



PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual TABLE OF CONTENTS

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PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual GENERAL INSTRUCTIONS

INTRODUCTION

DO NOT INSTALL, USE OR OPERATE THIS EQUIPMENT UNTIL THIS MANUAL HAS BEEN READ AND UNDERSTOOD. RETAIN THESE INSTRUCTIONS FOR FUTURE USE.

THESE INSTRUCTIONS ARE INTENDED TO SUPPLEMENT GOOD GENERAL PRACTICES FOR THE VARIOUS STYLES OF PLASTEC FANS AND BLOWERS. DETAILED INSTRUCTIONS WILL BE PRESENTED SEPARATELY.

IT IS THE RESPONSIBILITY OF THE USER/PURCHASER TO ASSURE THE INSTALLATION, OPERATION, AND MAINTENANCE OF THIS EQUIPMENT IS CARRIED OUT BY EXPERIENCED AND QUALIFIED PERSONNEL IN THIS TYPE OF WORK.

CONTACT YOUR LOCAL REPRESENTATIVE FOR ANY FURTHER INFORMATION REQUIRED.

SHIPPING & RECEIVING

All fans and blowers have been thoroughly inspected before shipment. Unless otherwise noted, All fans and blowers are test run and approved prior to shipment.

THE RECEIVER MUST NOTE ANY DAMAGE ON THE CARRIER'S BILL OF LADING AND FILE A CLAIM IMMEDIATELY WITH THE FREIGHT COMPANY.

Keep a record of all equipment received including inspection details and date of receipt.

Contact your sales representative for replacement service.

HANDLING

Handle your equipment with caution using proper equipment and safety procedures.

STORAGE

Store fans in a clean, dry location prior to installation to protect against the weather and corrosive atmospheres. If it is necessary to store equipment outdoors, protect from the elements as much as possible. Keep equipment dry and clean. Cover inlets/outlets to prevent collection of moisture, dust, etc.

For equipment stored for extended periods of time (1 month), rotate motor bearings. Records of stored equipment should be kept to assure proper procedures.



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INSTALLATION

Area where fan is installed should provide support for rigid mounting of the fan(s). Fans not supported properly will cause vibration that could cause damage or injury! Use guy wires to secure roof mounted units, stacks and accessories where excessively windy conditions are prevalent.

CAUTION! Fans contain rotating parts and electrical service is used to operate. Use appropriate safety precautions during Installation, Operation and Maintenance procedures.

WARNING! Do not install or operate fan in an environment or atmosphere where combustible or flammable materials, gases or fumes are present unless it is specifically designed for that type of environment. Explosion or fire can result.

Roof curbs for mounting of fans should be securely installed prior to fan installation. Fan should be firmly secured to roof curb to prevent vibration.

CAUTION! All electrical work must be done in accordance with local and/or national codes as applied. Work should be performed by qualified electricians.

WARNING! This product must be grounded.

DANGER! Make sure power is turned off and locked in the off position before installing, wiring or servicing fan.

CAUTION! Always check the supply voltage against the motor name plate voltage. Incorrect voltage can damage the motor and void the motor warranty.

WARNING! Keep all wiring clear of rotating or moving parts.

WARNING! Before starting the fan, turn the wheel to assure it rotates freely. **POWER MUST BE OFF DURING THIS OPERATION.**

CAUTION! Before operating any fan or blower, make sure any guards or protective devices required are in place for protection against injury.



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Installation, Operation & Maintenance Manual GENERAL INSTRUCTIONS

TEST & START PROCEDURES

Disconnect power before servicing the unit. Make sure power is turned off and locked in the **OFF** position.

Check that fan/blower is securely attached to the mounting location and that the mounting location is also secure. This unit should not vibrate when operating! Check clearances and all mounting hardware and secure as required.

All fans have sealed for life ball bearings and do not require lubrication. Running the unit for 15 to 20 minutes will assure lubricant to thoroughly mix with the bearings and operate at optimum quietness.

When power is applied to the unit, check for proper rotation of fan wheel/impeller. Most motors allow for reverse rotation and if the fan wheel/impeller is moving in the wrong direction, air performance will be greatly affected. Reverse rotation for a prolonged period of time may cause motor damage that could void the warranty. Check the motor wiring diagram for proper wiring.

Electrical input check should be performed with fan properly loaded (pressure drop) to assure motor name plate amps are not exceeded. Never run a fan at free air.

Check fan RPM against motor name plate to verify correct performance.

The fans are factory tested and checked for vibration so this type of balancing is not required. Vibration could be caused by rough handling during shipment, installation, and weak foundations. Correct as required.



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MAINTENANCE

Before performing any maintenance on the fan, be sure power is turned off and locked in the off position at the service entrance.

Ventilators should be carefully checked at least once a year. For critical or rugged applications, a routine check every two or three months is suggested.

All motors carry a one-year warranty from the date of shipment. For repairs within the warranty period, the motor must be taken to the motor manufacturer's authorized service dealer. Contact your representative for additional warranty details.

A periodic motor check should consist of spinning the motor shaft with the power off to be sure the motor turns freely and the bearings run smoothly.

The motor cooling fan and guard should also be maintained by checking and cleaning accumulated dust and debris.

The rotating wheel or propeller requires particular attention since materials in the air being handled can build up on blades to cause destructive vibration or weaken the structure of the propeller by corroding and/or eroding the blades. Regular inspection and corrective action at intervals determined by the severity of each application are essential to good service life and safety.



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MOTORS

Periodic checks of voltage, frequency and current of a motor while in operation are recommended. Such checks assure the correctness of frequency and voltage applied to the motor and yield an indication of the fan load. Comparison of this data with previous data will give an indication of the fan performance. Any serious deviations could indicate a potential motor failure.

All motors carry a one-year warranty from date of shipment. For repairs within warranty period, the motor must be taken to the motor manufacturer's authorized service dealer. Contact your representative for additional warranty details.

A periodic motor check should consist of spinning the motor shaft with the power off so to be sure the motor turns freely and the bearings run smoothly.

Repair or replacement of motors is normally performed by a repair station authorized by the manufacturer. Contact your representative or the factory for locations nearest you. DO NOT ship motor to factory without specific authorization forms.



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WARRANTY

This Blower Housing Assembly is warranted to be free from defects in material and workmanship for two years from date of original shipment. Any units or parts which prove to be defective and are reported during the warranty period will be replaced at our option when returned to our factory, transportation prepaid by the sender. Deterioration of wear by heat, abrasive action, chemicals, improper installation or operation or lack of normal maintenance shall not constitute defects, and are not covered by warranty. **Transportation to and from the factory for warranty repairs is not covered under warranty and is the sole responsibility of the owner of the equipment.**

The motor is warranted by the motor manufacturer for one year. If the motor becomes defective in the warranty period, it should be taken to the nearest authorized motor service station. If this is not done, the motor manufacturer will not warrant the motor. Call the factory for instructions if authorized service station is not known.

The manufacturer will not be responsible for any installation, removal or re-installation cost or any consequential damage resulting in failure to meet conditions of any warranty.

LIMITATION OF WARRANTY AND LIABILITY: This warranty does not apply to any product or parts which have failed as a result of faulty installation or abuse, or incorrect electrical connections or alterations, made by other, or use under abnormal operating conditions or misapplications of the products and parts.

The manufacturer will not approve for payment any repairs made outside its factory without prior written consent.

The foregoing shall constitute our sole and exclusive warranty and our sole and exclusive liability and is in lieu of all other warranties whether written, oral, implied, or statutory. There are no warranties which extend beyond the description of the page hereof. Seller does not warranty that said goods and articles are merchantable quality or that they are fit for any particular purpose. The liability of seller on any claim of any kind, including negligence, for any loss or damage arising out of, or connected with, or resulting from the sale and purchase of the products and parts covered by this proposal, acknowledgment, order or from performance or breach of any contract pertaining to such sale or purchase, or from the design, manufacture, sale, delivery, resale, installation, technical direction of installation, inspection, repair, operation or use of any products or parts covered by this proposal, acknowledgment, order or furnished by seller shall, in no case exceed the price allocable to the product or parts thereof which give rise to the claim and shall terminate one (1) year after shipment of said products and parts.

In no event, whether as a result of breach of contract, or warranty or alleged negligence, defects, incorrect advise or other causes, shall seller be liable for special or consequential damages including, but not limited to, loss of profits or revenue, loss of use of the equipment or any associated equipment, cost of capital, cost of substitute equipment, facilities or services, down time costs or claims of customers of the purchaser for such damages. The manufacturer neither assumes nor authorizes any persons to assume for it any other liability in connection with the sale of its fan products and parts.

SAFETY ACCESSORIES WARNING: The responsibility for providing safety accessories for equipment supplied by the manufacturer is that of the installer and user of this equipment. The manufacturer sells its equipment with and without safety accessories, and accordingly it can supply such safety accessories upon receipt of order.

The user, in making its determination as to the appropriate safety accessories to be installed and any warning notices, should consider (1) the location of the installation, (2) the accessibility of employees and other persons to this equipment, (3) any adjacent equipment, (4) applicable building codes, and (5) requirements of the Federal Occupational Safety and Health Act.

Users and installers of this equipment should read, "RECOMMENDED SAFETY PRACTICES FOR AIR MOVING DEVICES" which is published by Air Movement and Control Association, 30 West University Drive, Arlington Heights, Illinois, 60004.



PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual DISASSEMBLY INSTRUCTIONS

PLASTEC UTILITY AND STORM BLOWERS

Before beginning these instructions, place this fan on a bench or table top that can support its weight.

- 1) Remove Torx head screws from the motor plate. (These screws require a T-20 bit.)**
- 2) Lift the assembly clear of the fan housing. Set the fan housing aside.**
- 3) Use a thin flat head screwdriver to pop the black hub cap off the bushing. It may be necessary to reach between the blades of the impeller to do this. (Be careful not to damage the impeller during this step.)**
- 4) Remove the shaft bolt, lock washer and washer. The bolt will be 8mm, 10mm or 13mm.**
- 5) Use a gear puller to remove the impeller from the shaft. Always use the bushing as the pulling point. Pulling on the blades or rim of the impeller will cause irreparable damage.**
- 6) Use a 10mm or 13mm socket to remove the four bolts securing the motor plate to the C-face.**

(See Illustrations)



PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual REASSEMBLY INSTRUCTIONS

PLASTEC UTILITY AND STORM BLOWERS

Before beginning these instructions, place this fan on a bench or table top that can support its weight.

- 1)** Stand the motor on end, so that the shaft is pointing vertically.
- 2)** Set the motor plate onto the C-face and align bolt holes. If motor plate does not fit flush on the C-face, use a small hammer or dead blow mallet to seat the plate onto the rabbet. You should not need much force to seat the plate. Secure the motor plate with four bolts, lock washers and washers.
- 3)** Check the fit of the impeller bushing on the motor shaft. If it slides on easily, then push it onto the shaft and tap to seat it on the shaft shoulder. If it is a tight fit, lubricate the inside of the bushing with 3-in-1 oil or a similar product. Set the impeller on top of the shaft so it sits level. Use a driving rod and mallet, on bushing only, to drive the impeller onto the shaft until it touches the shoulder. Do not hit with excessive force or the bearings may be damaged. Remove any debris that was cut from the inside of the bushing. If there is a gap between the tip of the shaft and the top of the bushing, fill it with stainless steel washer(s).
- 4)** Secure the impeller on the shaft with supplied bolt, lock washer and washer.
- 5)** Cover the bushing with the hub cap and use a mallet to seat it properly. It may be necessary to cut out the raised ring on the inside of the hub cap with a box knife.
- 6)** Select the orientation of the fan housing. There are eight possible orientations. Remember, if the fan is being installed in a weather hood, the motor will be upside down. Use eight Torx head screws to secure the motor assembly to the fan housing. Inspect visually and test electrically before installing the fan.

(See Illustrations)



PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual DISASSEMBLY INSTRUCTIONS

PLASTEC PSS SERIES STAINLESS STEEL UTILITY BLOWERS

Before beginning these instructions, place this fan on a bench or table top that can support its weight. For tool size see illustration.

- 1) Remove Hex cap screws from the motor plate. (Be careful not to damage the impeller during this operation.)**
- 2) Lift the assembly clear of the fan housing. Set the fan housing aside.**
- 3) Remove the hub cap and teflon gasket.**
- 4) Loosen the shaft locking screws (hub).**
- 5) Use a gear puller to remove the impeller from the shaft. Always use the bushing as the pulling point. Pulling on the blades or rim of the impeller will cause irreparable damage.**
- 6) Remove the 4 motor plate bolts to remove the motor plate from the motor.**
- 7) Remove the motor support stand if required by this operation.**

(See Illustrations)

**NOTE: Any new assembly parts or mounting hardware sourced
must be 316 Stainless Steel**



PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual REASSEMBLY INSTRUCTIONS

PLASTEC PSS SERIES STAINLESS STEEL UTILITY BLOWERS

Before beginning these instructions, place this fan on a bench or table top that can support its weight.

- 1)** Stand the motor on end, so that the shaft is pointing vertically.
- 2)** Set the motor plate onto the C-face and align bolt holes. If motor plate does not fit flush on the C-face, use a small hammer or dead blow mallet to seat the plate onto the rabbet. You should not need much force to seat the plate. Secure the motor plate with four bolts, lock washers and washers. Apply the teflon gasket between the motor plate and housing.
- 3)** Check the fit of the impeller bushing on the motor shaft. If it slides on easily, then push it onto the shaft and tap to seat it on the shaft. If it is a tight fit, lubricate the inside of the bushing with 3-in-1 oil or a similar product. Set the impeller on top of the shaft so it sits level. Use a driving rod and mallet, on bushing only, to drive the impeller onto the shaft until it is even with the end of the motor shaft. Do not hit with excessive force or the bearings may be damaged.
- 4)** Secure the impeller on the shaft with supplied locking screws (2).
- 5)** Cover the bushing with the hub cap gasket and hub cap. Lock in place with two screws supplied.
- 6)** Select the orientation of the fan housing. There are eight possible orientations. Remember, if the fan is being installed in a weather hood, the motor will be upside down. Use eight Hex head screws to secure the motor assembly to the fan housing. Inspect visually and test electrically before installing the fan. Ensure the teflon gasket is in place.

(See Illustrations)

**NOTE: Any new assembly parts or mounting hardware sourced
must be 316 Stainless Steel**



PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual DISASSEMBLY INSTRUCTIONS

PLASTEC JET SERIES

Before beginning these instructions, place this fan on a bench or table top that can support its weight.

- 1) Disconnect the fan from its power source.
- 2) Open the switch box. Take note of the wire positions before removing them from the wiring terminal.
- 3) Unscrew the plastic locknut from the liquid tight fitting on top of the switch box and the one from the face of the weather cover.
- 4) Gently pull the conduit and cable out of the top of the switch box and pull the conduit off the cable.
- 5) Push a short length of cable back into the weather cover. This provides slack for lifting the weather cover off the manifold.
- 6) Remove the six or eight Phillips head screws from the base ring of the weather cover.
- 7) Lift the weather cover up and over the top of the manifold, being careful not to damage the cable.
- 8) If the motor is being replaced, be sure to retrieve the cable and strain relief connector from the wiring box. Take note of the orientation of the wiring positions before removing the cable.
- 9) Take note of the orientation of the motor as it sits in the fan body. This is important for the reassembly procedure.
- 10) Remove eight Torx head screws from the motor plate. Lift the motor assembly out of the fan body. Stand on the cooling fan end of the motor. Refer to step #3 of the utility blower disassembly sheet.

(See Illustrations)



PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual REASSEMBLY INSTRUCTIONS

PLASTEC JET SERIES

Before beginning these instructions, place this fan on a bench or table top that can support its weight.

- 1) Complete steps one through five of the Utility Blower assembly procedure.
- 2) Set the motor plate into the fan body in the same orientation as it was before being removed.
- 3) Secure the motor assembly to the fan body with eight Torx head screws.
- 4) Remove the lid from the wiring box. Install the strain relief connector and wire according to the motors and wiring diagram. Close the wiring box.
- 5) Slide the manifold onto the outlet of the fan body. If it is a tight fit, use a rubber mallet to tap it into position. Use careful strikes to avoid damaging the fan body or manifold. Do not use any adhesive or hardware to secure the manifold. Make sure the drain hole in the manifold is clear from the fan housing outlet.
- 6) Hold the weather cover over the fan assembly and feed the cable through the liquid tight fitting, from inside to out, while lowering the weather cover over the fan assembly.
- 7) Push the weather cover down past the fan body so it is seated in the ring on the colored base. Pull any additional slack out of the power cable. Align the holes around the base of the weather cover and the colored ring. Secure it in place with 6 or 8 Phillips head screws.
- 8) Feed the power cable through the conduit and fit the conduit into the liquid tight fitting in the weather cover. Screw the plastic lock nut onto this liquid tight fitting. Slide the other locknut onto the conduit and make sure it is oriented correctly.
- 9) Feed the power cable through the liquid tight fitting on top of the switch box and fit positions as before. Screw the second locknut onto the liquid tight fitting. Reconnect the power supply and close the switch box.

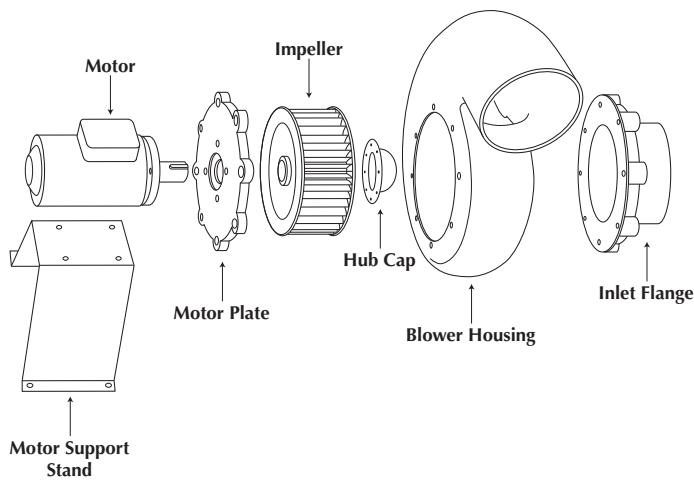
[See Illustrations]



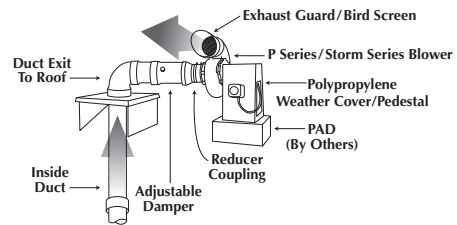
PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual ILLUSTRATIONS

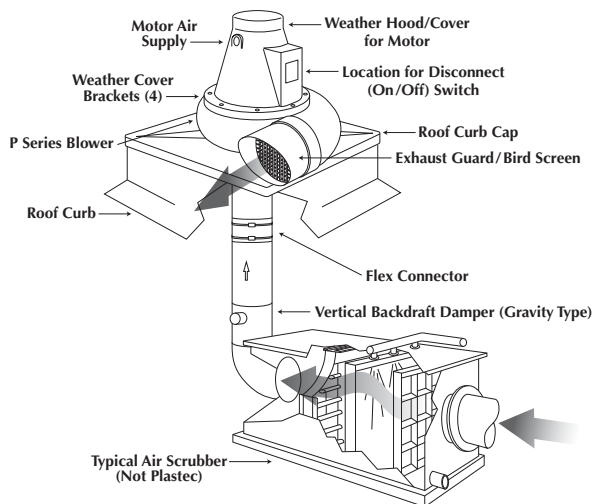
PLASTEC / STORM BLOWERS



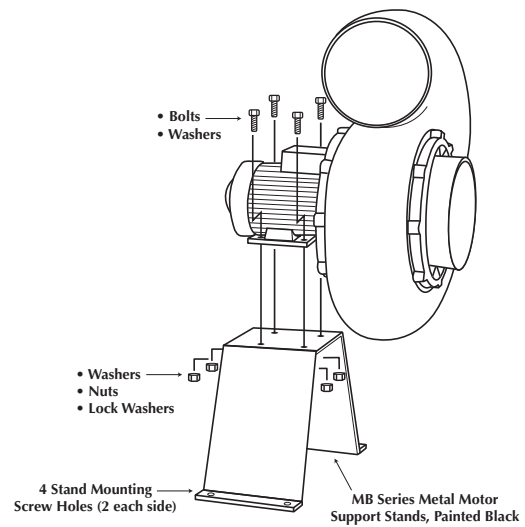
TYPICAL ROOF TOP INSTALLATION FOR PLASTEC / STORM UTILITY BLOWER



TYPICAL INSTALLATION FOR PLASTEC BLOWER WITH ROOF UNIT OPTION



MOUNTING PLASTEC SERIES AND STORM SERIES TO SUPPORT STAND

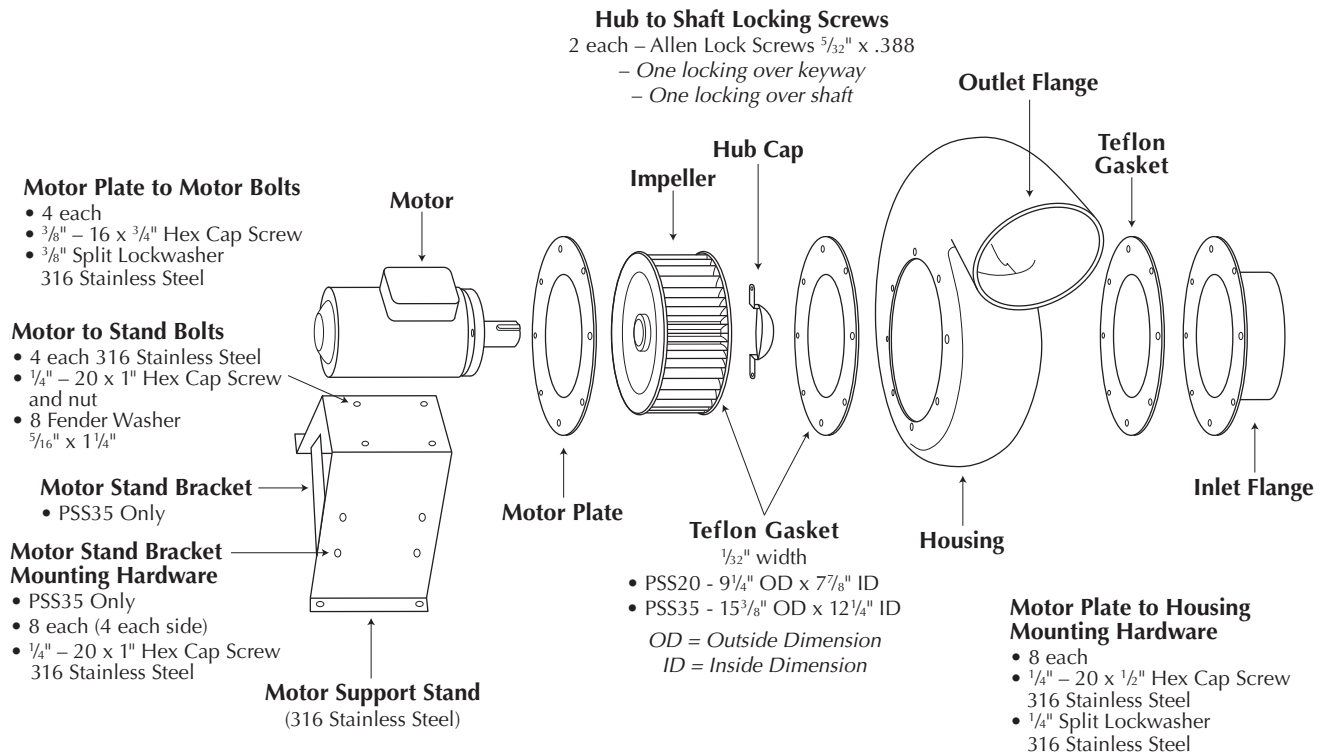




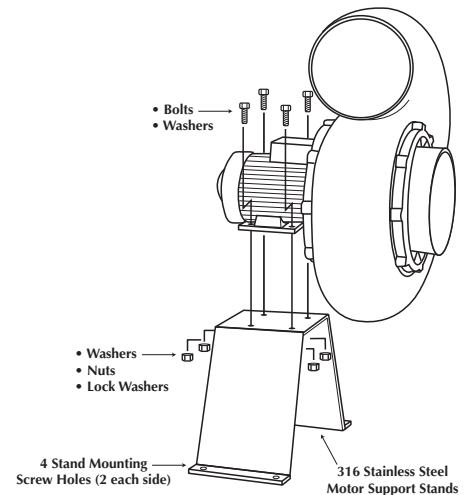
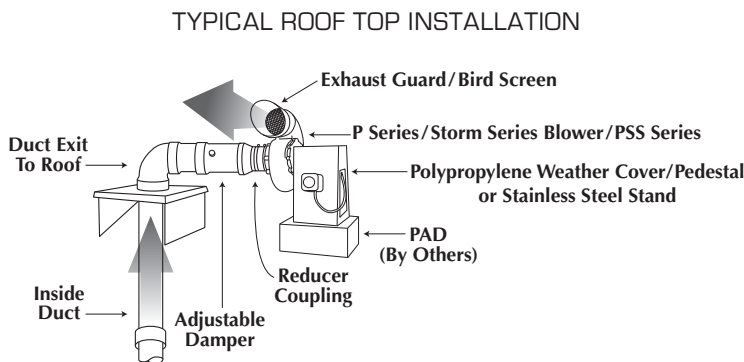
PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual ILLUSTRATIONS

PSS SERIES – PSS20 AND PSS35



MOUNTING PSS SERIES TO SUPPORT STAND

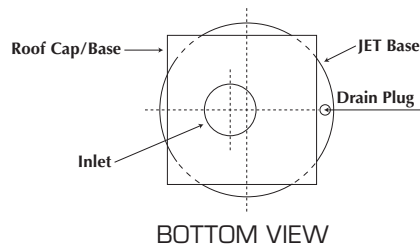
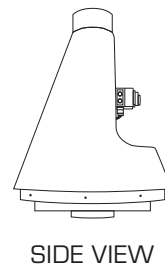
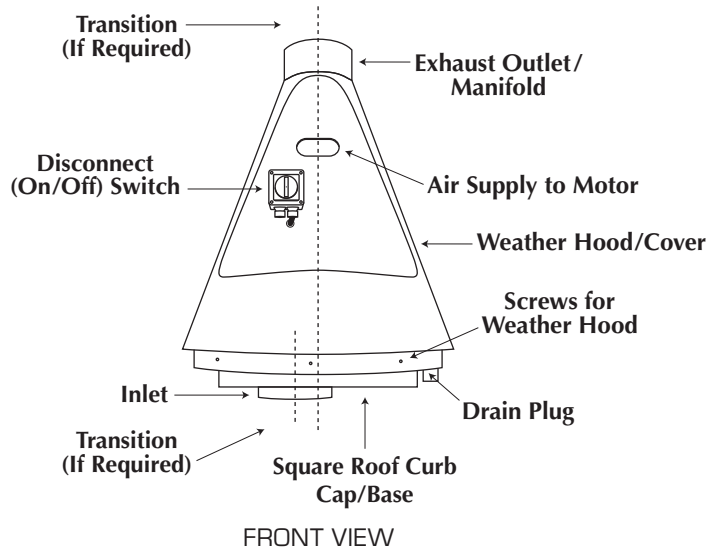
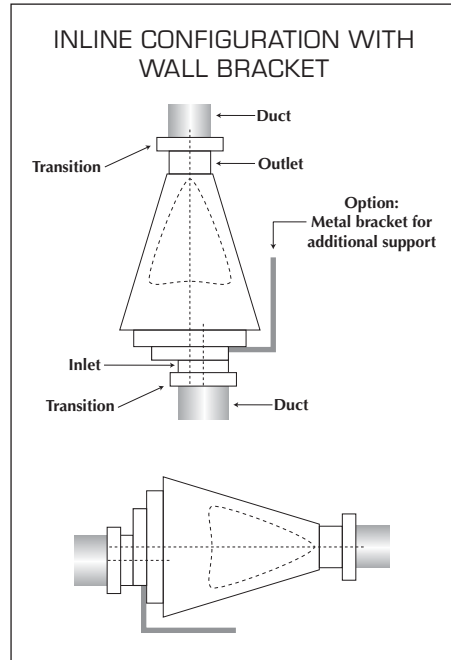
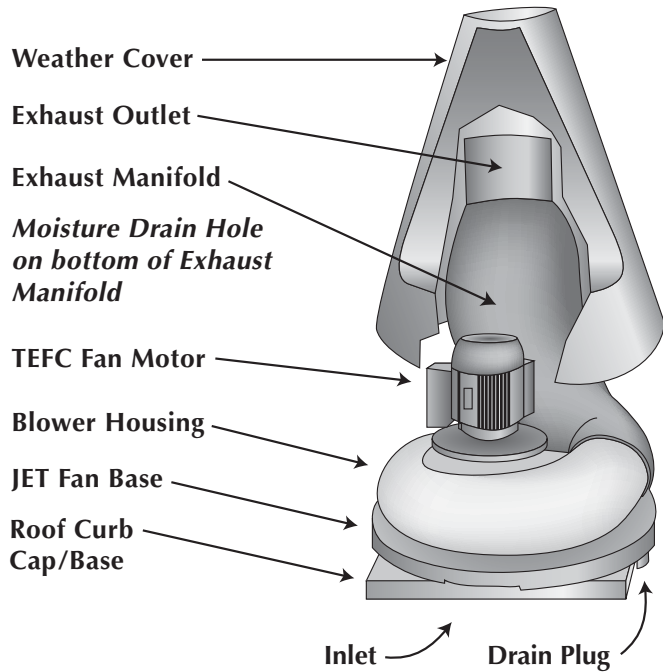




PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual ILLUSTRATIONS

PLASTEC JET SERIES





PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual ILLUSTRATIONS

ROOF UNIT 15 - ROOF UNIT 30 KIT ASSEMBLY





PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual ILLUSTRATIONS

ROOF UNIT 15 - ROOF UNIT 30 KIT ASSEMBLY

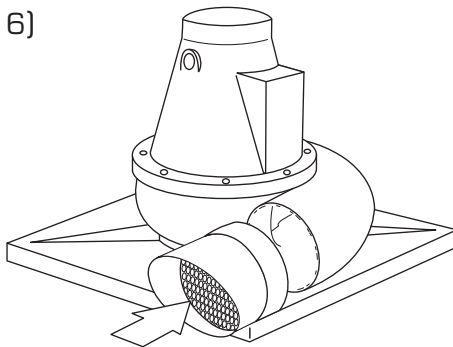
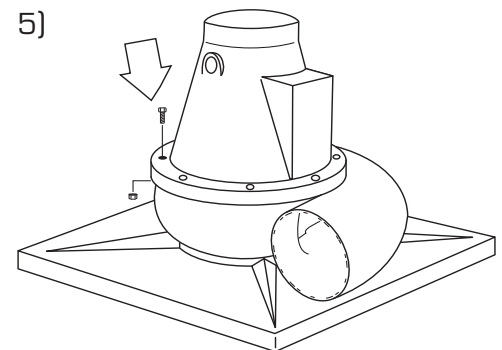
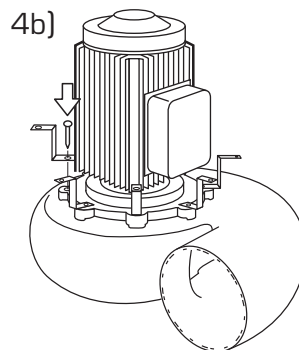
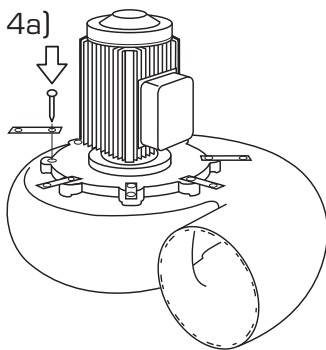
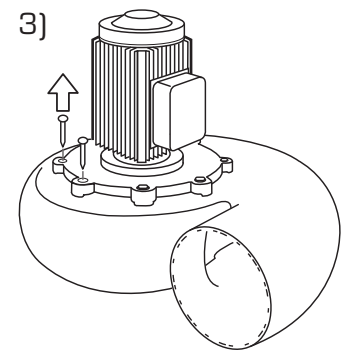
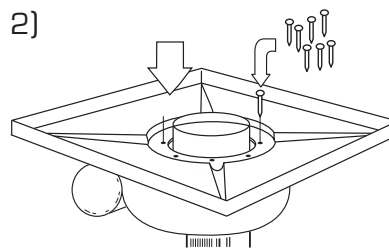
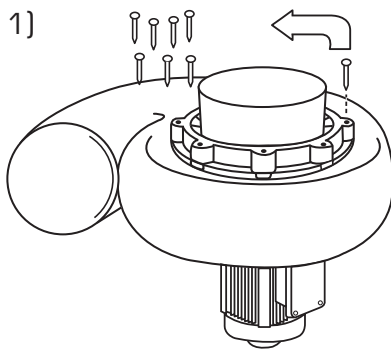
- 1) Components of Roof Kit: Roof Curb Cap, Motor Cap, Cap Bracket, Exhaust Guard
- 2) Place the cap bracket on the motor with the screwing inserts upwards.
- 3) Fix the motor flange.
- 4) Place the O-ring seal.
- 5) Place the impeller.
- 6) Push in the impeller.
- 7) Screw the hub cap on the motor shaft.
- 8) Install the hub cap.
- 9) Place the roof curb cap O-ring seal.
- 10) Place the roof curb cap on the housing.
- 11) Screw the roof curb cap to the housing.
- 12) Turn over the housing. Reinforce the base before placing the roof curb cap to support.
- 13) Place the motor/impeller part.
- 14-17) Screw the motor flange and the cap bracket on the housing indicated in the pictures.
- 18) Do the correct wiring between the switch and the motor, respecting tension.
- 19) Screw back on the terminal box lid.
- 20-21) Place the motor cap and secure with screws.
- 22-24) Attach switch with screws on the flat side of the motor cap.
- 25) Place the exhaust cap on the outlet and attach with 4 screws.
- 26) Finished Assembly.



PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual ILLUSTRATIONS

ROOF UNIT 35 KIT ASSEMBLY



- 1) Remove inlet screws.
- 2) Place roof cap on inlet and secure with inlet screws.
- 3) Remove applicable motor plate screws where brackets fit.
- 4) (a & b) Attach brackets using motor plate screws.
- 5) Attach motor weather cover to brackets using bolts, washers and nuts. (After installing electrical cable.)
- 6) Complete assembly by installing outlet guard/bird screen using screws.

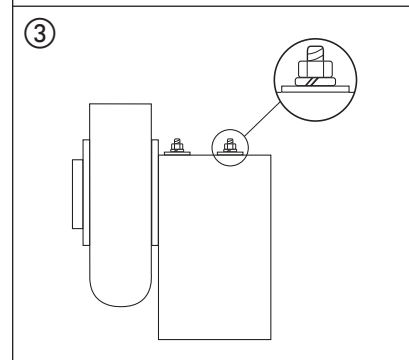
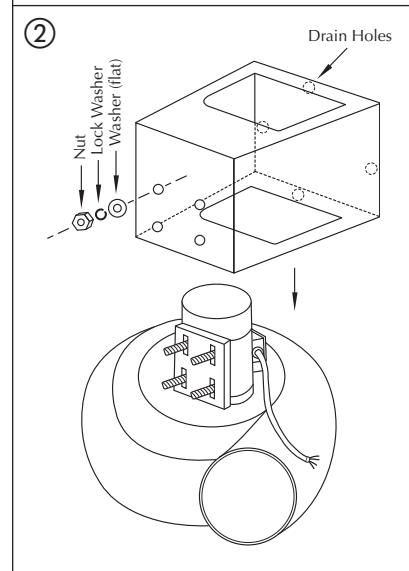
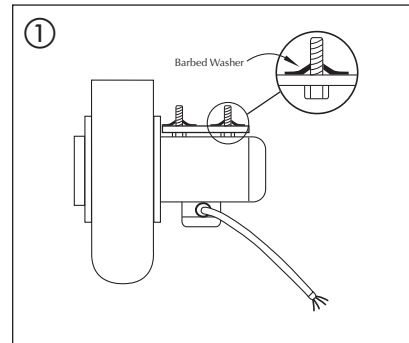


PLASTEC VENTILATION, INC.

Installation, Operation & Maintenance Manual ILLUSTRATIONS

ATTACHMENT OF PLASTEC FAN TO WEATHER HOOD

1. The motor feet should point vertically upwards for attachment to the underside of the hood top. Ensure that the fan discharge is correctly orientated in relation to the motor feet.
2. It is recommended that the motor is connected to the disconnect switch prior to assembly of motor and weather hood, otherwise access to the terminals may be difficult.
3. Insert the four bolts into the holes in the weather cover. Prevent them from falling out by fitting the barbed washers.
4. Secure weather hood to the motor by means of nuts, large washers and lock washers. This is best accomplished by placing the fan housing on a horizontal surface with the motor shaft vertical, then introduce the holes in the hood to the bolts you have fitted to the motor feet.
5. Ensure that the weather hood is installed in an upright position and that the drain holes in the base panel are clear.



Rotation and Discharge for Centrifugal Fans

STANDARD



OPTIONAL FIELD ADJUSTABLE POSITIONS

Notes:

- [1] Direction of rotation is determined from the drive side of fan.
Standard position is up-blast CCW 360.
- [2] On single inlet fans, drive side is always considered as the opposite fan inlet.