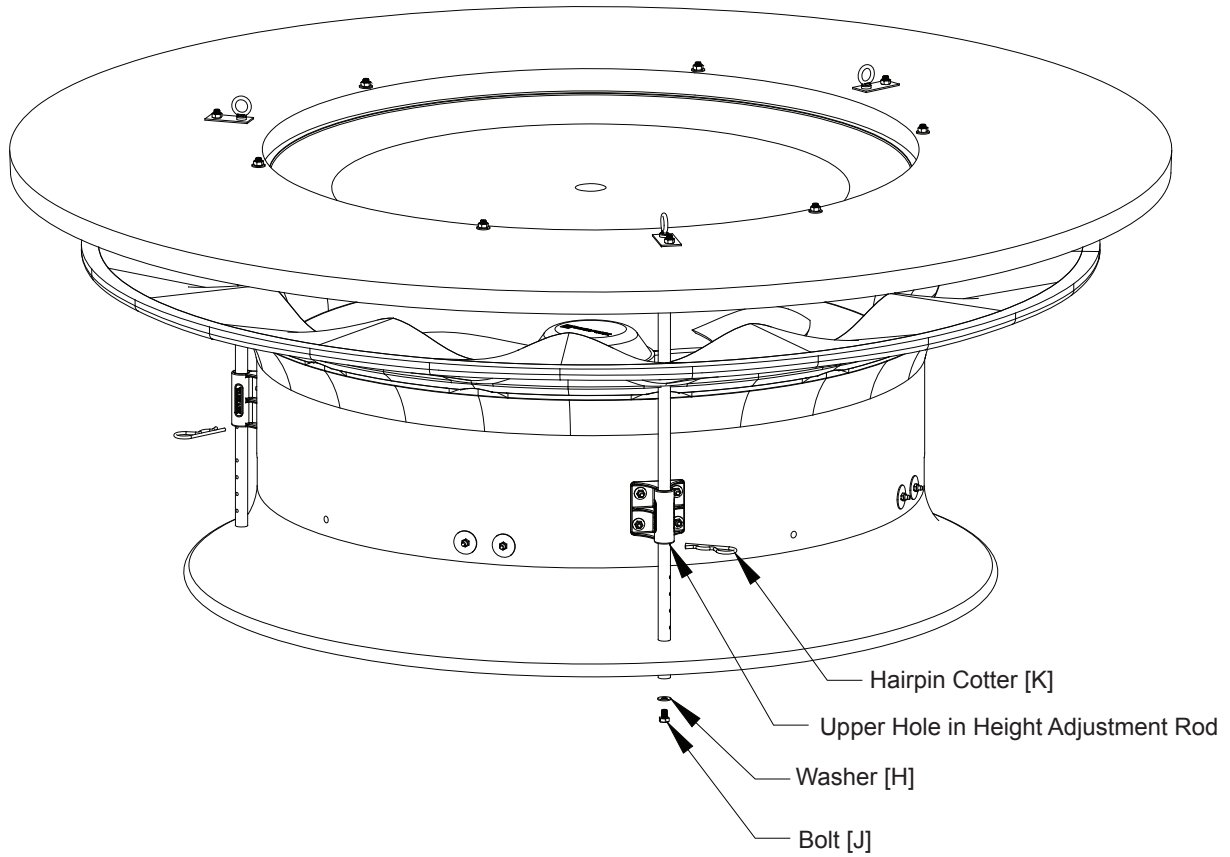
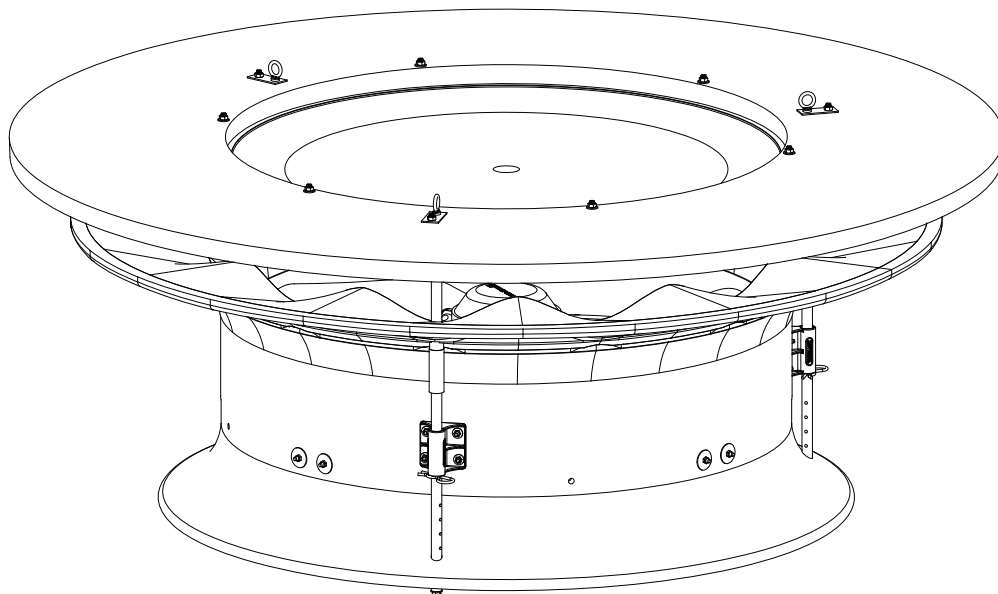


Figure 5



Assembly now complete. Proceed to Step 6

2.2 Fan Hanging

Step 6

Hang Fan Assembly from each Eye Nut [G] to 3 separate points on ceiling or trusses using chain (not provided). Chain must not run straight up, but should be at a slight angle. Hanging points must be capable of holding the weight of the Fan Assembly. *See Figure 6.*

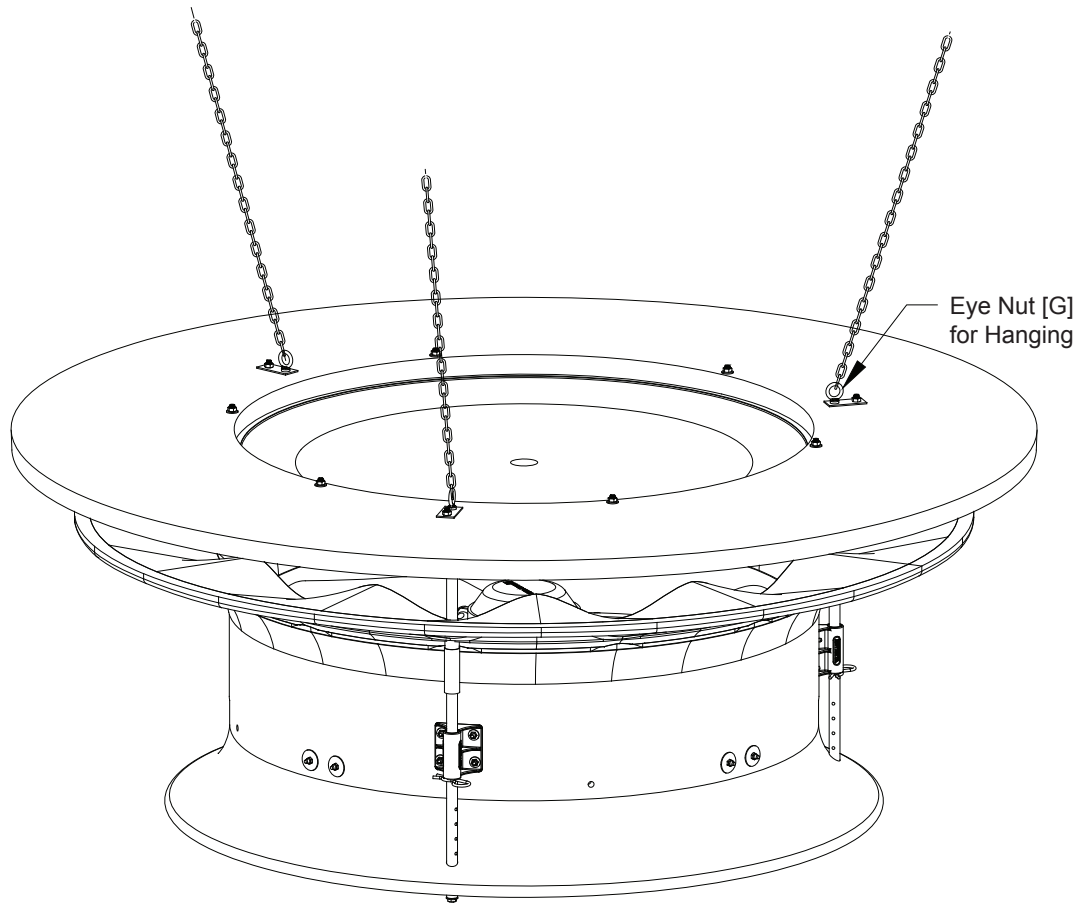


Figure 6

All wiring should be installed in accordance with National, State, and Local electrical codes. Fans used to ventilate livestock buildings or other rooms where continuous air movement is essential should be connected to individual electrical circuits, with a minimum of two circuits per room. For electrical connection requirements, refer to diagram on motor nameplate and to information enclosed with the Munters environmental control to be used.

Three Phase Fans: motor overload protection should be provided for each fan. A three-pole motor starter or slow blow motor fuses must be used. *See Figure 7.*

If a frequency drive (inverter) is used, confirm that motors are rated for inverter duty at the voltage used. Shielded power cable between frequency drive and each motor is highly recommended. Installation of line reactors is recommended to reduce voltage spikes and harmonic distortion. Supplemental motor overload protection is also recommended.

NOTE: A safety cut-off switch should be located adjacent to each fan.

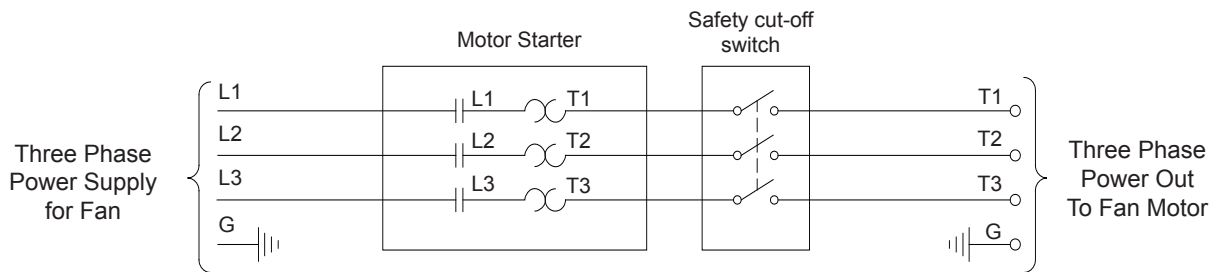


Figure 7

Three Phase - Motor Overload Protection with Disconnect

KEY:
 L1=Line 1
 L2=Line 2
 L3=Line 3
 G=Ground

The Vario Fan ships configured for 460V/3 phase operation. Connect 460V power to terminal block as shown in *Figure 8A*. To operate the the Vario 230V/3 phase remove the 2 existing jumpers and install 3 jumpers and connect 230V power as shown in *Figure 8B*.

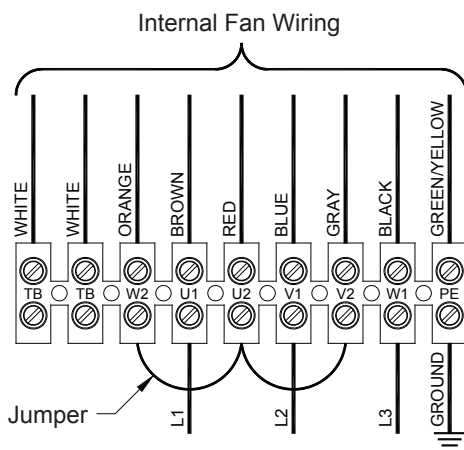


Figure 8A

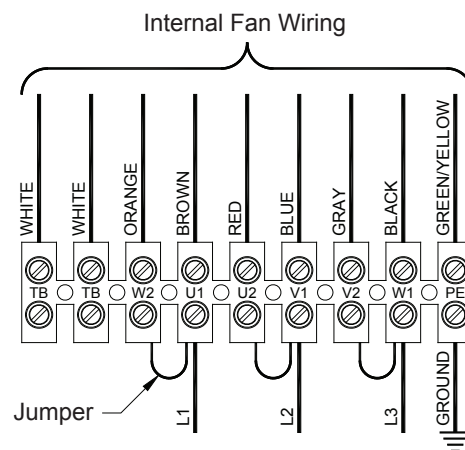


Figure 8B

4.1 Operation

- 1) **INITIAL START-UP:** With electrical power off, verify that the fan propeller turns freely and that all fasteners are secure. Turn on electrical power and confirm that the fan operates smoothly.
- 2) **ADJUSTMENTS:** To achieve a farther throw from the fan, adjust the opening between the Air Deflector and the Fan Assembly to its minimum opening. To achieve a shorter throw from the fan, adjust the opening to its maximum opening.



Three Phase Fans: If a frequency drive is used, the minimum operating frequency is 30 Hz.

Maintenance

5.

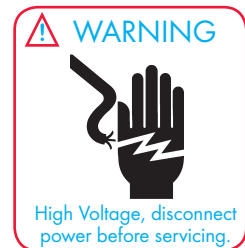
5.1 Maintenance

The following inspection and cleaning procedures should be performed monthly:

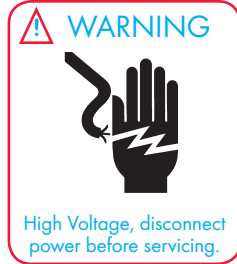
Tools Needed for Maintenance:

10mm Wrench, 4mm Allen Wrench

- 1) **INSPECT PROPELLER:** Check that propeller is secure on drive hub and that there are no signs of damage. The blades are of a self-cleaning design and should not require maintenance.
- 2) **CLEAN** regularly for best results:
 - **FAN MOTOR:** Remove any dust accumulation from motor using a brush or cloth. (DO NOT use a pressure washer). A clean motor will run cooler and last longer. At the same time, verify that the motor is secure in its mount.
 - **GUARD:** Clean any dust or feathers from fan guards using a brush. Dirty guards can reduce airflow.
- 3) **CHECK FASTENERS:** For safety, all fasteners should be inspected 1 month after initial operation and yearly thereafter. Tighten any loose connections.
- 4) **INSPECT FAN CONTROL:** With power disconnected, inspect all electrical connections. Wiring should be secure and in good condition. Remove any dust build-up from control case and sensor using a soft brush or cloth. **NEVER CLEAN ELECTRICAL EQUIPMENT WITH A PRESSURE WASHER!**



7.1 Troubleshooting



SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
Fan Not Operating	<ol style="list-style-type: none"> 1. Fan control set above room temperature 2. Blown fuse or open circuit breaker 3. Propeller blade contacting fan housing 4. Fan control defective 5. Motor defective 	<ol style="list-style-type: none"> 1. Set to a lower temperature 2. Replace fuse or reset breaker 3. Realign propeller in fan housing 4. Repair or replace control 5. Repair or replace motor
Fan Operating- Insufficient Airflow	<ol style="list-style-type: none"> 1. Damper door jammed 2. Guard dirty 	<ol style="list-style-type: none"> 1. Clean damper door & fan housing 2. Clean guard
Excessive Noise	<ol style="list-style-type: none"> 1. Propeller blade contacting fan housing 	<ol style="list-style-type: none"> 1. Sand fan housing to remove high spot
Excessive Vibration	<ol style="list-style-type: none"> 1. Motor loose on mount 2. Propeller damaged 3. Motor or propeller shaft bent 	<ol style="list-style-type: none"> 1. Tighten fasteners 2. Replace propeller 3. Repair or replace motor or propeller shaft
Fan Never Turns Off	<ol style="list-style-type: none"> 1. Override thermostat set incorrectly 2. Control set for continuous operation 	<ol style="list-style-type: none"> 1. Set to the correct temperature 2. Set control correctly

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Vario is developed and produced by Munters Corporation, Lansing, Michigan U.S.A. 1-800-227-2376



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