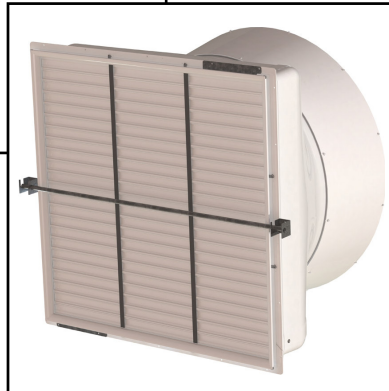
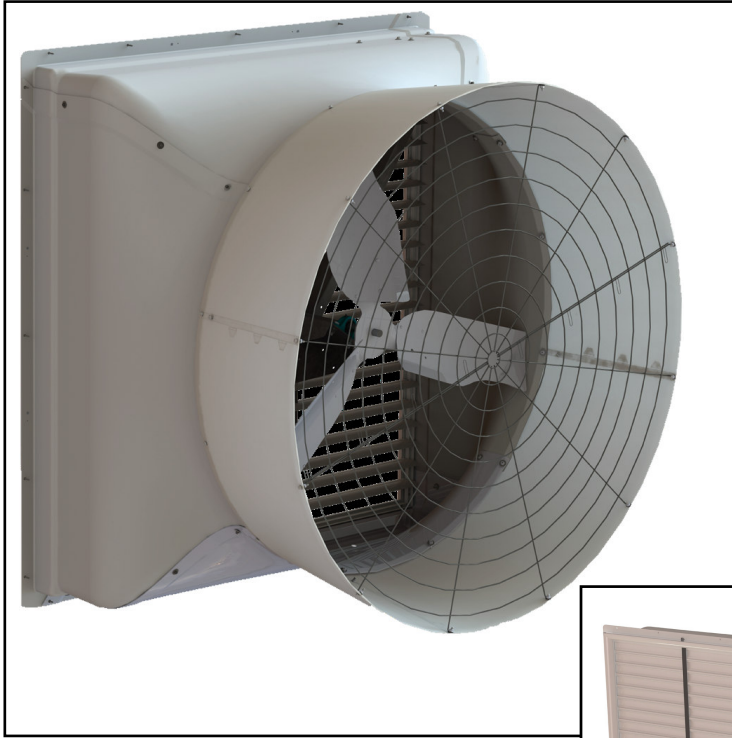


Instruction Manual

Munters ATLAS 74 74" Exhaust Fan



ATLAS 74 Fan

Models: ATS743F3CT-E • ATS743F3CT-P



Munters ATLAS 74 Fan

Instructions for Use and Maintenance

Thank You:

Thank you for purchasing an ATLAS 74 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](mailto: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.

Index

Chapters	Page
1. Unpacking the Equipment	4
1.1 Parts List	4
1.2 Fan Dimensions	5
1.3 Fan Spacing	6-7
2. Installation Instructions	8-17
2.1 Installation	8
2.2 Cone Installation	12
2.3 PT Shutter	15
2.4 Shutter Wind Kit	16-17
3. Electrical Wiring	18
4. Operation	20
5. Maintenance	22-23
6. Winterizing	24
6.1 Winterizing	24
6.2 Winter Weather Protection	24
7. Troubleshooting	25
8. Exploded View and Parts List	26-27

Unpacking the Equipment

1.

Before beginning installation, check the overall condition of the equipment. Remove packing materials, and examine all components for signs of shipping damage. Any shipping damage is the customer's responsibility and should be reported immediately to your freight carrier. Fan is shipped complete with all accessories.

1.1 Parts List

Each Fan includes:

- 1 - Belt Drive Fan
- 4 - Cone Sections, PL
- 2 - Guard Sections, CTD
- 1 - Shutter
- 2 - Shutter Wind Bracket, GZ
- 1 - Shutter Wind Pipe, GZ
- 4 - Reinforcing Ring, ¼ Section, Atlas74, CTD-STL, White
- 1 - Hardware Package as follows:

HP1162 - Atlas 74

ID	Qty.	Cat. No.	Description
[A]	28	KS1167	5/16"-18 x 1.25" SRTD Flange Head Bolt, ZP
[B]	32	KN0706	5/16"-18 SRTD Flange Nut, ZP
[C]	12	KW3011	5/16" x 1 1/4" O.D. Flat Washer, SS
[D]	4	KS1169	5/16"-18 x 1.75" SRTD Flange Head Bolt, ZP
[E]	4	KN1706	5/16"-18 Nylock Nut, ZP

WARNING:

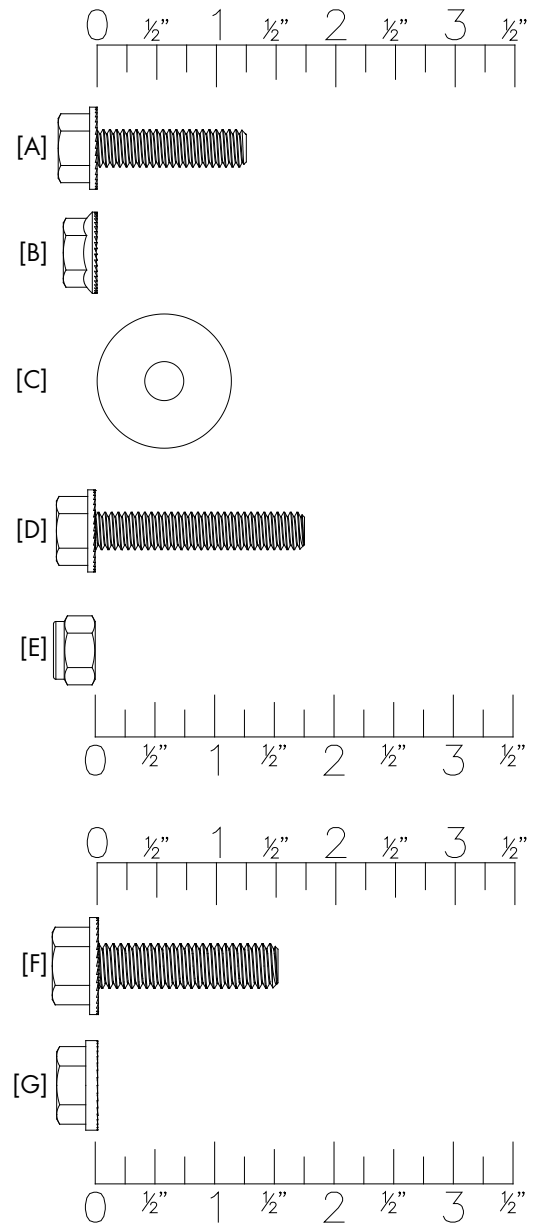
A Munters Lift Kit, FH1890, is required for installation of Atlas Fan. One Lift Kit may be used for multiple Atlas Fans. Failure to use the Munters Lift Kit may result in damage to fan. **DO NOT** use chains to lift fan for installation. Damage from chains will not be covered under warranty.

Each FH1890 Lift Bracket includes:

- 1 - Left Lift Bracket, PWDCTD
- 1 - Right Lift Bracket, PWDCTD
- 1 - Hardware Package as follows:

HP1891 - for FH1890

ID	Qty.	Cat. No.	Description
[F]	8	KS1180	3/8"-16 x 1.5" Flange Head Bolt, ZP
[G]	8	KN0705	3/8"-16 SRTD Flange Nut, ZP



1.2 Fan Dimensions

Fan Specifications:

Hertz: 60

Voltage: 208-240/480VAC

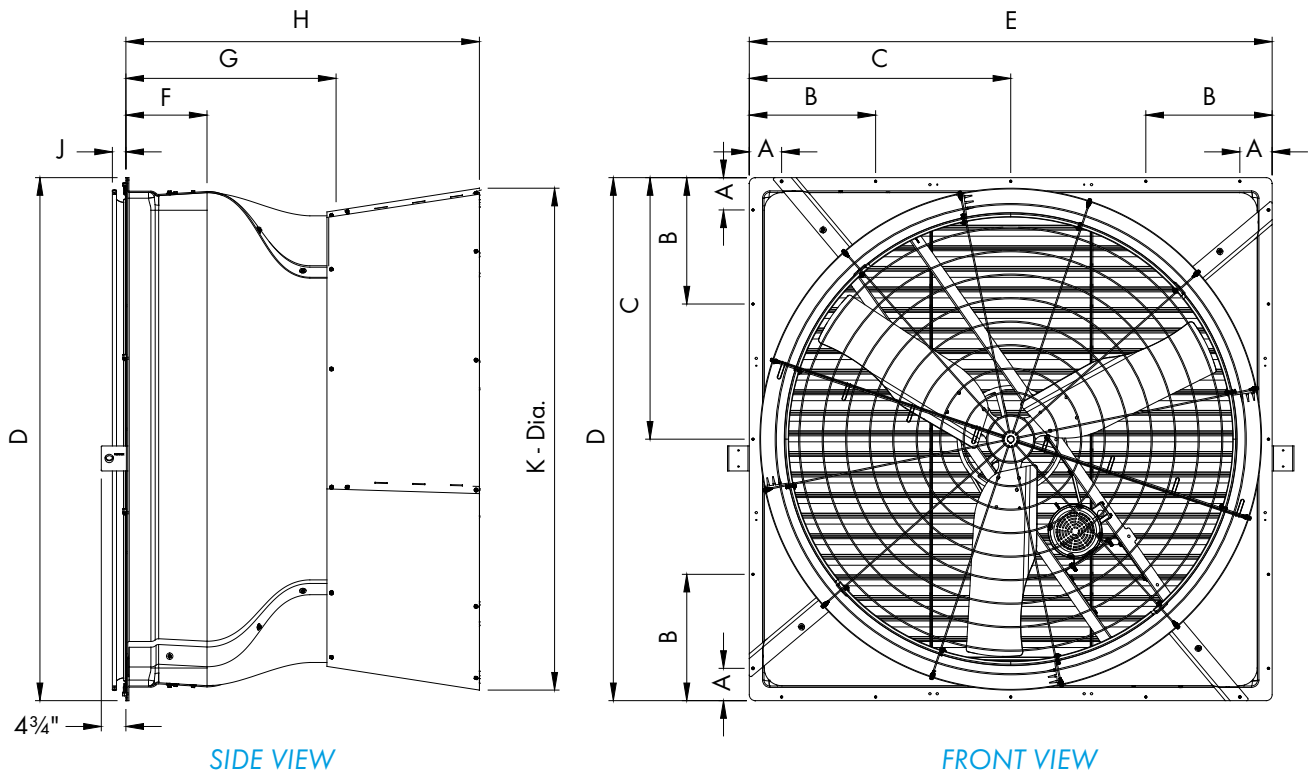
Phase: 3

Hertz: 50

Voltage: 190/380VAC

Phase: 3

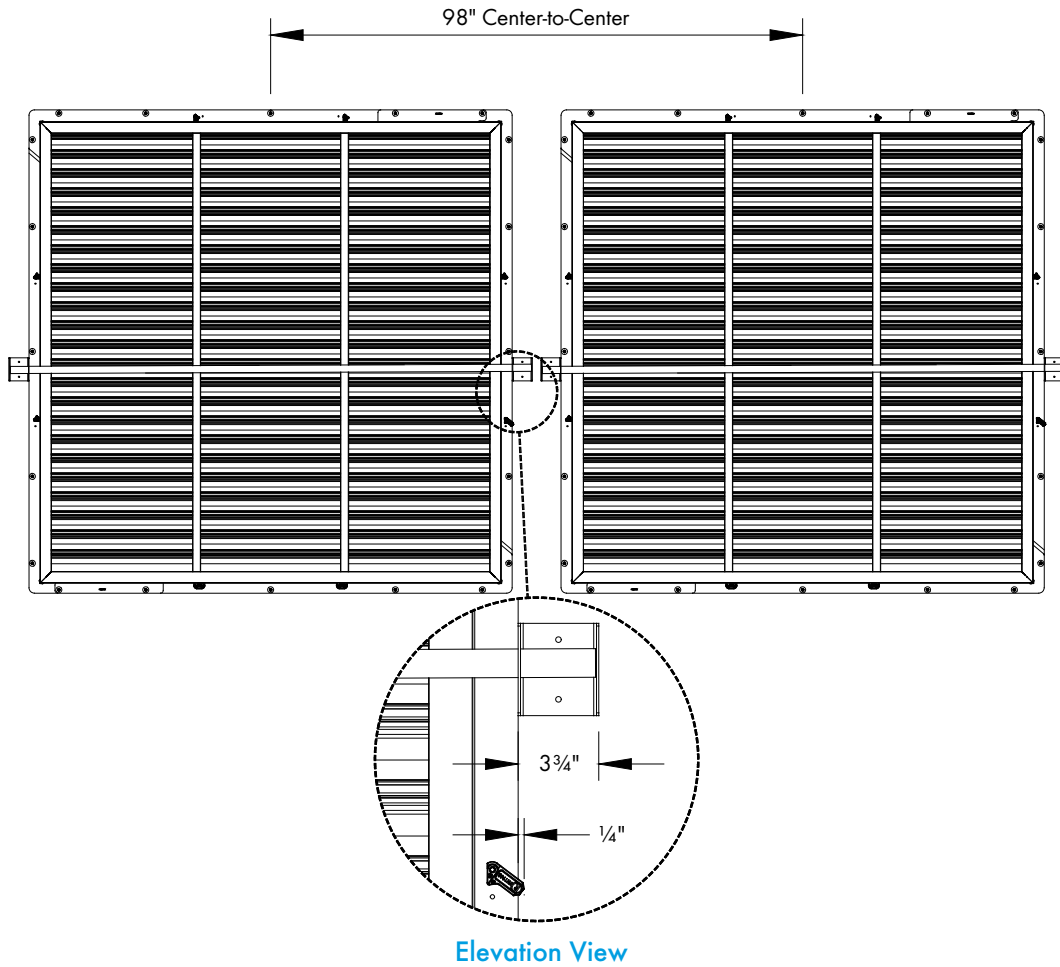
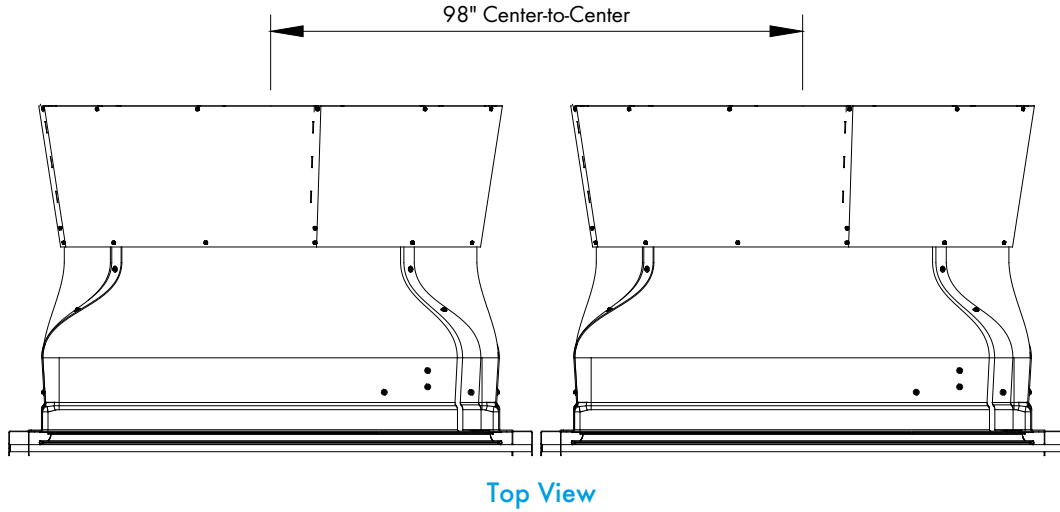
Weight: 400 lbs. [182 Kg]



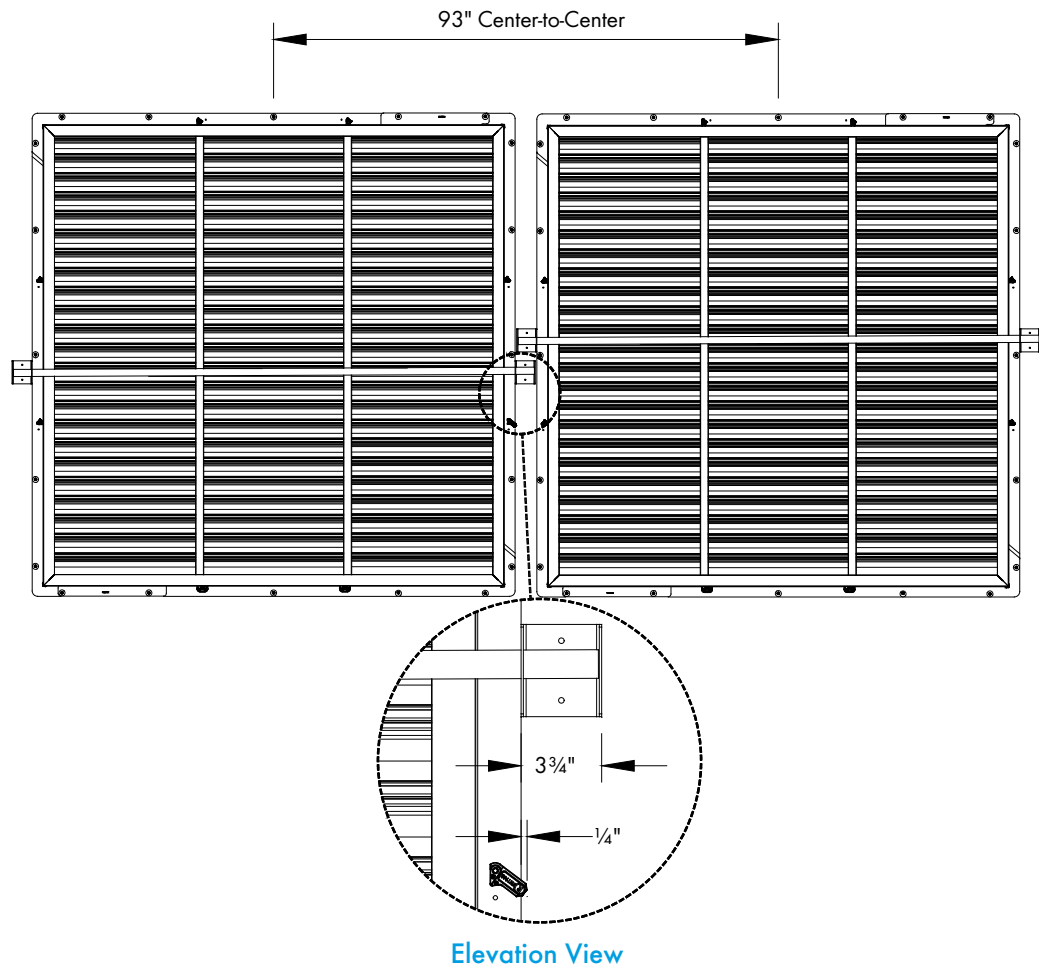
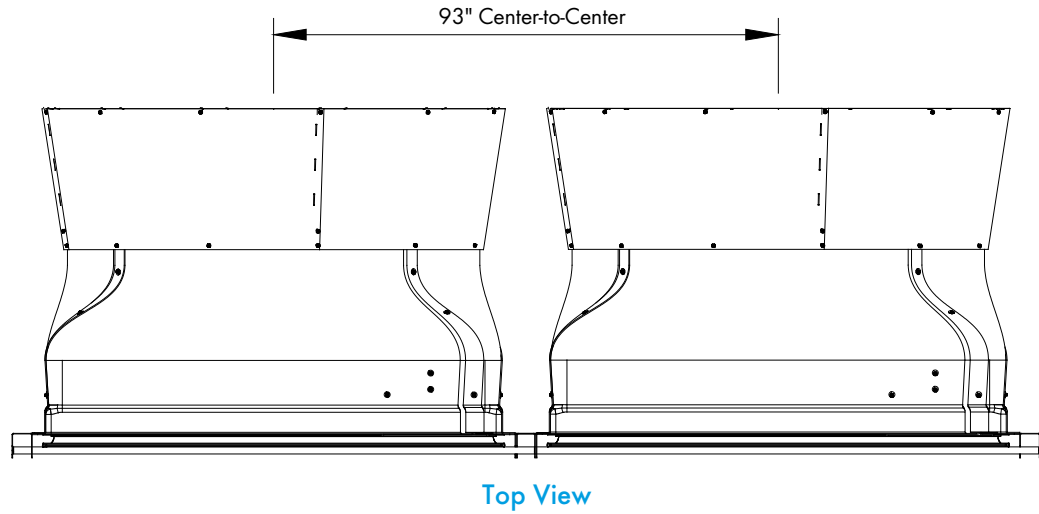
FAN DIA.	A	B	C	D	E	F	G	H	J	K-Dia.	WALL OPENING (I.D., framed)	
74"	5 1/2"	21 1/2"	44 1/2"	89"	89"	13 7/8"	35 3/4"	60 3/16"	2 5/16"	85 3/8"	84 1/2"W.	84 1/2"H.

1.3 Fan Spacing

When determining fan spacing/fan layout, keep in mind that the fan requires $\frac{1}{4}$ " clear space from the mousing flange so the Shutter Clips have room to rotate, to allow the shutter to be removed and reinstalled in the fan without interference. Also, the sides of the fan also require $3\frac{3}{4}$ " clearance for the Wind Kit Bracket to be installed. If the fans are to be installed side-by-side with the Wind Kit Brackets adjacent to each other, the minimum fan spacing is 98" Center-to-Center. See Figure Below.



If the fans are to be installed closer, then the Wind Kit Brakcet for one fan should be offset 6" up or down from the previous fan, then the minimum fan spacing is 93" Center-to-Center. [See Figure Below.](#)



Installation Instructions

2.

2.1 Installation

Step 1

Construct the framed opening to correct size according to the Chart on Page 5. The frame should be constructed of 4x4 Treated Posts or double 2x Treated Studs. 2 fans can fit between Columns that are 20' O.C., and 3 fans can fit between Columns that are 25' or 30' O.C. See [Figure 1A](#), [1B](#) and [1C](#).

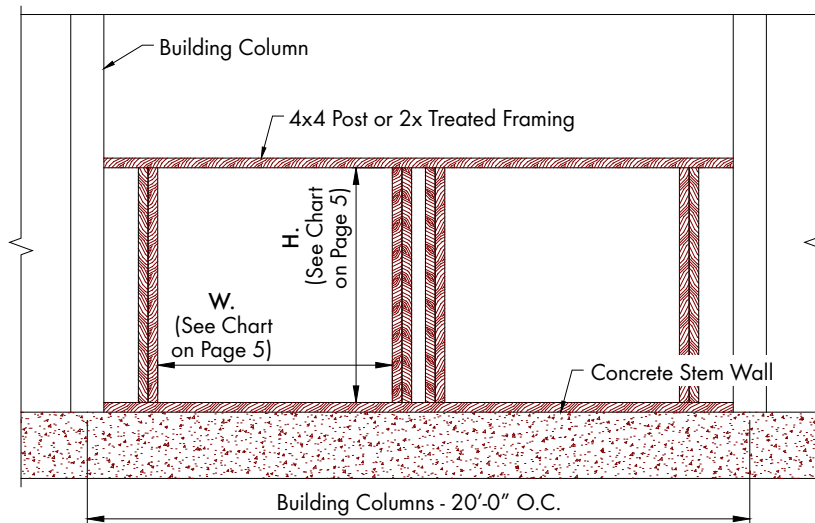


Figure 1A

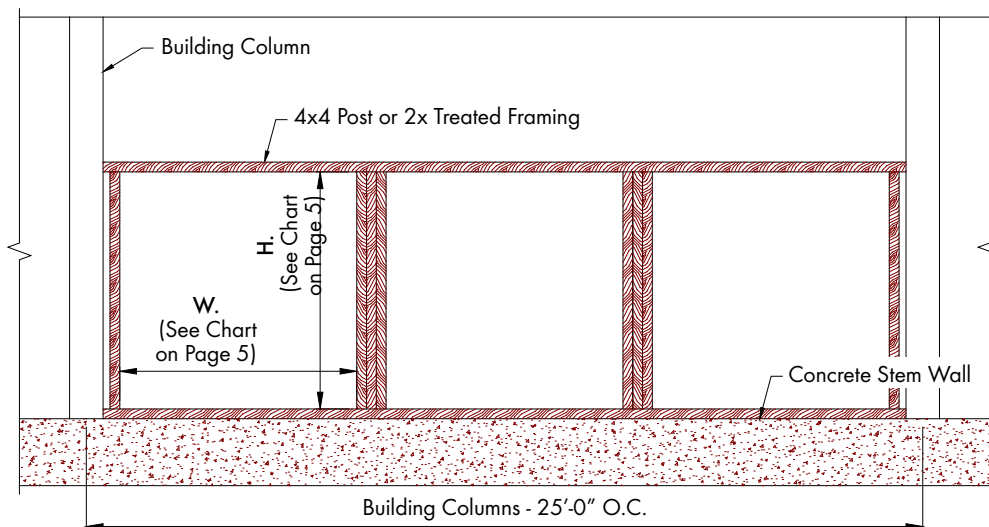


Figure 1B

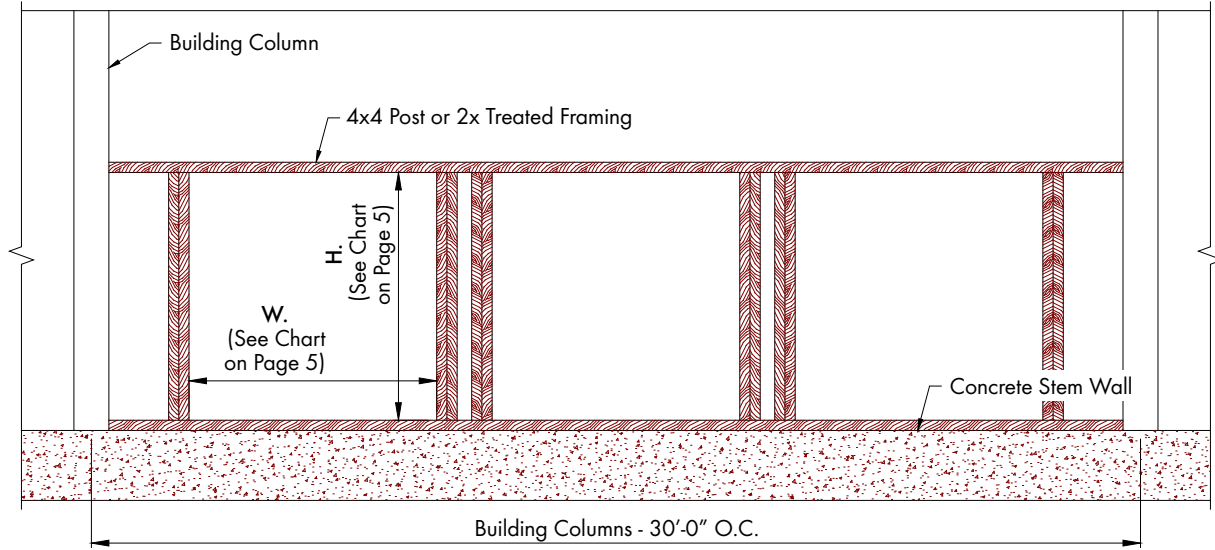


Figure 1C

WARNING:

A Munters Lift Kit, FH1890, is required for installation of Atlas Fan. One Lift Kit may be used for multiple Atlas Fans. Failure to use the Munters Lift Kit may result in damage to fan. **DO NOT** use chains to lift fan for installation. Damage from chains will not be covered under warranty.

Step 2

A Lift Bracket Kit is available to be able to lift fan into the framed opening. Attach each Lift Bracket to Bearing Bracket and Strut using (4) Bolts [F] and Nuts [G]. See Figure 2. Once fan has been installed in wall Lift Bracket can be removed and installed in next fan for installation.

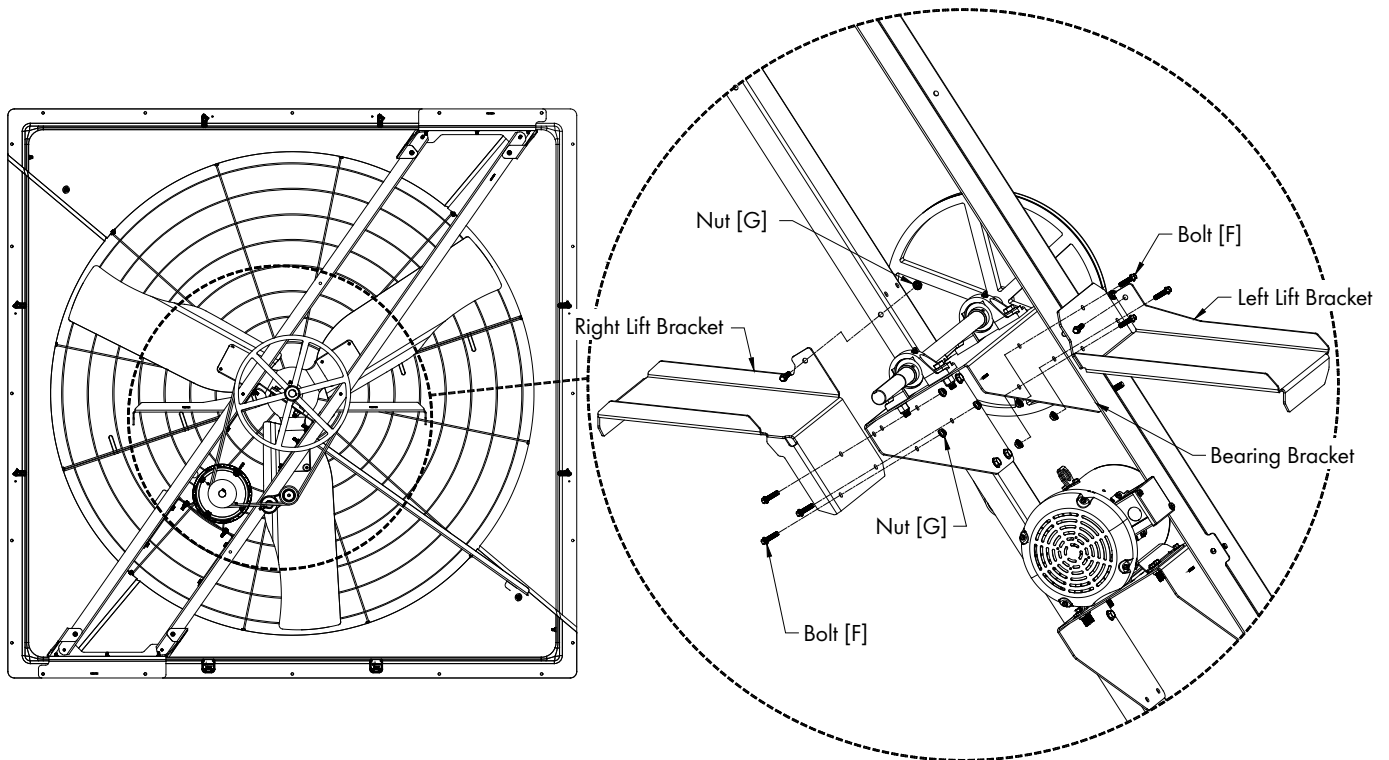
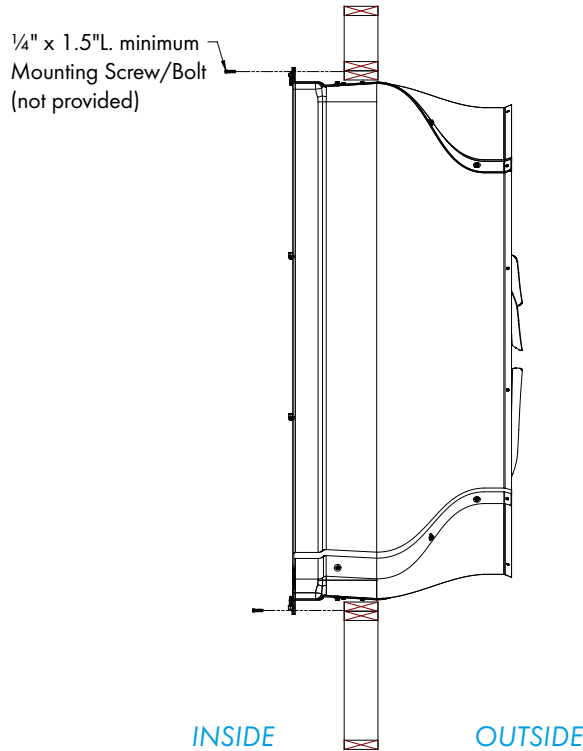


Figure 2

Step 3A

Using Munters Lift Kit, FH1890, insert fan into the framed opening from the inside. While holding fan tight to framing, fasten top of fan with (5) 1/4" x 1.5"L. minimum Mounting Screw/Bolt (not provided). See Figure 3A. Next, fasten bottom of fan, then both sides with (5) 1/4" x 1.5"L. minimum Mounting Screw/Bolt (not provided) per side. Install flashing around opening tight to fan and caulk around fan to seal.

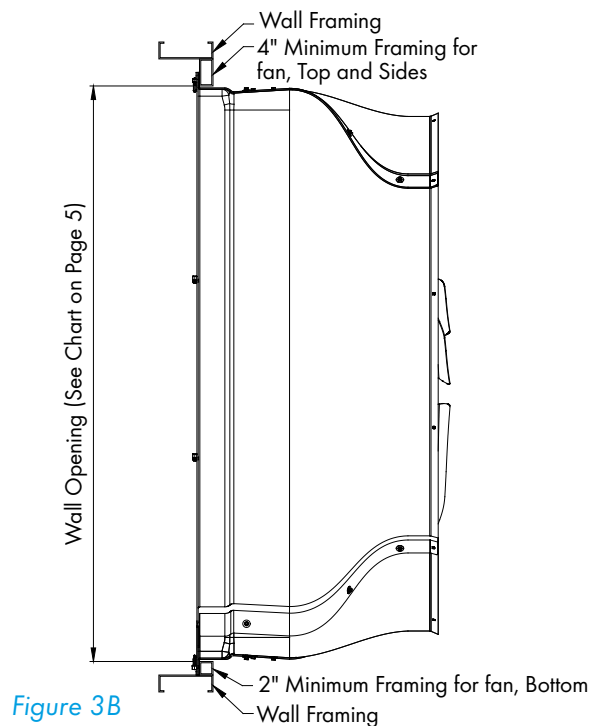


Note:
Once Fan is installed in wall, remove Lifting Brackets from Fan and install in next Fan for installation.

Figure 3A

Step 3B

If fan needs to be mounted, so that shutter does not stick into building then frame fan as shown in Figure 3B. Top and sides require 4" minimum and bottom requires 2" minimum.



Note:
Once Fan is installed in wall, remove Lifting Brackets from Fan and install in next Fan for installation.

Figure 3B

Step 4

Lay (4) Reinforcing Rings in a circular pattern on a flat surface with the tabs facing up. Fasten the Rings together at the End Flanges using (3) Bolts [D] and Nylock Nuts [E], leaving one pair of the End Flanges unattached. *See Figure 4.*

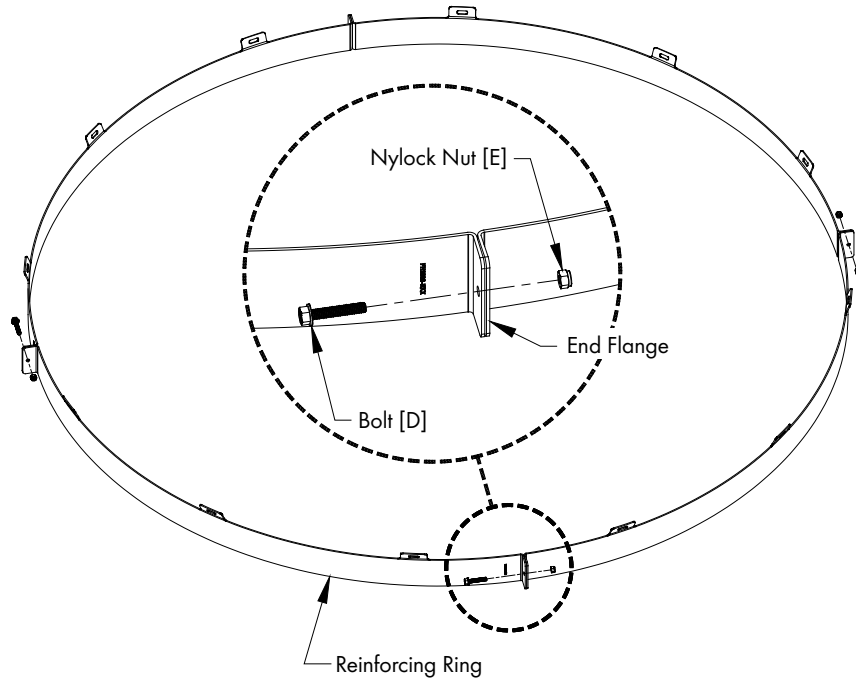


Figure 4

Step 5

Wrap the Reinforcing Rings around the outlet orifice of the fan and align the slots in the tabs with the holes in the orifice and secure the final End Flanges together using (1) Bolt [D] and Nylock Nut [E]. *See Figure 5.* Do not fully tighten the last bolt and nut at this time.

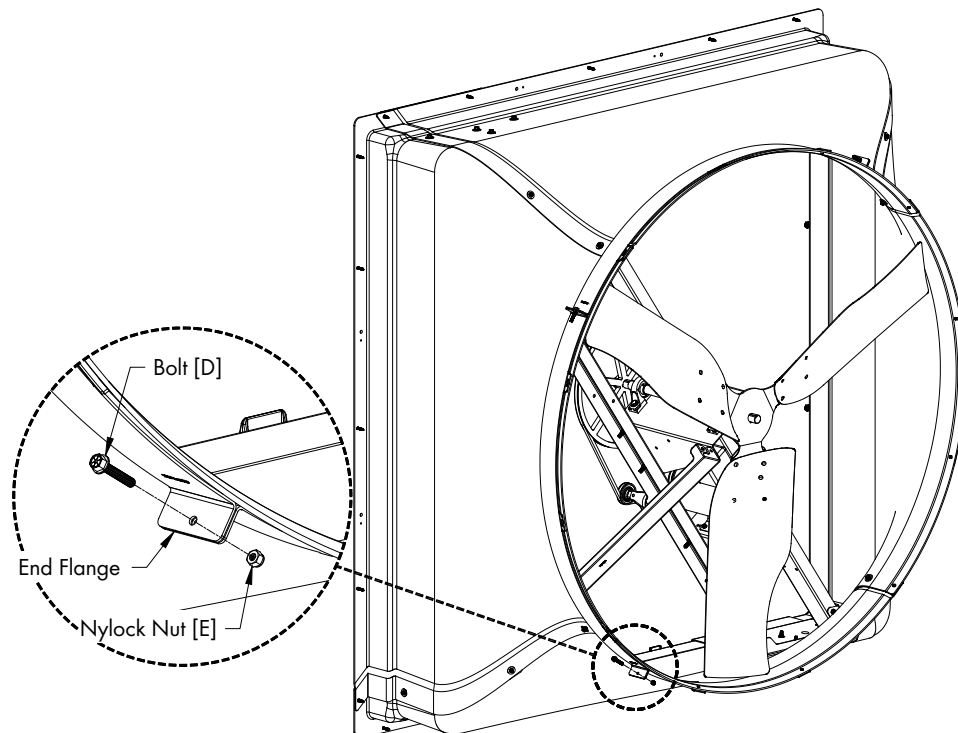


Figure 5

2.2 Cone Installation

Step 6

Place all 4 cone sections on a flat surface with tabs from one facing slots of the next. See [Figure 6A](#). Curl up tab end of first cone section and insert tabs up into slots in the next cone section. A mallet may be needed to seat slots over tabs completely. See [Figure 6B](#). Repeat this step until all 4 cone sections are connected and laying flat.

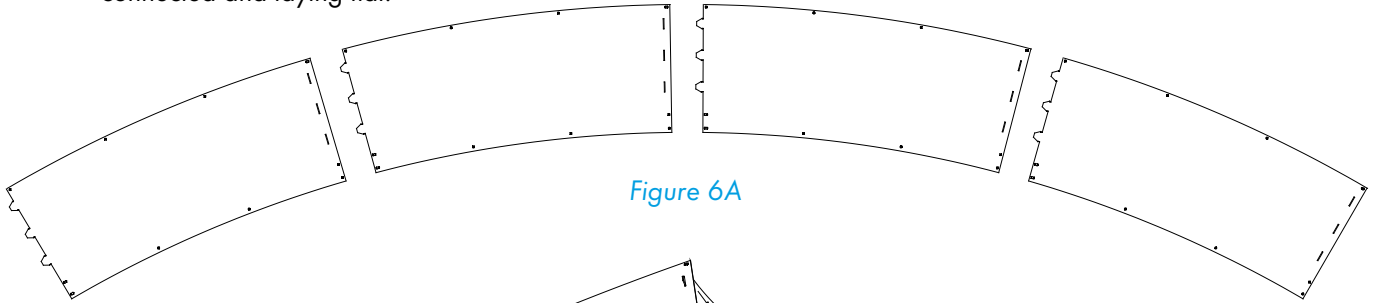


Figure 6A

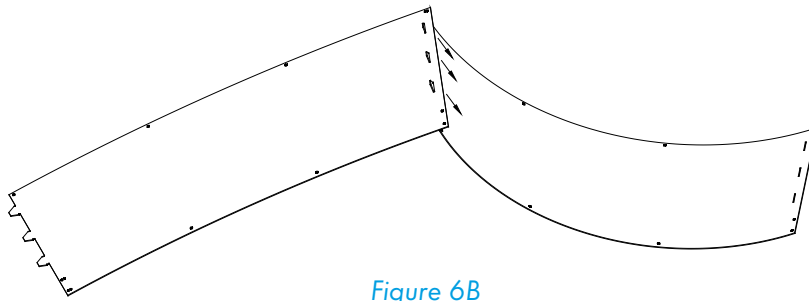


Figure 6B

Step 7

Fasten each of the joints in the single outer hole using (1) Bolt [A] and Nut [B], with the nut on the side with the tabs. At the inner pair of holes of each joint fasten using (1) Bolt [A] and Nut [B] with the bolt head on the side with the tabs. See [Figure 7](#).

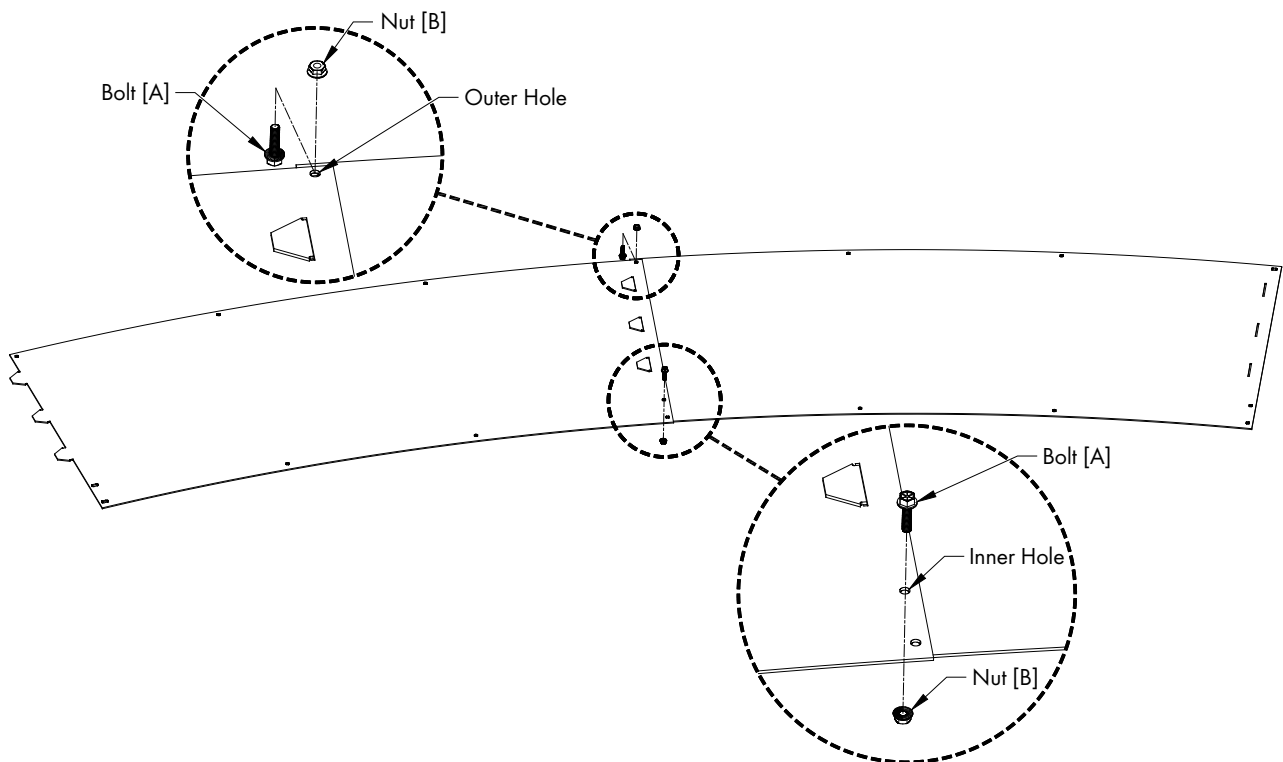


Figure 7

Step 8

Stand cone sections on end and curl ends around to form cone so that the nuts are outside and tabs on inside. Insert remaining tabs into slots so tabs are inside cone and fasten final joint using (1) Bolt [A] and Nut [B], with nut on inside of cone. At the inner pair of holes fasten using (1) Bolt [A] and Nut [B] with bolt head on inside of cone. See Figure 8. Leave all bolts and nuts loose at this time.

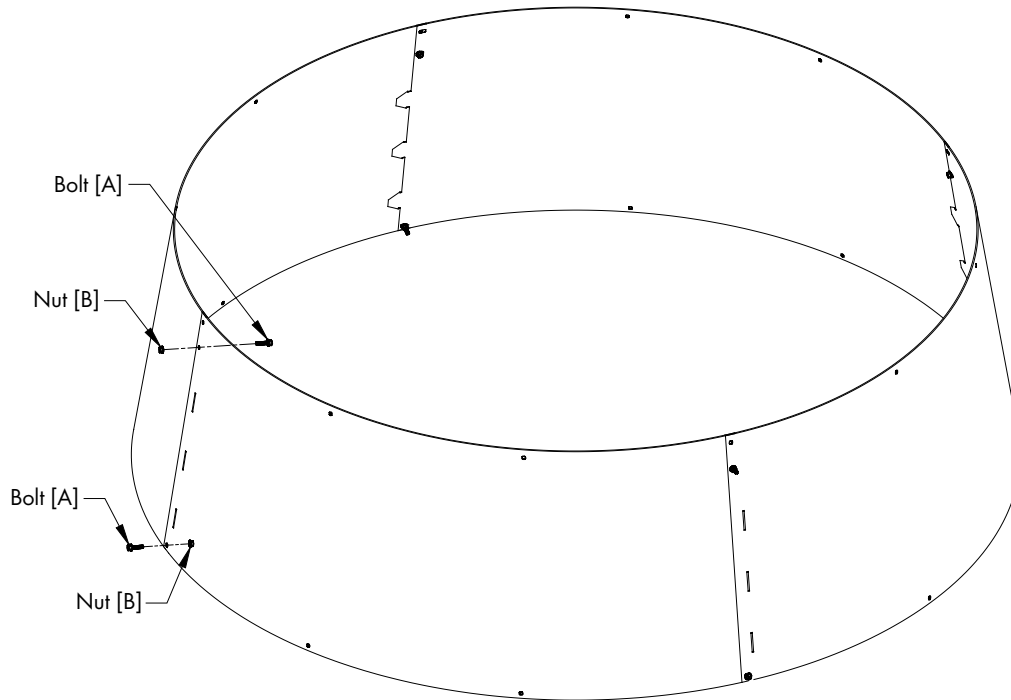


Figure 8

Step 9

Make sure the slots in the tabs of the Reinforcing Ring still line up with holes in the orifice of the fan. Install cone onto fan over the tabs of the Reinforcing Ring by putting cone over fan orifice and line up outer holes of cone with holes in fan orifice and tab slots. Fasten cone to fan orifice using (12) Bolt [A], Washer [C] and Nut [B] with bolt and washer on inside of fan orifice and nut on outside of cone with the tabs between orifice and cone. See Figure 9. Torque the last Ring Bolt to 125 in-lbs [14 Nm], and then tighten all the cone bolts at this time.

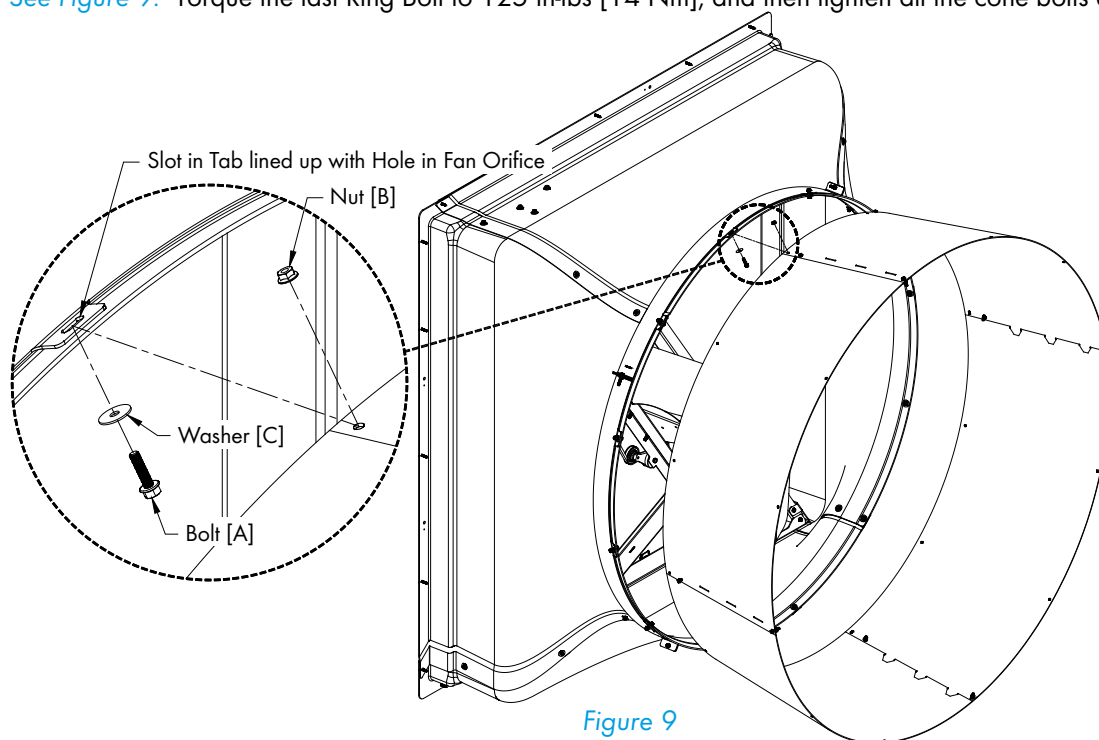


Figure 9

Step 10

Find the 2 Guard Sections and line the 2 of them up with the eyelets both facing the same direction. Then secure the guard sections together by wrapping the wire loop on each guard section around center wire of opposite guard section. See Figure 10.

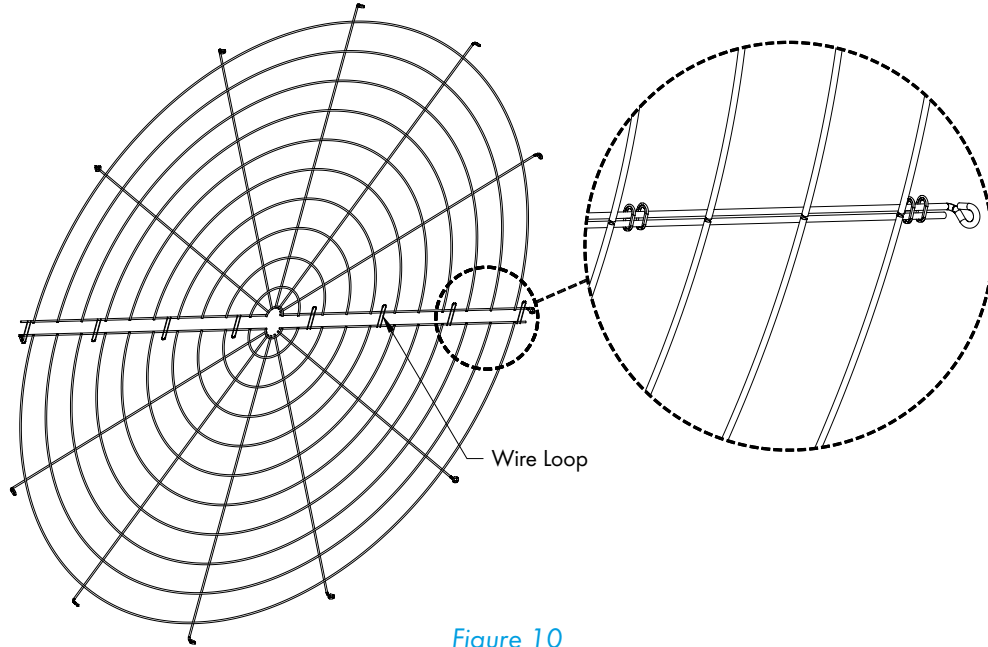


Figure 10

Step 11

Insert guard into cone with the eyelets facing you. Install eyelets over (4) Bolts already installed at joints in cone and fasten with Nut [B]. Secure (8) remaining eyelets using Bolt [A] and Nut [B]. See Figure 11.

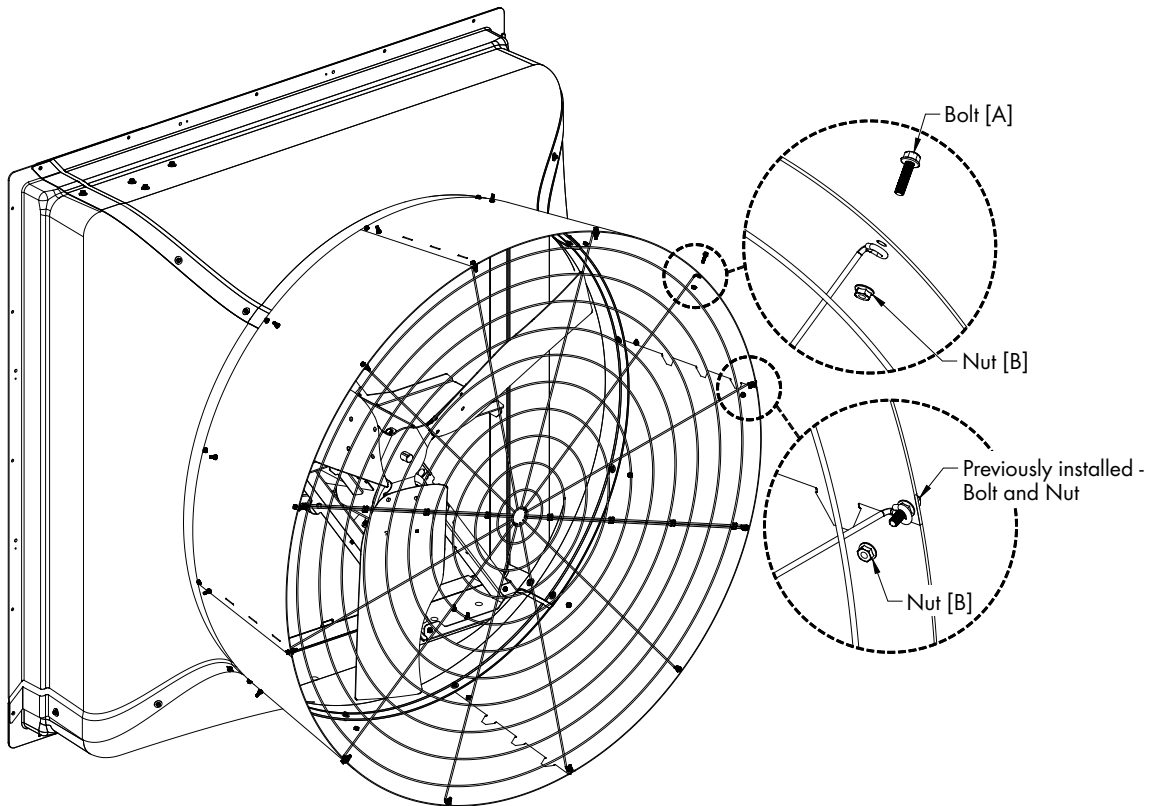


Figure 11

2.3 PT Shutter Installation

Step 12

Insert PT Shutter into fan by sliding the bottom flange of shutter into bottom shutter clips and pressing shutter inward. *See Figure 12.*

Note:

PT Shutter extends into room
2 5/16" from back of fan.

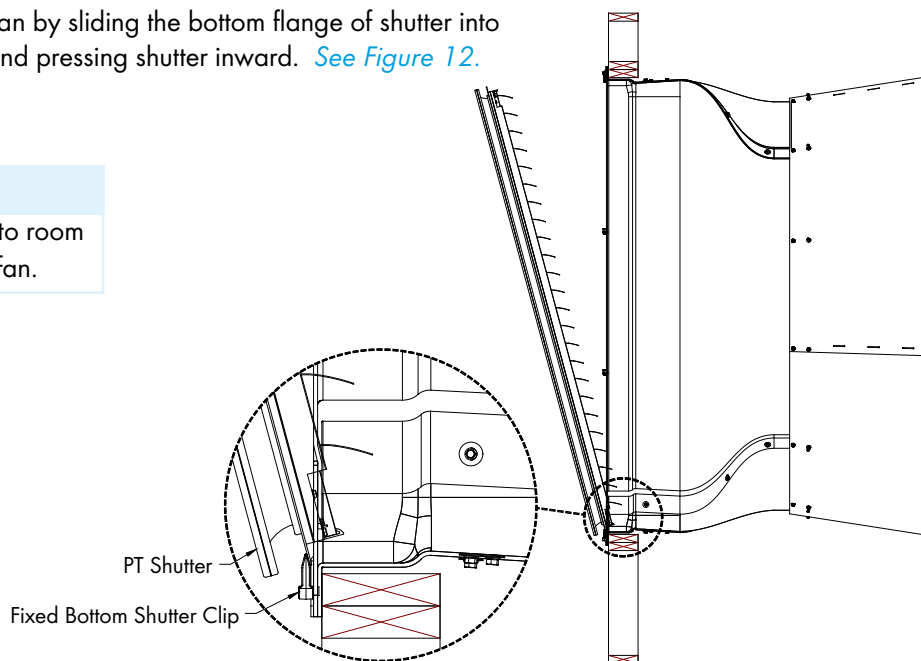


Figure 12

Step 13

Fasten shutter in place by rotating the side and top shutter clips over the shutter flanges. *See Figure 13.*

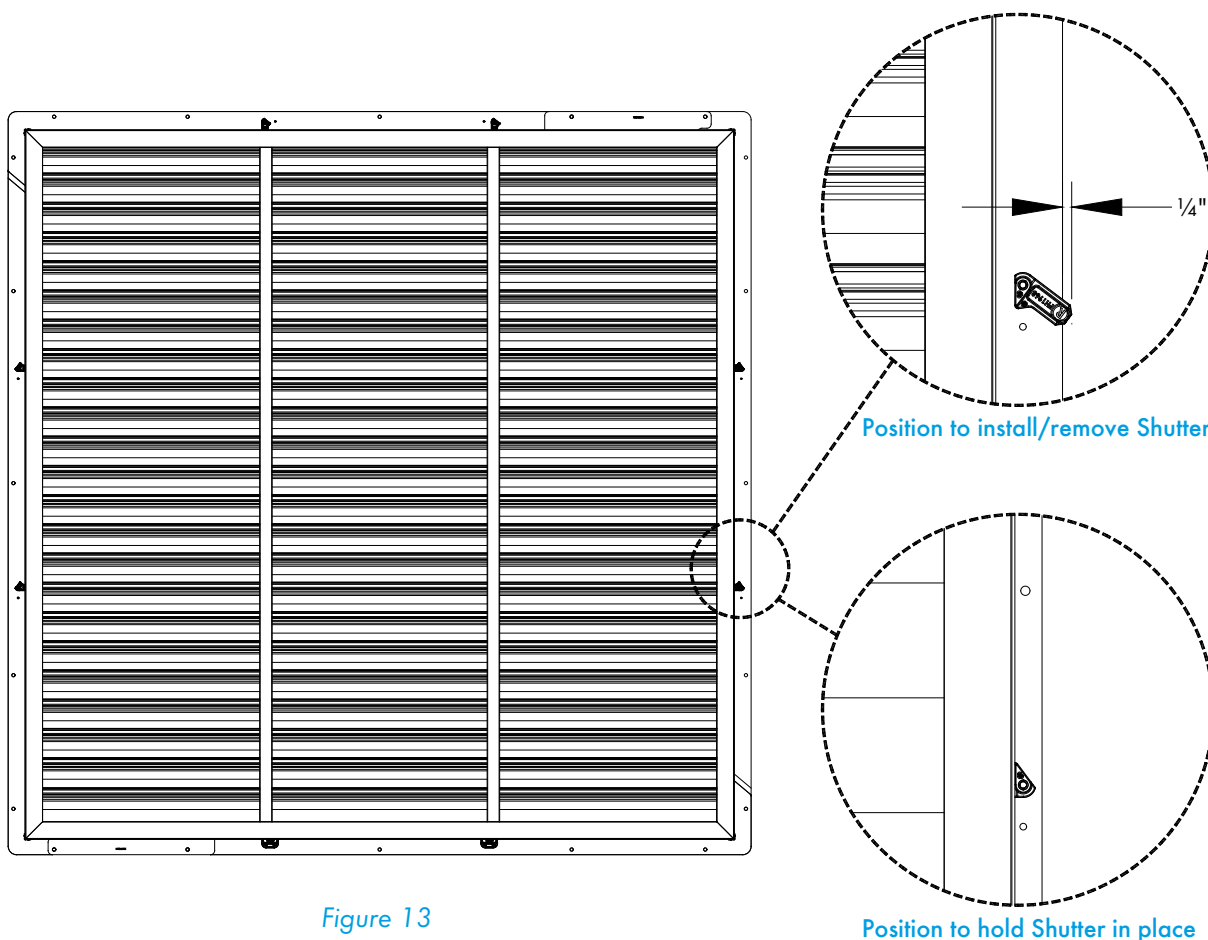


Figure 13

2.4 Shutter Wind Kit Installation

Step 14

Mount one Wind Kit Bracket on each side of fan, 3'-3" above the bottom flange of fan. The opening in the 'U' slot should be facing up and each Bracket should be mounted in same direction. See Figure 14A. Fasten Brackets in place using (2) Lag Screws (not provided). See Figure 14B.

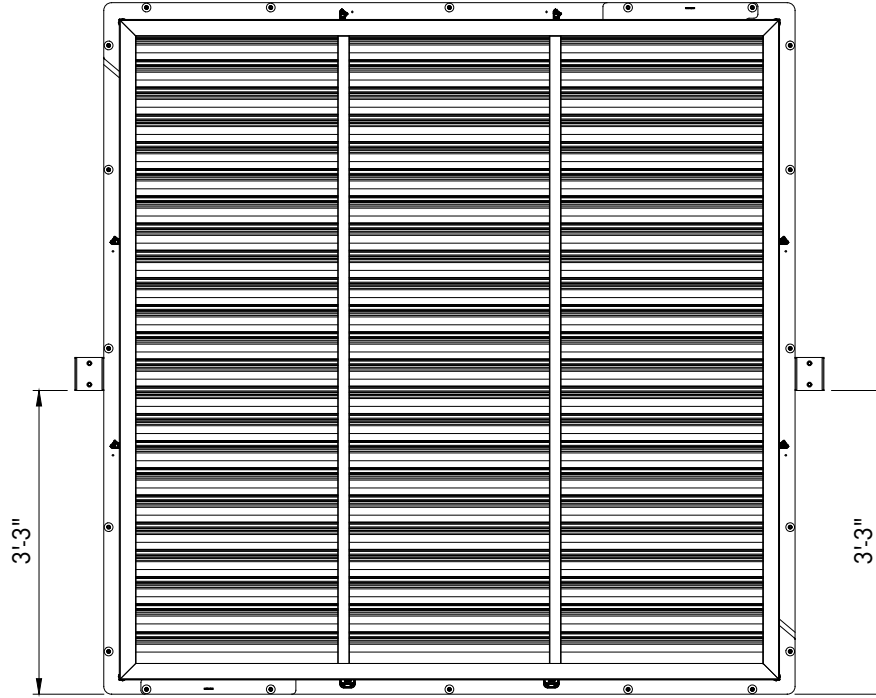


Figure 14A

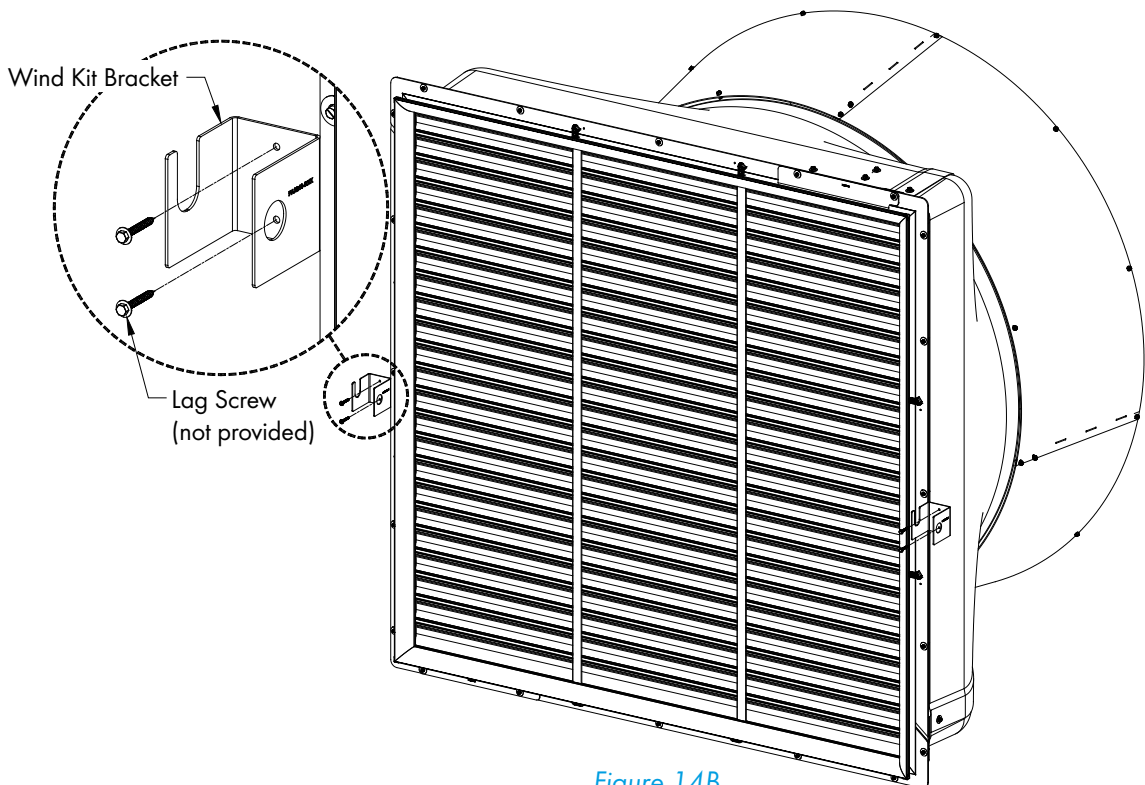


Figure 14B

Step 15

Slide the Wind Kit Pipe into the hole in the Left Wind Kit Bracket until it stops at the other side of the Bracket and set Pipe down into slot in opposite Bracket. *See Figure 15A.* For the completed Wind Kit installation *See Figure 15B.*

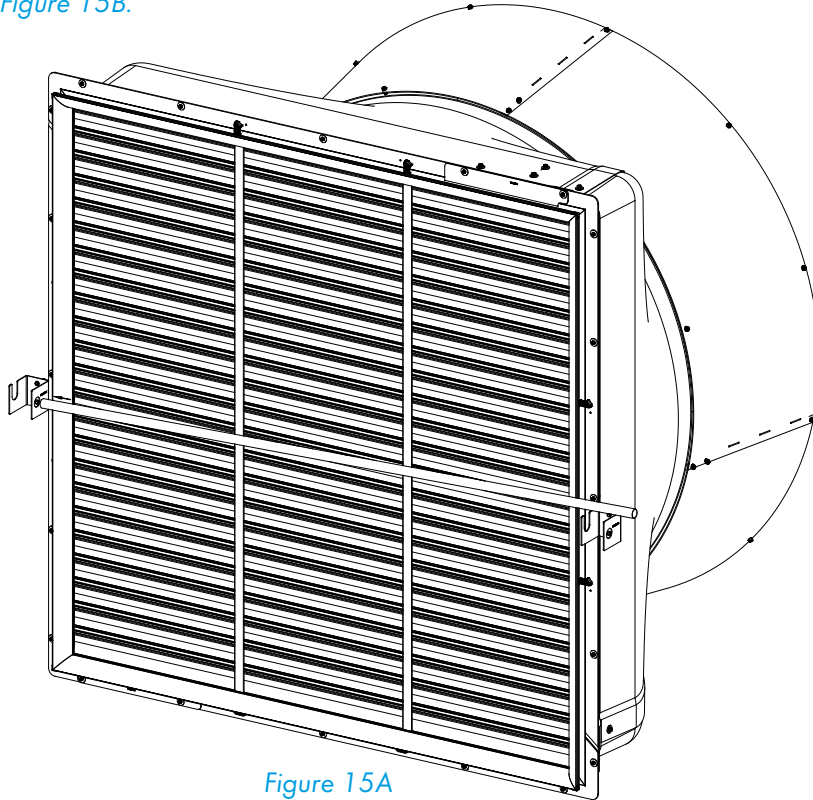


Figure 15A

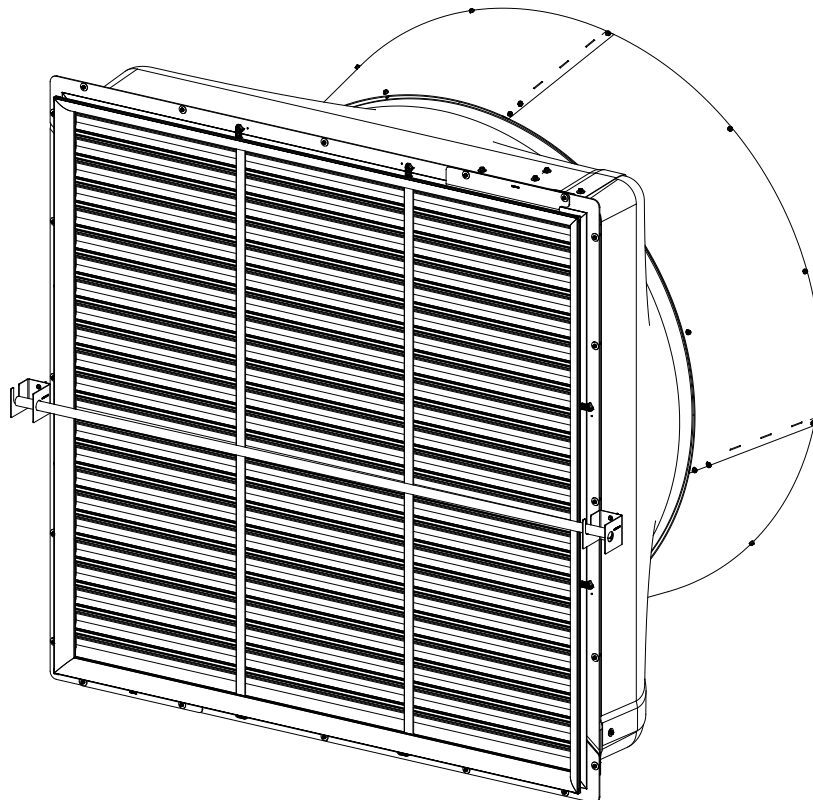


Figure 15B

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. After wiring check for proper motor rotation.

Single Phase Fans: motor overload protection should be provided for each fan. A Circuit Breaker Switch or slow blow motor type fuses must be used, *See Figure 16A. See form QM1400 for proper size.*

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 16B.*

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.

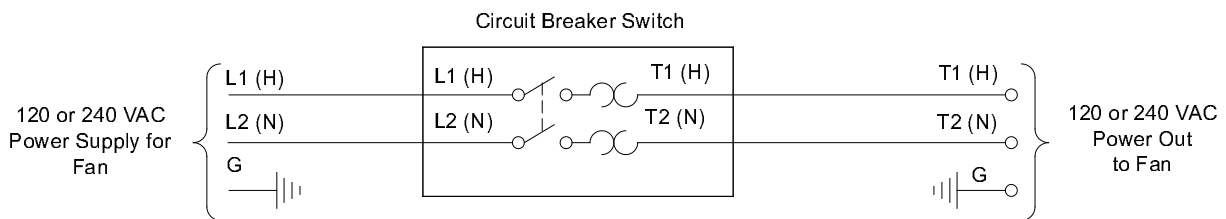


Figure 16A

Single Phase - Motor Overload Protection with Disconnect (SY2000 or Equivalent)

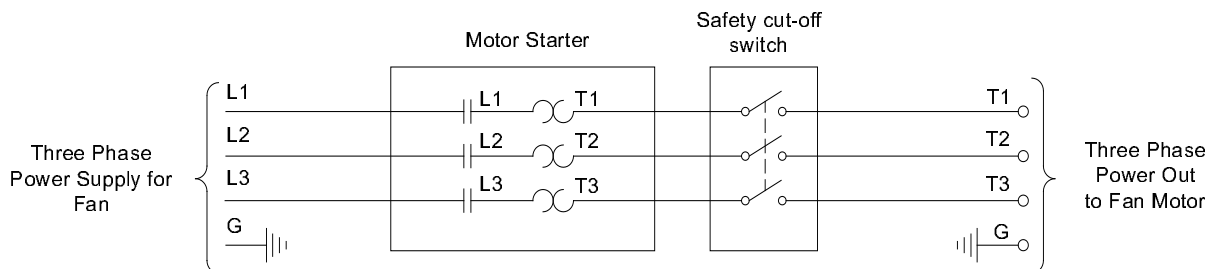


Figure 16B

Three Phase - Motor Overload Protection with Disconnect

KEY:

- L1=Line 1
- L2=Line 2
- L3=Line 3
- H=Hot
- N=Neutral
- G=Ground

NOTE: Information in parenthesis refers to 120 VAC control.

3.1 Recommended Wire Routing:

As the power cable exits the back of motor form a drip loop and then run power cable down along strut and "Zip" tie the cable to strut to prevent cable from getting tangled in the pulley or belt. [See Figure 17.](#) Then run the cable out the drain hole to the circuit breaker or control panel. (Continued on next page).

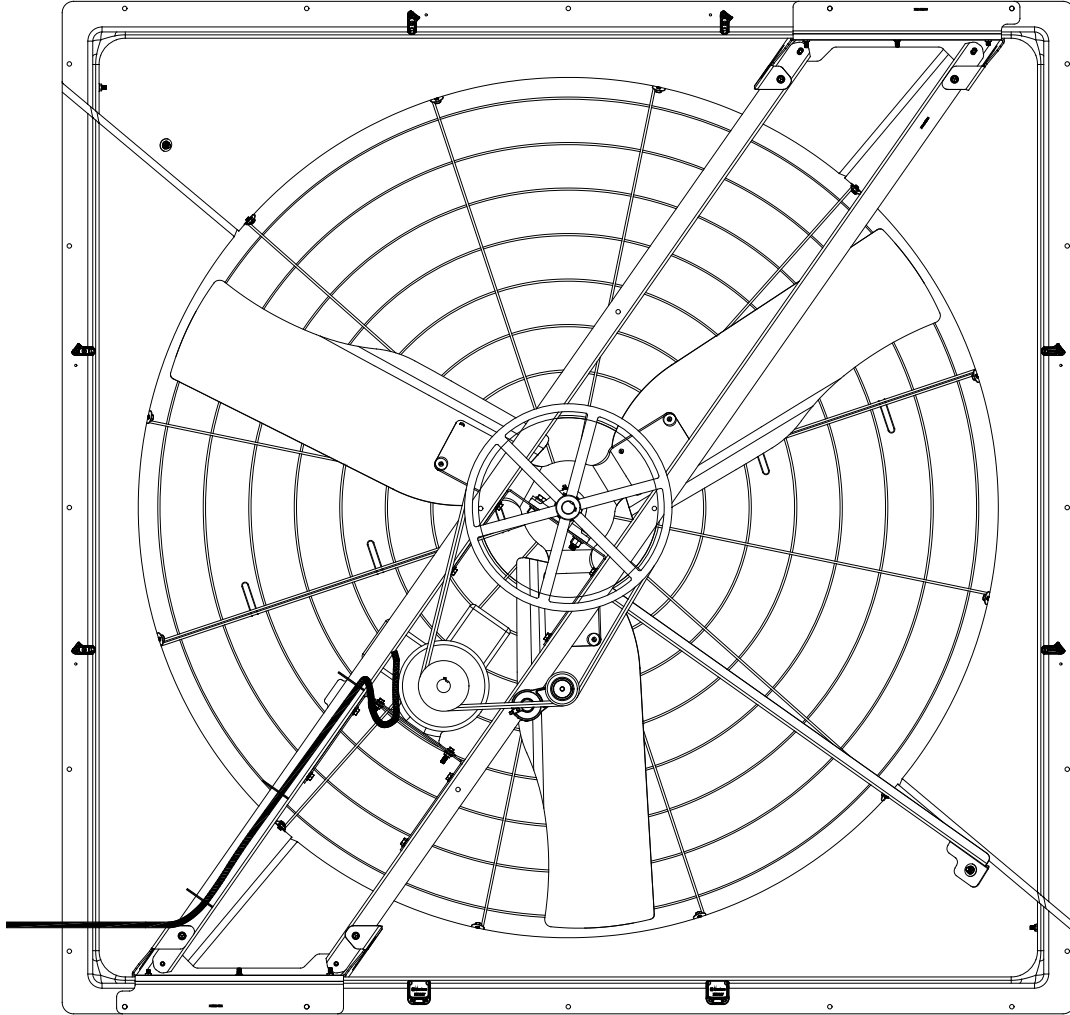


Figure 17

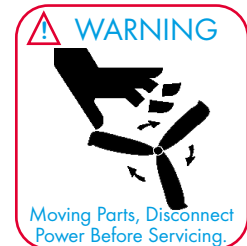
4.1 Operation

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.

ADJUSTMENTS: Set the fan control to the temperature shown on your ventilations system drawing, or to a value which will provide the desired environmental conditions.

Three Phase Fans:

- 1) The use of a quality frequency drive and the installation of line reactors is recommended to reduce voltage spikes and harmonic distortion.
- 2) Minimum operating frequency of 30 Hz.
- 3) Will require three pole contractors with overload protection (by others).



This page left blank intentionally

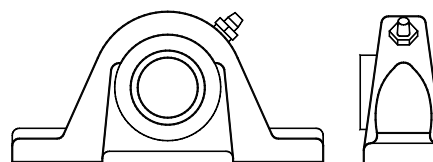
5.1 Maintenance

The following inspection and cleaning procedures should be performed monthly:

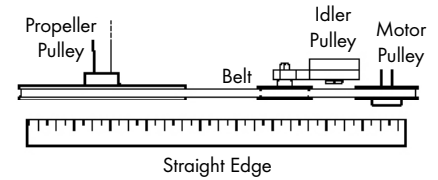
Tools Needed for Maintenance:

wrenches: 10mm, 13mm, 17mm, 27mm

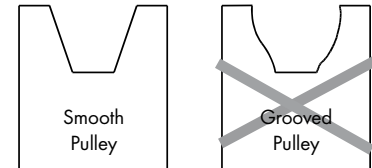
- 1) **INSPECT PROPELLER:** Check that propeller is secure on prop shaft or motor shaft and that there are no signs of damage. The blades are of a self-cleaning design and should not require maintenance.
- 2) **CLEAN** regularly for best results:
 - **FAN MOTOR:** Remove any dust accumulation from motor 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.
 - **SHUTTER:** Carefully clean dust from shutter blades and frame so that blades open and close freely. A brush or cloth should be used.
 - **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!**
- 5) **GREASE BEARINGS:** Grease bearings every 4-6 months. Use no more than 2 shots when greasing fan.
 - A premium non-water based grease is recommended:
 - Shell Alvania #2
 - Exxon Unirex N2
 - Mobil 532
 - Mobil Mobilux #2
 - Texaco Premium RB
 - Texaco Multifak #2



- 6) **CHECK DRIVE ALIGNMENT:** Check to make sure the belt is centered on the idler pulley, then use a straight edge to check the alignment of the drive pulleys. If an adjustment is needed, remove the belt, then loosen the set screw in one pulley and move it. Remember to tighten the set screw after making an adjustment. Drive alignment is very important for long belt life and proper operation.



- 7) **CHECKING PULLEYS:** Roll the belt off and look at both pulleys. If the pulley has grooves in it or is no longer smooth, it needs replacement. A loose or slipping belt will reduce fan performance up to 60% and cause premature belt failure.



- 8) **BELT TENSIONING:** Check condition of belt, if worn, replace belt. If belt is in good condition then make sure the tensioner is in the correct position. Looking from the inlet of the fan, the correct position of the tensioner is approximately the 2 o'clock position.

See Figure 18A.

To adjust the tensioner, loosen the 10mm bolt fastening the tensioner to the motor base (using 17mm end wrench) to allow tensioner arm to rotate. Place a 27mm (1 1/16") wrench onto the hex on tensioner. Turn the wrench clockwise until the Alignment Mark is at Mark 4 on the tensioner arm. See Figure 18B. Hold tensioner at this setting and tighten the 10mm bolt to 40 ft. lbs. [54 N-m] torque.

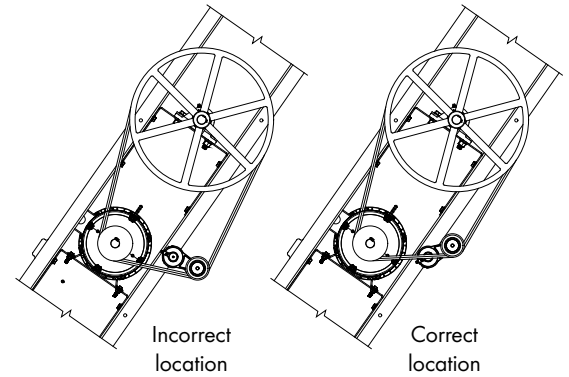


Figure 18A

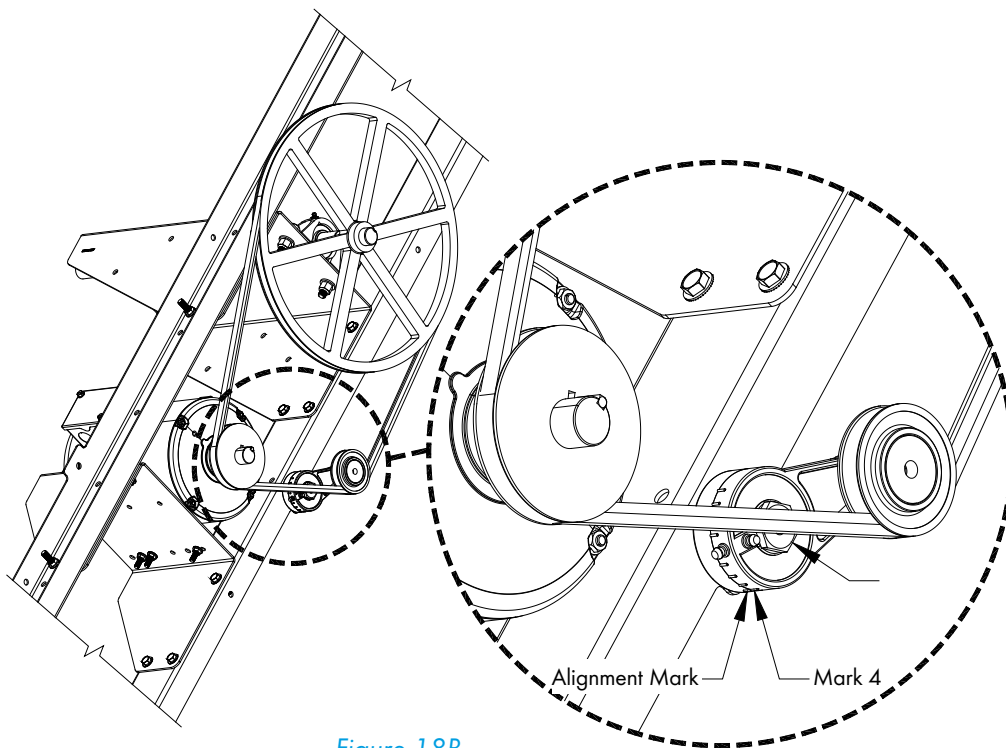


Figure 18B

6.1 Winterizing

In most climates, it is probable that the ventilation system will never need to operate at a total capacity during the colder winter months. Consequently, it is advisable to “winterize” those fans which will not be used in cold weather to avoid unnecessary heat loss and condensation.

To winterize, turn fan control “off”. Install the insulated closure panel over the fan intake. If you don’t have an insulated closure panel, a piece of rigid insulation material can be used. Remember the insulation panel must be removed before warmer weather returns.

NOTE: At least one single speed fan should be left uncovered and with power available to provide air movement in the event of variable speed control difficulties.

6.2 Winter Weather Protection

To prevent cone or fan damage from snow or ice sliding off building roof, weather protection must be provided. A weather shelter may be constructed to cover the entire fan, *See Figure 19*, or snow guards may be placed on the roof, *See Figure 20*.

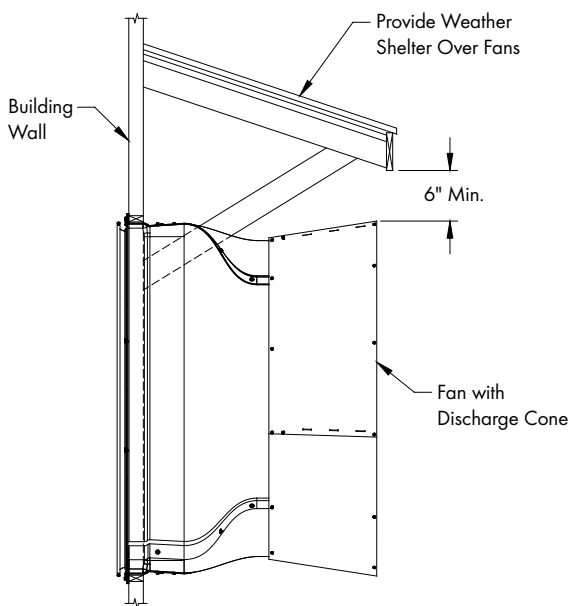


Figure 19

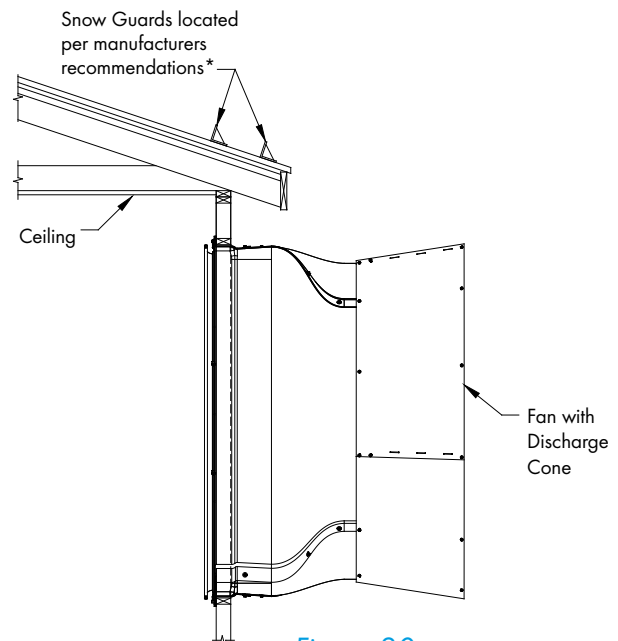


Figure 20

* Snow Guard Suppliers

Company Name	Phone No.	Fax No.	Web Site
Snojax, Inc.	800-766-5291	717-697-2452	www.snojax.com
Polar Blox	800-298-4328	814 629-9090	www.polarblox.com
LM Curbs	800-284-1412	903 759-3598	www.lmcurbs.com
Alpine Snow Guards	888-766-4273	888-766-9994	www.alpinesnowguards.com

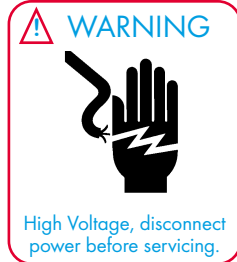


IMPORTANT

Munters Product and System Warranties do not cover cone or fan damage from external sources.

Note: Snow guards are designed to prevent sudden, dangerous snow and ice slides when attached to the building roof according to manufacturers recommendations. The supplier listing above is given as a reference only. Munters does not endorse any specific snow guard product and no performance warranty is implied.

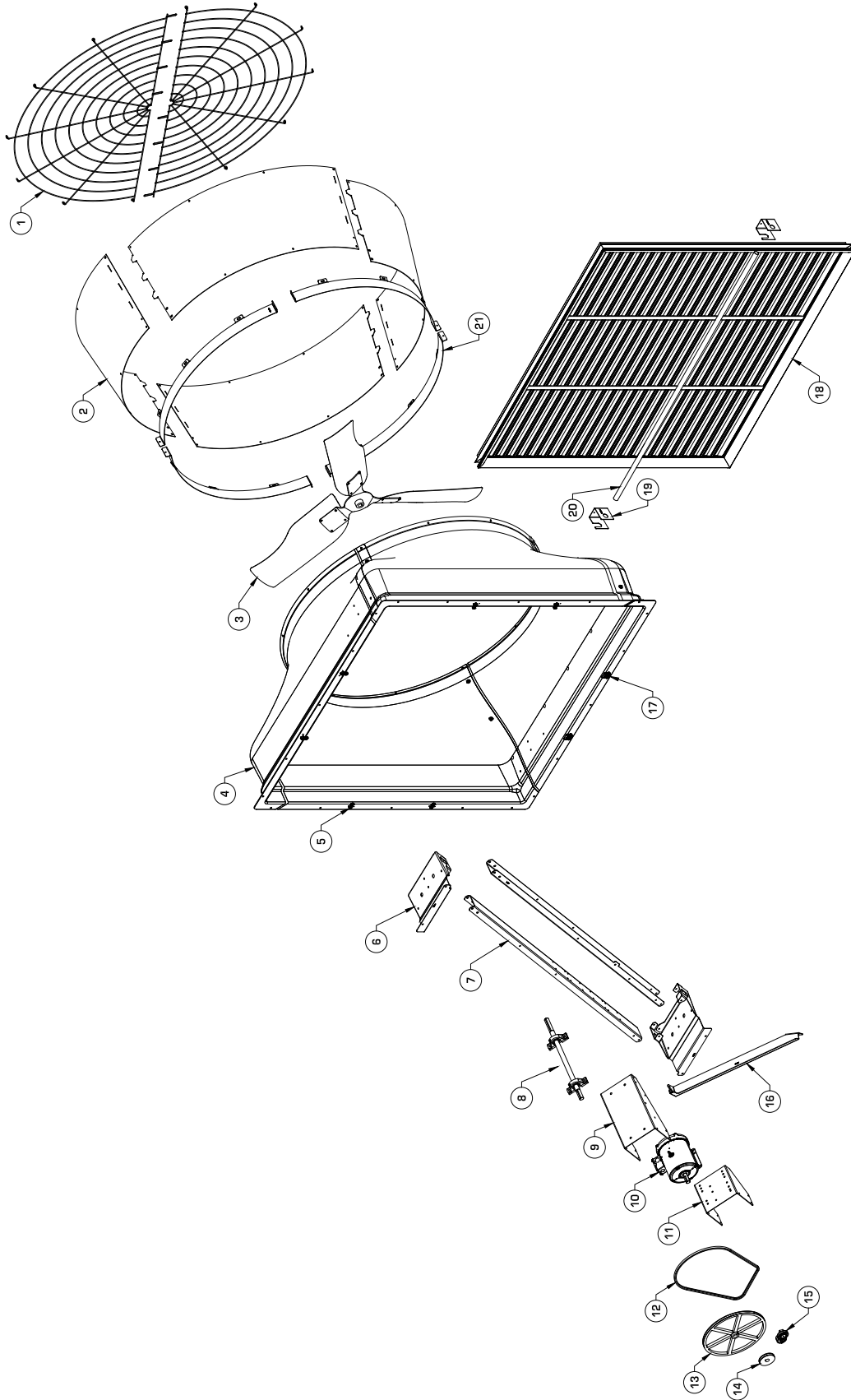
7.1 Troubleshooting



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 	<ol style="list-style-type: none"> 1. Set to a lower temperature 2. Replace fuse or reset breaker 3. Realign motor in fan housing 4. Repair or replace control 5. Repair or replace motor
Fan Operating- Insufficient Airflow	<ol style="list-style-type: none"> 1. Shutter jammed or dirty 2. Guard dirty 3. Frequency drive improperly adjusted 4. Incorrect Belt Tension/worn belt 	<ol style="list-style-type: none"> 1. Unjam and clean shutter 2. Clean guard 3. See operation, Step 2 for adjustments guidelines 4. See Maintenance Section, Belt Tensioning
Excessive Noise	<ol style="list-style-type: none"> 1. Propeller blade contacting fan housing 2. Motor bearing or shaft bearing defective 3. Frequency drive improperly adjusted 	<ol style="list-style-type: none"> 1. Sand fan housing to remove high spot 2. Repair or replace motor or shaft bearings 3. See operation, Step 2 for adjustments guidelines
Excessive Vibration	<ol style="list-style-type: none"> 1. Motor loose on mount 2. Propeller damaged 	<ol style="list-style-type: none"> 1. Tighten fasteners 2. Replace propeller 3. Repair or replace motor or propeller shaft

Exploded View

8.



Item	Catalog No.		Description	Qty.
	ATS743F3CT-E	ATS743F3CT-P		
1	FH6474	FH6474	Outlet Guard, 1/2 round, 74" Fan, CTD BLACK	2
2	FH4674	FH4674	Discharge Cone Section w/ Tabs, PL	4
3	FP1874	FP1874	Prop Assembly, 74" Fan, 3-Blade, GZ	1
4	FH2374	FH2374	Housing Assembly, 74" Fan, w/ Clips, FG	1
5	FH1968	FH1968	Pivoting Shutter Clip, PL	6
6	FH2877	FH2877	Strut Mount Bracket, 74" Fan, GZ	2
7	FH2873	FH2873	C-Channel Strut, 74" Fan, GZ	2
8	FH2376K	FH2376K	Assembly, Bearing/Shaft, w/ Pins, 74" Fan	1
	FH2196	FH2196	Shaft, 1.25"Dia, Stepped x 28.75"L, 74" Fan, STL	1
	FH2199	FH2199	Bearing, 1.25" Bore x 1.63" CL, Set Screws, 1/8" FTNG, CI	2
9	FH2880	FH2880	Bearing Mount Bracket, 74" Fan, GZ	1
10	FM1063	FM1063	Motor, 3HP, 1765 RPM, 182FR, 3PH, 230V/460V, 60Hz	1
11	FH2878	FH2878	BD Motor Base Bracket, 74" Fan, GZ	1
12	FH1441	FH1441	V-Belt, 79", A-Section, POLYSTR CORD	1
13	FH2185	FH2185	Sheave, A-section, 1 3/16" Bore, w/ keyseat, (Prop), CI	1
14	FH2020	FH2183	Sheave, A-section, 1 1/8" Bore, w/ keyseat, (Motor), CI	1
15	FH2402K	FH2402K	Belt Tensioner assembly with 3" Idler Pulley	1
	FH2406	FH2406	3" Idler Pulley only, with Bolt, CI	1
	FH2459	FH2459	Tensioner Arm only, AL	1
16	FH1974	FH1974	Strut Brace, 74" Fan, GZ	1
17	FH1967	FH1967	Fixed Shutter clip, PL	2
18	PT74	PT74	Shutter, all plastic	1
19	FA2619	FA2619	Wind Bracket, GZ	2
20	AC1416	AC1416	Wind Pipe, GZ	1
21	FH2890	FH2890	Reinforcing Ring, 1/4 Section, Atlas74, PWDCTD, WHT	4
--	HP1162	HP1162	Hardware Pkg., Fan/Cone Install	1

* Contact office for replacement part numbers for your fan configuration.

Atlas 74 Fan with Cone is developed and produced by Munters Corporation, Lansing, Michigan U.S.A. 1-800-227-2376



Munters Europe AB, Isafjordsgatan 1, P.O. Box 1150, SE-164 26 Kista, Sweden. Phone +46 08 626 63 00, Fax +46 8 754 56 66.

Munters Corporation 2691 Ena Drive Lansing, MI 48917 U.S.A. Phone +1 800-227-2376, Fax +1 517-676-7078

www.munters.us

Australia Munters Pty Limited, Phone +61 2 6025 6422, **Brazil** Munters Brasil Industria e Comercio Ltda, Phone +55 41 3317 5050, **Canada/US** Munters Corporation Lansing, MI Phone +1 517 676 7070, **China** Munters Air Treatment Equipment (Beijing) Co. Ltd, Phone +86 10 80 481 121, **Denmark** Munters A/S, Phone +45 9862 3311, **India** Munters India, Phone +91 20 3052 2520, **Indonesia** Munters, Phone +62 818 739 235, **Italy** Munters Italy S.p.A., Chiusavecchia, Phone +39 0183 52 11, **Japan** Munters K.K., Phone +81 3 5970 0021, **Korea** Munters Korea Co. Ltd., Phone +82 2 761 8701, **Mexico** Munters Mexico, Phone +52 818 262 54 00, **Russia** Munters AB, Phone +7 812 448 5740, **Singapore** Munters Pte Ltd., Phone +65 744 6828, **South Africa and Sub-Sahara Countries** Munters (Pty) Ltd., Phone +27 11 997 2000, **Spain** Munters Spain S.A., Phone +34 91 640 09 02, **Sweden** Munters AB, Phone +46 8 626 63 00, **Thailand** Munters Co. Ltd., Phone +66 2 642 2670, **Turkey** Munters Form Endüstri Sistemleri A.Ş, Phone +90 322 231 1338, **USA** Munters Corporation Lansing, MI Phone +1 517 676 7070, **Vietnam** Munters Vietnam, Phone +84 8 3825 6838, **Export & Other countries** Munters Italy S.p.A., Chiusavecchia Phone +39 0183 52 11