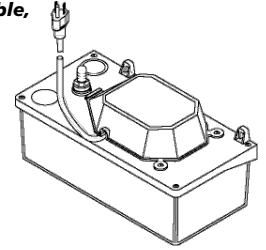


Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.



Condensate Unit

Description

A condensate unit removes condensation from air conditioning and high efficiency furnaces. The compact design of the unit consists of a 3/8" ID discharge and 6 ft. long power cord. The unit also contains a safety switch to automatically shut off pump in the event of a failure.

Unpacking

Inspect this unit before it is installed. Occasionally, products are damaged during shipment. If the pump or components are damaged, return the unit to the place of purchase for replacement. Failure to do so could result in serious injury or death.

NOTICE This pump is not designed to handle salt water, brine, laundry discharge, or any other application which may contain caustic chemicals and/or foreign materials. Pump damage could occur if used in these applications and will void warranty. Use for clear water application only.

Performance

GALLONS PER HOUR AT TOTAL HEAD IN FEET					
Head (ft)	2	6	8	10	19
Flow (GPH)	78	72	66	59	0

Specifications

Power supply requirements120V, 60 Hz,
1 phase
Motor dutyIntermittent
Liquid temperature range40°F to 125°F
Max. operating position45° from vertical
Dimensions10" X 5" X 4-3/4"
Discharge3/8" ID
Power cord6'
3 conductor with ground
Reservoir2 quart plastic

Safety Guidelines

This manual contains information that is very important to know and understand. This information is provided for SAFETY and to PREVENT EQUIPMENT PROBLEMS. To help recognize this information, observe the following symbols.

⚠ DANGER Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Caution indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.

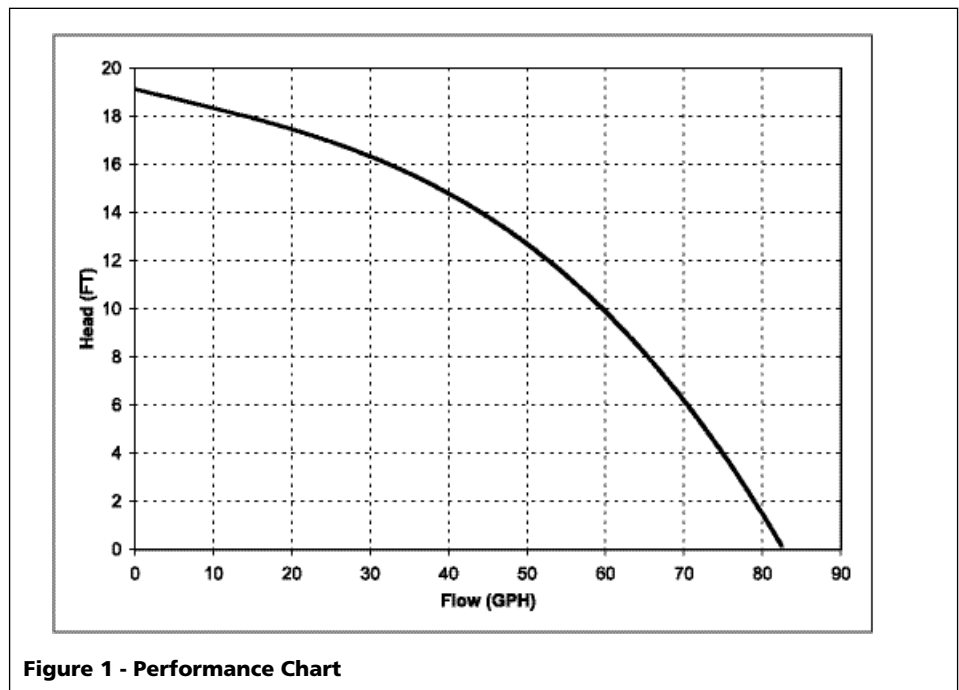


Figure 1 - Performance Chart

REMINDER: Keep your dated proof of purchase for warranty purposes! Attach it to this manual or file it for safekeeping.

Safety Guidelines (Continued)

NOTICE Notice indicates information, that if not followed, may cause damage to equipment.

General Safety Information

1. Know the pump application, limitations, and potential hazards.

WARNING Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in flammable and/or explosive atmospheres. Use pump only with liquids compatible with pump component materials. Failure to follow this warning can result in personal injury and/or property damage.



2. Make certain that the power supply conforms to the requirements of the unit.

DANGER Disconnect power before servicing. If the power disconnect is out of sight, lock in the open position and tag it to prevent unexpected application of power. Failure to do so could result in fatal electrical shock!

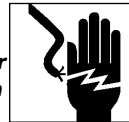


3. Release all pressure within the system before servicing any component.
4. Drain all liquids from the system before servicing.
5. Secure the discharge line before starting the pump. An unsecured discharge line will whip, possibly causing personal injury and/or property damage.
6. Check hoses for weak and worn condition before each use, making certain that all connections are secure.
7. Periodically inspect the pump and system components. Perform routine maintenance as required (See Maintenance Section).
8. Provide a means of pressure relief for pumps whose discharge line can

be shut-off or obstructed.

9. Personal Safety:
 - a. Wear safety glasses at all times when working with pumps.
 - b. Keep work area clean, uncluttered and properly lighted; replace all unused tools and equipment.
 - c. Keep visitors a safe distance from the work area. Make workshop child-proof with padlocks, master switches, and by removing starter keys.
10. When wiring an electrically driven pump such as this, follow all electrical and safety codes, as well as the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

WARNING Risk of electric shock! Never connect the green (or green and yellow) wire to a live terminal!



11. This equipment is only for use on 120 volt (single-phase) and is equipped with an approved 3-conductor cord and 3-prong, grounding-type plug as shown in Figure 2.

To reduce the risk of electric shock, the motor must be securely and adequately grounded. This can be accomplished by inserting plug directly into a properly installed and grounded 3-prong, grounding-type receptacle (as shown in Figure 2).

WARNING Risk of electrical shock! This pump is supplied with a grounding conductor and grounding type attachment plug. Use a grounded receptacle to reduce the risk of fatal electric shock.

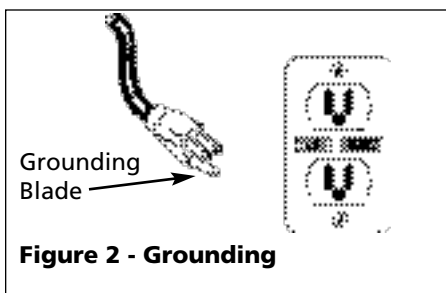


Figure 2 - Grounding

Never cut off the round grounding prong. Cutting the cord or prong will void the warranty and make the pump inoperable.

- Where a 2-prong wall receptacle is encountered, it must be replaced with a properly grounded 3-prong receptacle installed in accordance with the NEC and local codes and ordinances.
12. All wiring should be performed by a qualified electrician.
 13. It is strongly recommended that this unit is plugged into a Ground Fault Circuit Interrupter (GFCI). Consult a local electrician for installation and availability.
 14. Protect electrical cord from sharp objects, hot surfaces, oil, and chemicals. Avoid kinking the cord. Replace or repair damaged or worn cords immediately. Use wire of adequate size to minimize voltage drop at the motor.

15. Do not handle a pump or pump motor with wet hands or when standing on a wet or damp surface, or in water.



16. Do not use an extension cord.

DANGER Do not walk on wet area until all power has been turned off. If the shut-off box is in basement, call the electric company to shut-off service to the house, or call the local fire department for instructions. Remove pump and repair or replace. Failure to follow this warning can result in fatal electrical shock.

Installation

NOTICE In any installation where property damage and/or personal injury might result from an inoperative or leaking pump due to power outages, discharge line blockage or any other reason, use a backup system(s).

STEP 1: INSTALLATION OF PIPE

- A. Insert the discharge pipe or pipe nipple into the 3/8" ID plastic tube.

CAUTION Before removing pump from its mounting position for service, always disconnect electrical power to pump and control switch. For any work on pump or switch, ALWAYS unplug the power cord. Do not just turn off circuit breaker or unscrew fuse.

STEP 2: MOUNTING CONDENSATE UNIT

- A. Position the pump below the evaporator drain and/or furnace drain.
- B. The pump can be installed to the wall or side of the appliance using the two mounting brackets. Refer to Figure 3.

STEP 3: INSTALLATION OF CONDENSATE DRAIN LINES

- A. To prevent pipe blockage in the reservoir, modify the end of pipe or tubing as illustrated in Figure 4.
- B. Plumb flexible tube or pipe from the condensate drain, and from the furnace drain (if applicable), to the inlet holes on the pump. Refer to Figure 5.

STEP 4: INSTALLATION OF DISCHARGE LINE

NOTE: Use 3/8" I.D. (max.) flexible tubing. A hose clamp is recommended (not provided).

- A. Extend discharge pipe from barbed check valve to the highest point possible. Refer to Figure 6.
- B. From this point, direct the discharge line to the location of the drainage source. Maintain a continuous downward slope.

NOTE: Construct an inverted "U" (see Figure 6) at the highest point of discharge line if a continuous downward slope is not possible. Exercise care not to kink or "pinch off" the flow of condensate liquid.

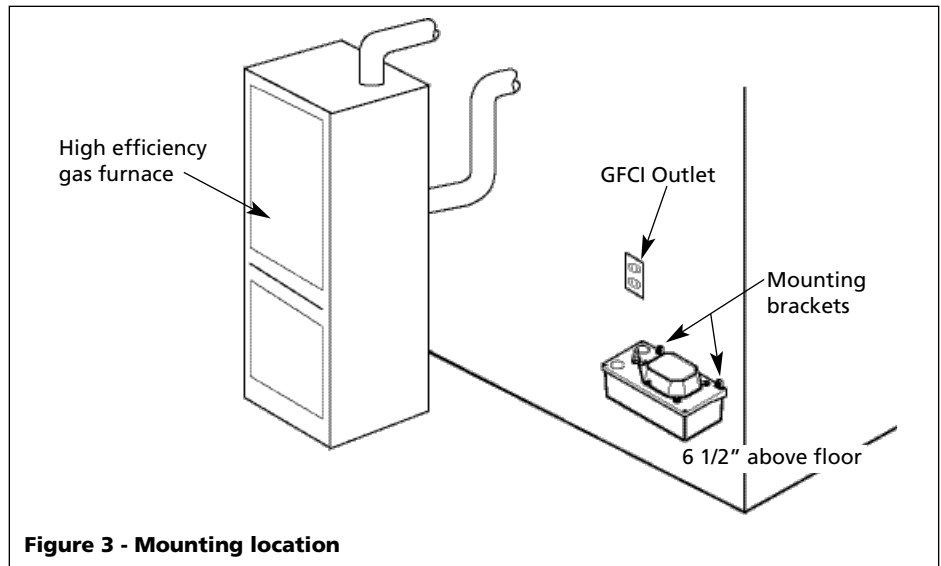


Figure 3 - Mounting location

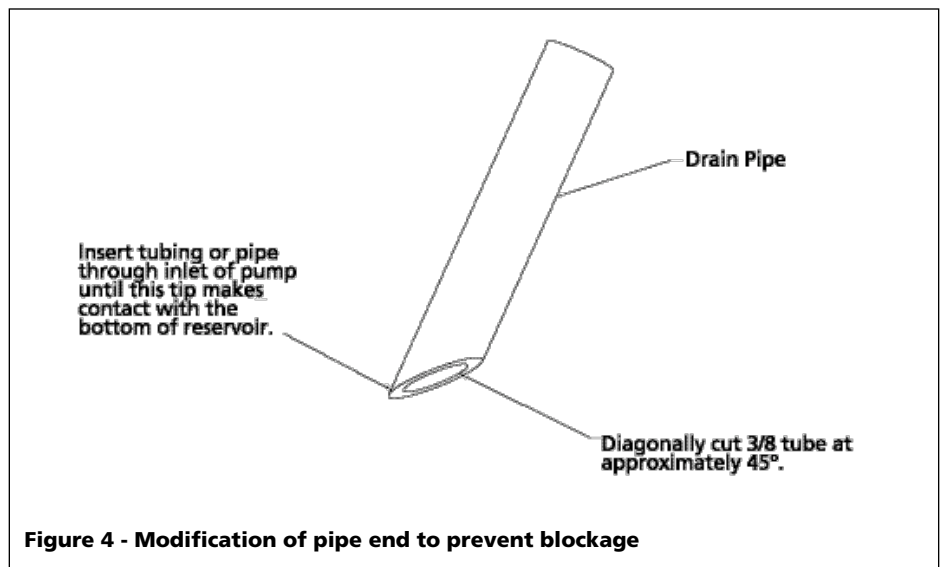


Figure 4 - Modification of pipe end to prevent blockage

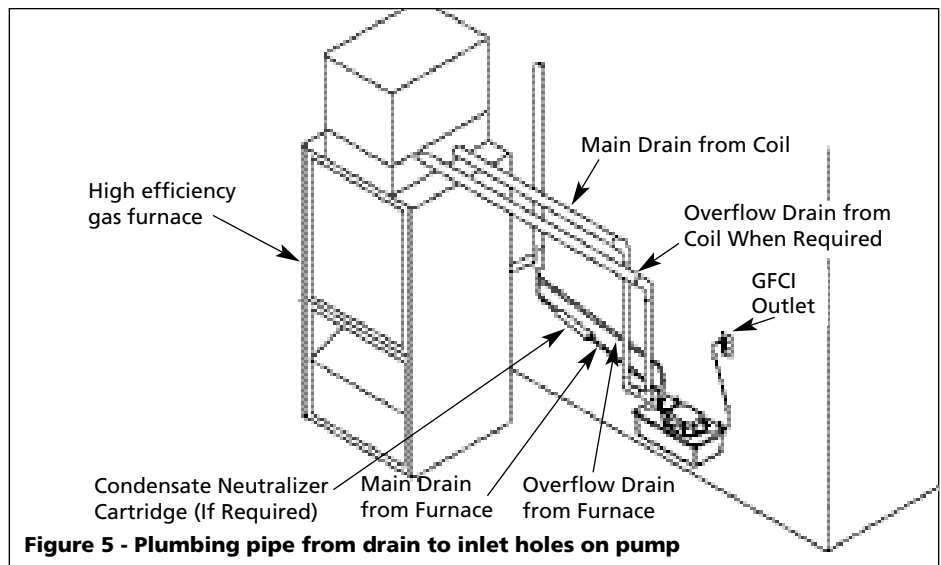


Figure 5 - Plumbing pipe from drain to inlet holes on pump

Installation (Continued)

STEP 5: INSTALLATION OF SAFETY SWITCH (IF APPLICABLE)

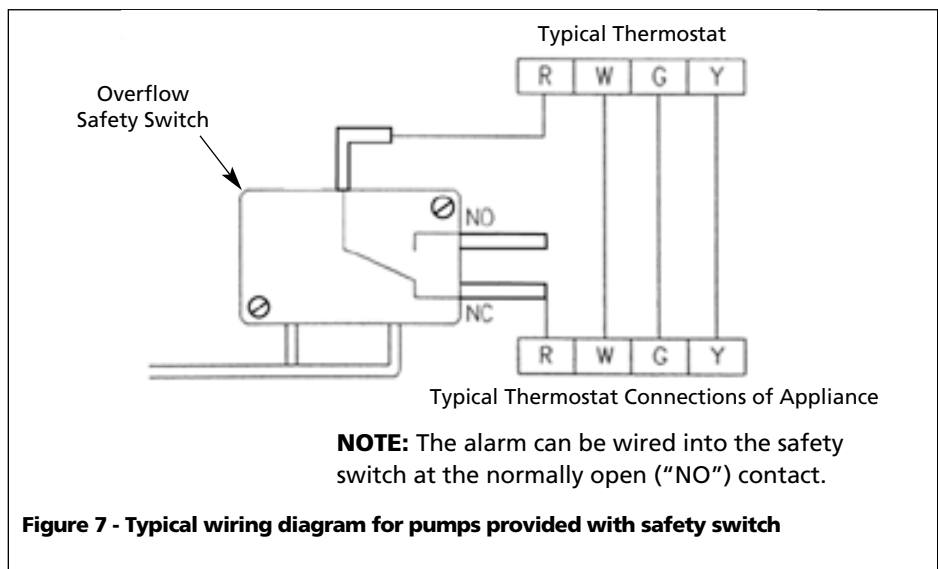
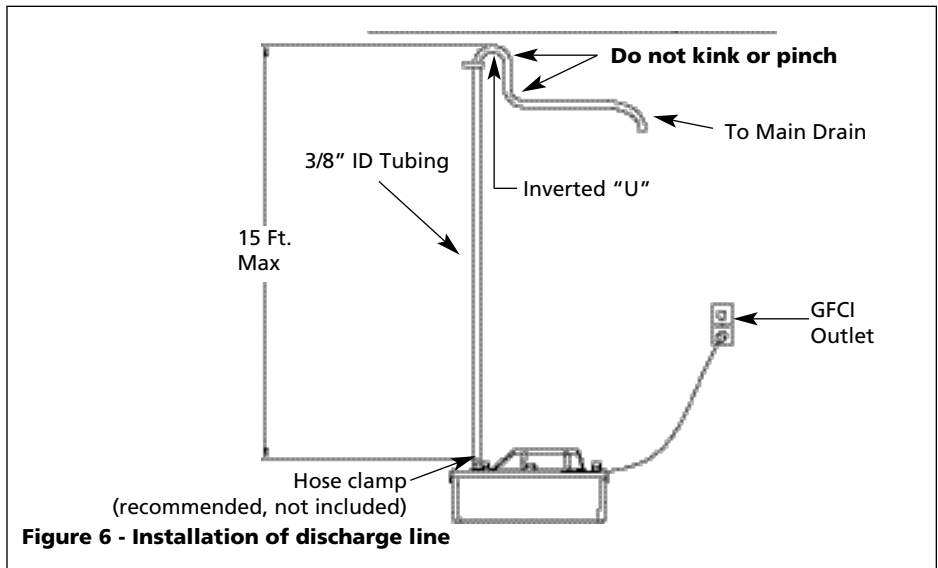
NOTICE Connect power cord to a constant voltage source. Do not connect to a fan or other device that may run intermittently.

A. The pump can be wired directly to the appliance thermostat to shut the pump and appliance down in the event of pump failure. Refer to Figure 7 for typical wiring diagram.

NOTE: The alarm can be wired in the safety switch at the normally open ("NO") contact.

TIPS FOR EASY INSTALLATION

1. After reading instructions, check to make sure installation does not exceed a maximum of 15 feet of vertical lift.
2. Make sure pump is level. No part of the pump base should be more than 1/8" off of level plane.
3. Use soapy water on unit when performing cleaning maintenance. (Refer to Maintenance guidelines.)
4. For optimum performance, drain and discharge lines should have a continuous downward slope. Test operation of pump to make sure lines have enough downward slope for efficient operation.
5. Avoid overtightening of check valve after cleaning. (Refer to Maintenance guidelines.)
6. Use constant voltage power source. Do not plug into a device that runs intermittently.
7. Locate model number and date code on pump and take note of them.
8. To assure proper performance, the highest point of discharge line should be higher than 5' off the floor.
9. Clean any debris in the pump reservoir if necessary.
10. Do not handle the pump until you have disconnected it from the power source. Follow all guidelines



- for electrical safety discussed in General Safety.
11. Do not use a pump discharge pipe smaller than the pump discharge size.
 12. After installation, test pump to make sure that system is working properly.
 13. Make sure that installation conforms to all local and national codes.
 14. Local codes may require the use of a condensate neutralizer when using this pump.

Maintenance

AWARNING Make certain that the pump is unplugged before attempting to service or remove any component. This pump is assembled in the factory using special equipment; therefore only authorized service dealers or qualified electricians should attempt to repair this unit. Improper repair can cause an electrical shock hazard.

CLEANING RESERVOIR AND IMPELLER

1. Unscrew two screws through mounting brackets, and remove pump from wall, if mounted.

Maintenance (Continued)

2. Remove reservoir from deck by unscrewing the four screws located at the corners of the reservoir cover.
3. Remove the impeller cover by unscrewing the five screws on the underside of the motor. Pull out the impeller shaft assembly.
4. Use a damp cloth to wipe off the gasket and the motor assembly.
5. Reassemble impeller to motor. Then reassemble reservoir to reservoir cover.

CLEANING CHECK VALVE

1. Disconnect discharge line from check valve – see Figure 8.
2. Remove check valve with 9/16" wrench.
3. Visually check for obstructions or damage.
4. If check valve is not damaged, replace valve by hand-tightening. Then tighten 1/2" turn with 9/16" wrench.

NOTICE *Do not over-tighten. Damage to O-ring seal may occur.*

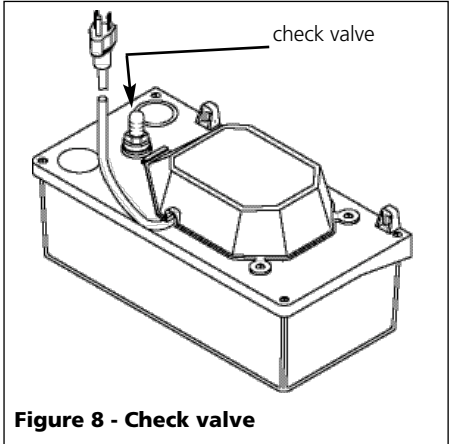


Figure 8 - Check valve

Notes

Troubleshooting Chart

CAUTION Pump may start unexpectedly. Disconnect power supply before servicing.

Symptom	Possible Cause(s)	Corrective Action
Pump fails to run	<ol style="list-style-type: none"> 1. Pump not plugged in 2. Low voltage, blown fuse, open circuit 3. Reservoir is absent of condensate 4. Drain/discharge lines blocked 	<ol style="list-style-type: none"> 1. Plug in. 2. Have a certified electrician check fuse circuit. 3. Make sure that there is adequate condensate level in reservoir. Check drain lines and/or discharge line for obstructions. 4. Check drain lines and/or discharge line for obstructions.
Pump emits loud noises when operating	Foreign material in reservoir	Refer to Maintenance section for cleaning instructions.
Pump operates but there is no flow of liquid	<ol style="list-style-type: none"> 1. Float is sticking 2. Discharge height greater than 15 feet 3. Obstruction in discharge tube 4. Blockage in check valve 5. Damaged check valve 	<ol style="list-style-type: none"> 1. Refer to Maintenance section for cleaning instructions. 2. Measure from bottom of pump to highest point. Rework discharge if height is greater than 15'. Refer to Installation Step 4 for instructions. 3. Check discharge line for blockage. Remove debris. 4. Refer to Maintenance section for cleaning instructions. 5. Contact Blue Angel Pumps.
Liquid drains back into pump from discharge line	<ol style="list-style-type: none"> 1. Damaged check valve 2. Blockage in check valve 3. Discharge line is 5' or less 	<ol style="list-style-type: none"> 1. Contact Blue Angel Pumps. 2. Refer to Maintenance section for cleaning instructions. 3. Condensate liquid may drain out of line into reservoir due to discharge height. This is normal. No action is necessary.
Liquid leaks from around check valve	<ol style="list-style-type: none"> 1. Check valve fastened too tight or too loose 2. Damage to O-ring 	<ol style="list-style-type: none"> 1. Check valve should be hand-tightened, then tightened an additional 1/2 turn with a 9/16" wrench. 2. Replace with a 1/2" ID x 11/16" OD x 3/32" thick O-ring or contact Blue Angel Technical Service at 1-800-237-0987,

WARNING Before servicing a pump, always shut off the main power breaker and then unplug the pump. Make sure you are not standing in water. Make sure you are wearing insulated, protective-soled shoes. Under flooded conditions, check your local electric company or a qualified licensed electrician for disconnecting electrical service prior to pump removal. If the above checklist does not solve the problem, contact Blue Angel Technical Service at 1-800-237-0987.



Limited Warranty

For one year from the date of purchase, Blue Angel will repair or replace, at its option, for the original purchaser any part or parts of its Sump Pumps or Water Pumps ("Product") found upon examination by Blue Angel to be defective in materials or workmanship. Please call Blue Angel (800-237-0987) for instructions or see your dealer. Be prepared to provide the model number and the serial number when exercising this warranty. All transportation charges on Products or parts submitted for repair or replacement must be paid by purchaser.

This Limited Warranty does not cover Products which have been damaged as a result of accident, abuse, misuse, neglect, improper installation, improper maintenance, or failure to operate in accordance with Blue Angel's written instructions.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF PURCHASE. THIS IS THE EXCLUSIVE REMEDY AND ANY LIABILITY FOR ANY AND ALL INDIRECT OR CONSEQUENTIAL DAMAGES OR EXPENSES WHATSOEVER IS EXCLUDED.

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusions or limitations of incidental or consequential damages, so the above limitations might not apply to you. This limited warranty gives you specific legal rights, and you may also have other legal rights which vary from state to state.

In no event, whether as a result of breach of contract warranty, tort (including negligence) or otherwise, shall Blue Angel or its suppliers be liable for any special, consequential, incidental or penal damages including, but not limited to loss of profit or revenues, loss of use of the products or any associated equipment, damage to associated equipment, cost of capital, cost of substitute products, facilities, services or replacement power, downtime costs, or claims of buyer's customers for such damages.

You **MUST** retain your purchase receipt along with this form. In the event you need to exercise a warranty claim, you **MUST** send a **copy** of the purchase receipt along with the material or correspondence. Please call Blue Angel (800-237-0987) for return authorization and instructions.

DO NOT MAIL THIS FORM TO BLUE ANGEL. Use this form only to maintain your records.

MODEL NO. _____ SERIAL NO. _____ INSTALLATION DATE _____

ATTACH YOUR RECEIPT HERE