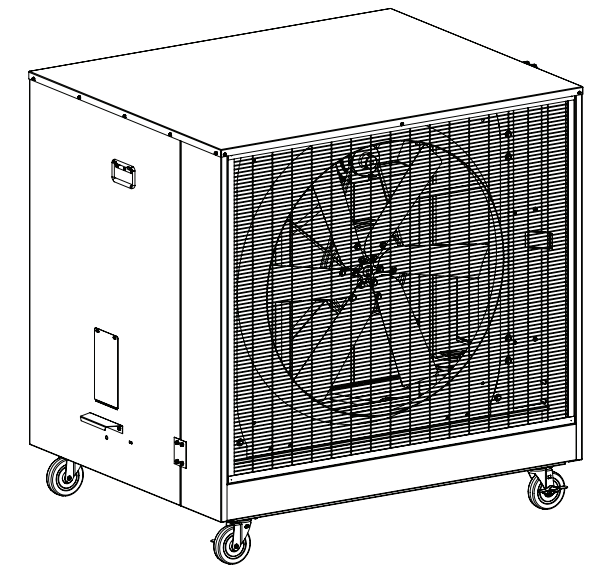


# MASTER BLASTER OWNER'S GUIDE USE AND CARE MANUAL MODEL MB36, MB24



Congratulations: You have purchased a product of superior performance and design, which will give the best service when properly operated and maintained. This cooler is intended to be used as a convenient roll-around spot cooler.

This guide was designed to provide you with the information needed to prepare the unit for roll-around spot-cooling. It also contains information on how to safely operate, inspect, maintain and troubleshoot your MasterBlaster evaporative air cooler.

The first section contains instructions to prepare your cooler for roll-around portable service. 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.

- |               |                     |
|---------------|---------------------|
| ■ Safety      | ■ Trouble Shooting  |
| ■ Operation   | ■ Parts Replacement |
| ■ Maintenance |                     |

## READ THIS FIRST!

**WARNING - TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSONS, OBSERVE THE FOLLOWING**

### READ AND SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

**Read all instructions carefully before installation**

- This cooler must be connected 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.
- Do not step on or rollover 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 it.
- 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 with evaporative pad removed.

- Do not operate this cooler (fan motor) with any solid-state speed control device.
- Do not operate with inlet/outlet grilles removed. Do not place fingers or any other objects inside the fan section. Serious risk of personal injury or property damage.
- Never wash your cooler cabinet with a garden hose, water may harm motor and pump.

**NOTE:**

- Do not use indoors on carpet or wood floor. Unit may leak water and could damage flooring or create a slip hazard.
- Do not locate or operate cooler near exhaust or vent pipes as odors or fumes may be drawn into unit.
- Your warranty does not cover shipping damage. Report all shipping damage at once to store making the delivery.
- For future reference, record the serial number and purchase date of your evaporative cooler here:

Serial # \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Place of Purchase: \_\_\_\_\_

**CAUTION: the use of anode devices, chemical additives or cooler cleaner treatments in this cooler will void the warranty.**

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## INTRODUCTION

Your MasterBlaster evaporative air cooler was thoroughly tested and inspected before leaving the factory. This is your guide to economical, trouble free comfort cooling over the years with reasonable care and regular maintenance. Failure to follow these instructions may damage your cooler, impair its operation and/or void the warranty.

**Read it carefully**

## PREPARATION

### Unpacking the unit

Remove the Access Panel screws using 1/4 " nut driver, lift up and pull outwards. Float kit bag is taped on the inside to the right of the access opening. Remove the float kit bag from the cabinet. Float kit contains the following items:

1. Float valve assembly
2. Float shield with instructions
3. Garden hose adapter
4. Adapter hose
5. Hose nut
6. Hose washer
7. O-ring

### Required tools

1. 7/16" & 3/8" box or open end wrenches
2. 6" crescent wrench
4. 1/4" nut driver

## SET UP FOR USE

Install float valve and hose adapter

Attach the float valve to the cabinet as shown in figure 3. The garden hose adapter attaches to the brass inlet fitting on the float valve (see figure 3). **NOTE:** verify that the hose washers are correctly in place.

## Water connection and float adjustment

Move cooler to desired location (must be a level area for proper operation of the cooler).

1. Connect to water supply using a commercial grade of water hose (not supplied with cooler, obtained separately) to the adapter on the float valve and turn water on. **CAUTION:** water inlet pressure should be limited to a maximum of 65 PSI to avoid rupturing the water hose. If pressure exceeds this value, an inline pressure regulator should be installed (obtainable from a local plumbing or hardware store).

2. Check that all connections are tight by visually inspecting hose, float valve, etc. for leakage.

3. Set float valve for a water depth of 2.5". The float is adjusted by lightly bending the float rod.

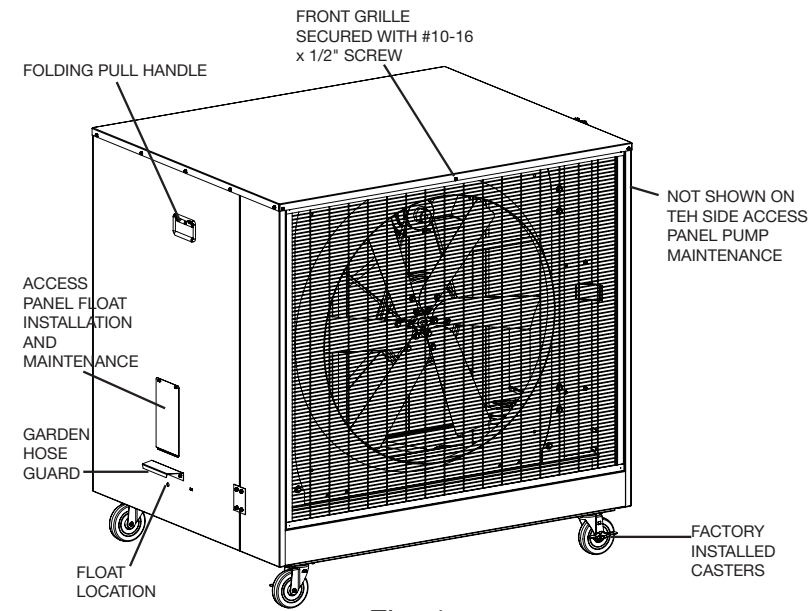


Fig. 1

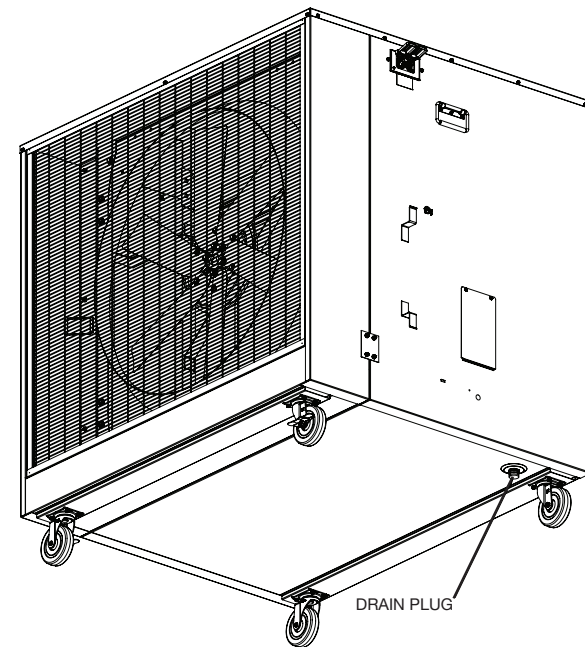


Fig. 2

## FLOAT VALVE AND HOSE ADAPTER

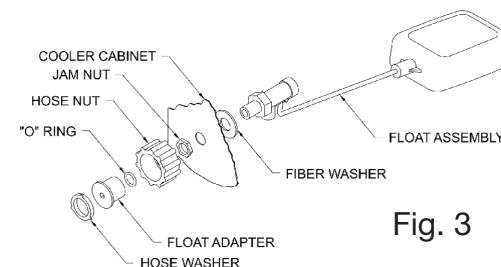


Fig. 3

## TROUBLESHOOTING:

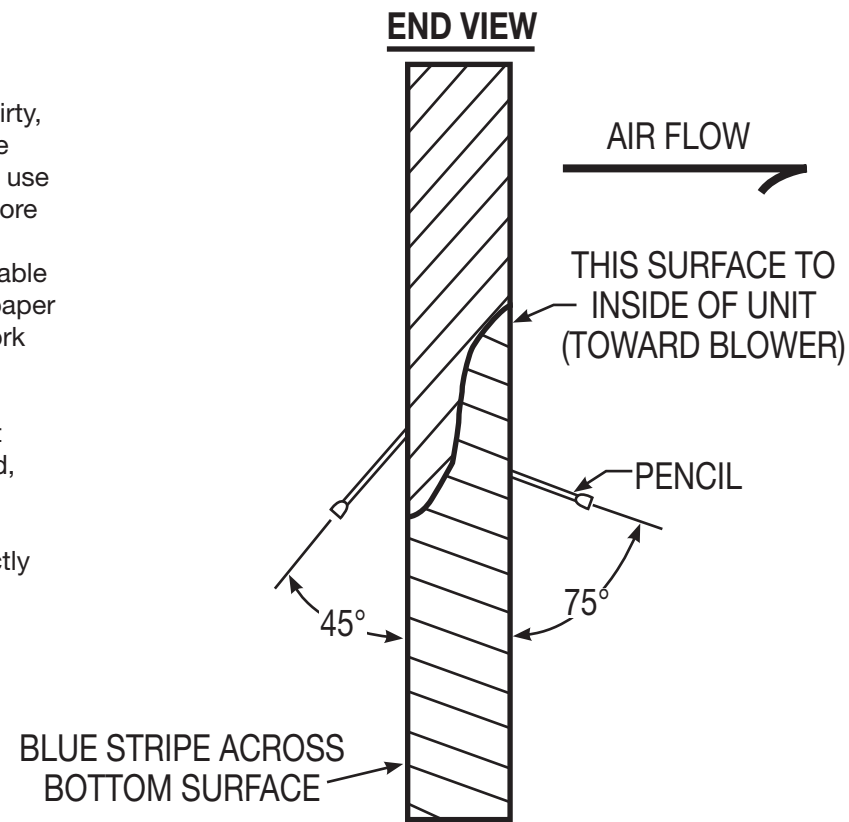
The following guide is intended to help you diagnose and fix some of the most commonly encountered problems; by no means does this guide cover all of the possible problems you may encounter. If you cannot diagnose and correct the problem, or if it persists, contact qualified service personnel. All electrical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

PROBLEMS / SYMPTOMS	POSSIBLE CAUSE	CORRECTIVE ACTION
Water draining from unit	<ol style="list-style-type: none"> <li>1. Float valve out of adjustment</li> <li>2. Float movement obstructed</li> <li>3. Float valve non-functional</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust float to 2-1/2" water depth</li> <li>2. Free float from obstruction</li> <li>3. Replace float assembly</li> </ol>
Dry Media	<ol style="list-style-type: none"> <li>1. Pads clogged (mineral accumulation)</li> <li>2. Dry spots or streaks on media pad</li> <li>3. Distributor tube holes plugged</li> <li>4. Pump not working</li> <li>5. Loose connections in water system</li> <li>6. Inadequate water in reservoir</li> <li>7. Pump basket/screen clogged</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean or replace media pads</li> <li>2. Check water distributor system</li> <li>3. Clean distributor holes</li> <li>4. Clean or replace pump</li> <li>5. Check for leaks and correct</li> <li>6. Check float valve operation</li> <li>7. Clean basket/screen</li> </ol>
Motor does not start or no air delivery	<ol style="list-style-type: none"> <li>1. Electrical power disconnected</li> <li>2. Belt too loose or too tight</li> <li>3. Non-functional motor</li> <li>4. Non-functional switch</li> <li>5. Broken belt</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power receptacle and cord</li> <li>2. Adjust belt tension</li> <li>3. Replace motor</li> <li>4. Replace switch</li> <li>5. Replace belt</li> </ol>
Inadequate air delivery	<ol style="list-style-type: none"> <li>1. Excessive belt tension</li> <li>2. Fan blade shaft tight or frozen</li> <li>3. Motor overloaded</li> <li>4. Pulleys misaligned</li> <li>5. Grille is not in place</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust belt tension</li> <li>2. Replace bearings</li> <li>3. Adjust relief vents to increase exhaust*</li> <li>4. Check and correct alignment</li> <li>5. Replace grille</li> </ol>
Knocking or banging sound	<ol style="list-style-type: none"> <li>1. Bearings dry or worn out</li> <li>2. Rotating off-balance</li> <li>3. Loose parts</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace bearings</li> <li>2. Reposition fan</li> <li>3. Tighten set screws</li> </ol>
Excessive humidity inside	<ol style="list-style-type: none"> <li>1. Inadequate exhaust form building</li> </ol>	<ol style="list-style-type: none"> <li>1. Open relief vents to increase exhaust</li> </ol>
Musty or unpleasant odor	<ol style="list-style-type: none"> <li>1. Stale or stagnant water in cooler</li> <li>2. Media pads clogged or mildewed</li> <li>3. Media pads not completely wet before starting fan motor</li> </ol>	<ol style="list-style-type: none"> <li>1. Drain, clean and flush reservoir</li> <li>2. Replace media pads</li> <li>3. Turn pump ON for several minutes prior to starting cooler</li> </ol>

## 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.

- Remove inlet (back) grille from cabinet.
  - Remove top pan from cabinet.
  - Remove water distributor cover and tube assembly.
  - Remove pads by tilting slightly forward and carefully lifting up and out. 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.
  - 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.
- 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.
    - Reinstall pads, making sure they are positioned correctly (painted stripe on pad placed to the bottom, facing outside).
    - Reinstall water distributor cover and tube assembly.
    - Reinstall top pan to wet section cabinet.
    - Reinstall inlet louver panels.

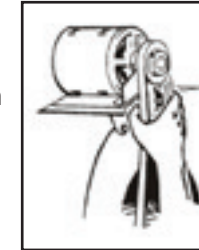


### Motor and fan check

Using ¼ nut driver remove front grille screw as shown in figure 1. Remove the grille by slightly lifting it from the bottom, pull outwards until clear of cabinet bottom pan, then downwards until frame clears cabinet top. Check motor mounting to be sure all screws and nuts are tightened down properly. Rotate the fan by hand to see that it moves freely without rubbing against housing. Reinstall the front grille and secure with the screw.

### Belt Adjustment

Correct belt tension and alignment is important as it cuts power consumption and prolongs life of belt and motor. When installing or adjusting belt, loosen the motor adjustment bolts and adjust for proper tension. Align belt vertically by centering motor pulley in-line with blower pulley. Do not adjust motor sheave turns. Adjusting sheave turns will void warranty.



### 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 your cooler is complete and ready for use. Please proceed to Pre-startup inspection checklist on page 3 before starting unit for the first time.

### GENERAL INSPECTION

#### Pre-Start-up Inspection Checklist

- Cooler is on a level surface, casters locked to prevent unnecessary movement (prevent spillage).
- Power supply cord is plugged into a GFCI protected receptacle; cord is secure from accidental damage.
- Float valve installed.
- Water hose connected securely without leaks. Water faucet or supply is turned on.
- Float adjusted for proper water level.
- Inlet and outlet grilles correctly installed.
- Pump impeller turns freely. Remove impeller cover (see page 5 "Cleaning Pump") and check rotation.

- Fan, shaft, pulley and motor sheave set bolts/screws are snug.
- Motor sheave alignment okay; belt tension okay (see page 3 for instructions).

### Start-up Checklist

**CAUTION: Never operate unit with inlet/outlet grille 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 start-up, the following procedure should be followed.

- Push "COOL" switch to ON position (pump on).
- Verify that pump starts and pads are evenly wet.
- Open windows, doors or vents in building.
- Push "FAN" switch to LOW position (low speed on).
- Observe that motor starts and runs. Check high-speed function by turning "FAN" switch to HIGH (high speed on).

In case of trouble in any of these stages, refer to the Troubleshooting chart on page 7.

### Cabinet Inspection Checklist

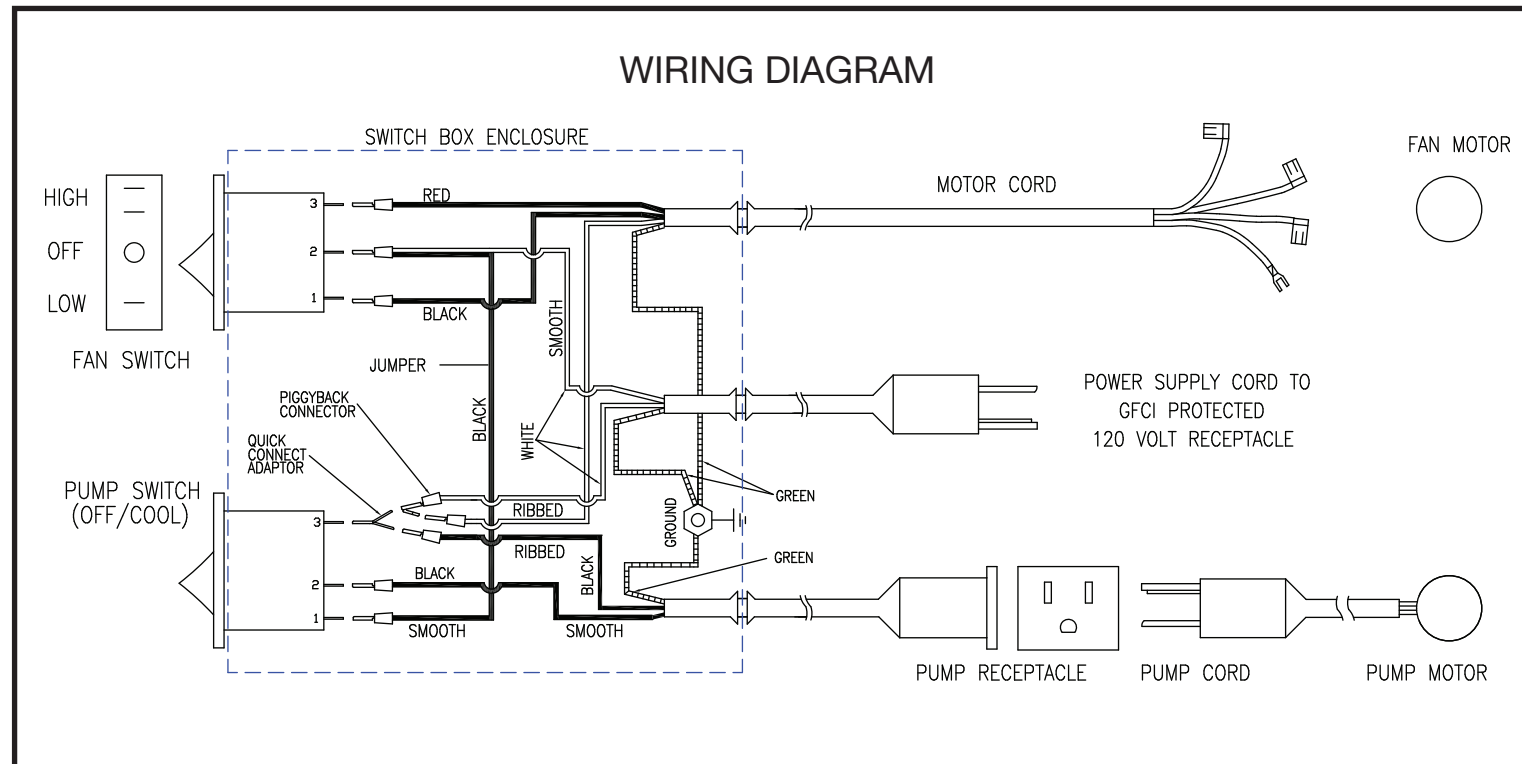
After initial start-up and during periodic inspections, check for and/or observe the following: Refer to the Troubleshooting Chart on if necessary.

- Leaks from cabinet
- Observe cooler media for uneven wetting
- Confirm water level setting is correct.
- Verify full, even flow in water distribution system.
- Fan / motor rotates freely, no unusual noises.
- Belt condition / tension / alignment.
- Check motor mounting and cabinet hardware.

### Extended Shut-down (winterizing) checklist

Any time the unit will not be used for an extended period:

- Move cooler to the area appropriate to dump water. Remove brass drain cap as shown in fig 2. Drain all of the water out of the cooler when not used for prolonged periods, particularly at the end of the season (winter).
- Unplug the cooler power supply cord and secure it out of the way on the side of the unit to avoid damage.



## OPERATING INSTRUCTIONS

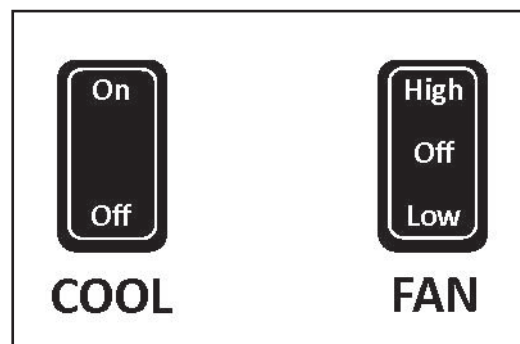
### Guidelines and location

Always make sure that the roll-around unit is operated on a solid, level surface strong enough to hold its weight (Unit can weigh up to 500lb when full). Make sure the two locking casters have been locked to prevent the cooler from accidentally moving while in use. Use caution when rolling the unit to avoid splashing or spilling of water. Unless the move is for a short distance, it is best to drain the unit, move it and then refill it in its new location. For best results:

- Turn pump on a few minutes before starting the fan, this allows the pads to pre-wet and avoids a blast of warm air.
- Turn pump off a few minutes before turning the fan off. This will allow the pads to dry out, helping to prevent stale or musty odors the next time the unit is started.
- Whenever possible, operate the fan on low speed for maximum cooling.
- When cooling is not required, you can operate this unit by turning on the fan only (leaving the pump turned off).

### 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.



CONTROL SWITCHES

### Maintenance Schedule

Regular maintenance and periodic inspection is a key to long and successful service of your MasterBlaster Cooler. The cooler should be serviced at least once a year, or more often if required. For maximum efficiency, longer life and appearance, every two months during operation, the cooler should be inspected and cleaned. Drain water from the unit every 8-10 hours of operation to minimize scaling build up.

### 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.

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

Even while routinely inspecting or servicing the inside, the cooler can be accidentally started. Keep all personnel away from the cooler and electrical supply when you are working on it. Before servicing or cleaning unit, switch "COOL" and "FAN" to the OFF position and remove power cord from receptacle.

### 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 corrosion.

### 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 from pad frames, cabinet, etc.
- Are there any dry spots on the media when cooler is in operation?
- Are bolts, nuts and set screws snug?
- Is bearing making unusual noises?
- Does the fan turn freely?
- Is float level set correctly?
- Is water in the bottom pan clean?
- Belt condition / tension / alignment?

### Set Screws, Bolts and Nuts

Check torque on set screws and cabinet hardware:

- Motor set screws (95 in-lbs.)
- Cabinet hardware (25 in-lbs)

### Adjust Belt Tension

**CAUTION: Disconnect all electrical power to the cooler and insure that belt is not rotating before adjusting belt tension.**

Each time you inspect your cooler, be sure to check belt tension on motor/fan assembly. Check belt condition and replace it if frays or cracks appear. Check alignment of blower pulley with motor pulley (see page 3).

### 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 pump cord, remove mounting bracket screw and remove pump from cooler. Shake gently to remove water.
2. To prevent breakage, carefully release and remove impeller base plate from the pump body.
3. Using a mild detergent solution and clean cloth, clean deposits from pump screen, around impeller and base plate.
4. Spin impeller to dislodge any foreign material.
5. Remove any foreign material in the adapter between the pump and hose, or between the hose and the water distributor assembly.
6. Rinse and reinstall impeller base plate.
7. Reinstall pump and reconnect pump cord.

### Draining

Drain the cooler cabinet (with power off) as follows:

1. Move cooler to the area appropriate to dump water.
2. Remove brass cap as shown in fig. 2.
3. Drain, clean and dry reservoir.

Alternative draining options for units that will not be moved frequently:

1. Remove brass cap as shown in fig. 2.
2. Attach suitable size hose and route it to the desired drain area.
3. Put a cap on the end of the hose.
4. Drain every 8-10 hours of operation.

### 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

#### Motor Bearings

Some motors used in MasterBlaster coolers have ports for lubricating the motor and are oiled at the factory. If the need for oiling is indicated, see the motor nameplate for specific instructions on re-lubricating the motor. Under normal use, these motors require oiling about every 12 months of operation. **Do Not Over-Oil.**

### Fan Shaft Bearing/Pump Bearings

Fan shaft bearings are sealed and do not require oiling. The pump motor bearings are permanently lubricated

### 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 wet section cabinet as follows: