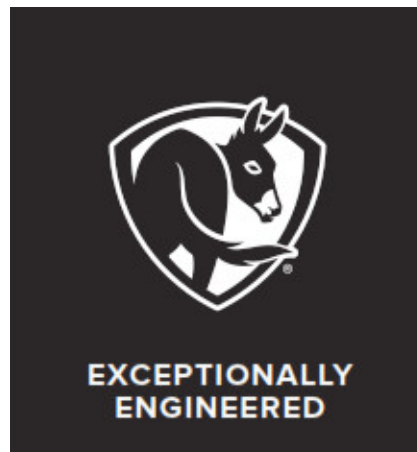




EXCEPTIONALLY ENGINEERED Big Ass Fans Cold Front User Manual

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READ AND SAVE THESE INSTRUCTIONS

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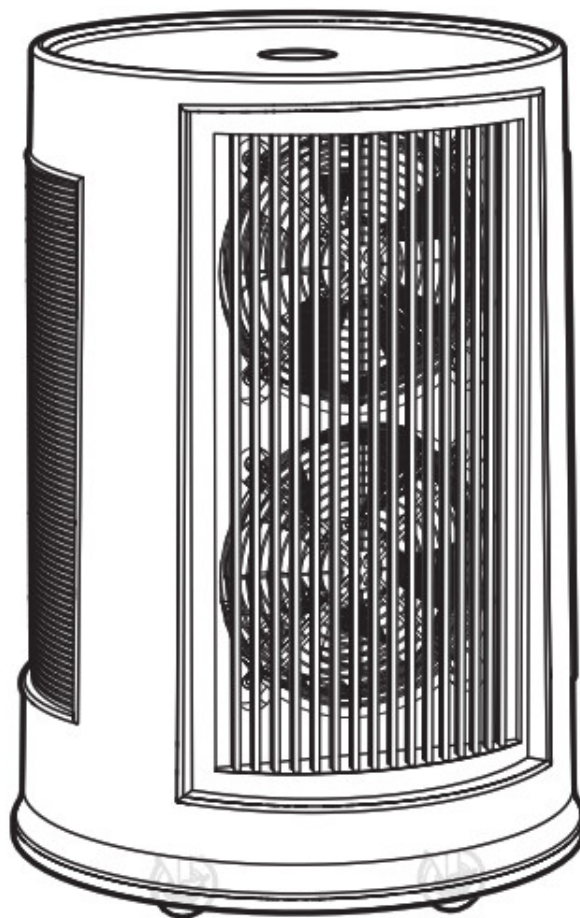
COLD FRONT 100 COLD FRONT 200

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Operation and Maintenance Manual

Manuel de fonctionnement et d'entretien Manual de operación y mantenimiento



F-EV1-1001S75
F-EV1-1001S75V60

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 READ AND SAVE THESE INSTRUCTIONS	
 DANGER	DANGER indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.
 WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.
 CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.
IMPORTANT	IMPORTANT indicates a potentially hazardous situation which, if not avoided, MAY result in property damage.



Installation Guide Rev.
C 09/22/2020

Original English Instructions



www.bigassfans.com/support

Improper installation, delivery, or maintenance, including, but not limited to, any of the following actions by the customer or agent of the customer will constitute a breach of and will void all warranties:

- Failure to follow the required installation procedures specified in this Installation Guide and in all other documentation supplied with the fans and related equipment including documentation provided by the manufacturers of the individual fan and control components;
- Failure to follow all relevant codes and ordinances, including, but not limited to, the National Electrical Code (United States), applicable national and local electrical codes, and state and local building codes;
- Failure to follow electrical engineering industry standards regarding the approved method of installing solid-state electrical equipment having the characteristics of the fans, the fan controls, and their related components, even if such standards are not specifically referenced in any instructions or literature supplied by Big Ass Fans or provided by manufacturers.

All trademarks used herein are the properties of their respective owners. No part of this document may be reproduced or translated into a different language without the prior written consent of Big Ass Fans. The information contained in this document is subject to change without notice. For the most up-to-date information, see the online printable installation guide at www.bigassfans.com

Patent: [Big Ass Fans Patents and Trademarks](#) · www.bigassfans.com/product-warranties

CHECKLIST

DO

- ✓ Read the Operation and Maintenance Manual.
 - ✓ Check all hose connections.
 - ✓ Use a 12 gauge cord if the cord is under 50 ft (15 m) or a 10 gauge cord if the cord is over 50 ft (15 m).
 - ✓ Provide fresh air intake for the cooler and maintain a minimum clearance of 3 ft (0.9 m) behind the cooler.
 - ✓ Flush new cooling media.
1. Fill the cooler with water.
 2. Switch on the pump.
 3. Run the cooler without the fan running for 5 hours.
- ✓ Make sure the cooling media is being evenly saturated.
 - ✓ Drain and clean the cooler weekly. Remove the cooling media and wash with a garden hose.

✓ Use Refresh™ tablets (algae killer) and/or CTT-ECTM cooler treatment tablets (mineral treatment). One algae killer tablet is provided in the cooler's reservoir. Additional water treatment tablets are available at bigassfans.com.

DO NOT

- × DO NOT forget to dry out the cooling media before shutting down the cooler. Turn off the pump and leave the fan running for 10 to 15 minutes.
- × DO NOT run the pump without filling the reservoir with water first.
- × DO NOT use a water source with more than 120 PSI of water pressure.
- × DO NOT operate the cooler in a sealed room. Allow for fresh air intake and exhaust.

ASSEMBLY

IMPORTANT

Carefully examine the carton for damage before opening. If the carton is damaged, notify the shipping company immediately.

Install casters

1. Locate the package of four (4) casters and remove from box.
2. Lay box on its side and carefully open bottom of box. DO NOT STAND BOX UPSIDE DOWN.
3. Install the four casters.
4. Stand cooler up on casters and remove box.

SETUP

The cooler has been factory tested and is ready to use. Place the cooler on level ground with the casters locked to prevent inadvertent movement.

Connecting the water supply

The cooler comes equipped with a female garden hose water source connection. Use a standard garden hose (not provided) to connect the water supply to the cooler.



CAUTION

Do not connect to any water source where water pressure exceeds 120 PSI. This will cause permanent damage to the cooler.

Connecting the electrical supply

IMPORTANT

The cooler should be plugged into a fused or breaker-protected circuit. Refer to Table 1 for circuit size requirements.

Amperage and Circuit Requirements

Model	Volts +/- 10%	Frequency	Min. Circuit Size	Running Amps
Cold Front 100	120 V	60 Hz	15 A	1.5 A
Cold Front 200	120 V	60 Hz	15 A	2.7 A



CAUTION

Do not exceed the amperage ratings of the extension cord. Undersized extension cords create excessive drops in voltage, causing the electric motor to generate excess heat. This results in inefficient motor operation and premature motor failure and will void the warranty.

Three-Conductor Heavy Duty Extension Cord Requirements

Cord Length	Cord Size			
	16 GA	14 GA	12 GA	10 GA
0–50 ft (0–15 m)	13 A	18 A	25 A	30 A
50–100 ft (15–30 m)	10 A	13 A	18 A	25 A

Table 2: Cord Size Requirements

OPERATION

The cooler must be placed on level ground to operate correctly. Evaporative coolers create an oval-shaped air pattern. Obstacles such as racks and workbenches may interfere with airflow. Position the cooler so that interruption of the air pattern is minimized. Multiple coolers may be required to cover larger areas. There are three major factors to consider when determining where to place the cooler.

1. Fresh Air Supply. The inlet (mesh sides) requires a constant, uninterrupted supply of fresh air for maximum performance. A distance of 3 ft (0.9 m) of clear space to any obstructions at the rear or inlet side of the cooler is recommended.
2. Discharge Airflow. The cool air discharged from the cooler should be free from obstruction to promote air circulation in order to maximize the cooling zone.
3. Ventilation. Adequate ventilation is needed to ensure the cooler does not recirculate air that has already been through the evaporative cooling process.

Filling the cooler with water

Once the cooler has been connected to a water source, turn the water source on to fill the cooler with water. The float valve will shut off the water flow when the sump is full.



CAUTION

Prolonged use of hard water without proper water treatment will create mineral deposit buildup. This will cause the pump to fail and is NOT COVERED BY WARRANTY.

Starting the pump

On initial startup, the cooling media in your new cooler will take a few hours to become fully saturated. During this time, the media may produce an odor. This odor will dissipate over time. For best results, change the water in the reservoir a few times.

Subsequent startups

On subsequent startups, turn on the pump, start the fan, and cool down.

Low water indicator

The cooler is equipped with a low water indicator light.

- When the power is on and there is sufficient water in the reservoir, the light will be green and the pump will be running.
- When the power is on and the water in the reservoir is low, the light will be red and the pump will stop running.



Starting the fan

Turn the fan control knob clockwise to turn on the fan and adjust the speed to your preferred setting.

MAINTENANCE AND STORAGE



WARNING

ELECTRICAL SHOCK HAZARD Disconnect the power supply before performing any service or maintenance. Failure to do so may result in serious injury or death.

Removing the cooling media

Remove the cooling pads to access the inside of the cooler.

1. Remove pad grilles from support channel.
2. Tilt pads from the top and lift out of the cooler.

Daily maintenance

After each use, turn off the pump about 15 minutes before the fan is turned off to allow the pads to drain and dry out. This controls mildew and bacteria growth for a long and efficient pad life. Drain the water from the cooler if it will be unused for a prolonged period of time.

Periodic maintenance

The cooling pads act as a filter to remove dust and other particles from the incoming air stream. The collected particles and any water impurities will flow into the sump and collect there. To keep the cooler operating at peak efficiency, keep the cooling media and sump clear of debris. Water treatment tablets are available at

Draining the water sump

Depending on how often you operate the cooler, drain the sump anywhere from every week for heavy use to monthly for light use.

1. Turn cooler off and disconnect the power supply.
2. Remove drain plug located at bottom of reservoir and let cooler drain.
3. Remove cooling pads.
4. Clean out reservoir with either a towel or wet/dry vacuum.
5. Reinstall pads and grille.

Cleaning the cooling media

Ensure the cooling pads are kept clean and dust-free. Dust and other particles have an adverse effect on the pads' ability to introduce water into the air stream. If the pad surface is dirty, clean with a soft brush and water. Never use bleach.

Storage

1. Remove cooling pads and clean with a soft brush and water to remove dust and debris.
2. Drain sump and wipe dry. 3. Store cooler in a dry area and cover to prevent dust buildup.

TROUBLESHOOTING AND REPAIR



WARNING

ELECTRICAL SHOCK HAZARD

Disconnect the power supply before performing any service or maintenance. Failure to do so may result in serious injury or death.



CAUTION

Please use caution when troubleshooting or repairing all electrical components. Ensure all power is disconnected from the cooler before the pads or fan guard are removed to gain access to the fan.

Tools needed

- Screwdrivers
- Pliers
- Adjustable wrenches
- Volt/Ohm meter (electrical troubleshooting)

Additional tools may be required.

General troubleshooting

The cooler consists of three systems:

- Pump
- Water distribution system

- Fan system

Use the troubleshooting tables on the following pages to determine which system(s) require servicing.

Pump troubleshooting

Issue	Solution(s)
Pump motor will not run when switch is turned on.	Turn fan on to check for power. <ul style="list-style-type: none"> • If fan does not start, check breaker and make sure cord is plugged in. • If fan starts, check for power to and through pump switch (when turned on). Ensure water level is high enough to make the low water cutoff circuit. Fill water reservoir.
Pump motor hums when switch is turned on but does not pump water.	Obstruction in impeller. Remove object(s). Pump motor failure. Replace pump.
Breaker trips or fuse blows when switch is turned on.	Check power cord length and breaker rating. Refer to page 2 for cooler amperage draw and to determine required cord gauge and circuit size. Check for locked up pump. Replace pump.
Pump runs but does not pump water.	Air lock in outlet side of pump. Turn off and on to bleed. Ensure the impeller is turning in pump. If not, replace pump.

Pump repair procedures



CAUTION

Repairs should be performed by a qualified technician!



WARNING

ELECTRICAL SHOCK HAZARD

Disconnect the power supply before performing any service or maintenance. Failure to do so may result in serious injury or death.

Pump replacement

1. Remove cooling pads.
2. Remove switch plate and disconnect pump wire. Refer to wiring diagram on the following page.
3. Remove hose and level switch from pump.
4. Remove pump from water sump and install new pump.
5. Perform the steps above in reverse to reconnect the wiring, level switch, and hose. Secure wires to fan frame with wire ties so that wires are clear of fan blades. Ensure plug is positioned correctly.
6. Reinstall cooling pads and guards.
7. Reconnect power and test pump.

Water distribution system troubleshooting

The water distribution system consists of two assemblies:

- Water inlet assembly
 - Brass bulkhead fitting
 - Float valve assembly
- Hose and valve assembly
 - Drip channel
 - Valve assembly
 - Connection hose

Issue	Solution(s)
Floor at side of cooler is wet.	Water inlet hose is loose at supply hose or inlet hose is loose at bulkhead fitting. Tighten connections and/or replace hose washers.
Water overflows from reservoir.	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 shut off (120 PSI max). Reduce water pressure by adding an inline reducer. Float valve is not properly seated. Check all hoses for leaks.
Water is spitting from the cooler.	Check the hose and valve assembly. <ul style="list-style-type: none"> • Reduce flow control setting. • Replace cracked hose and valve assembly. • Tighten hose connections.
Water is leaking from the drain plug.	Check that plug is tightly seated in hole. <ul style="list-style-type: none"> • Tighten drain plug. • Replace drain plug.
There are too many dry streaks on the pads.	Check for blocked holes in the drip channel. <ul style="list-style-type: none"> • Remove and clean tube and holes.
Cooler will not fill.	Check float screen. Clean. Float not functioning. Replace.

Fan system troubleshooting

Issue	Solution(s)
Fan will not run and makes no sound.	Check power cord, extension cord, switches, and circuit breaker. <ul style="list-style-type: none"> • Reconnect power or extension cord. • Reset breaker.
Fan will not run and makes humming sound.	Check capacitor. Re-center blade hub. Motor stall (will not turn by hand). Replace motor.
Breaker trips or fuse blows when fan starts.	Motor stall. Replace motor. Check power source. Refer to page 2 for electrical requirements. Upgrade power supply. Extension cord gauge is too small. Replace with heavier cord.
Motor overheats, shuts off, and restarts several minutes later.	Extension cord gauge is too small. Replace with heavier cord. Inlet air is obstructed or too close to wall. Provide minimum 3 ft (0.9 m) inlet clearance. Faulty motor. Replace motor.
Fan motor will not run and switch makes soft clicking sound.	Ensure switch is making good contact. Replace switch if needed.
Fan blade does not turn and cooler makes squealing sound.	Motor stall (will not turn by hand). Replace motor.
Fan will not reach speed but turns and makes humming sound.	Check capacitor (where visible) and motor electrical connections. Replace capacitor or motor. Extension cord gauge is too small. Replace with heavier cord.

Fan repair procedures



CAUTION

Repairs should be performed by a qualified technician!



WARNING

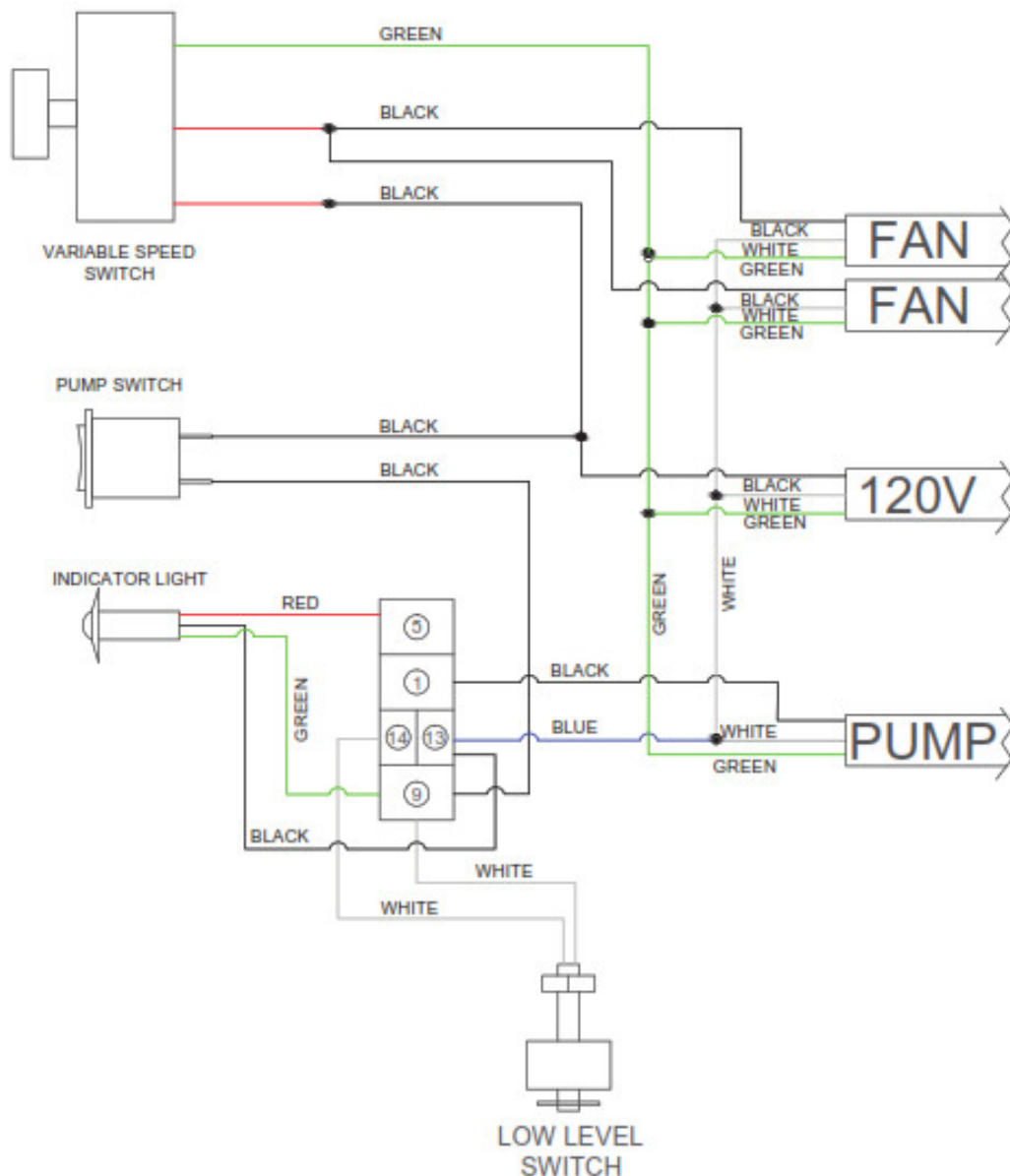
ELECTRICAL SHOCK HAZARD

Disconnect the power supply before performing any service or maintenance. Failure to do so may result in serious injury or death.

Fan motor replacement

1. Remove cooling pads.
2. Remove black motor wiring plate and disconnect motor wires. Mark each wire with a marker or marker tape for easy matching when installing new motor.
3. Remove louver.
4. Remove the four (4) nuts and bolts securing the motor, fan, and support braces (complete fan assembly).
5. Replace with new fan assembly.
6. Secure with four (4) nuts and bolts.
7. Replace any wire ties that were removed when uninstalling the old fan assembly.
8. Replace black motor wiring plate.
9. Reinstall pads and connect power.

Wiring diagram



MAINTENANCE

Spring cleaning

- Remove the cooling media and clean out any debris in the water pan at the bottom of the cooler.
- Remove the distribution tube from the mounting clips. Remove the plug at the end of the tube and flush out. Clean the distribution holes with a small brush and flush with water to verify all holes are clear.
- If the cooling media is heavily stained with minerals or is damaged, replace the media. Replacement cooling media is available at bigassfans.com. Verify the media is installed correctly with the arrows on the side.
- Connect the water line and turn on the water supply. Check the float valve and make sure it is operating properly. Verify that the float valve is shutting the water off before walking away.
- Switch on the fan motor and pump. Make sure the cooling media is being evenly saturated with water. Small dry streaks are acceptable.

Mid-summer checkup

- Make sure the float valve is working properly. If the valve sticks, the water will run continuously and flood the reservoir. If this occurs, install a new float valve or contact Customer Service.
- Check all other working parts for cracks or damage, including the pump, fan motor, and fan belt.
- Check the condition of the cooling media. The cooler runs most efficiently when the media is clean. If the media has a heavy accumulation of mineral deposits, replace it.
- Use the drain valve to empty the reservoir. Remove any debris.

Winterize

- Clean the minerals from the reservoir. Vinegar can be used to dissolve buildup. Flush out the reservoir through the drain plug.
- Inspect the water distribution tube for clogged holes. Clean as necessary.
- To prevent freezing in the cooler's waterline, disconnect the water supply, and then open both valves on the side of the cooler to dry out the reservoir.
- Use a storage cover to protect your cooler and keep it clean.

Customer Service 2348 Innovation Drive Lexington, KY 40511 USA 877-244-3267 bigassfans.com

CONTACT US

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www.bigassfans.com

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Documents / Resources

	<p>EXCEPTIONALLY ENGINEERED Big Ass Fans Cold Front [pdf] User Manual</p> <p>Big Ass Fans Cold Front, COLD FRONT 100, COLD FRONT 200, F-EV1-1001S75, F-EV1-1001S75V60</p>
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References

-  [Big Ass Fans](#)
-  [Big Ass Fans](#)
-  [Patents - Big Ass Fans®](#)
-  [Product Warranties - Big Ass Fans®](#)
-  [Support - Big Ass Fans®](#)