



The following excerpt from the Owners Manual is provided to help explain the proper way to safely use this product. If you have any questions please call RSVP at 702-878-0144

Please do not attempt to service or repair this product in any way.

If you experience any problems with this item please discontinue its use and call RSVP at 702-878-0144 for assistance. If for any reason we cannot be reached, please discontinue use of any malfunctioning piece of equipment.

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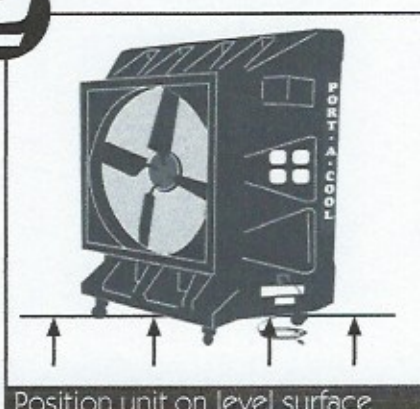
## QUICK SET UP GUIDE

1



Remove box and pallette

2



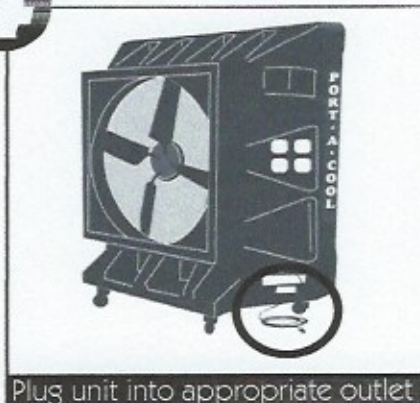
Position unit on level surface

3



Fill sump or attach water hose

4



Plug unit into appropriate outlet

5

For setup, pads should appear wet before starting the fan. Check the water gauge\* (see instructions for model setup in this manual) to monitor water level in tank.

\* Water gauge is not applicable to all models

Fill the tank then turn on the pump switch and the fan.





## SAFE OPERATION

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

- Do not operate any unit with a damaged cord or plug. Discard unit or return to an authorized service facility for examination and/or repair.
- Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Arrange cord away from traffic area where it will not be tripped over.
- Read instructions and labels carefully.
- Always unplug the electric cord to the Port-A-Cool unit before performing inspections or repairs.
- Plug into three-prong grounded GFCI protected electrical receptacle only.
- Do not operate if there is any damage to the plug or cord.
- Do not step on or roll over power cord with heavy or sharp objects.
- Do not operate unit unless all pads are securely in place.
- Remove the plug from the electrical receptacle by pulling on the plug and not the cord.
- Test the GFCI receptacle or breaker monthly to ensure it is functioning properly.
- Do not operate near open containers of flammable liquids or gases.
- Ensure evaporative cooler pumps are running continuously to saturate and wet combustible media when used in close proximity to open flame or spark producing activities. A distance of at least 35 feet away from open flame or sparks is recommended to ensure safe operation.
- Never wash the unit cabinet with a garden hose; water may harm the motor and electrical system.
- If the unit is damaged or it malfunctions, do not continue to operate it. Refer to the warranty, troubleshooting or FAQ section, call Port-A-Cool, LLC, Technical Support at 1-888-266-5243, or email support@port-a-cool.com.

## UNIT OVERVIEW

### SETUP

#### Unpacking the PORT-A-COOL® unit.

PORT-A-COOL® units are shipped completely assembled. The PAC2K482S, PAC2K361S, PACHR3600, PAC2K363S, PAC2K36HPVS, PAC2K24HPVS, PAC163SVT, PAC1S1600, PAC1S2400, PAC2KCYC01, PAC2KCYC01A, PACCYC04, and PACCYC04A models ship on a plastic pallet with a cover box strapped over the unit. Cut the straps and remove the box by lifting it over the unit. Remove the protective plastic dust cover and lift the unit off the pallet.

Models PAC2K163SHD, PAC2K16HPVS, PACCYC02, PACCYC02A, PACCYC03, and PACCYC03A are shipped in an enclosed corrugated box and need only to be removed from the box.

#### Connecting the water and electricity.

##### Water Connection

**PORT-A-COOL® UNIT MUST BE IN UPRIGHT AND LEVEL POSITION**

Locate the brass hose adapter on the side of the PORT-A-COOL® unit (all models except PAC163SVT) near the water adjustment and drain valves. Verify that the hose washer is in position and in good condition. Attach a standard garden hose to the brass hose adapter and tighten to preclude leaks. Turn water on to fill the sump tank.

On models equipped with a manual water fill and sight tube, the water tank in the lower portion is designed to be filled at a remote location and can be used without a water hose connected. Simply fill the lower tank using the sight tube as a gauge.

**UNIT IS EQUIPPED WITH 50 PSI WATER REGULATOR. DO NOT BYPASS.  
WATER INLET PRESSURE SHOULD NOT EXCEED 50 PSI MAXIMUM.**

Visually inspect water connections for leaks and verify that the connections are secure. Remove the pads by following the instructions in this owners manual. Once the sump tank is filled, the water flow should cease and the inlet connections may now be visually checked for leaks. All of these inspections have been performed at the factory but shipping may have caused connections to loosen. Replace the pads by reversing the removal operation.



## Electrical Connection

**PORT-A-COOL® UNIT MUST BE IN UPRIGHT POSITION WITH COOLING PADS INSTALLED!**

All models utilize a single power cord and control switches. Before connecting the plug to an outlet, ensure that there is no standing water where the cord may lie or the operator is standing. The use of separate multiple outlet devices are not recommended.

When making electrical connections, ensure that local and national codes are adhered to. Use only with GFCI Protected Receptacles. Please refer to the Barcode Product Label on the side of the unit for specific electrical requirements.

## OPERATING PROCEDURES

### Specifications

Each PORT-A-COOL® unit has its own set of operational specifications, sizes, weights, voltage, frequency, current requirements, etc. Please ask for the specifications for your model from your distributor, check the serial number plate, or visit [www.port-a-cool.com](http://www.port-a-cool.com) for the specifications for your Port-A-Cool® unit.

### Placement of the PORT-A-COOL® unit.

**PORT-A-COOL® UNITS SHOULD BE USED IN WELL-VENTILATED AREAS ONLY**

There are three primary considerations when deciding where to place the PORT-A-COOL® unit.

- 1) Fresh Air Supply - If used indoors, the inlet side of the PORT-A-COOL® unit (pad side) should be placed near a fresh air supply, like a door or window, to ensure that a smooth, uninterrupted supply of fresh air is available.
- 2) Air Pattern - The cool air discharged from (fan side) the PORT-A-COOL® unit should have a clear area in which to circulate, being as free of obstructions as possible.
- 3) Ventilation - When positioned so that a fresh air supply is pushed through the inlet or pad side of the unit, a second source of fresh air should be utilized for expulsion of the cooled air. This is to prevent the unit from recirculating air that has already been through the cooling process and provides the optimal environment for the unit to produce the most efficient cooling.

A primary consideration when deciding where to place the PORT-A-COOL® unit is the direction of the airflow. The PORT-A-COOL® unit creates a fan-shaped air pattern that discharges the air over a large area. This pattern may be disturbed or broken up by obstacles such as shelves, work benches, etc. It is important to ensure that a clean, unbroken path for the air from the unit is provided to the maximum extent possible.

It may be desirable to raise the PORT-A-COOL® unit above any low obstructions in order to increase the overall coverage. When raising the height, ensure that the platform constructed for holding the unit is stable, well constructed, and will not allow the unit to tip over. The unit must be level and in the upright position. When supporting with a platform, allow for the full weight of a functioning unit by including the weight of the water, both in the sump tank and the added weight of the water saturated cooling pads. The total weight could be in excess of 500 lbs. (227 kg.).

When the PORT-A-COOL® unit is placed near a wall or other obstruction, it is recommended that a distance of at least 3 feet (0.9 meters) from the wall or obstruction to the face of the cooling pads be maintained. This allows the unrestricted flow of warm air to the cooling pad side of the unit. When using multiple units in close proximity, be sure to aim the unit so that the air flows complement each other and not oppose. Opposition will negate the airflow and allow an area of dead air to accumulate between units.



## Starting the pump and adjusting the water flow

### CAUTION - DO NOT RUN PUMP WHEN SUMP IS DRY

Once the sump tank is full, moving the pump switch to the "ON" position will turn on the pump.

When initially turning on the pump, the level in the sump will drop suddenly and restart the flow of supply water. This is a normal condition, as the cooling pads require a large amount of water for proper wetting.

When the PORT-A-COOL® unit is new, the new pads will require an initial 'breaking-in' period. This period is required for the pads to begin readily absorbing water. It may require up to a week to achieve maximum efficiency.

It is important to ensure that the spray bar is properly adjusted when first starting the water flow in the PORT-A-COOL® unit. Increasing the flow using the SPRAY BAR ADJUSTMENT valve on the side of the unit makes this adjustment.

Proper water adjustment should leave the pads saturated with water, but not flooded. Pads should appear wet, however, cascading amounts of water can actually reduce cooling efficiency. Proper adjustment will prevent problems and increase cooling capacity.

When turning the unit off at the end of the day or week, the pump should be turned off about 15 minutes before the unit to allow the cooling pads to dry. This will increase the life of the pads.

## Starting the unit

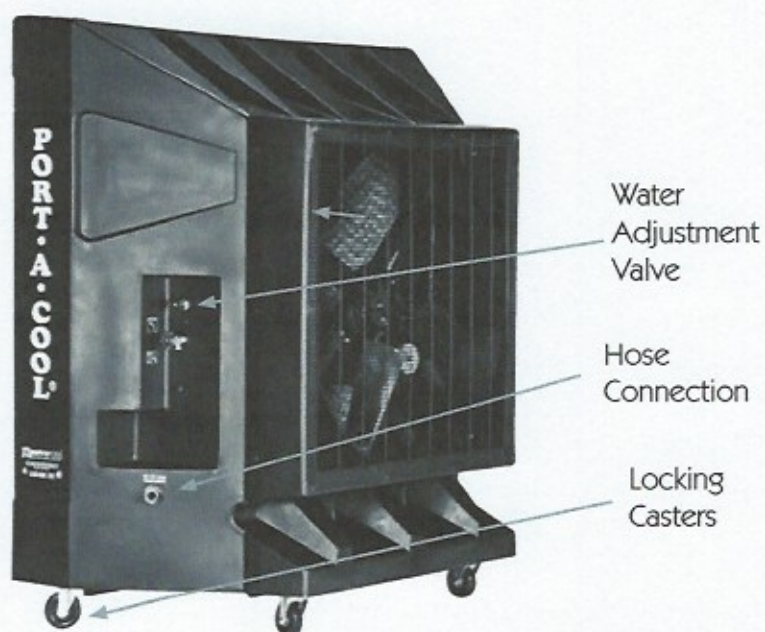
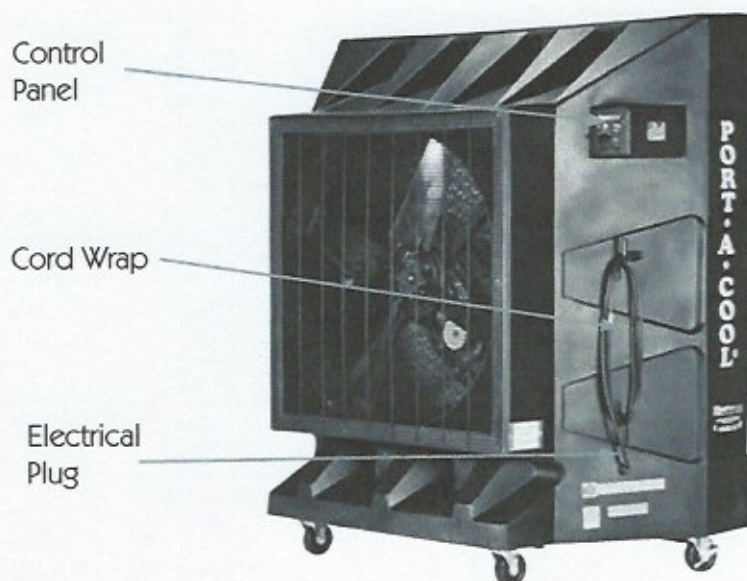
### COOLING PADS MUST BE INSTALLED AND CASTER LOCKS MUST BE ENGAGED

Start the fan by turning the fan switch to the "ON" position, or to one of the available speeds on the multi-speed models. On the multi-speed model, it is preferred to step slowly through the speeds allowing the fan to obtain its full speed at the LOW speed before going to MEDIUM and before going to HIGH.

## UNIT OPERATION WARNINGS

- 1) Not intended for use by children
- 2) Not intended for use by persons with reduced physical, sensory or mental capabilities
- 3) Not intended for use by persons with lack of experience and knowledge, unless they have been given instruction and are supervised during operation
- 4) Children should be supervised to ensure that they do not play with the appliance

## PORT-A-COOL® UNIT OVERVIEW





## TROUBLESHOOTING

### Troubleshooting

The PORT-A-COOL® unit consists of three systems — the fan system, the electrical system, and the water system. It is important to determine which system of the PORT-A-COOL® unit the problem is associated with. Certain problems may be associated with more than one system.

Since several things may cause a particular problem (i.e., the pump is not running), when determining which system that the problem is associated with, first define the problem. A careful check of all systems should be made to fully understand the extent of the problem.

With an understanding of all three systems of the PORT-A-COOL® unit and how they depend on each other, it becomes much simpler to define and solve any problems.

Although the PORT-A-COOL® unit is designed to be simple to maintain, it will be necessary to have some basic hand tools (screwdrivers, pliers, adjustable wrenches, etc.).

### CAUTION

**Please use caution when troubleshooting or repairing any electrical components. Be certain that all power is disconnected from the PORT-A-COOL® unit before the cooling pads are removed to gain access to the fan.**

## Repair and Replacement Procedures

Ensure that all water is removed from the PORT-A-COOL® unit and all power is disconnected. Remove all impediments to access the component you are checking or replacing.

### REPLACING THE COOLING MEDIA (PADS) (All Models)

#### CAUTION - DISCONNECT POWER BEFORE PERFORMING THIS OPERATION!

The flap must be removed to allow access to the cooling pads. Start with the center pad, which can be tilted out from the top and lifted out of the drain trough. The two pads to either side of the center pad may then be removed in the same manner. To remove the two outside pads, they must first be pulled sideways toward the center of the PORT-A-COOL® unit until they clear the side retainer before removing in the same manner as the other pads.



Locate the set screw in the rear of the unit on the upper right side



Remove set screw and lower front flap to vertical position (see illustration)



Once the front flap is moved, grasp the right pad and tilt out at a 90 degree angle (see illustration).



Pull the pad up to remove from unit. Repeat for other pads.

## FAN SYSTEM

This section is divided into the two categories of fans used on all PORT-A-COOL® models: Direct Drive and Belt Drive. Both have some symptoms in common, and both have problems that are particular to each.

### BELT DRIVE MODELS

PROBLEM	CHECK	SOLUTION
Fan motor won't run and makes no sound.	Power cord, switches, circuit breaker, etc.	Check switch connection Reconnect power, reset breaker.
Fan motor won't run and makes a humming sound.	Blade in contact with shroud	Check mounting bolts.
	Motor stalled (will not turn by hand)	Replace motor.
Breaker trips or fuse blows when fan is started.	Motor stall (as above).	Replace motor.
	Other items on circuit.	Remove other items.
Motor overheating and shutting off and restarting several minutes later.	Inlet air obstructed or too close to wall.	Provide minimum 36 inch inlet clearance.
Switch making good contact. makes soft clicking sound.	Faulty motor. Replace switch	Replace motor.
Fan motor won't run and has a burning smell and hums.	Motor stall (as above).	Replace motor.
Fan blade doesn't turn and unit makes squealing sound.	Fan Belt, loose.	Tighten or replace fan belt.
	Fan pulley spinning on shaft.	Tighten pulley set screw.
Fan belts do not last very long.	Motor and fan pulleys misaligned	Realign motor and mount.
Fan will not reach speed but turns and makes humming sound.	Capacitor (where visible) and motor electrical connections.	Replace motor.

### DIRECT DRIVE

PROBLEM	CHECK	SOLUTION
Fan motor won't run and makes no sound.	Power cord, switches, circuit breaker, etc. cord, reset breaker.	Check switch connection Reconnect power
Fan motor won't run and makes a humming sound.	Blade in contact with shroud	Check mounting bolts.
	Motor stalled (will not turn by hand)	Replace motor.
Breaker trips or fuse blows when fan is started.	Motor stall (as above).	Replace motor.
	Other items on circuit.	Remove other items.
Motor overheating and shutting off and restarting several minutes later.	Inlet air obstructed or too close to wall.	Provide minimum 36 inch inlet clearance.
Fan motor won't run and switch makes soft clicking sound.	Faulty motor. Switch making good contact.	Replace motor. Replace switch.
Fan motor won't run and has a burning smell.	Start capacitor leaking from cover.	Replace motor .
	Motor stall (as above).	Replace motor.



## WATER SYSTEM

The water system consists of three primary elements: 1) Water Delivery System, 2) Spray Bar Assembly; 3) Pump. Troubleshooting of this system is fairly simple.

The **Water Delivery System** consists of two assemblies: A) The Water Inlet Assembly and B) The Plumbing Assembly.

The **Water Inlet Assembly** is made up of three components: 1) The Bulkhead Fitting, 2) The Float Valve Connection Hose, and 3) The Float Valve.

The **Plumbing Assembly** consists of three elements: 1) Riser (PVC components), 2) Drain Valve, and 3) The Spray Bar Adjustment Valve. (The PAC9K163SHD and PAC9K163HPVS models have no riser or drain valve.)

The **Spray Bar Assembly** consists of two components: 1) Spray Bar, 2) Connection Hose.

The pumps that actually move the water through the delivery system are discussed in the charts below. These charts indicate the major symptoms of problems that may be encountered with the Water System components.

### WATER INLET SYSTEM

PROBLEM	CHECK	SOLUTION
Floor near the PORT-A-COOL® unit is wet. Water flow is too heavy.	Water inlet hose is loose at supply hose or inlet hose is loose at bulkhead fitting	Adjust water flow. Tighten connections and/or replace hose washers.
PORT-A-COOL® unit overflows from sump tank or is spitting water through fan.	Float valve hose is loose at bulkhead fitting or at float valve.	Tighten connections and /or replace hose washers.
	Water pressure is too high to allow float valve to shutoff. (50 psi max.)	Reduce water pressure by checking in-line reducer.
	Float valve is not seating properly.  Spray bar valve adjustment.	Check for particles in valve. Replace float valve.  Close down adjustment valve to reduce excess water flow.

### PLUMBING ASSEMBLY

PROBLEM	CHECK	SOLUTION
Water spitting from the unit.	Cracked riser assembly. Spray Bar Adjustment valve.	Replace riser assembly.
Water leaking from Drain Valve.	Washer worn.	Replace washer.
	Stem worn.	Replace Drain Valve.
Water leaking from Spray Bar Valve.	Washer worn.	Replace washer.
	Stem worn.	Replace Spray Bar Valve.

### SPRAY BAR ASSEMBLY (ALL MODELS)

PROBLEM	CHECK	SOLUTION
Too many dry streaks in the pads.	Holes in spray bar blocked by foreign material.	Remove and clean spray bar.
		Clean individual holes.
Water spitting from the unit.	Hose connection loose.	Tighten hose.
		Replace hose and washer.
		Reseat spray bar end caps
Excess water in air coming from the fan.	Pad Installation	Pads must be installed according to air flow direction label on the pad.

### SUBMERSIBLE PUMPS PROBLEM CHECK SOLUTION

PROBLEM	CHECK	SOLUTION
Pump will not run when switch is turned on.	Power cord, switches, circuit breaker, switch box, connection, etc.	Reconnect power, reset breaker or reconnect in switch box.
	Air lock in hose.	Disconnect hose at base of pump, run pump to release air, then reconnect.
Pump hums when switch is turned on, but does not pump water.	Inlet filter clogged.	Clean filter.
	Pump motor locked.	Replace pump.
Breaker trips or fuse blows when switch is turned on.	Wiring short in line between pump and switch box.	Check and/or replace wiring.
Pump cycling on and off periodically	Sump tank is empty.	Fill with water.
	Spray bar valve is closed.	Open valve.
Pump will not run and power is available and pump is functional.	Switch making closure contact.	Check continuity/ Replace switch.
Unit has water spraying from front.	If the unit is equipped with a PUMP-016-4Z.	If so, disconnect the unit and remove the pads to access the pump. Turn it towards the rear of the unit.
	Water level	Units equipped with PUMP-016-4Z need to maintain water levels to cover the pump.



**BRONZE PUMP (PAC2K36HZ or PAC2K48HZ)**

PROBLEM	CHECK	SOLUTION
Pump motor will not run when switch is turned on.	Power cord, switches, circuit breaker, etc.	Reconnect power, reset breaker.
Pump motor hums when switch is turned on, but does not pump water.	Air Locked.  Pump/Motor locked.	Disconnect hose at base of pump, run pump to release air, then reconnect. Replace pump/motor.
Pump makes loud noise while running	Pump bearings.	Replace pump.
	Object in impeller housing.	Clear object.
Breaker trips or fuse blows when switch is turned on.	Pump motor locked.	Replace pump/motor.
Pump will not run and power is available and pump is functional	Switch making closure contact.	Replace switch.
Pump motor running but pump is not turning.	Set screws on coupling.	Tighten set-screw / Replace coupling.

**SHAFT TYPE PUMP (16" models)**

PROBLEM	CHECK	SOLUTION
Pump motor will not run when switch is turned on.	Power cord, switches, circuit breaker, switch box, connections, etc.	Reconnect power cord, reset breaker, or reconnect to switch box.
Pump motor hums when switch is turned on, but does not pump water.	Object jammed into impeller blade.	Remove object.
	Air Locked.	Prime pump.
	Pump motor locked.	Replace pump.
Pump makes loud noise while running.	Pump bearings.	Replace pump.
	Object in impeller housing.	Clear object.
Breaker trips or fuse blows when switch is turned on.	Pump motor locked.	Replace pump.
Pump won't run and power is available and pump is functional.	Switch making closure contact.	Replace switch.