

SLIM WALL OWNER'S GUIDE



USE AND CARE MANUAL

MODEL SWH3000

For Customer Assistance

CALL 1-800-325-6952

Congratulations: You have purchased a product of superior performance and design, which will give the best service when properly operated and maintained.

This guide was designed to provide you with the information needed to install, operate, inspect, maintain and troubleshoot your Slim Wall evaporative cooler.

The first section, Installation and Start-Up, gives details for installation. The second section, Maintenance, contains operational and maintenance instructions to aid in keeping your unit in good working order, while Troubleshooting includes information to help diagnose and repair commonly encountered problems.



IMPORTANT: Read the complete installation instructions before proceeding with installation.

⚠ WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING.

- Read all instructions carefully before installation
 - This cooler must be connected to 120Volt AC, 60 Hz (cycle) power only. NOTE: Improper voltage will void the pump and/or motor warranties and may cause serious personal injury or property damage.
 - This cooler must be plugged into a GFCI protected receptacle, which has been properly installed in accordance with all local and national codes. If you are not sure that the receptacle is GFCI protected, consult with a qualified electrician.
 - This cooler is equipped with a power cord having an equipment grounding conductor and grounding plug. Do **NOT** attempt to defeat this safety device by removing the grounding pin.
 - Do **NOT** step on or roll over power cord with heavy or sharp objects. Do **NOT** operate if plug or cord is damaged in any way. If the unit is damaged or malfunctions, do **NOT** continue to operate.
 - Remove the plug from the electrical receptacle by pulling on the plug and not the cord.
 - Always disconnect electrical power to unit before attempting to work on or service your cooler.
 - Do **NOT** operate near open containers of flammable liquid or gases.
 - Do **NOT** operate with evaporative pad(s) removed.
 - Use of extension cords is **NOT** recommended.
 - Do **NOT** operate this cooler (fan motor) with any solid-state speed control device.
 - Do **NOT** operate with back panel or outlet grille removed. Do **NOT** place fingers or any other objects inside the blower section. Serious risk of personal injury or property damage can occur.
 - **NEVER** wash your cooler cabinet with a garden hose. Water may harm motor and pump.
 - Do **NOT** locate or operate cooler near exhaust or vent pipes as odor or fumes may be drawn into unit.
 - Your warranty does **NOT** cover shipping damage. Report all shipping damage at once to store making delivery.
 - For future reference, record the serial number and purchase date of your evaporative cooler here:
- Serial # _____
- Purchase Date: _____
- Place of Purchase: _____
- ⚠ WARNING:** THE USE OF ANODE DEVICES, CHEMICAL ADDITIVES, OR COOLER CLEANER TREATMENTS IN THIS COOLER WILL VOID WARRANTY.

INTRODUCTION

Your Slim Wall evaporative air cooler was thoroughly tested and inspected before leaving the factory. This manual is your guide to proper installation procedures along with information about reasonable care and maintenance that will ensure safe, economical and trouble free cooling. Failure to follow these instructions may damage your cooler, impair its operation, create the potential for serious personal injury and/or void the warranty.

Read it carefully.

A Note About Air Exhausting/Maximum Cooling

Since coolers function best when there are plenty of openings for the air to exhaust, you can leave doors or windows open so your house can breathe. To get the maximum capacity of your cooler, and to help keep insects, dust, dirt, etc. out of the cooled space, the house should maintain a slightly positive air pressure (there should be slightly more air going into the house than is leaving). This is controlled by how much the windows or doors are opened.

How much should you open your windows or doors? You should adjust your openings until the air pressure inside the house is nearly balanced with the air outside. A good method to determine when the air is reasonably balanced is to place a tissue paper against the screen in the window or door farthest from the cooler and adjust the other openings in the house until the tissue paper stays lightly on the screen. You can adjust different windows in the house to direct the most airflow to the areas that are occupied during different parts of the day or night (example: living room windows during the day and bedroom windows at night.)

INSTALLATION

Carefully read the contents of the manual and review the drawings of the cooler to familiarize yourself with the various parts before beginning the installation process. Do NOT attempt to perform any part of the installation described in this owner's manual unless you are *fully qualified* to do so.

⚠ CAUTION: Disconnect all electrical power to the cooler before attempting to install, open or service your cooler.

Even while routinely inspecting or servicing the inside, the cooler can be accidentally started. Keep people and pets away from the cooler and electrical supply when you are working on it. Before opening, servicing or cleaning the unit, unplug the unit from the wall receptacle and take steps to ensure that the cord cannot be plugged back in and the cooler turned on accidentally. Do not plug power cable into receptacle until installation or service work is complete.

Before attempting to install the cooler, confirm that the following preparations have been made:

- This cooler must be plugged into a 120 volt GFCI (Ground Fault Circuit Interrupter) protected receptacle. If you are not sure that the receptacle is GFCI protected, consult

located within 5 feet of planned installation location (cooler power cord is 6 ft long, use of extension cords is not recommended).

- Install cooler where only fresh outside air can enter. Avoid installing the cooler in an area where the free air movement around and into the cooler is restricted or locations where obnoxious odors or fumes may be drawn into cooler from vent pipes, kitchen exhausts, etc.
- Proper installation requires a wall with a thickness between 6" and 8-1/2". If the wall is thinner than this a spacer can be installed on the outside of the wall to properly space the unit.
- It is extremely important to create a watertight seal between the outside wall and the duct passing through the wall.

INSTALLATION THROUGH THE WALL

REQUIRED TOOLS:

- Drill
- Stud finder
- 1/4" nut driver
- 1/2" & 7/16" inch socket
- Ratchet
- Level & measuring tape
- Drywall saw
- Stucco/Siding Cutting blade and saw

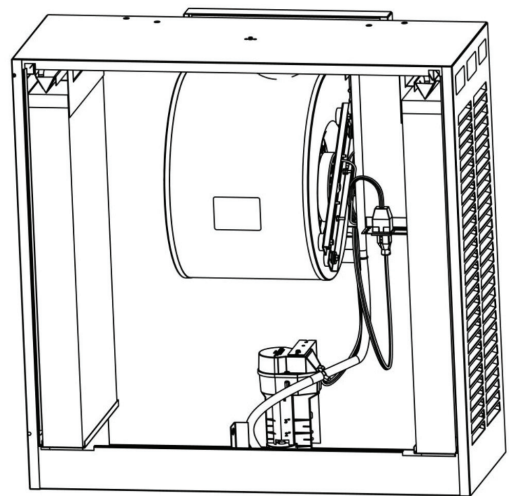


Fig. 1 - Inside of Cooler
(back panel removed)

Installation work and electrical wiring must be done in accordance with all applicable building codes and standards, including fire rated construction.

⚠ CAUTION: When cutting or drilling into the wall, do NOT damage electrical wiring or other hidden utilities (water or gas lines, sewer lines, etc.).

INSTALLATION

1. Remove the outlet grill, spacing control plate and back panel

- Remove the six screws on the sides of the screen (Fig. 2).
- Remove the four screws attaching the spacing control plates (Fig. 3).
- Keep all screws as they will be reused during installation.
- Remove back panel (Fig. 4).

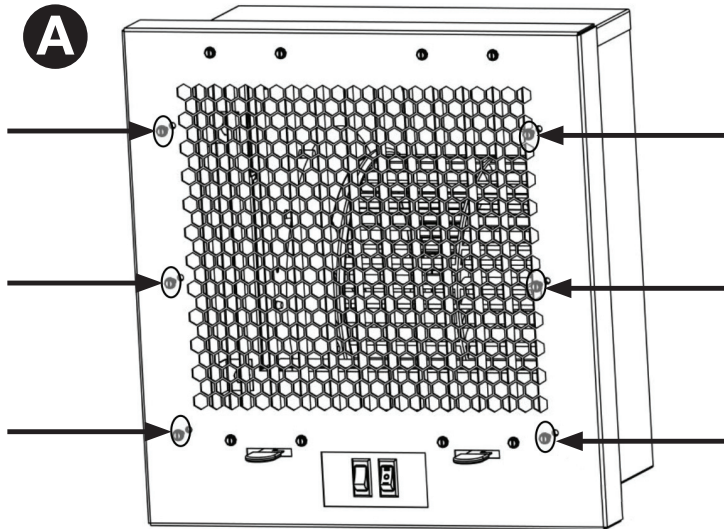


Fig. 2 - Output Grille Removal

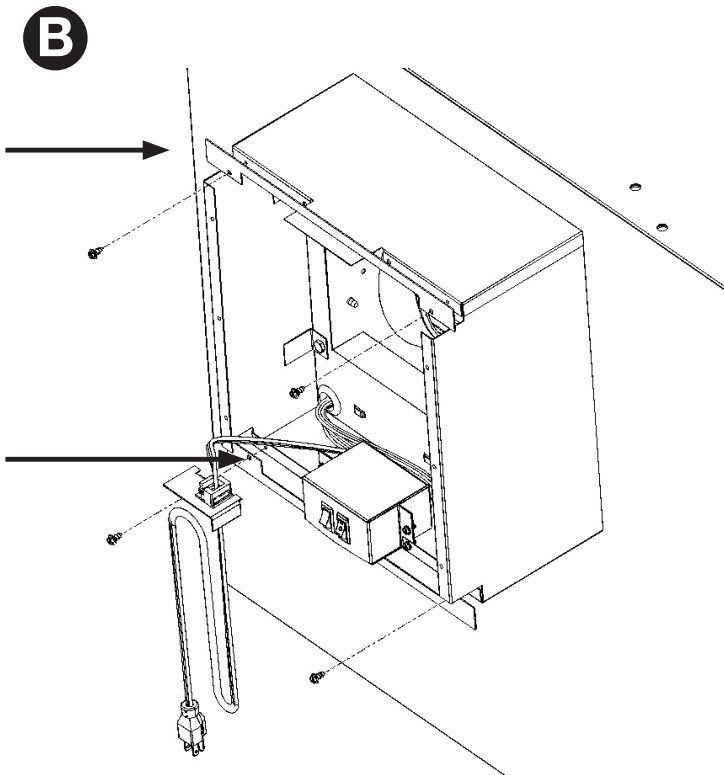


Fig. 3 - Spacing Control Plate Removal

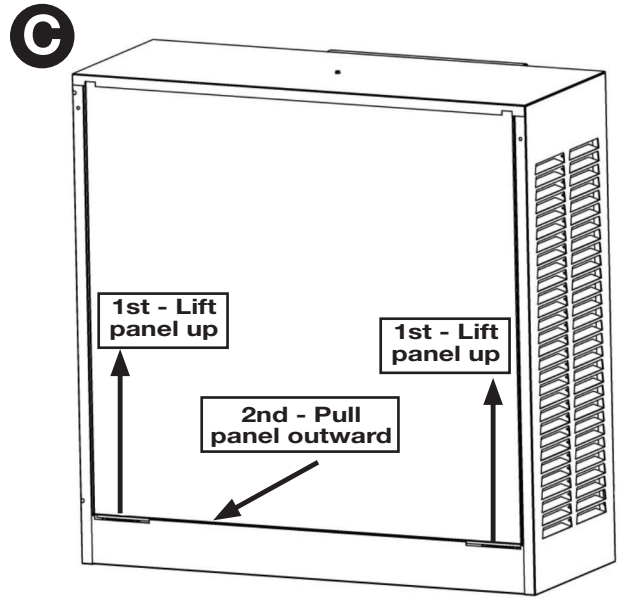


Fig. 4 - Back Panel Removal

2. Locate wall studs

NOTE: This cooler is intended to be installed between studs that are either 16" on center or 24" on center. The unit cannot be installed between studs that are less than 16" on center. If studs are less than 16" on center a different installation location must be chosen or structural changes must be made. Consult a qualified professional before making structural changes to the wall.

⚠ CAUTION: When cutting or drilling into the wall, do NOT damage electrical wiring or other hidden utilities (water or gas lines, sewer lines, etc.).

3. Once you have selected the studs you intend to use, mark the lines for the duct cutout.

Use a level and mark a horizontal line a minimum of 24" off the ground. Add a second horizontal line 14-3/4" above the first line. Mark two vertical lines 13-1/2" apart to form a rectangle that is centered between the studs that were selected for installation.

4. Ensure that the lines are in the correct places and then cut through the entire wall including the drywall.

5. Measure the thickness of the wall.

If the thickness is less than 6", a spacer will be required as specified in step 6. **If the thickness is greater than 6", skip step 6 and proceed to step 7.**

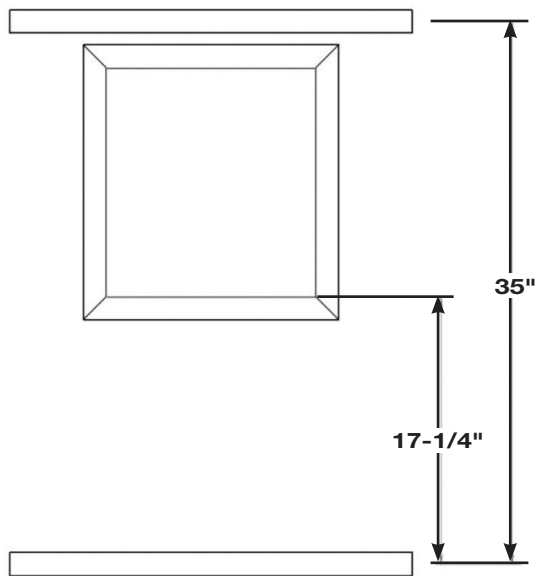


Fig. 5 - Spacer

6. If a spacer is required, make one from wood that is a minimum of 1-1/2" wide similar to what is shown (Fig.5). Ensure the thickness of spacer combined with the wall thickness will be between 6" and 8-1/2". Cut boards to fit around the duct cutout. Cut two 26" long boards to make spacers for the mounting brackets. Space the lower spacer so the center of the board is 17-1/4" below the bottom of the cutout. Ensure that the spacer is level and that the fasteners used will not interfere with the fasteners that will be used to connect the bracket to the spacer. Place the top spacer so the center of the spacer is 35" from the center of the lower board.
7. Attach the angle brackets to the studs. Place the lower bracket flange up so that the top of the flange is 16-1/8" below the bottom of the duct cutout. Ensure the bracket is installed level and is centered in relation to the duct cutout. Pre drill the holes and attach the brackets using the included lag screws. Attach the top bracket with the flange facing down at a vertical distance of 33" from the flange of the bottom bracket. Ensure the bracket is level and centered in relation to the duct cutout.
8. **Install unit**
 - A. Ensure all cords are contained within the duct extension so they do not get caught when the unit is being installed.
 - B. Slide the cooler into place until the wall side of the cooler is flush with the exterior wall or the spacer.
 - C. Use sealant around the unit to prevent rain, blowing dust, insects etc. from entering the indoor space.
 - D. Bolt the cooler to the top mounting flange using the supplied bolts, washers and nuts (Fig 7).

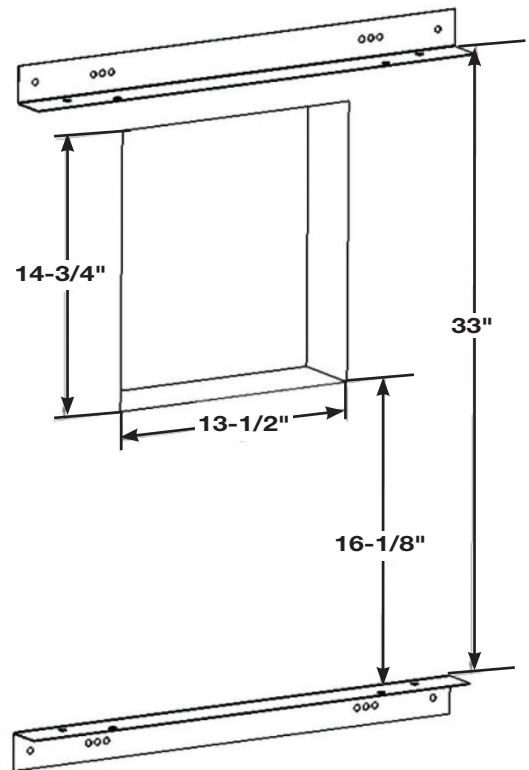


Fig. 6 - Wall Mounting Brackets

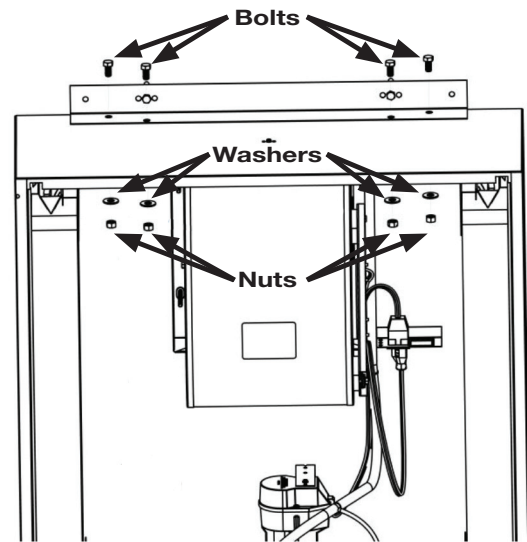


Fig. 7 - Mounting Bolts

9. Adjust duct extension (Fig. 8)

- A. Using a 7/16" socket and ratchet loosen, the four screws until the flange that mates to the spacer control plate extend beyond the interior wall.
 - B. Reinstall spacing control plates (Step 1B , Fig.3)
 - C. Using the 7/16" socket and ratchet tighten the four screws until the spacing control plates are flush with the interior wall
10. Gently pull the cords going into the cabinet to remove any slack. Using the zip ties included in the parts bag, secure the cords at the locations shown to make sure all slack is out of the cabinet and the sections of the cords in the duct will not interfere with the operation of the blower wheel or the outlet louvers.
11. Use sealant around the duct extension to prevent rain, blowing dust, insects, etc. from entering the indoor space.

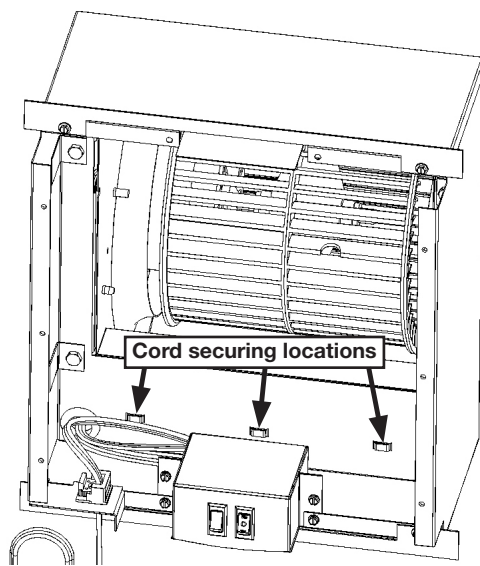
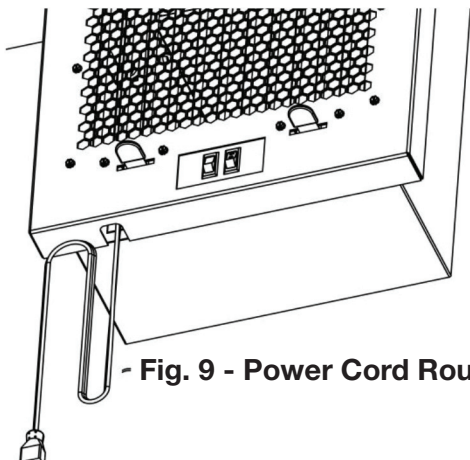


Fig. 8

12. Reinstall the outlet grille using the six screws that were removed in **step 1**. Ensure the power cord goes through the cutout in the bottom of the outlet grille (Fig. 9).



- Fig. 9 - Power Cord Routing

DRAIN BUSHINGS

Install overflow drain bushings in bottom of cooler. Slide rubber washer over drain bushing, push drain bushing through bottom of cooler and tighten nut. Screw plastic overflow standpipe into the drain bushing and tighten (hand-tight) to prevent leakage. Where conditions allow for drainage, connect a drain line (garden hose) to the right drain bushing and drain in accordance with local codes.

WATER SUPPLY

⚠ CAUTION: All plumbing installations must comply with local building codes.

NOTE: coolers should not be connected to "soft" water systems. Soft water will accelerate corrosion and decrease the effective life of pads and cooler cabinet.

- a. A water supply valve should be installed at a convenient location to allow the water supply to be turned on and off for servicing or winterizing. Minimum 1/4" diameter tubing should be used to provide water to the cooler, larger tubing should be used if the length is greater than 100 feet and reduced to 1/4" at the unit.
- b. Install float valve in location and orientation as shown.
- c. Route water line up the left stand pipe as shown in figure 10
- d. Place compression nut and ferrule over end of tubing.
- e. Connect 1/4" tubing from water supply to float valve
- f. Insert tube into float valve and tighten to secure.
- g. Adjust float for a water level of 2 1/2".

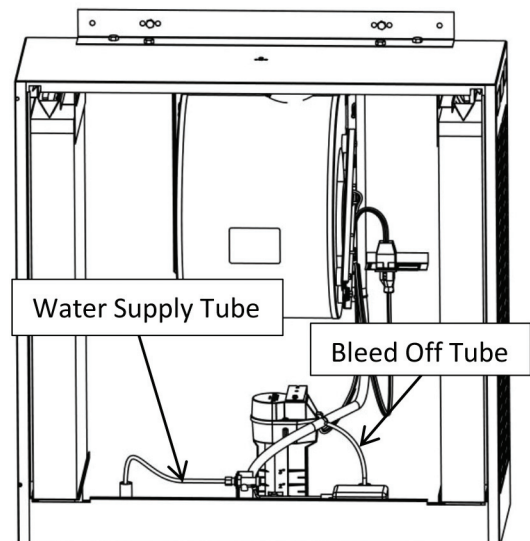
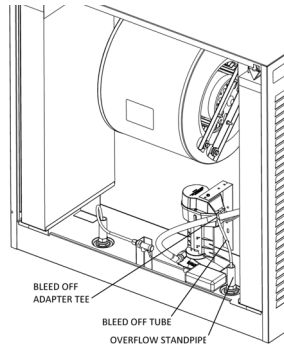


Fig. 10

BLEED-OFF

To minimize scale build-up, use the included bleed-off assembly. Remove the cap from the bleed-off tee, insert the black tubing and route it through the right standpipe opening. To prevent siphoning of the water, make sure that the bleed-off tee is above the water level.



ELECTRIC POWER

⚠CAUTION:

- This cooler is designed for connection to 120 volt AC, 60 Hz (cycle) power only. **NOTE:** Improper voltage will void the pump and/or motor warranties and may cause serious personal injury or property damage.
- This cooler must be plugged into a GFCI protected receptacle, which has been properly installed in accordance with all local and national codes. If you are not sure that the receptacle is GFCI protected, consult with a qualified electrician.
- This cooler is equipped with a power cord having an equipment grounding conductor and grounding plug. Do **NOT** attempt to defeat this safety device by removing the grounding pin.

Cooler checkout and first time start-up

Congratulations once you install the outlet grille and back panel your cooler is complete and ready for use. Please proceed to Pre-startup inspection checklist before starting unit for the first time.

GENERAL INSPECTION

Pre-start-up Inspection Checklist

- Cooler mounting is level
- Power supply cord is plugged into a GFCI protected receptacle; cord is secure from accidental damage.
- Bleed-off is correctly installed and fully functional
- Water hose connected securely without leaks. Water faucet or supply is turned on
- Float valve is correctly installed, adjusted for proper water level and fully operational.
- Outlet grille and back panel correctly installed.
- Pump impeller turns freely. Remove impeller cover (see "Cleaning Pump") and check rotation.
- Blower wheel turns freely

Start-up Inspection Checklist

⚠CAUTION: Never operate unit with outlet grille or back panel removed. This will result in an overloaded condition and may damage the fan motor. The motor and pump have an internal automatic thermal overload switch that will shut the motor and/or the pump off if it overheats! The motor and/or pump can restart automatically when they cool down.

To verify and check out the cooler installation on initial or annual start-up, the following procedure should be followed.

- Open building exhaust/ relief vents (windows, doors, etc.)
- Plug supply cord into receptacle.
- Push "COOL" switch to ON position (pump on).
- Verify that pump starts and pads are evenly wet.
- Switch "FAN" to "HIGH", observe that the motor starts and runs.
- Switch to "LOW", observe that the motor changes to low speed.

In case of trouble in any of these stages, refer to the Troubleshooting chart on page 8.

CABINET INSPECTION CHECKLIST

After initial start-up and during periodic inspections, check for and/or observe the following: Refer to the Troubleshooting Chart on page 8 if necessary.

- Leaks from cabinet.
- Observe cooler media for uneven wetting
- Confirm water level setting is correct.
- Verify full, even flow in water distribution system.
- Blower wheel rotates freely, no unusual noises.
- Check motor mounting, cabinet hardware and setscrews on blower wheel are tight.

OPERATING INSTRUCTIONS

Controls

Rocker-type control switches are used to select the operating mode of the cooler. These switches control fan speed (FAN-HIGH/OFF/LOW) and the pump operation (COOL-ON/OFF). To eliminate a rush of warm air when starting the cooler, be sure to turn the pump (COOL) on for a few minutes before turning on the blower motor (FAN) in low or high speed.

MAINTENANCE SCHEDULE

Regular maintenance and periodic inspection is a key to long and successful service of your Slim Wall Cooler. The cooler should be serviced at least once a year or more often if required (dusty environment, constant use, poor water quality, etc.). For maximum efficiency, longer life and appearance, every two months during operation, the cooler should be inspected and cleaned.

Note: Do NOT undercoat the water reservoir

Your cooler's water reservoir is finished with our Peblar XT® appliance-type finish. It is so hard that asphalt-type cooler undercoating will not stick to it. Undercoating will break free, clogging the pump and water distributor.

NOTE: Do **NOT** use cooler cleaners, cooler treatments or other chemical additives in this evaporative cooler. Use of any additives or water treatment will void your warranty and impair the life of the cooler.

Before starting any maintenance operation, read thoroughly all operating and maintenance instructions and observe all CAUTIONS and WARNINGS.

CLEANING

⚠CAUTION: Never wash your cooler cabinet with a garden hose; water may harm motor and pump. Motors damaged by water are **NOT** covered under warranty.

All foreign materials, scale, salt deposits, lime, etc. can and should be removed from bottom pan and other components. Your cooler's long lasting finish can be brought to like-new condition by using warm water and a soft cloth.

NOTE: Avoid using scouring pads, steel wool or wire brushes, as these will damage the finish and encourage

MAINTENANCE & INSPECTION

⚠CAUTION: Disconnect all electrical power to the cooler by removing the plug from the receptacle before attempting to install, open, or service your cooler.

IMPORTANT: Before operating cooler at beginning of each cooling season, turn cooler motor and pump motor shafts by hand to make sure they turn freely. Failure to do so may result in burning out motor.

Periodic inspection of your cooler will enhance the chance for long, trouble-free service life. For maximum efficiency, every two months during operation, or any time the cooler is opened, the cooler should be inspected. Some suggested items:

- Check for leaks
- Are there any dry spots on the media when cooler is in operation?
- Are bolts, nuts and set screws snug?
- Are the bearings, etc. making unusual noises?
- Does the blower wheel turn freely?
- Is float level set correctly?
- Is water in the bottom pan clean?

CLEANING WATER PUMP & HOSE

⚠CAUTION: Do not allow pump to fall over and become submerged; water will damage pump motor.

Clean water pump and hose assembly as follows:

1. Unplug power supply cord from wall receptacle, remove pump mounting bracket screw and gently lift pump from cooler. Shake gently to remove water.
2. To prevent breakage, carefully release the snap-out impeller cover plate and remove cover plate from the pump body.
3. Using a mild detergent solution and a soft cloth, clean deposits from screen and around impeller to dislodge any remaining foreign material.
4. Remove any foreign material in the hose adapter (between the pump and hose), or between the hose and water distributor assembly.
5. Rinse and reinstall impeller cover plate.
6. Reinstall pump and reconnect power cord.

TOUCH-UP

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.

Do NOT use asphalt type cooler undercoat material in water reservoir. Undercoat will break free, clogging the pump and water distributor.

LUBRICATION

Blower Motor and Pump Motor Bearings

The blower and pump motor bearings do not require lubrication.

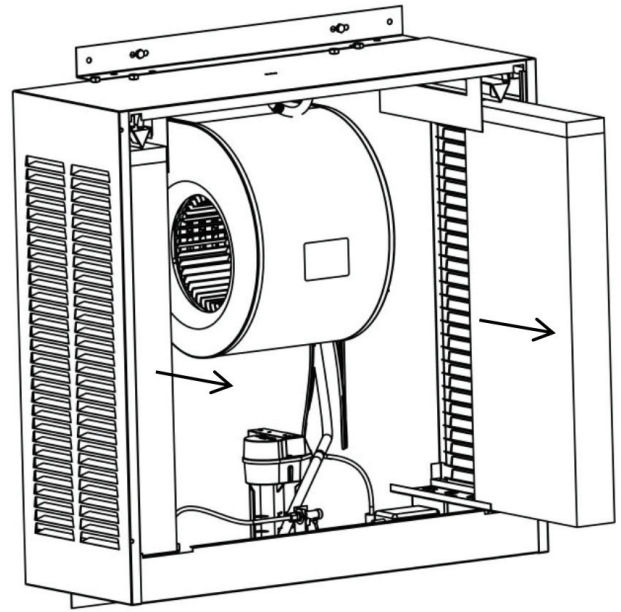
Cleaning or Replacing Media Pads

⚠CAUTION: Disconnect all electrical power to the cooler before attempting to install, open, or service your cooler.

The condition of your cooler pads should be checked at least once a year; at the beginning of the season is best. However, your pads may need to be checked more frequently, depending on local air and water conditions. For instance, in areas where mineral content of the water is high or the air is dusty, deposits may build up in the cooler pads, restricting airflow.

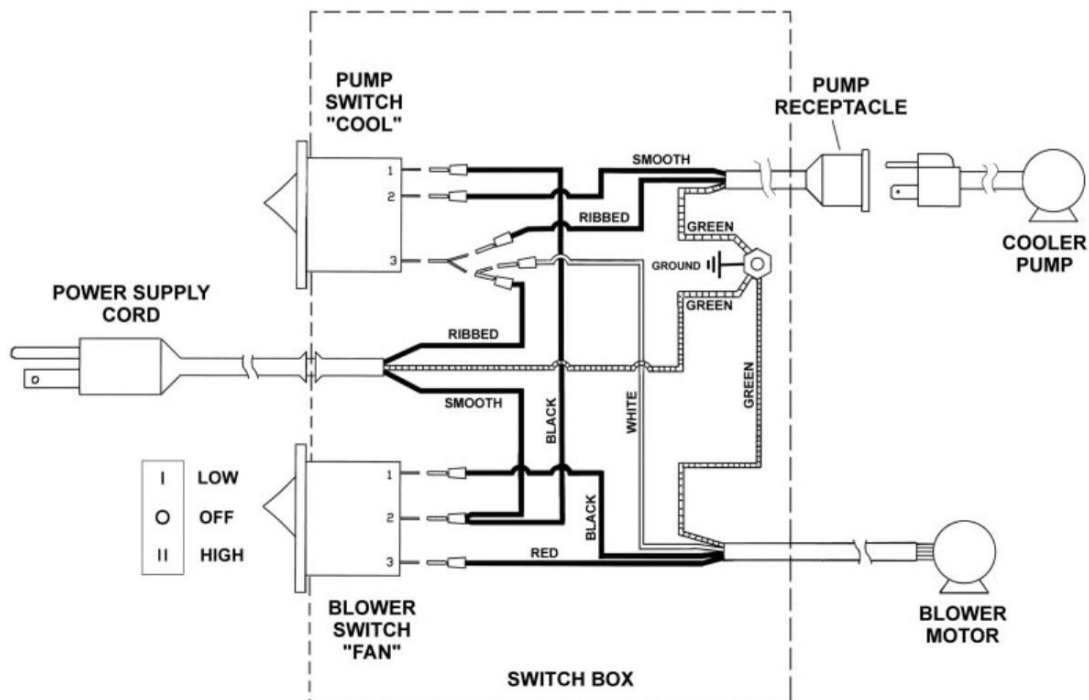
Clean or replace pads as follows:

1. Disconnect power from unit.
2. Remove pads from cabinet as follows:
 - a. Remove back panel from cabinet.
 - b. Remove pads by sliding the pad straight backwards.
3. If passages are clogged or pad is dirty, hose off inlet face of pad. Light, gentle brushing of the inlet edges of the pad with a stiff bristle brush (do not use a wire brush) will not harm the pad and will remove more stubborn scaling.
4. If necessary, replace with new rigid media pads, available only from your rigid media dealer. Aspen, expanded paper or other types of evaporative cooling pads will not work and will void your warranty.
5. Using a mild detergent, wash dirt and scale from the inside of the wet section cabinet. Wire brushing is not recommended. If finish is damaged or rusting is noted, repair as noted in the "Touch-Up" section. Rinse with fresh water.
6. Reinstall pads, making sure they are positioned correctly
7. Reinstall back panel



Media Replacement

Wiring Diagram



TROUBLESHOOTING

The following guide is intended to help you diagnose and fix some of the most commonly encountered problems; by no means does this guide cover all of the possible problems you may encounter. If you cannot diagnose and correct the problem, or if it persists, contact qualified service personnel. All electrical work should be done by, or with the help of, a qualified electrician.

PROBLEM/SYMPTON	POSSIBLE CAUSE	CORRECTIVE ACTION
Water draining from unit	1. Float valve out of adjustment 2. Float movement obstructed 3. Float valve non-functional	1. Adjust float to 2 1/2" water depth 2. Free float from obstruction 3. Replace float assembly
Dry media pads	1. Pads clogged (mineral accumulation) 2. Dry spots or streaks on media pad 3. Clogged water line 4. Pad trough clogged 5. Pump not working 6. Loose connections in water system 7. Water turned off to cooler 8. Pump basket/screen clogged	1. Clean or replace media pads 2. Check water distributor system 3. Locate and free obstruction 4. Clear debris from trough 5. Clean or replace pump 6. Check for leaks and correct 7. Turn on water supply 8. Clean basket / screen
Motor does not start or no air delivery	1. Electrical power disconnected 2. Non-functional motor 3. Non-functional switch	1. Check power receptacle and cord 2. Replace motor 3. Replace switch
Inadequate air delivery	1. Insufficient air exhaust 2. Pads plugged	1. Open windows to increase air flow 2. Clean/Replace media pads
Motor cycles on & off	1. Low Voltage 2. Non-functional motor	1. Check voltage 2. Replace motor
Noisy operation	1. Blower rubbing on housing 2. Blower set screw loose	1. Reposition wheel 2. Tighten set screw
Excessive humidity inside	Inadequate exhaust from building	Open relief vents to increase exhaust

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.