

Owner's Manual

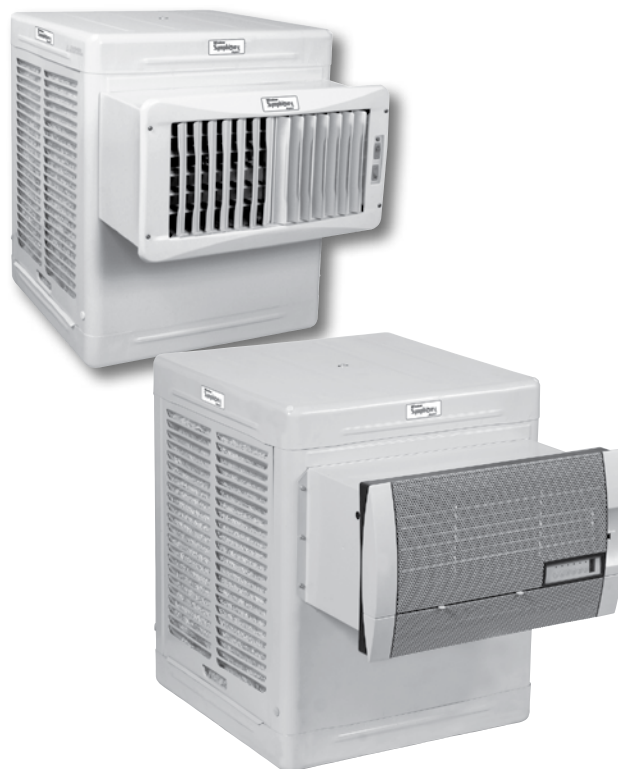
Manual de Operación



CAUTION

SAVE AND READ THESE IMPORTANT INSTRUCTIONS

Read all instructions carefully before setting up and operating this unit. This manual was designed to provide you with important information needed to setup, operate, maintain, and troubleshoot your cooler. Failure to follow these instructions may damage and/or impair the operation of your unit and void the warranty.



PRECAUCIÓN

LEA Y CONSERVE ESTE MANUAL

Lea todas las instrucciones cuidadosamente antes de montar y operar esta unidad. Este manual fue diseñado para proveerle importante información necesaria para instalar, operar, mantener y detectar problemas en su enfriador. La falla en seguir estas instrucciones puede dañar y/o afectar la operación del enfriador y anular la garantía.

Models: R28PE • R38PE • R48PE • R68PE
R28RTE • R38RTE • R48RTE

impco

email: customerservice@impcolc.com, Website: www.impcolc.com

INTRODUCTION

Evaporative cooling works on the principle of heat absorption by moisture evaporation. Simply put, heat is removed from the air as water evaporates. You feel this principle in action when you step out of a swimming pool or shower; you feel immediately cooler as water evaporates from the surface of your skin.

Your evaporative cooler works on the same principle.

Hot outside air is pulled through water-saturated pads, where the air is cooled by evaporation and then discharged from the cooler.



WARNINGS AND SAFETY RULES

WARNING...

To reduce the risk of electric shock, fire or injury:

- Read instructions and labels carefully.
- Always unplug the electric cord to your cooler before working on it.
- Plug into three-prong grounded GFCI protected electrical receptacle only.
- Do not operate if plug or cord are damaged in any way.
- Do not step on or roll over power cord with heavy or sharp objects.
- Do not operate unit unless all panels are securely in place.
- Remove the plug from the electrical receptacle (outlet) by pulling on the plug-end of the cord, and not the cord itself.
- Test the GFCI receptacle or breaker monthly to ensure it is functioning properly.
- Do not operate near open containers of flammable liquids or gases.
- If the unit is damaged or it malfunctions, do not continue to operate it. Refer to the warranty or troubleshooting section at www.impcollc.com or call Customer Service at: (602)-281-7968

Other Mobile Products by Symphony



MMB10E



Hi Cool

impcollc

email: customerservice@impcollc.com, Website: www.impcollc.com



INSTALLATION

CAUTION:

- This appliance is intended for window mounted or through wall mounted installation. Any other use is not recommended by the manufacturer and may cause fire, electrical shock or other injury to persons and/or property and will void the Warranty.
- Do not attempt repair or adjust to any electrical or mechanical functions of the cooler, as this may void the warranty.
- Verify that the voltage power source matches the appliance electrical specifications. Improper voltage will burn out the blower/fan, oscillating and/or pump motor windings and will void the warranty.
- Do not cover the air inlet or outlet on the appliance as this may cause motor damage.
- Do not operate with media removed as this will overload and damage the motor.
- Always unplug the unit from the power source before servicing or removing the unit.
- Do not use the unit with an electrical extension cord as this may cause overheating and lead to a fire.
- Do not insert or allow objects to enter inlet or outlet areas of the unit as this may damage the product and/or cause electrical shock or fire.

SAFETY:

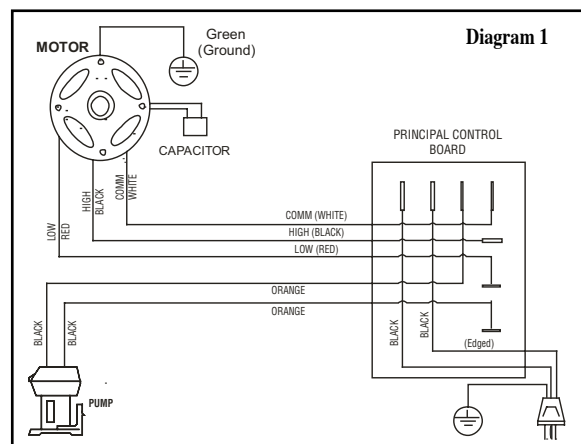
- Do not leave the unit operating unattended for any extended period of time.
- Keep all plastic bags and packaging out of reach of children.
Failure to do so may result in injury or death.
- Place power cord away from areas where it may be a Trip-Hazard.
- Plug the power cord into a three-pronged grounded 120 Volt 60 Hz GFCI protected electrical receptacle only.

TOOLS REQUIRED

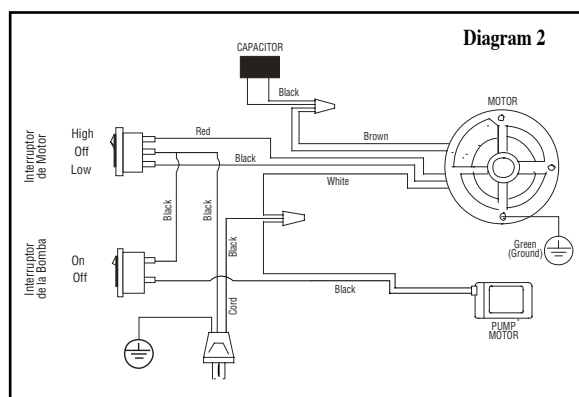
- Leveler
- 5/32" hex key Allen wrench
- Pliers
- Adjustable wrenches
- Tubing cutter
- Screwdrivers

Required Exhaust Openings. Using standard CFM ratings, a common method for determining how much to open doors or windows for proper exchange is: 2 square feet per 1,000 CFM.

Models	Voltage	Amperage	HP's
R28PE	115	3.0	1/8
R38PE	115	7.3	1/3
R48PE	115	7.3	1/3
R68PE	115	9.2	1/2
R28RTE	115	2.0	1/8
R38RTE	115	7.3	1/3
R48RTE	115	9.2	1/2



This Diagram refers to Models: R28RTE, R38RTE*, R48RTE*



This Diagram refers to Models: R28PE, R38PE*, R48PE*

* The following Models do not have capacitor.



MOUNTING WINDOW MODELS

Assure that the mounting surface is strong enough to bear the weight of the cooler when in use. Remember that when the system fills with water, the cooler will be much heavier than when dry.

To Install Cooler On a Flat Support

The most common method of installation involves mounting the cooler on a flat support or stand provided by the installer. The duct and grille portion are placed through the window opening and window panels are fitted into position (see Figure 4).

Another method of installation involves the use of a chain kit and standoff hardware.

To Install Cooler Using A Chain Kit.

(see Figure 5)

1. Attach screw hooks to outside window frame approximately two feet above cooler. Be sure the hook is inserted to full depth in frame for maximum strength. Attach chain to each hook.
2. If your cooler does not have holes predrilled, drill 3/16" holes 1" above each pad frame corner at rear of cooler cabinet. Bolt hanger tabs to cooler (notched end up) using machine screws and nuts provided.
3. Place leg leveling bolts in holes in cabinet front with nut, washer and angle to outside of cabinet.
4. Check window sill offset to determine the thickness of the wood strip for clearance. This clearance will provide space for the grille and winterizing cover if used. Secure wood strip with nails or screws. Fasten the two brackets with screws provided, making sure they are square with the window sash.
5. Place cooler in window allowing duct to rest on sill. Using chain link that brings cooler closest to level position, place link over hanger tab. Turn link to lock it into notches on hanger tab.
6. Place leg leveling bracket on leg leveling bolt with bracket against wall. Adjust bolts and chain to level cooler. Secure brackets to wall with eight #10 Phillips head screws provided.

NOTE: Cooler may need to be re-leveled later to compensate for added weight of water.

Electrical Wiring on Window Models. Your unit has been pre-wired at the factory so further wiring is not necessary. Diagram 2 shows the wiring diagram of your unit in case of electrical component replacement. For motor wiring use diagram on motor backplate.

CAUTION: All wiring should be done only by qualified electrician.

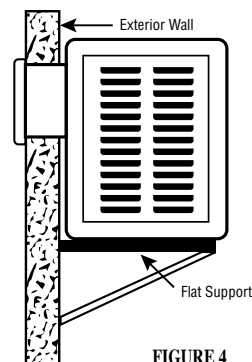


FIGURE 4

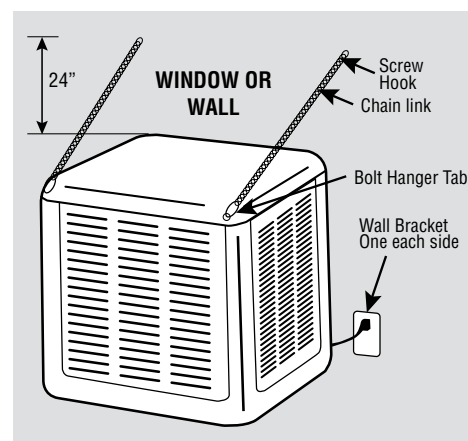


FIGURE 5



INSTALLATION

Overflow Standpipe and Drain Line Installation.

1. Install overflow drain bushing in bottom of cooler.
2. Screw overflow standpipe into drain bushing and tighten snugly to prevent leakage.
3. Slide rubber washer over drain bushing, push drain bushing through bottom of cooler, and tighten nut.
4. Connect (copper/pvc/garden hose) to drain bushing and drain in accordance to local codes (see Figure 7).

Connect Water Supply. A water valve should be installed at a convenient location to allow the water supply to be turned on and off (see Figure 8); 1/4" tubing is used to provide water to the cooler. A water connector kit, available from your dealer, provides the necessary items.

1. Remove 7/16" knock-out from corner leg.
2. Insert end of tubing through this opening.
3. Place tube nut and ferrule over end of tubing.
4. Install float valve through bracket provided.
5. Insert tube into float valve and tighten to secure.

NOTE: Soft water equipment should not be attached to any water lines going to a cooler. "Soft water" will cause corrosion and decrease effective life of a cooler.

Install Bleed-Off. Optional Bleed off kit can be purchased from your dealer. Its purpose is to eliminate a small quantity of water from recirculation; this reduces scale build-up. This bleed-off assembly merely requires inserting the bleed-off hose into the pump assembly and routing bleed-line hose through standpipe opening.

1. Install bleed-line into pump assembly bleed-off tap.
 2. Route far end of bleed-line into standpipe.
 3. Install clamp with screw on bleed-line.
 4. Adjust screw to obtain flow rate for appropriate model indicated in table at right.
- * Adjust clamp so a 12-ounce beverage can filled by bleed-off in this 60 seconds.

NOTE: Bleed rate may degrade slightly after two weeks and should be checked two to four weeks after initial setting and re-adjusted.

Approximate Dimensions (length and width) of coolers bottom pan
17" x 22"
22" x 22"
22" x 28"
28" x 28"
34" x 34"
37" x 37"

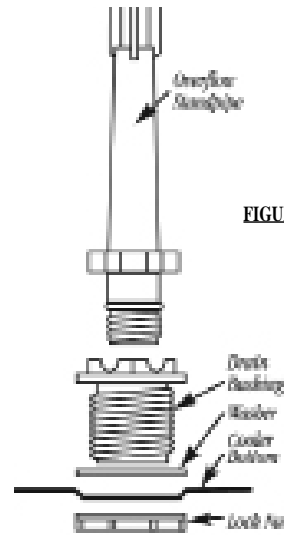


FIGURE 7

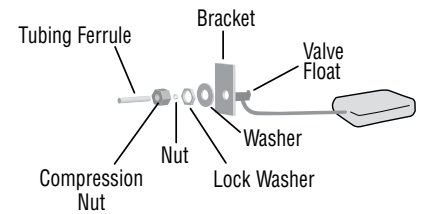


FIGURE 4

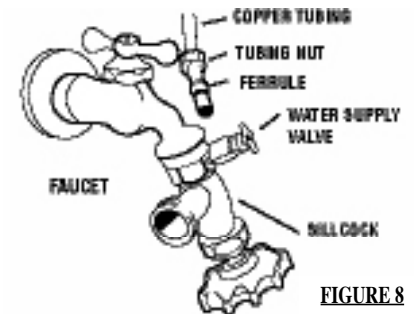
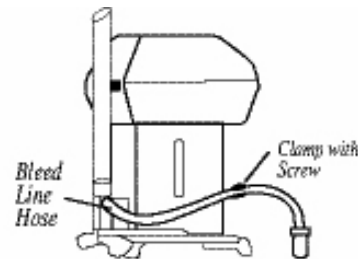


FIGURE 8



BLEED-OFF KIT

FIGURE 9



WINDOW COOLER OPERATION (For Units with Remote Control)

Your Symphony window cooler can be operated by using either the controls on the grille (see Figure 10A) or the hand-held remote unit (For RC Models) (see Figure 10B).

NOTE: An amber light on the grille control indicates stand-by mode, meaning the cooler is plugged in to an electrical outlet but no functions have been selected (The cooler is “off”). The following functions are available:

Pre Wet. Pump On/ Fan Off – Allows pads to absorb water before turning on the blower fan.

High Cool. Pump On/ Fan On – For high speed cooling

Low Cool. Pump On/ Fan On – For low speed cooling

High Vent. Pump Off/ Fan On – For high-speed ventilation

Low Vent. Pump Off/ Fan On – For low speed ventilation

On/Off. When the cooler is operating, depressing the On/Off button will turn the cooler off (stand-by mode). When the cooler is Off (stand-by mode), pressing the On/Off button will return your cooler to the most recent function selected.

CAUTION: To reduce the risk of electric only to an outlet provided with a ground fault circuit interrupting device.

FIGURE 10A



FIGURE 10B



START-UP INSTRUCTIONS

General Inspection.

Start-Up Inspection. Disconnect all electrical power to the cooler before inspecting. Be sure that:

- Cooler mounting is level; duct is sealed.
- Cabinet is securely fastened to mounting.
- Cooler cabinet is grounded. Electrical connections are safe and secure.
- Motor, pump, and float are installed. Motor and pump plugged into junction box (on window models, they are factory-wired).
- Pump impeller turns freely. Remove pump and basket. Remove impeller cover and spin the impeller to assure free rotation.
- Water lines connected securely without leaks. Water supply turned on.
- Float adjusted for proper water level.
- Blower, shaft, collar, and pulley set bolts are snug (do not overtighten pulley bolt).
- Pulley alignment okay; belt tension okay.
- Blower bearings are lubricated. Fill oil cup SAE 20W or 30W oil.
- Pads presoaked and correctly installed.

Start-Up Check List. To check out installation, an initial start-up procedure should be followed:

1. Turn electrical supply on.
2. Turn control switch to PUMP ONLY position. Check to see that pump starts and pads are evenly wet.
3. Open windows or vents in house.
4. Start blower by switching to COOL.

5. Check for cool air delivery. (Note: an aroma of damp wood will be present during initial use of new pads.) In case of trouble in any of these steps, refer to the Troubleshooting Chart.

Adjusting Water Level and Float Valve. Fill reservoir as follows:

1. Turn water supply on. Check for good pressure and flow from float valve.
2. When float valve shuts off, check water level. Water level should be from 1/2" to 1" below top edge of overflow standpipe.
3. Turn on water and adjust float valve by bending the rod (see Figure 11).

CAUTION: Water inlet pressure should be limited to a maximum of 105 PSI or an inline pressure regulator should be installed !

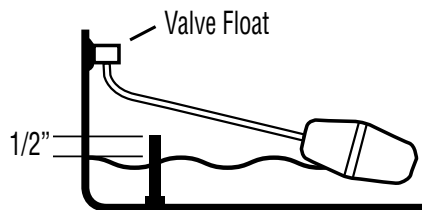


FIGURE 11



CLEANING & MAINTENANCE

Regular, careful maintenance will allow you to enjoy a long, efficient service life from your cooler. Before starting any maintenance operation, read thoroughly all operating and maintenance instructions and observe all cautions and warnings.

CAUTION: Disconnect all electrical power to the cooler before attempting to install, open, or service your cooler. If the cooler is thermostatically controlled, the thermostat is not to be used as a disconnect as it may reset and start the unit unexpectedly.

Changing Cooler Pads

Your cooler pads should be changed at least twice a year, at the beginning of a season and midway through. Your pads may need to be changed more frequently, depending on local air and water conditions. For instance, in areas where mineral content of the water is high, deposits may build up in the cooler pads, restricting air flow. Replace pads as follows:

1. Remove pad assembly from cabinet.
2. Remove pad frame stiffener from frame, using caution as stiffener can spring back. Carefully remove all pad from retainers. Remove and discard pads (see Figure 12).
3. Using a mild detergent, wash dirt and scale from pad frames. Wire brushing is not recommended. Rinse with freshwater.
4. Lay new pad in frame, starting at trough end, making sure pad is snug against trough and outer edges with no air spaces.
5. Pad thickness should be uniform across the frame.

NOTE: Pad must completely fill frame or hot air may enter house.

6. Replace pad retainers and lock under edge of frame. Sharp points must be buried in pad.
7. Pre-soak pads and reinstall pad frame.
8. Start pump and allow troughs to fill. Check water level in troughs by slightly tilting each pad frame out.

Adjusting Belt Tension. Each time you inspect your cooler, be sure to check belt tension on motor/blower assembly. Check belt condition and replace it if frays or defects appear. Check alignment of blower pulley with motor pulley.

Lubrication. Blower shaft bearings need periodic lubrication. The oil cups on the blower shaft bearings should be filled with a good grade SAE 20W or 30W oil when necessary. Under normal use, oiling is required every three months of operation. Do Not Over-Oil. **The pump and blower motors do not require lubrication.**

Cleaning Water Pump. Disassemble and clean water pump as follows:

1. With power supply disconnected, unplug pump cord.
2. Remove pump.
3. To prevent breakage, carefully release the four snap-out tabs, and lift impeller base plate from the pump body (see Figure 13 and 14)
4. Using a mild detergent solution, wash all deposits from inside around impeller and impeller base plate.
5. Spin impeller to dislodge any foreign material.
6. Rinse and reinstall impeller base plate.
7. Reinstall pump.
8. Connect cord.

CAUTION: Do not allow pump to topple over and become submerged since water will damage pump motor. Warning: Never wash your cooler cabinet with a garden hose since water may harm motor and pump or seep into ductwork.

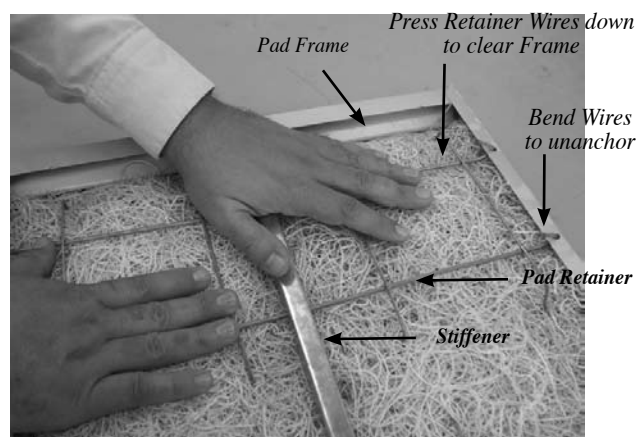


FIGURE 12

NOTE: Do not undercoat the water reservoir. Your cooler's water reservoir is finished with a Polybond™ appliance-type finish. It is so hard that asphalt-type cooler undercoating will not stick to it. Undercoat will break free and clog pump and water distributor. Do not use cooler cleaners, cooler treatments, or other additives in this evaporative cooler. The use of any of these products will void your warranty and may impair the life of your evaporative cooler.

Draining and Touch-Up. Clean the cooler cabinet (with power off and frames removed) as follows:

1. Connect a drain hose to the drain fitting on the bottom of the reservoir.
2. Remove standpipe from the drain fitting and allow water to drain (never drain water onto a roof, make sure drain hose is long enough to reach a gutter or over edge of house).
3. Clean reservoir.

The hardness, adhesion and smoothness of the internal and external finish on your cooler makes it extremely unlikely that scratches or chipping will occur. In the event that finish damage does occur, it should be promptly repaired by the following procedures:

1. Sand the area around bare metal spots.
2. Prime and paint with a quality paint.



FIGURE 13



FIGURE 14



CLEANING & MAINTENANCE

Getting The Most From Your Cooler. Your evaporative cooler is a finely crafted, economically operating unit built on decades of know-how and research. It serves as the heart of an overall air cooling and moving system for your home. But there are a number of ways you can maximize the comfort, efficiency, economy and convenience of your total cooling system.

Maintenance. Regular maintenance as recommended in this manual is essential for cooling comfort, extending the life of your cooler, and avoiding unnecessary parts replacements. Start-up, mid-season and shut-down servicing should never be overlooked. Change pads at least twice a year, or sooner, if mineral deposits or dust build-up.

Add-On Coolers. Coolers come in a wide array of sizes, horsepower, and capacities suitable for patio, garage, guest room, and so forth. More than one cooler in a single home improves the cooling effectiveness of the entire system. Owners of refrigerated air conditioning have found that the addition of an evaporative cooler vastly reduces their electric bills.

Insulation. Once your cooler forces cooled air into your home and pushes the hot air out, good insulation around your ductwork will keep the air as cool as possible. Whole house insulation will prevent heat from seeping in and will improve cooling comfort.

Multi-Speed Motor. The cooling rate can be controlled by increasing and reducing the amount of cooled air blown into your home. Two-speed motors allow you to use higher speeds during the hottest part of the day, lower speeds for milder temperatures.

Bleed-off. Bleed-off components can be purchased with your cooler and should be installed as instructed in this manual.

Attic Vents. By exhausting cool air through the attic, you can reduce the temperature of this hot spot and make your home more comfortable. It is important to remember to provide adequate exhaust in the area. Again, provide 2 square feet of relief for every 1,000 CFM of air delivery.

Thermostat Control. The cooler can be set to turn on and off automatically at the temperature desired.

Timer Control. The cooler can be programmed to turn on and off automatically when desired. (cannot be used with remote control units)

Replacement Parts. When ordering replacement parts, always refer to the serial and model number of your cooler. Use the part numbers listed in the accompanying parts list, as illustrated in the diagrams for your model.

MAINTENANCE REQUIREMENTS	ANNUAL START-UP	DURING SEASON	ANNUAL SHUT-DOWN
Cabinet Inspection	●	●	
Changing Cooler Pads	●	●	
Lubrication	●	●	
Adjusting belt Tension	●	●	
Cleaning Water Pump	●		
Cleaning & Touch Up			●
Drain all Water Lines			●



TROUBLESHOOTING

The following troubleshooting guide is intended to address the most common symptoms and is by no means exhaustive. If symptoms persist, call a qualified service provider. Only a certified electrician should complete electrical work. Turn off all power to the cooler before attempting to troubleshoot any of the following symptoms.

SYMPTOM	POSSIBLE CAUSES	REMEDY
Unit fails to start or deliver air	<ol style="list-style-type: none"> No electrical power to unit <ol style="list-style-type: none"> Fuse blown Circuit breaker tripped GFCI tripped Cord(s) unplugged or damaged Belt too loose or too tight Motor overheated and frozen <ol style="list-style-type: none"> Belt too tight or broken Blower wheel bearings dry Motor overloaded Faulty wiring or shorts Bad capacitor 	<ol style="list-style-type: none"> Check power <ol style="list-style-type: none"> Replace fuse* Reset breaker* Reset GFCI* Plug in cord(s) or replace if damaged * If condition persists, call an electrician Adjust belt tension Replace motor <ol style="list-style-type: none"> Adjust belt tension or replace Lubricate blower bearings Using an ammeter, adjust motor to full load nameplate amps Call electrician Replace capacitor
Unit starts but air delivery inadequate	<ol style="list-style-type: none"> Lack of sufficient air exhaust Motor underloaded (ducted units only) Belt too loose 	<ol style="list-style-type: none"> Open windows or doors to increase ventilation Using ammeter, adjust motor to full load nameplate amps Adjust belt tension or replace if need
Inadequate cooling	<ol style="list-style-type: none"> Inadequate exhaust in house Air registers improperly positioned Insufficient water / pad not wet <ol style="list-style-type: none"> Pad plugged Distribution holes clogged Pump not working Loose connection in water system Pump basket clogged 	<ol style="list-style-type: none"> Open windows or doors to increase ventilation Adjust to direct air as desired Check water distribution system <ol style="list-style-type: none"> Rinse or replace pad Clear holes Unplug pump. Clean impeller housing of foreign matter Check for leaks and correct Clean basket
Motor fails to operate	<ol style="list-style-type: none"> Excessive belt tension Blower shaft tight or frozen Motor overloaded Pulleys misaligned 	<ol style="list-style-type: none"> Adjust belt tension Lubricate blower bearings Correct - do not exceed motor nameplate amps Check and correct alignment
Water draining from overflow standpipe	<ol style="list-style-type: none"> Float arm improperly adjusted Seat in float valve leaking Standpipe not tight 	<ol style="list-style-type: none"> Adjust float Replace float valve Tighten standpipe
Knocking or banging sound	<ol style="list-style-type: none"> Bearings dry <ol style="list-style-type: none"> Wheel rubbing blower housing or rotating off-balance 	<ol style="list-style-type: none"> Lubricate blower bearings <ol style="list-style-type: none"> Inspect blower shaft, collars, belt and pulley alignment and motor mounting
Blower shakes or rattles	<ol style="list-style-type: none"> Belt or pulley loose 	<ol style="list-style-type: none"> Inspect belt and adjust if needed. Adjust or replace pulley.
Excessive humidity in house	<ol style="list-style-type: none"> Inadequate exhaust ventilation 	<ol style="list-style-type: none"> Open doors or windows to increase
Musty or unpleasant odor	<ol style="list-style-type: none"> Stale or stagnant water in sump Pads mildewed or clogged Pads not presoaked 	<ol style="list-style-type: none"> Drain, flush and clean sump Replace pads Turn on pump before starting fan cooler is turned on

NOTE: Do not use cooler cleaners, cooler treatments, or other additives in this evaporative cooler. The use of any of these products will void your warranty and may impair the life of your evaporative cooler.



WARRANTY

MODELS R28PE, R38PE, R48PE, R68PE, R28RTE, R38RTE, R48RTE. 5-YEAR LIMITED WARRANTY

Impco. Phoenix, Arizona, extends this limited warranty to the original purchaser of a Symphony Evaporative Cooler installed and used under normal conditions within the continental United States.

- I. Five Year Coverage applies to wet section cabinet only in residential applications (2-year coverage for commercial / industrial applications). At our option, we will exchange or repair the wet section bottom pan assembly should any water leakage occur through the base assembly due to rust out during the first five years after date of initial purchase.
- II. One Year Coverage applies to the structural integrity of the pad. We will exchange the pad should it fail as a result of original material or workmanship during the first year from the date of initial purchase.
- III. One Year Coverage applies to original Symphony pumps and motors from Symphony motor kits only. We will exchange these parts should they fail as a result of original material or workmanship during the first year from the date of initial purchase.
- IV. One Year Coverage applies to all other components and accessories furnished by Impco. At our option, we will exchange or repair any part which fails as a result of original material or workmanship during the first year from the date of initial purchase.
- V. **What this warranty does not cover:**
 - a. This warranty does not cover any failure, damage or defect that results from unauthorized modification or service; or from the use of products or replacement parts other than those from Symphony; including but not limited to, motors and pumps.
 - b. This warranty does not cover any damage or malfunction unless caused by a defect in material or workmanship. Damage or malfunction which is not covered by this warranty includes, but is not limited to, water damage to the motor, abuse, misuse, alteration, improper installation / maintenance / operation, or transportation damage.
 - c. Mineral accumulations and dirt and dust on the pad are not defects and are excluded from this warranty. Refer to the Owners Guide supplied with your cooler for maintenance and instructions to help minimize these conditions.
 - d. This warranty does not cover the cost of a service call at the site of installation to diagnose cause of

trouble, the cost of labor to install the part, or mileage allowance to or from the site. Impco does not pay freight or postage on any exchange.

- e. This warranty does not cover evaporative coolers installed and operated outside the continental United States.
- VI. **Do not use cooler cleaners, cooler treatments, or other additives in this evaporative cooler. The use of any of these products will void your warranty and may impair the life of your evaporative cooler.**
- VII. To obtain service under this warranty, contact the dealer where you purchased your evaporative cooler. As a final step or if you cannot locate your dealer, contact Customer Service at www.impcollc.com
- VIII. In case of unsatisfactory warranty service please write Customer Service at Impco. Include your name, address and ZIP code; the servicing dealer involved; the model number of your evaporative cooler; date of installation; and a description of your problem.

Impco

customerservice@impcollc.com
www.impcollc.com

This warranty is the only warranty extended by Impco to suppliers and / or purchasers of this evaporative cooler. Impco disclaims all other warranties, express or implied, that arise by the operation of the law, except that implied warranties of merchantability or fitness for a particular purpose are limited to the duration of the warranty period. Impco shall not be liable for any incidental or consequential damage which may have resulted from any alleged breach of warranty. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the limitations or exclusions stated above may not apply to you.

This warranty gives you specific legal rights and you may have other rights which vary from state to state.

Note: There will be a slight odor that may be noticed during the initial start-up. The odor will disappear within the first few days of operation if the drain system supplied with the cooler is properly installed and used. Since Impco follows a policy of continuous product improvement, it reserves the right to change design and specifications without prior notice or liability.