

# SCHAEFER

## Polyethylene Flushmount Exhaust Fan Series Operators Manual



Outlet View  
Polyethylene Exhaust Fan

### IMPORTANT: READ AND SAVE THESE INSTRUCTIONS

Read all instructions carefully before attempting to assemble, install, operate or service the product described. Failure to comply with instructions could result in personal injury and/or property damage.

Using this product for any other purpose than it was intended, or not within the operating specifications in this manual will void the warranty and may cause damage to the fan or serious injury to personnel.



### WARNING - TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK:

- Do not expose fan to water or rain.
- The power source must conform to the electrical requirements of the fan. Consult your local electrician before wiring and follow all national, state, and local electrical codes.
- Disconnect all power before performing maintenance.
- DO NOT use a variable speed control device, unless your fan has been equipped with a VFD-compatible motor.

### GENERAL SAFETY

- This fan is intended for general use only. Do not use near hazardous or explosive materials or vapors.
- Never insert fingers or any other objects into the fan when in operation.
- Use of an OSHA complying guard if within seven feet of floor is recommended.
- Use of a guard, shutter or hardware cloth if above seven feet of floor is recommended.
- Carefully read all safety messages in this manual and on your equipment safety decals. Follow recommended precautions and safe operating practices.

**KEEP THIS MANUAL IN A CLEAN, DRY PLACE FOR FUTURE REFERENCE.**

All information, illustrations and specifications in this manual are based on the latest product information available at the time of printing. Product specifications subject to change. We reserve the right to make changes at any time without notice.

If you need replacement parts, please contact your dealer. Take special care when ordering replacement blades, pulleys, motors and belts to ensure you get the proper configuration for your fan. If you do not have that information, please call Schaefer Ventilation Equipment at 800-779-3267 for assistance.

**SAFETY INFORMATION**

Warning and danger decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety decals immediately.

**IMPORTANT!**

Schaefer Ventilation Equipment strongly recommends that a good alarm system be installed in confinement buildings to warn of power failure and high temperature. Schaefer also recommends that an alternate power source be available for confinement buildings in case of power failure.

**INSTALLATION INFORMATION**

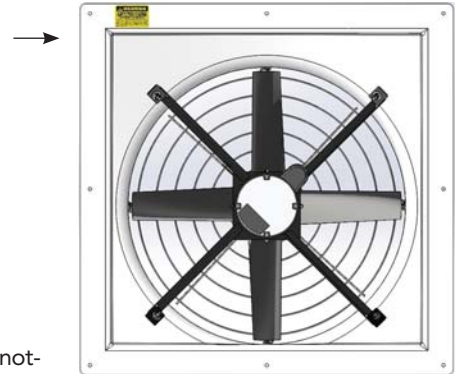
The installation information is the same for all polyethylene exhaust fans, unless otherwise noted. Refer to the Rough-In Opening Dimension chart for the correct opening for your product.

Build wall framing to the required wall opening illustrated in the chart below. The fans are shipped completely assembled and need only to be fastened to the wall framing with the supplied fasteners.

**INSTALLATION INSTRUCTIONS**

1. After you have made the correct sized opening in the wall, the fan unit can be placed into the opening and secured with lag bolts and washers (supplied) as in Figure 1.
2. There are two (2) shutter latches supplied with each fan which are used to hold the shutter in place. These latches should be positioned with one on the top and one on the bottom in the center hole of the fan panel. NOTE: Be sure to use two (2) washers for each shutter latch (see Figure 1).
3. Flashing should be attached across the top of the fan on the outside of the building. Caulking can be used on the sides of the fan housing to assure a tight seal.
4. Once the unit has been securely fastened to the wall, the fan is ready to be wired. As shown in Figure 2, the electrical wire from the motor should be run through the wire harness on the top inside of the fan housing and then through the notch in the upper right of the shutter frame.

Safety decal locations



Rough-in Opening Dimensions

Model #	Fan Size	Width (A)	Height (B)
PFM0900	9"	13-3/4"	14-1/2"
PFM1200	12"	15-3/4"	16-3/4"
PFM1600	16"	19-1/2"	20-1/2"
PFM2000	20"	23-1/2"	24-3/4"
PFM2400	24"	29"	29-1/2"

\* Standard 2x6 wall construction.  
 \* Rough-in Framing Tolerance: +1/4"/-0"

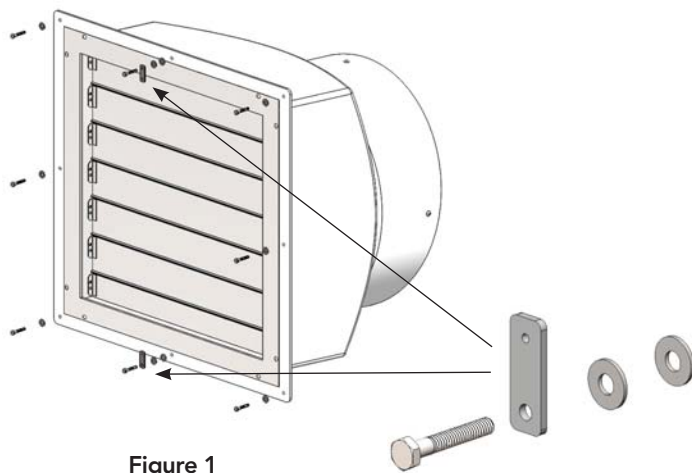
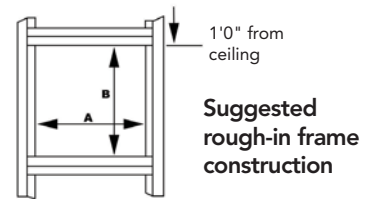


Figure 1

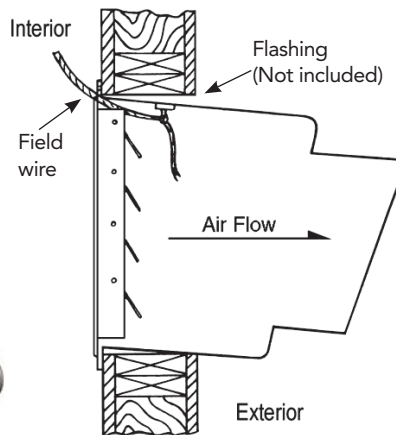


Figure 2

**\*NOTE: Shutter is on the inside of building and poly housing extends outside the building.**

## POWERING THE FAN:



### CAUTION:

ALL ELECTRICAL WORK SHOULD BE COMPLETED BY QUALIFIED ELECTRICIAN AND MEET ALL NATIONAL, STATE AND LOCAL CODES.

## INSTRUCTIONS FOR WIRING

- Wiring should only be done by a trained electrician to prevent injury or death.
- Configure internal wires to match supply voltage and wire according to motor nameplate. Test to verify correct rotation.
- Many of the electric motors in our fans are reversible. Make sure the fan is rotating in the proper direction (see BLADE ROTATION ARROW LABEL on the fan housing). Follow instructions on the motor label to change rotation if necessary.
- Schaefer recommends installing a lockable disconnect switch near each fan.
- Route wire to motor with drip loop and secure. Drip loop will drain accumulated moisture away from the motor.
- Only permit power to unit when motor cover plate is properly installed to prevent injury.



## MAINTENANCE

The fan you have purchased is built with heavy duty components, designed to give you many years of worry-free performance. Like anything else that is mechanical, your fan will require a small amount of periodic maintenance to assure maximum efficiency.



**Disconnect power before cleaning or maintaining your fan in order to prevent serious injury or death.**

## PERFORM EVERY 6 MONTHS

### Clean motor, fan blade and guard option

- Service and repair of fan should only be completed by a qualified technician.
- Use an air hose to remove dust.
- Use a damp cloth to remove grime and grease.
- PRESSURE WASHING WILL VOID WARRANTY.
- Do not use harsh chemicals or cleaners to clean any part of the fan.
- Sealed motor bearings are pre-lubricated and do not require servicing.



**CAUTION: Fasteners may loosen over time. It is important to check and tighten fasteners frequently.**

**CAUTION: Inspect fan components and fasteners frequently for corrosion. Replace any corroded fasteners or parts.**

## SET SCREW TIGHTENING SCHEDULE

1. Before initial operation of the fan, tighten set screws according to the procedure outlined below.
2. After 500 operating hours or three months, whichever comes first, tighten set screws to the full recommended torque.
3. At least once a year, tighten set screws to the full recommended torque.

## PROCEDURE FOR TIGHTENING SET SCREWS IN BEARINGS AND BLADES

### ONE SET SCREW APPLICATION

Using a torque wrench, tighten the set screw to the full torque recommended in Table 1.

### TWO SET SCREW APPLICATION

1. Using a torque wrench, tighten the one set screw to half of the torque recommended in Table 1.
2. Tighten the second set screw to the full recommended torque.
3. Tighten the first set screw to the full recommended torque.

**Table 1. Recommended Tightening Torque for Set Screws**

Set screw diameter	Torque (in-lbs)
#10	35
1/4	80
5/16	120
3/8	240

## TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
Fan not operating	<ol style="list-style-type: none"> <li>1. Improper wiring</li> <li>2. Fan control set above room temperature</li> <li>3. Blown fuse or tripped breaker</li> <li>4. Fan blade contacting fan</li> <li>5. Fan control defective</li> <li>6. Motor defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Ensure wiring is done correctly</li> <li>2. Set to a lower temperature</li> <li>3. Replace fuse or reset breaker</li> <li>4. Realign fan blade in fan housing</li> <li>5. Repair or replace control</li> <li>6. Repair or replace motor</li> </ol>
Insufficient airflow	<ol style="list-style-type: none"> <li>1. Shutter jammed</li> <li>2. Guard, shutter, fan blade dirty</li> <li>3. Fan blade facing wrong direction</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean shutter and fan housing</li> <li>2. Clean guard, shutter and fan blade</li> <li>3. Orient fan blade correctly</li> </ol>
Excessive fan noise	<ol style="list-style-type: none"> <li>1. Fan blade contacting fan panel</li> <li>2. Motor bearing defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Realign fan blade in fan housing</li> <li>2. Repair or replace motor</li> </ol>
Excessive vibration	<ol style="list-style-type: none"> <li>1. Motor loose in mount</li> <li>2. Fan blade damaged</li> <li>3. Motor shaft bent</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten fasteners</li> <li>2. Replace fan blade</li> <li>3. Repair or replace motor</li> </ol>

## WARRANTY

### Schaefer Limited Warranty Policy

Schaefer Ventilation Equipment, LLC (SVE) provides the following limited warranty from the date of invoice to the initial purchaser of our products or to its customer with a dated proof of purchase:

Two-year coverage (unless otherwise indicated below) applies to all products, components and assemblies provided by SVE that prove to be defective in material or workmanship. Any such defective product will be repaired or replaced at SVE's option, with the defective product or component returned-upon approval, to SVE, F.O.B Sauk Rapids, Minnesota. This warranty does not cover: failure, damage or malfunction as a result of: Improper installation or installation not in accordance with installation instructions. Operating conditions that vary from SVE's operating instructions. Misuse, abuse, negligence, alteration, or accident. Transporting the product. Improper operation or lack of appropriate or regular maintenance of the product. Loss of time, inconvenience, loss of use of the product or other consequential or incidental damages. Parts that need replacement due to normal wear and tear. Superficial or cosmetic rust or corrosion. Any product whose name plate has been removed.

*Full warranty statement may be printed or downloaded from [www.schaeferventilation.com](http://www.schaeferventilation.com)*



sales@schaeferventilation.com • www.schaeferventilation.com • 320.251.8696

©2015 Schaefer Ventilation Equipment. All rights reserved. 2-17-2015  
M-PFMEF