

# Portable Evaporative Cooling System



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Manual No. 4801-5035 Rev 09-2014

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## 1. Warnings

# A WARNING

- Whenever water and electricity are combined in the same enclosed environment the
  possibility of electric shock exists. This unit must only be plugged into a three conductor,
  grounded GFI (Ground Fault Interrupt), power source. Do not open the unit with power
  applied to the unit. Do not place the unit on a slope or where it can accidentally fall or
  roll into water.
- Wiring And Connections Must Comply With All National And Local Electrical Codes.
- Installation By Qualified Electrician Required!

# 🗛 WARNING

- Hazardous rotating fan blade. Do not place fingers, arms, or other appendages into the path of the blade, or operate the machine without the guards in place.
- Use Caution When Handling Sharp Metal.

# A WARNING

Once per month, inspect the internals of the PolarCool for signs of electrical insulation breakdown. Check the seal at the motor, as any holes may allow water to come in contact with open electrical circuits.

# A WARNING

Do not operate any fan with a damaged cord or plug. Discard fan or return to an authorized service facility for examination and/or repair.

# A WARNING

Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.

## 2. Limited Warranty

All products are warranted to be free from defects in material and workmanship for a period of one year from the date of purchase if installed and used in strict accordance with the installation instructions. Liability is limited to the sale price of any products proved to be defective or, at manufacturer's option, to the replacement of such products upon their return. No products are to be returned to the manufacturer, until there is an inspection and/or a return-goods authorization (RGA) number is issued.

All complaints should be directed first to the authorized distributor who sold the product. If satisfaction is not obtained or the name of the distributor is not known, write the manufacturer that appears below, directed to the attention of Customer Service Manager.

This limited warranty is expressly in lieu of any and all representations and warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. The remedy set forth in this limited warranty shall be the exclusive remedy available to any person. No person has authority to bind the manufacturer to any representation or warranty other than this limited warranty. The manufacturer shall not be liable for any consequential damages resulting from the use of our products or caused by any defect, failure or malfunction of our products (Some areas do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.)

This warranty gives you specific legal rights and you may also have other rights that vary from area to area.

#### Warrantor:

RollSeal, Inc. 1733 Co. Rd. 68 Bremen, Alabama 35033 Phone 256-287-7000 Fax: 256-287-7010

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### 3. PolarCool Performance

The following table shows estimates of the performance of three sizes of the PolarCool Evaporative Cooling System. These values will vary depending on the particular installation and operating conditions. Both Variable Speed(VS) and Single Speed(SS) models are listed.

PolarCool Model	Drive	Water Consumption Rates (See Note 1)	Power Consumption	Typical Air Movement Rates (cubic feet per minute- See Note 2)
18" VS	Direct	5 gallons per hr.	5 amps @ 115v /60hz	3,000
18" VS	Direct	5 gallons per hr.	3.5 amps @ 230v /50hz	3,000
24" VS	Direct	7 gallons per hr.	6 amps @ 115v /60hz	4,400
24" VS	Direct	7 gallons per hr.	3.5 amps @ 230v /50hz	4,400
36" VS	Direct	12 gallons per hr.	10 amps @ 115v /60hz	10,000
36" VS	Direct	12 gallons per hr.	5.5 amps @ 230v /50hz	10,000
36" SS	Direct	10 gallons per hr.	7.0 amps @ 115v /60hz	10,000
48" SS	Belt	17 gallons per hr.	11 amps @ 230v /60hz	17,500
48" SS	Belt	17 gallons per hr.	8 amps @ 230v /50hz	17,500

- Note 1: This estimate is under 90+ degree conditions; cooler temperatures will result in less water usage.
- Note 2: The cooling area is very dependent on the relative humidity, temperature, and the space being cooled.

#### 3.1 Temperature Differential Readings

The temperature drop from inlet to exit is very dependent on relative humidity and temperature. The higher the ambient temperature and the drier the air, the greater the drop. A temperature drop of 10 to 20 degrees is common.

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## 4. Controls

2008 and newer 18" and 36" Variable Speed PolarCool units feature a completely redesigned control panel interface. The new control panel provides a user friendly interface with status indicator lights. The 24" and 48" PolarCool models have two valves and two switches. Their functions are as follows:

#### 4.1 Valves

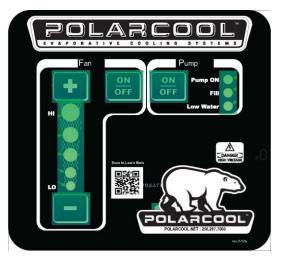
- *Discharge Valve (24" and 48" models only)* Used when pumping out the reservoir for cleaning and extended shutdown (Down time greater than 24 hours). Also used to implement the "bleed-off" function. Connect a hose to this valve when pumping out the system or implementing "bleed-off" to prevent dangerous water puddling around the fan.
- *Spray Bar Adjustment Valve (18", 24", 36", and 48" models)* Used to adjust the water flow to the spray bar. The valve can be opened or closed to increase or decrease the water flow to the pads. Too much water can allow droplets or a mist to be blown out of the fan. Too little water will prevent thorough wetting of the pads and will result in a reduction in cooling efficiency.

#### 4.2 18" and 36" Variable Speed Control Panel

- *Power Indicator Light* The red Power Indicator Light is located at the bottom-center of the control panel label and illuminates the Danger High Voltage Triangle. The Power Indicator Light remains ON constantly while power is applied to the PolarCool unit.
- Fan Control ON/OFF Button This button is used to start and stop the fan.
- + *and Speed Control Buttons* Used to select the fan speed to any position between LO and HI. These buttons control the fan speed only and does not turn the fan on or off.
- Water Pump Control ON/OFF Button This button is used to start and stop the water pump.

CAUTION: This switch should never be turned on unless there is water in the pan.

- *Pump ON* The green indicator PUMP ON light is ON solid when the water pump is running.
- *Low Water* The red indicator LOW WATER light is ON blinking when the water level is low for less than 1 minute. After the first minute, the red indicator light is ON solid.
- *Fill* The green indicator FILL light turns ON blinking when the water level has remained low for a constant time of more than 1 minute. Also after the first minute of constant low water level, the water pump will automatically turn off, the Pump ON and Fill green indicator lights will be blinking, and the Low Water red indicator light will be ON solid.
- **NOTE:** The water must be filled above the low level switch and remain above the switch for a minimum of 1 minute solid before the water pump will turn back On.



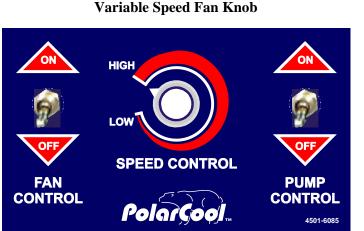
#### 4.3 Switches

Section 4.3 pertains only to the 24" Variable Speed Model and the 36" & 48" Single Speed Models.

- *Fan Control Switch* Used to start and stop the fan. This switch is the one on the left when looking at the bank of switches.
- **NOTE:** Some models come with two speed and others with variable speed fans. Refer to the figure below for available models and fan speeds. These models will have a two position switch to turn the fan On and Off (36" and 48" Single-Speed Models) or a two position On/Off switch with a variable speed knob (24" Variable Speed Model).
  - *Pump Control Switch* Used to start and stop the pump, and is located on the right when looking at the bank of switches.

#### CAUTION: This switch should never be turned on unless there is water in the sump.

• *Speed Control Knob* – Used to select the fan speed to any position between Low and High (24" Variable Speed Models). This knob controls the fan speed only and does not turn the fan on or off.



24" Variable-Speed Model

36" and 48" Single-Speed Models Single Speed Fan Toggle Switch



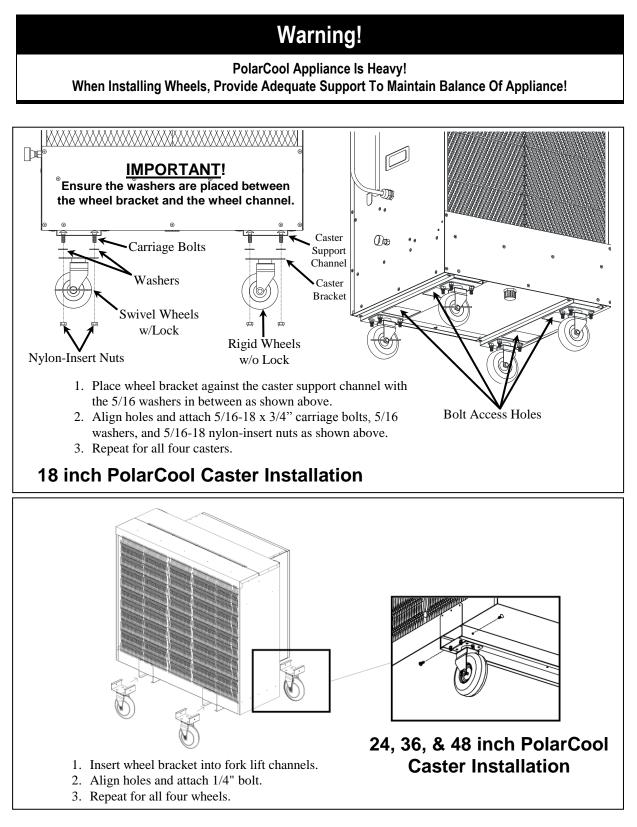
NOTE: The 18" & 36" Variable-Speed Models Manufactured in 2007 and Before Included the Variable Speed Fan Knob Assembly as Pictured Above.



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## 5. Installation and Preparation

#### 5.1 Wheel Installation



# **IMPORTANT!**

# **Remove Tape From Float Before Operating! Follow Instructions Below.**

Lift cover

access to

to gain

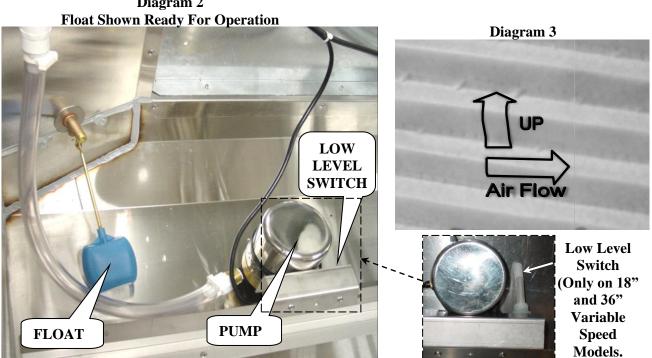
pads

#### **INSTRUCTIONS:**

- 1. Carefully unpack PolarCool from shipping carton.
- 2. Lift Cover to gain access to pads as shown in Diagram 1 at right. Tilt pads as shown. Remove pads to access float.
- 3. Float is securely taped to bottom of PolarCool for shipment.
- USE HAND AND APPLY PRESSURE TO HOLD FLOAT IN PLACE. CAREFULLY PEEL TAPE FROM FLOAT WITH OTHER HAND! DO NOT BEND FLOAT ARM WHILE REMOVING TAPE! See Diagram 2.
- 4. Replace pads. Look for arrows on side of pad as shown in Diagram 3. Ensure pads are replaced with up arrow pointed UP.



PolarCool shown with cover open and pad tilted forward



**Diagram 2** 

#### 5.3 230 VAC /50 hz Wiring Diagram

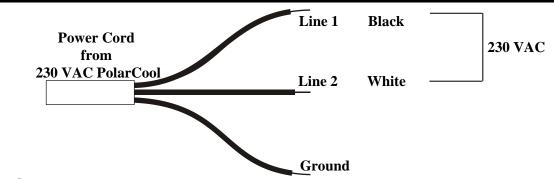
The 230 VAC /50 hz PolarCool models are supplied with a stubbed power cord which must be wired to the specific plug necessary to match local, state, and national electrical receptacles.

# WARNING

- Whenever water and electricity are combined in the same enclosed environment the possibility
  of electric shock exists. This unit must only be plugged into a three conductor, grounded GFI
  (Ground Fault Interrupt), power source. Do not open the unit with power applied to the unit.
  Do not place the unit on a slope or where it can accidentally fall or roll into water.
- Wiring And Connections Must Comply With All National And Local Electrical Codes.

1

Installation By Qualified Electrician Required!



#### 5.4 Start-Up

The PolarCool is easy to prepare for operation. There are five easy steps.

## WARNING

Do not place the unit on a slope or where the unit can accidentally fall or roll into water. The lockable wheels provide resistance to movement although do not prevent movement or turn-over.

- 1. Hook-up water hose to inlet tap.
- **NOTE:** If desired, an optional customer supplied drain hose and cut-off valve can be attached to the drain pan outlet beneath the PolarCool.
  - 2. Check safety of electrical cords, and plug in unit.

# CAUTION: The system must always be plugged into a three conductor, grounded GFI (Ground Fault Interrupt), power source.

3. Turn on water and allow time for the reservoir to fill.

#### IF PADS ARE NEW:

When pads are new, their slick surface will prevent the fast water absorption that will happen with older pads. For this reason, it is important that the first time new pads are used, to allow the pump to run for two or three hours. This will "soak-in" the pads, and allow faster start-up later.

After soaking new pads, turn off the pump, fan, and water supply, unplug the unit, and drain the reservoir. The reservoir can be drained using the Drain Outlet, or for 24 and 48 inch models, the Discharge Valve and pump can be used to remove water. This eliminates chemical residues that have washed out of the new pads.

NOTE: Do not allow the pump to run without water in the reservoir. Without water, the pump may be damaged.

Foaming can occur with new pads. If excessive foaming is experienced, repeat the procedure described above two or three times to flush chemical residues from the pads. Reducing the water flow to the pads may also be helpful to reduce foaming.

#### NORMAL OPERATION :

Turn on the pump and let the water run for fifteen to twenty minutes before turning on fan.

- 4. Turn on fan and enjoy the cool air output.
- 5. Follow Shut Down procedure described in Section 5.5.

#### 5.5 Shut Down

When you are finished with the PolarCool, follow these steps for shutting down the unit.

- 1. Turn off pump.
- 2. Wait ten to fifteen minutes (This will dry the pad and minimize algae growth).
- 3. Turn off fan.
- 4. Disconnect water and power to the unit.
- 5. If water is not disconnected, turn off water hose to PolarCool whenever PolarCool is not in use.

#### 6. Operation

#### 6.1 Ventilation is Very Important

Fresh air is very important for proper operation of evaporative cooling. Ventilation can be provided by air flow from open windows and doors, or exhaust fans. Positioning the PolarCool intake close to an open door is a common way to assure fresh air. Evaporative cooling will not function properly in a closed environment.

#### 6.2 Normal Operation

Under normal conditions, the pump should run constantly when air is being drawn through the pads. If outside conditions are not warm enough to run evaporative cooled air, an alternative is to run the fan with the pump off.

Dry the pads completely each night by turning off the pump and drawing air through the pads with the fan.

#### 7. Maintenance

#### 7.1 Maintenance Accessibility

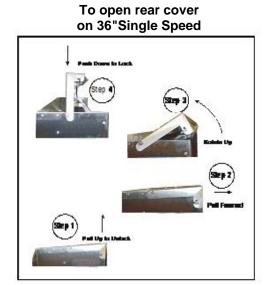
Since evaporative coolers require maintenance, the PolarCool has been designed to make maintenance as easy as possible. By simply raising the rear cover, basically all critical parts are within easy reach for inspection, including the pads, spray bar, fan belt (48" model only), pump, strainer, and water reservoir. The 36 inch Single Speed PolarCool has a special rear cover. To open, see the Figure below.

Lift cover to gain access to pads



PolarCool shown with lid open and pad tilted forward

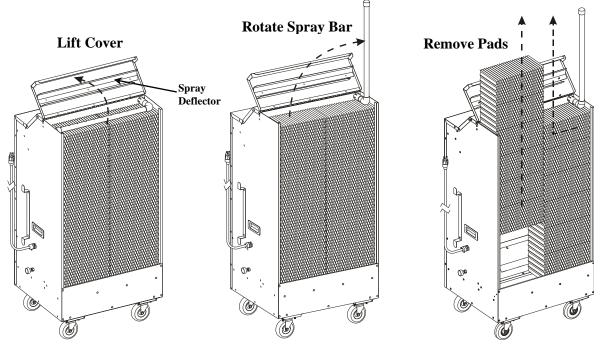
#### Rear Cover (except 36" Single Speed)



Rear Cover (36" Single Speed)

#### 7.2 Frequency Of Pad Replacement

PolarCool pads, produced from a cellulose base and impregnated with a plastic resin anti-rot agent, can give years of trouble free operation with proper maintenance (3 to 5 years is typical).



# NOTE: When lowering the cover, do not force the cover closed. Ensure the Spray Bar is correctly centered beneath the Spray Deflector.

#### 7.3 Extending Pad Life

As you use the PolarCool system, you will notice the need for good preventive maintenance. Algae growth, scale (hard crusty deposits), and dirt accumulation are typical problems associated with poor maintenance. Maintaining the PolarCool is very simple. It only takes a small amount of time and effort. If you follow the guidelines below, your pads will last much longer, and be much more efficient.

#### 7.3.1 Algae

To prevent algae, allow the pads to dry out each day, by running the fan without the pump running until the pads are completely dry (about 15 minutes).

#### 7.3.2 Scale

Scale is a concentration of solids that "plate" the surface of the pads if the water contains too many impurities. Scale formation can be prevented by using water with a pH between 6 and 9 and silica levels below 150 ppm. If this is impractical, scale can be minimized by increasing the drain-off rate. To clean pads, spray pads frequently with water hose.

#### 7.3.3 Dirt and Dust

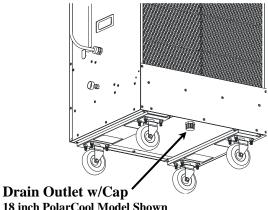
If the pads are allowed to get excessively dirty, they should be removed from the system and washed down with a water hose.

#### 7.3.4 Why Drain Water From The System?

If you have ever left a pot of coffee warming on the coffee maker you know the two principles at work in evaporative cooling systems. First, as the coffee sits on the warming plate, the level of water in the pot goes down. Second, the remaining coffee gets stronger as the water evaporates.

In your cooling system, these effects still apply. As water evaporates, no impurities are carried along. This leaves all sorts of minerals, chemicals, and other impurities behind. The concentration of impurities in the reservoir and system will quickly rise.

Drain the reservoir daily in dusty conditions, and twice a week in clean air.



18 inch PolarCool Model Shown

#### 7.3.5 Water Distribution

Maintaining even water distribution to the pads is the most important way of extending pad life. If an area of pad does not receive enough water, cooling efficiency will be degraded. The Spray Bar Adjustment Valve (18", 24", 36", and 48" models) should be increased until the pads are fully wet, but not to the extent that a mist is blown out of the fan.

NOTE: The 18" model's Spray Bar Adjustment Valve is located inside the unit on the lower-side of the water pump.

Dry spots or streaks can also be caused by clogged holes in the spray bar. Investigate by raising the rear cover and running a pipe cleaner, or small dowel into the holes in the spray bar to clear any clogged holes. The spray bar end cap or caps may be removed for easier cleaning. Ensure the holes in the spray bar point upward during operation.

#### 7.4 Flushing the Reservoir

The pads and the complete water system should be flushed out at least once a week and the reservoir wiped clean.

- 1. Turn off the pump, fan, and water source, unplug the unit and drain the reservoir. The reservoir can be drained using the Drain Outlet for 18 and 36 inch models, or for 24 and 48 inch models, the Discharge Valve and pump can be used to remove water.
- NOTE: If desired, an optional customer supplied drain hose and cut-off valve can be attached to the drain pan outlet beneath the PolarCool.
  - 2. Wipe out the reservoir.
- **NOTE:** Do not allow the pump to run without water in the reservoir. Without water, the pump may be damaged.
  - 3. Restore the water source and fill the reservoir.
  - 4. Run the pump for at least 15 minutes.
  - 5. Pump the reservoir out again and refill with fresh water.
  - 6. Start the pump and fan.

#### 7.5 Cleaning the Pump Filter

The water pump includes a removable plastic filter on the bottom of the pump which should be cleaned weekly when the reservoir is flushed.

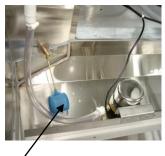
- 1. Turn off the pump, fan, and water source, and unplug the unit.
- 2. Remove the pump from the reservoir, remove and clean the screen on the bottom of the motor, and reinstall the pump in the same location and method as removed.

#### **NOTE:** Do not allow the pump to run without water in the reservoir. Without water, the pump may be damaged.

- 3. Restore the water source and fill the reservoir.
- 4. Reconnect power and run the pump for at least 15 minutes.

Pump (18 inch PolarCool — Model Shown)

5. Turn the fan ON.



Float and Pump (48 inch PolarCool Model Shown)

#### 7.6 Cleaning the Pads

- 1. Turn off pump and fan.
- 2. Remove screws on each side of hinged cover.
- 3. Lift cover and remove pads.
- 4. Hose down each side of pads.

#### CAUTION: Do Not Use High Pressure Washer To Hose Down Pads!

- 5. Drain the reservoir.
- 6. Clean out strainer.
- 7. Refill reservoir with clean water.
- 8. Replace pads.
- 9. Turn on the pump to run fresh water over the pads for about 20 minutes. Use as much water as possible.

**Sprav Adjustment** 

Valve (2007 models

and earlier)

- 10. Gently hose stubborn deposits from the face of the pads.
- 11. Completely empty the reservoir to remove all the old algae and dirt that will rinse off the pads.
- 12. Refill with clean water.

#### 7.7 Replacing Pads

- 1. Remove old pads from PolarCool.
- 2. Look for Air Flow Diagram on side of new pad. Refer to diagram at right.
- **IMPORTANT!** Install new pad into PolarCool with Air Flow in direction of arrow and with up arrow pointing UP.
  - 3. Replace all pads as described in step 2.

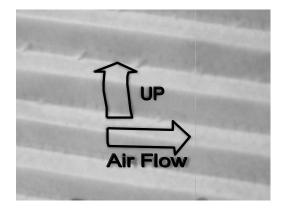
#### 7.8 Winterization

When storing for extended periods:

- 1. Flush and clean reservoir. Never leave water in reservoir for extended periods.
- 2. Remove and backwash pads. Remove any debris or deposits from pad.
- 3. Remove the drain outlet cap to prevent water accumulation inside the reservoir.



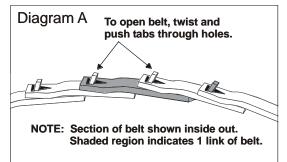
Little Giant PolarCool Pump (24 inch and 36 inch models)



#### 7.9 Belt Inspection or Removal (48"Model Only)

- **NOTE:** Experience indicates that drive tension should be checked between 1/2 hour and 24 hours running at full load. A retension may be necessary depending on the application. Any initial belt stretch is then taken up. Subsequently, belt tension should be checked periodically and adjusted when necessary.
  - 1. Disconnect all electrical power to PolarCool!
  - 2. Remove pads.
  - 3. TEST FOR LOOSE BELT: Press on belt with finger about halfway between pulleys. Belt should deflect about 3/4" if correctly fitted.
  - 4. To remove belt, slowly rotate belt while carefully rolling belt off of prop pulley.
  - 5. After removing belt, turn belt inside out. Links should resemble Diagram A.
  - 6. Flex belt to form a short, tight loop at one end.
  - 7. Twist and unlock tabs holding link. This will open belt.
  - 8. Remove links as required to tighten belt.
  - 9. After removing link(s), reattach belt together by locking tabs through holes.
  - 10. Turn belt to place tabs to inside of belt.
  - 11. Hook belt onto motor pulley. Roll belt onto Prop pulley.
  - 12. After belt is installed, press on belt with finger about halfway between pulleys. Belt should deflect about 3/4" if correctly fitted.
- **NOTE:** Make sure arrows on belt are pointing in direction of prop rotation.

#### 7.10 Float Adjustment Important! Float Is Preset By Manufacturer And Should Not Require Adjustment Under Normal Circumstances! If adjustment is required, perform the following steps: 1. Disconnect all electrical power to PolarCool appliance! Adjustment 2. Carefully remove pads. Screw 3. Locate float valve inside PolarCool. Refer to Replacement Parts Diagram. 4. Use a screwdriver and loosen adjustment screw as shown in figure at right. Increase **Float Arm** Water Level 5. To decrease water level in reservoir, move float arm downward as shown in diagram at right. Retighten adjustment screw. 6. To increase water level in reservoir, move float arm Decrease upward as shown in diagram at right. Retighten Water Level adjustment screw. 7. Replace pads. Return PolarCool to operation. 8. Repeat steps 1 thru 7 above as required for proper adjustment of water level. **NOTE:** Water level in reservoir is normally $2-1/4" \pm 1"$ . Do not allow the reservoir water to contact the pads when the reservoir water level is at the highest point. 9. After adjusting water level, return PolarCool to service.



#### 7.11 Flow Control Adjustment

Flow control adjustments are available on the 18" model (2007 models and earlier) on the bottom of the pump as shown in **Section 7.5** and also at the Flow Control Valve as shown to the right. The 36" model has a flow control valve as shown to the right. Flow adjustments are factory preset, however can be adjusted by the user based upon local water pressure and evaporative conditions at the site. The amount of water flow affects the efficiency and operation of the PolarCool. During operation the flow should be adjusted so that sufficient water soaks the pads, but only enough to completely soak the pads.

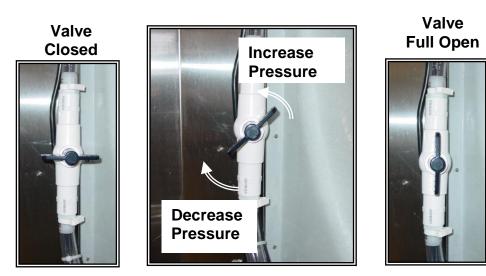
If there is too much water flow, the pads become over-soaked, that is, there is more water flow than required for proper evaporation. Surplus water may be sucked into the fan producing a water droplet spray directly in front of the PolarCool. In some cases, if you stand in front of the PolarCool you may feel the water spray! The efficiency of the Polar cool is reduced in this case. If this happens, reduce the water flow.

If there is too little flow, there will not enough water to fully soak the pads. You can actually see dry spots in the pads. Again, this reduces the efficiency of the PolarCool. If this is the case, increase the flow until the pads become fully soaked.

Adjust the Water Flow as described above. The FULL OPEN and CLOSED positions of the Valve are shown below.



Flow Control Adjustment 18", 24", 36" & 48" PolarCool



#### Adjust Water Flow 18", 24", 36" & 48" PolarCool

## 8. PolarCool Preventive Maintenance Requirements

- Flush the system at least once per week and wipe the reservoir clean to prevent damage to the unit. **Refer to Section 7.4.**
- Allow the pads to dry out each day, by running the fan without the pump running until the pads are completely dry (about 15 minutes).
- Drain the system during extended shutdowns.
- Disinfect the whole system once per quarter.
- Routinely inspect fan belt (48" model only) for looseness and inspect spray bar for debris in holes.
- Turn off water hose to PolarCool whenever PolarCool is not in use.
- Have the right amount of water running over the pad.
- If power cord extension is necessary, ensure that you use 12 AWG or larger wire.
- Ensure that air is not limited or restricted from entering or exiting the unit.
- Identify and correct leaks in the system.
- Excessive dust, fumes, and harsh cleaners, should be avoided.
- Do not use in closed environment. Fresh air is necessity.
- Do not add chlorine or bleach to water.
- Never use phosphate based water treatment chemicals.

**NOTE:** After running 30 minutes to 24 hours at full load, inspect belt tension (48" model only). Refer to **Belt Removal Section 7.9, Step 12** for belt tension guide. If belt requires tightening, follow instructions in the same section for belt removal.

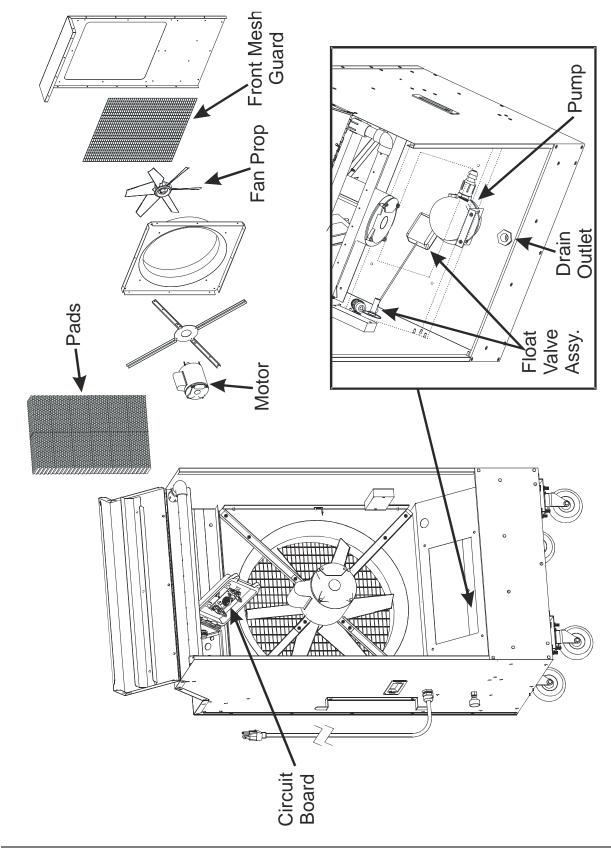
### 9. Troubleshooting Guide

Problem	Check/Action	Reference Section				
Swivel casters will not turn.	Check installation of caster hardware. Hardware must be in the proper order and location.	5.1				
First time using a NEW PolarCool - Water overflows	Remove tape from float.	5.2				
Water is splashing off of pads	Pads may be in backwards; Check Flow chart on side of pad.	7.7				
Water spraying out from cover.	Ensure the holes in the spray bar point upward into the spray deflector. (Vertical Spray).	7.3.5				
Water is not spraying out of ANY spray bar holes.	Ensure pump switch is ON; Check for sufficient water in reservoir; Check screen on bottom of pump for obstructions.	7.5				
Water is not spraying out of SOME spray bar holes.	Adjust spray using the Spray Bar Adjustment Valve, the spray bar should be cleaned, OR the pump screen should be cleaned.	4.1 and 7.3.5				
Excessive dry streaks in the pads.	Remove spray bar and clean the bar and all holes.					
Existing Unit – Water overflows	Adjust float valve to a lower position.	10				
Fan motor doesn't turn ON and no sound from the motor.	Check PolarCool Switches, power cord, GFCI outlet, and circuit breaker.					
48" Fan blade doesn't turn or slips.	Check for broken or loose fan belt. (48" ONLY)	9				
Motor overheats and shuts off then restarts minutes later.	Extension cord gauge is too small or the air passage is blocked or partially obstructed.					
Pump does not work.	Check for low water-level and low-level switch. (18" and 36" Variable-Speed models manufactured in 2008 and later)	4.2 and 5.2				
Manual No. 4801-5035 Rev 09-2014 PolarCool Page 1'						

## 10. Replacement Parts List

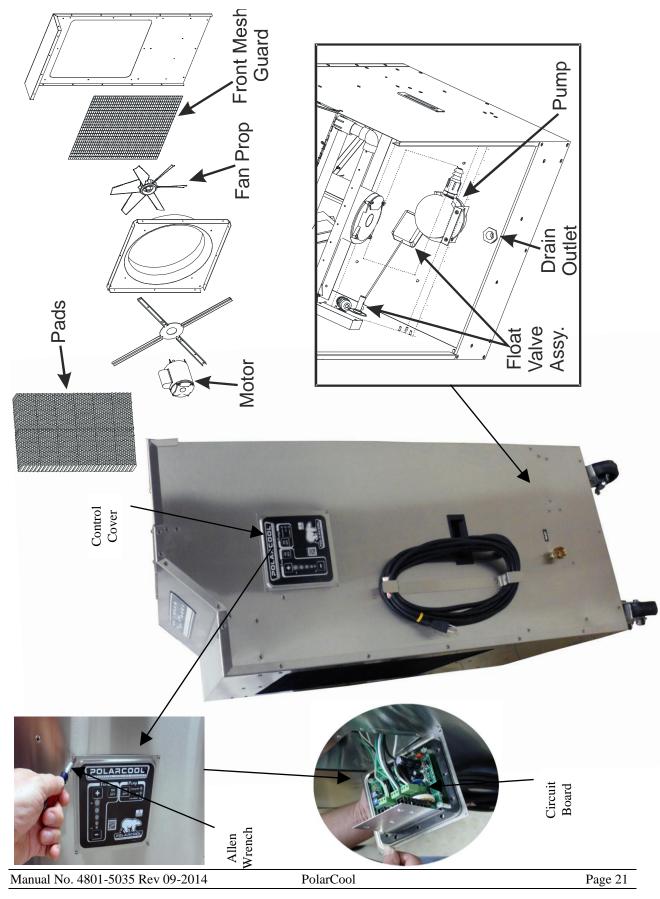
Part	Volts/Hz	18" Vari Spd	24" Vari Spd	36" Vari Spd	36" Sgle Spd	48" Sgle Spd
Cooling Pads		0050-6503	0050-6502	0050-6501	0050-7601	0050-6500
Complete Pad Set		2 Required	3 Required	5 Required	4 Required	6 Required
Water Pump	120v / 60Hz	6422-0610	6422-0612	6422-0615	6422-0614	N/A
	230v / 50Hz	6422-0611	6422-0613	6422-0616	N/A	6422-0617
	230v / 60Hz	N/A	N/A	N/A	N/A	6422-0617
Fan Motor	120v / 60Hz	3017-5018	3017-5018	3017-5600	3017-2271	N/A
	230v / 50Hz	3017-5018	3017-5018	3017-5602	N/A	3017-3081
	230v / 60Hz	N/A	N/A	N/A	N/A	3017-3081
Fan Belt		N/A	N/A	N/A	N/A	1022-2998 (55-1/2") (141 cm)
Fan Prop		6403-5610	6403-6000	6403-5600	6403-6112	6403-6111
Float Valve		1009-0107	1009-0107	1009-0107	1009-0107	1009-0107
Fan Switch		3001-2862 (2007 and older models)	3001-2862	3001-2862 (2007 and older models)	3001-2865	3001-2865
Front Mesh Guard		0011-7100	0011-7005	0011-7007	0011-7007	0011-7006
Spray Bar		6422-0570	6422-0532	6422-0531	6422-0206	6422-0530
Pulley (motor)	230v / 50Hz	N/A	N/A	N/A	N/A	1011-2647
	230v / 60Hz	N/A	N/A	N/A	N/A	1011-2650
Pulley (Fan Prop)		N/A	N/A	N/A	N/A	1011-0100
Bearing Assy.		N/A	N/A	N/A	N/A	1016-0100
Hose Adapter Fitting		1021-3000	1021-3000	1021-3000	1021-3000	1021-3000
Fan Shaft		N/A	N/A	N/A	N/A	0411-4535
PCB175 Circuit Board	120v / 60Hz	6407-1542 (2007 and older models)	6407-1540	6407-1540 (2007 and older models)	N/A	N/A
	230v / 50Hz	6407-1556 (2007 and older models)	6407-1558	6407-1544 (2007 and older models)	N/A	N/A
Pump Switch		3001-2862 (2007 and older models)	3001-2862	3001-2862 (2007 and older models)	3001-2865	3001-2865
Vari-Speed Switch/Harness		1903-6000 (2007 and older models)	1903-6000	1903-6000 (2007 and older models)	N/A	N/A
Low-Level Switch/Harness		3001-0050 (2008 and later models)	N/A	3001-0050 (2008 and later models)	N/A	N/A
PCB189 Circuit Board	120v / 60Hz	6407-1610 (2008 and later models)	N/A	6407-1615 (2008 and later models)	N/A	N/A

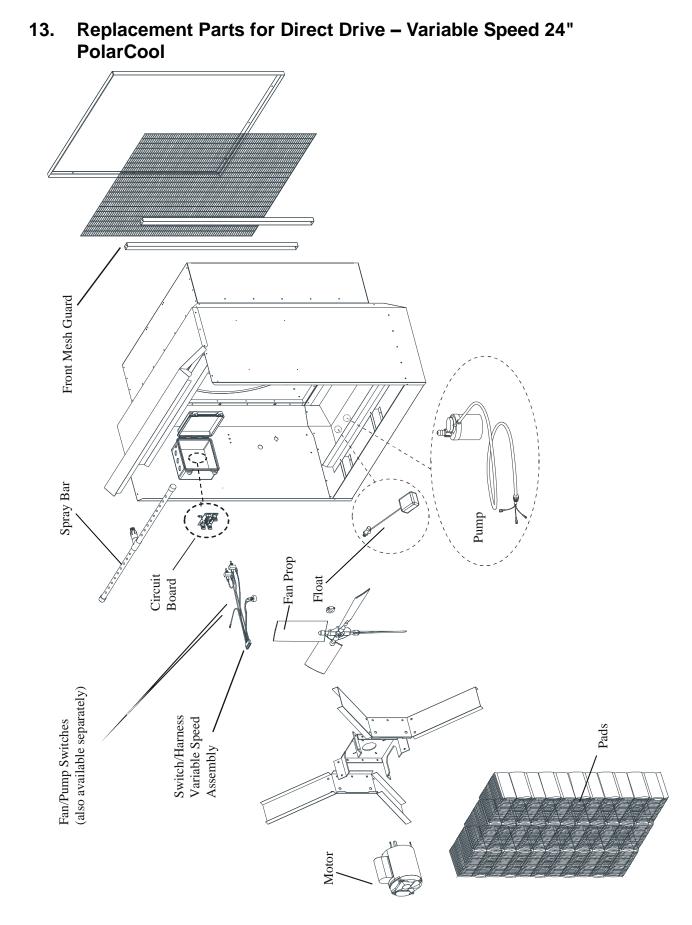
Part	Volts/Hz	18" Vari Spd	24" Vari Spd	36" Vari Spd	36" Sgle Spd	48" Sgle Spd
		6407-5136		6407-5137	6407-5137	
Control Plate		(2008 and		(2008 and	(2008 and newer	
		newer models)		newer models)	models)	
		6407-1610		6407-1615	6407-1615	
Control Panel		(2008 and		(2008 and	(2008 and newer	
		newer models)		newer models)	models)	
		1028-3500		1028-3500	1028-3500	
Control Box		(2008 and		(2008 and	(2008 and newer	
		newer models)		newer models)	models)	
		3006-5082		3006-5082	3006-5082	
3 Pos Connector		(2008 and		(2008 and	(2008 and newer	
		newer models)		newer models)	models)	
		3006-5107		3006-5108	3006-5107(2008	
2 Pos Connector		(2008 and		(2008 and	and newer	
		newer models)		newer models)	models)	
		3001-0050		3001-	3001-0050(2008	
Level Switch		(2008 and		0050(2008 and	and newer	
		newer models)		newer models)	models)	
		1001-		1001-0110	1001-0110	
Nut		0110(2008 and		(2008 and	(2008 and newer	
		newer models)		newer models)	models)	

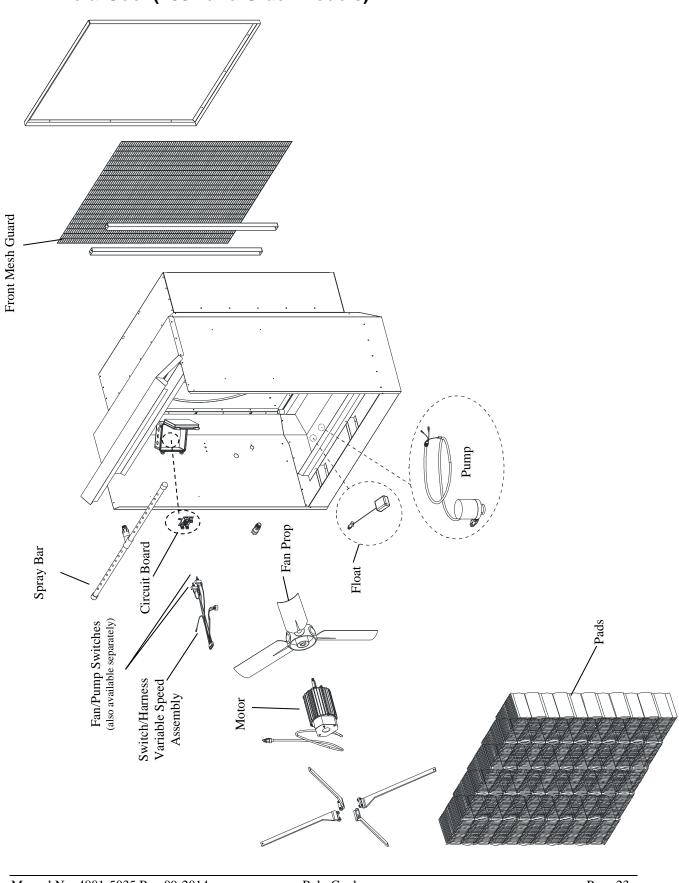




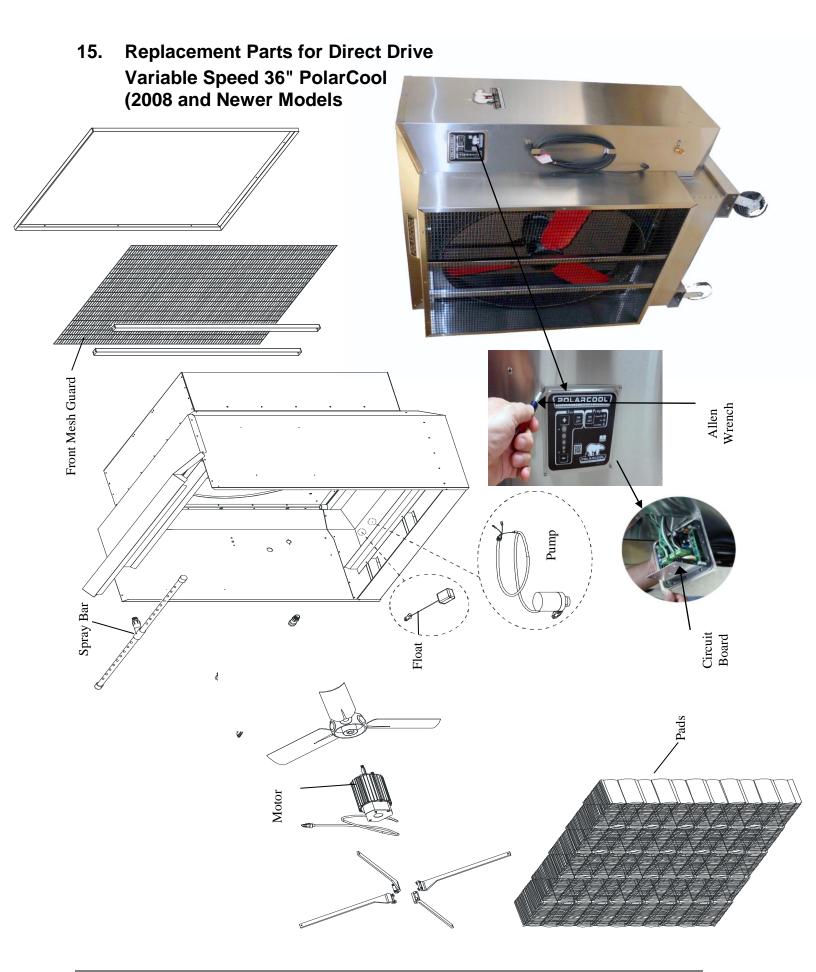
12. Replacement Parts for Direct Drive – Variable Speed 18" PolarCool (2008 and Newer Models)

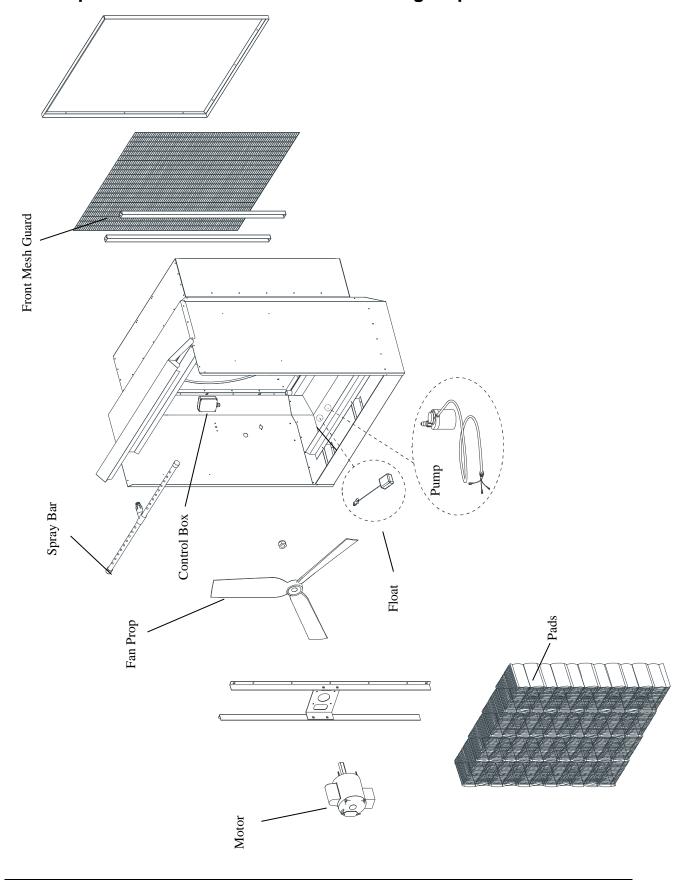




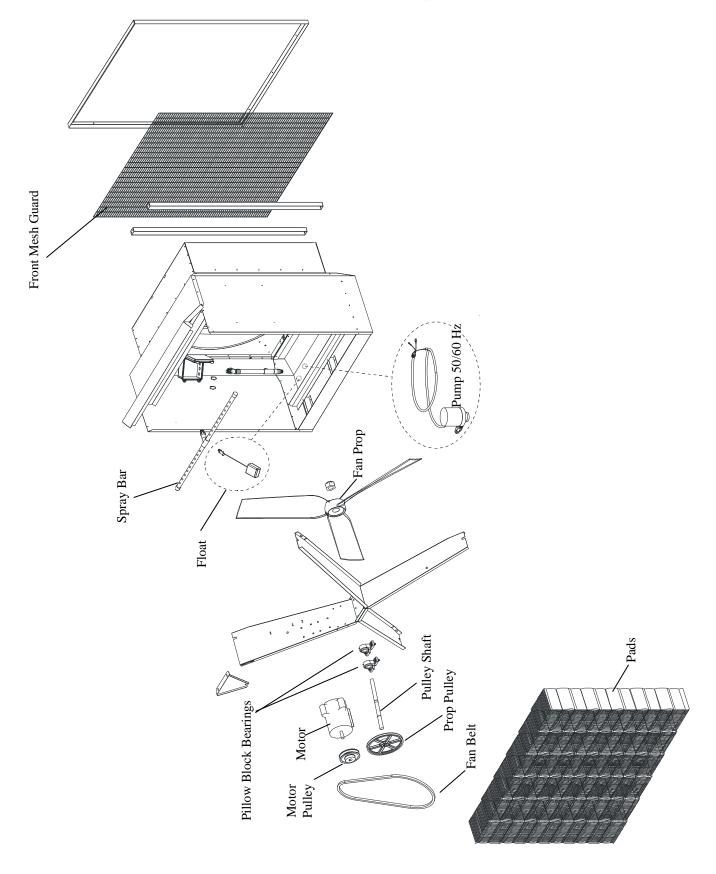








16. Replacement Parts for Direct Drive – Single Speed 36" PolarCool



## 17. Replacement Parts for Belt Drive – Single Speed 48" PolarCool

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