# DRIEAZ

# Owner's Manual - DrizAir Dehumidifiers

# DrizAir 1200 and DrizAir 2000 230-volt models

**DRI-EAZ PRODUCTS, INC.** 

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DrizAir Dehumidifiers are commercial refrigerant dehumidifiers, designed for drying building structures and contents. They are designed for high performance water removal, as well as durability and ease of use.

# Read And Save These Instructions



# Safety Information

**Keep Children Away:** Do not allow children to play with or around the unit, which could result in injury. Be sure the unit is inaccessible to children when not attended.

**Keep Unit Grounded**: Always operate the unit with a grounding plug and a grounded electrical outlet. A grounding plug is an essential safety feature that helps reduce the risk of shock or fire.

**Protect Power Cord from Damage:** Never operate a unit with a damaged power cord, as this may lead to electrical or fire hazards. If the power supply cord is damaged, it must be replaced by a cord of the same type and amperage rating.

**Extension Cords:** Extension cords must be grounded and able to deliver the appropriate voltage to the unit.

**Handle With Care:** Do not drop or throw the unit. Rough treatment can damage the components or wiring and create a hazardous condition.

**Run on Stable Surface:** Always operate the unit on a stable, level surface, like the floor or a strong counter, so it cannot fall and cause injury.

**Secure During Transport:** When transporting in a vehicle, secure the unit to prevent sliding and possible injury to vehicle occupants.

**Keep Out of Water:** Never operate the unit in pooled or standing water, as this may create a risk of injury from electrical shock. Do not store or operate outdoors. If electrical wiring or components become wet, thoroughly dry them before using the unit.

**Keep Air Intakes Clear:** Do not clog or block air intakes, as may occur if operated to close to draperies or similar materials. This may cause the unit to overheat and result in a fire or electrical hazard

**Keep Filter Clean:** Always use a clean air filter. Do not allow any material to clog the filter, as this may cause the dehumidifier to overheat. Do not allow oil, grease, or other contaminants to be drawn into the dehumidifier.

Keep Electrical Components Dry: Never allow water inside the dehumidifier's electrical components. If these areas become wet for any reason, thoroughly dry them before using the dehumidifier.

Allow Repair Only by Authorized Service Technician: Do not attempt to disassemble or repair the unit if you are not qualified to do so. You may handle some maintenance and troubleshooting, but make sure that more complex problems are handled by an authorized service technician. For information about authorized repair, call Dri-Eaz at (360) 757-7776 in the US, or (01908) 611211 in the UK.

# **HOW TO USE DEHUMIDIFIERS**

DrizAir Dehumidifiers are designed to reduce water vapor or high humidity in a building or part of a building. The purpose is to prevent humidity damage, and to dry out wet materials such as carpet, carpet cushion, floors, walls, furniture, contents, lumber, and structural materials.

To speed up the rate of evaporation, and dry out materials faster, use Dri-Eaz TurboDryer airmovers. The DrizAir Dehumidifier will be needed to remove the additional water evaporated by the TurboDryers.

#### **Positioning Dehumidifiers**

The dehumidifier must be operated in an enclosed area to achieve best efficiency. Close all openings to other areas of the building, like windows and doors, to prevent moist air from mixing with the air in the drying area. Keep traffic through doors at a minimum. This forms a closed drying chamber.

Inside the drying chamber, air should circulate freely. Open interior doors and operate TurboDryer airmovers to maintain good airflow to all areas.

Place the dehumidifier where there is no restriction to air flowing through either the inlet or the outlet. Keep away from loose materials like curtains and drapes.

Under normal circumstances, place the dehumidifier in the center of the room. To dry a specific area, place the dehumidifier so the outlet air points at the wet area and the warm, dry air passes across it. The duct should never be closer than three feet from the wall.

The DrizAir Dehumidifier warms the air as it removes its moisture. In smaller rooms this can raise the temperature substantially. Room temperatures of about 20° to 27° C (68° to 80° F) are usually a good condition for drying. Never allow the room temperature to exceed 38° C (100° F), because this could damage the dehumidifier or building contents.

### **OPERATING INSTRUCTIONS**

- Operate the DrizAir Dehumidifier <u>only</u> in the upright position. If it has been in a horizontal position for any time over a few minutes, let it sit in the upright position for at least 30 minutes before starting. This allows oil to drain back into the compressor, increasing its life.
- Plug in to a standard outlet with the correct voltage and amperage for the unit. Push the <u>ON</u> switch. Listen for proper operation of fan and compressor before leaving the unit unattended.
- Allow five minutes before restarting after the unit shuts off for any reason. This will avoid damaging the compressor.
- If your unit has a pump, run the pump drain hose into a sink, toilet, drain, or bucket. Make sure the hose is not kinked. If using a bucket, check and empty the bucket

- frequently to prevent overflow.
- Before moving the unit, make sure the pump is empty of water. To do this, let the unit sit while OFF for 10 minutes, while water drains drain from the coils into the pump. Then push the <u>PURGE</u> switch.
- CAUTION: Check dehumidifier daily for correct operation. Protect floor surfaces from leakage.

#### Water Removal Rate

With all dehumidifiers, the rate of water removal varies with humidity and temperature. If possible, judge the performance of the dehumidifier by how much the humidity drops, rather than by the volume of water being removed and deposited in the bucket. You can roughly guess the humidity by its "feel" on your skin, but to be accurate use a thermo-hygrometer.

To estimate how many dehumidifiers to place, see the Specifications below.

#### **How the Machine Works**

DrizAir units are refrigerant dehumidifiers. They operate by blowing moisture-laden air from the room across a cold evaporator coil. Moisture in the air condenses on the coil, drips off, and then is removed through a drain hose or pump. Now warmer and drier, the air passes back into the room to continue its work of carrying water vapor.

When a DrizAir Dehumidifier is operating at a room temperature below about 20° C (68° F), frost will normally form on the evaporator coil. Water removal will stop temporarily. When an automatic control built into the unit senses the ice temperature, it initiates a defrost cycle. During this time, considerable quantities of water drain from the unit. As soon as the ice has melted, normal operation resumes.

## **How to Use the Touchpad Controller**

The Touchpad Controller used on DrizAir dehumidifiers has one display and four keys. The normal display messages are:

DEHUMIDIFIER OFF DEHUMIDIFIER ON TOTAL HRS=00000 JOB HRS=00000 CMPRSR DELAY 60 PUMP PURGING DEFROST ON GET SERVICE ER01

#### **Control Keys**



<u>ON-OFF</u>. When the unit is first plugged in, the display cycles through three messages: DEHUMIDIFER OFF, TOTAL HOURS, and JOB HOURS. Press the ON-OFF key to turn the unit on. The display often reads CMPRSR DELAY <u>00</u>, with the numeral counting down from a maximum of 60 seconds to 0. At that point the unit begins to operate and the display reads DEHUMIDIFIER ON. (The delay prevents damage from accidental power interruptions, where power to the compressor stops and then starts again when pressure in the system is still high.)



**PURGE**. Push this key to run the purge before tipping the unit. This empties water from the pump reservoir to prevent leakage. If the unit has been operating, turn the power OFF but leave the cord plugged in for about 10 minutes while water drips from the coil; then press PURGE to remove residual water. The purge also runs automatically every six minutes during operation, and whenever the reservoir is full. While the purge is running, the display reads PUMP PURGING.



**DISPLAY**. Press the DISPLAY key to stop the display at DEHUMIDIFER ON or OFF, TOTAL HOURS, or JOB HOURS, when it is cycling. Press again to make the display cycle again.



<u>CLEAR</u>. To clear the JOB HOURS reading, first press the DISPLAY key to make the display read JOB HRS steadily. Then press the CLEAR key to reset the numerals to 00000. NOTE: the TOTAL HOURS reading cannot be re-set.

#### **Defrost On**

The display will read DEFROST ON whenever the unit is in a defrost cycle. During normal operation, frost forming on the coils is detected by the temperature sensor, causing a defrost cycle to start. Dehumidification is suspended as hot gas flows through the coils and melts the frost. At the end of the defrost cycle, the display returns to its normal condition.

#### Changing Language Shown on Display

The default language is English. To change to another language, follow these steps. (1) The unit must be unplugged from the power outlet. Hold down the DISPLAY key while plugging the unit in. The display now reads "ENGLISH." (2) Press the DISPLAY key or the CLEAR key to adjust the reading to FRANCAIS, DEUTSCH, or ESPANOL. (3) Then unplug the unit from the power outlet, which sets the language.

<u>CAUTION</u>: While in the change-language mode, pressing other keys can change operating parameters of the unit. Do NOT press other keys or change parameters, except when following guidelines from the Dri-Eaz Service Department.

#### Error Messages

In case of certain problems, the display may show the error message "GET SERVICE," followed by "ER<u>01</u>" or another numeral. Follow these steps:

- First, unplug the unit and then plug it back in. This may re-set the electronics.
- If that does not fix the problem, try the solution if one is listed in the table below.
- If that does not fix the problem, contact the Dri-Eaz Service Department (contact information above).

| ER<br>1-2-3-5-6 | Problem with the electronic control panel. Contact Service.                   |
|-----------------|---|
| ER4             | Problem with temperature sensor or cable.                                     |
| ER8             | Problem with a touchpad key. Press and release each key several times.        |
| ER9             | Check for obstructions in pump or drain hose, or that pump wiring is correct. |

# **ELECTRICAL CONNECTIONS**

DrizAir Dehumidifiers are designed to operate on a 230V/50 Hz electrical connection. Make sure that the electrical outlet is grounded and that all safety precautions are taken.

# **MAINTENANCE**

Always turn off the power before performing maintenance procedures. All the service procedures below are to be executed with the unit unplugged. Perform before each use or as needed.

INSPECT ELECTRICAL SYSTEM: Inspect the electrical cord for damage at regular intervals. Periodically, remove the housing and inspect internal wiring for bare wires, insecure fasteners, and discoloration. Remove and repair any damaged wiring as needed. Failure to do so may lead to electrical shock or a fire hazard.

<u>PUMP TUBE</u>: Make sure the pump tube is completely unwrapped and not kinked. Failure to do so can cause water to back up in the pump and leak out. The control panel may signal this problem by displaying "ER9."

KEEP OUT DUST. Keep dust from drywall, demolition, and other sources out of the coils. Failure to do so can cause the unit to overheat, leading to compressor failure or other problems. Do not run the unit during sanding, painting or other operations producing airborne particulate. When dust is pre-

sent, use the optional pleated paper filter to keep more dust out of the unit; also, inspect and clean the coils as required.

<u>USE A CLEAN FILTER</u>. Keep a clean filter in the unit at all times to keep out dust. When using a foam filter, clean with a vacuum, or wash with water and mild detergent and allow it to dry. When using paper filters, discard the filter when visibly dirty and insert a clean one.

<u>SHINE EXTERIOR</u>: Use a sponge and mild detergent for regular cleaning. Do not pour or run water onto the unit or allow water to soak the touchpad control. Bring back the original shine with a vinyl cleaner-polish.

#### Periodic Maintenance (as needed)

Make sure unit is unplugged. Remove housing as needed to permit access to interior parts.

<u>KEEP COILS CLEAN</u>. Dirty coils do not remove water efficiently. Inspect them regularly, especially if operating in dusty environments. Clean if they are visibly dirty.

First make sure coils are dry, then blow them clean with direct compressed air from both sides of the coil. Do NOT hold too close to the coils, as high-pressure air may fold the fins.

If sticky or oily residue remain, do a wet cleaning. Use a squirt bottle to flush the coil with water and a little detergent. Do NOT run a hose or pressure washer on the coils, or permit water to enter the electrical compartment.

Remove dirt buildup with an aluminum evaporator coil cleaner available from a refrigeration supply outlet. Follow product directions carefully.

When cleaning coils, also make sure that the drain tray, drain hose, and filter cover are free of dirt.

<u>PUMP SYSTEM</u>: Inspect and clean the pump system regularly to maintain effective operation. Remove the four screws holding down the pump cover. Clean the catch basin. Make sure the float shaft operates smoothly and does not stick in the OFF position. Use a pipe cleaner to clean the gravity drain hose.

# **WARRANTY**

FILL OUT WARRANTY CARD: Please stop before proceeding and fill out the warranty card.

INSPECT ON ARRIVAL: When your Dri-Eaz product arrives, check immediately for signs of shipping damage. If you notice damage, save the shipping carton for claim purposes, and immediately report the problem to your supplier and the shipping company. Also, save the carton for shipping in case your product ever needs repair at a remote location.

Dri-Eaz promises, to the original purchaser, to perform the following as needed to correct defects in materials and workmanship:

1 Year on Parts and Labor: Cover parts and labor costs for the repair of a Dri-Eaz Airmover, Dehumidifier, Instrument, Accessory, and other product except Marketing Products, for a period of one year from the date of purchase.

90 Days on Shipping: Cover shipping costs for the repair of a Dri-Eaz Airmover, Dehumidifier, Instrument, Accessory, or other product except Marketing Products, both to and from the Service Center, for a period of 90 days from the date of purchase.

LIMITATIONS: This warranty shall not extend to any products showing effects of misuse, accident damage, disassembly, alteration, lack of proper maintenance, corrosive chemicals, improper voltage, unauthorized repairs, use of other than genuine parts and materials, fire, flood, normal wear and tear, or any other causes beyond Dri-Eaz Products' control. The warranty obligation extends only to the repairs or replacement of parts found, upon Dri-Eaz Products' examination, to be defective. The foregoing constitutes the entire warranty and no other warranty, liability, contingency or responsibility, direct, indirect, consequential or in any way connected with the sale or operation of products is expressed or implied.

TO RECEIVE WARRANTY SERVICE: You must write or call for a Return Authorization. You must have the serial number available. The Dri-Eaz Service Department must authorize all costs, including shipping, for any Service Centers worldwide. Please direct questions to an authorized distributor, or to Dri-Eaz at (360) 757-7776 in the US, or (01908) 562611 in the

# **SPECIFICATIONS**

| Model  | DRIZAIR 1200        | DRIZAIR 2000 LG   |  |  |  |
|--|---------------------|-------------------|--|--|--|
| Water Removal, maximum   | 58 liters           | 71 liters         |  |  |  |
| Water Removal, AHAM  | 30 liters           | 42 liters         |  |  |  |
| (21°C, 60% Rh)   |                     |                   |  |  |  |
| Airflow  | 385 m2/hr 513 m2/hr |                   |  |  |  |
| Use Weight   | 36 kg               | 60 kg             |  |  |  |
| Dimensions   | 83x50x50 cm         | 103x61x57 cm      |  |  |  |
| Operating range  | 0° - 38° C          | 0° - 38° C        |  |  |  |
| Safety Listings  | CE                  | CE                |  |  |  |
| Filter   | Foam or Paper       | Foam              |  |  |  |
| Defrost  | Hot Gas Bypass      | Hot Gas Bypass    |  |  |  |
| Pump   | Centrifugal         | Centrifugal       |  |  |  |
| Refrigerant  | R-417A              | R-417A            |  |  |  |
| Compressor   | 6,670 BTU Rotary    | 10,535 BTU Rotary |  |  |  |
| One dehumidifier will dry the air in APPROXIMATELY the size of the following |                     |                   |  |  |  |
| drying chamber or room(s) with a standard ceiling.                           |                     |                   |  |  |  |
| Soaking wet  | 30 m2               | 50 m2             |  |  |  |
| Moderately wet   | 45 m2               | 75 m2             |  |  |  |
| Mostly dry   | 90 m2               | 150 m2            |  |  |  |

Specifications are subject to change without notice. Some values are approximate.

# **TROUBLESHOOTING**

In COLUMN 3, **"FS" or Field Solutions** can be handled by the technician in the field. Others solutions should be handled by a repair technician – an **"AST" or Authorized Service Technician**.

WARNING: All the service procedures below should be executed with the power turned off, i.e. unplugged.

|                              |                                      | See   |   |
|------------------------------|--------------------------------------|-------|---|
| PROBLEM                      | CAUSE                                | above | SOLUTION  |
| Unit does not operate        | No power to machine                  | FS    | Plug in the unit; check power at outlet         |
| •                            | Switch not turned on                 | FS    | Turn on the switch                              |
| Compressor will not start    | Unit needs 5 minutes before re-start | FS    | Switch off unit, wait 5 minutes before starting |
| -                            | Overload preventing start up         | FS    | Reduce room temperature below 100° F (38° C)    |
|                              | Faulty or broken wire                | AST   | Replace or repair broken/loose wire             |
|                              | Defective relay                      | AST   | Check relay with volt/amp meter                 |
|                              | Compressor not running               | AST   | Contact distributor or Dri-Eaz Products         |
| Blower wheel not turning     | Obstructed blower                    | FS    | Remove obstruction                              |
| _                            | Loose blower wheel set screw         | FS    | Tighten set screw                               |
|                              | Loose or broken wire                 | AST   | Replace broken wire                             |
|                              | Burned out fan motor                 | AST   | Replace fan motor                               |
| Dehumidifier operating       | Not enough time to dry               | FS    | Allow more time for drying                      |
| but room not dry             | Poor air movement                    | FS    | Increase air movement with TurboDryers          |
|                              | Excessive air infiltration           | FS    | Reduce airflow into the area being dried        |
| Only partial frost           | Possible leak in system              | AST   | Check for leak with gas leak detector           |
| or moisture on coils         | Low charge in system                 | AST   | Repair and recharge system                      |
| No moisture                  | Possible leak in system              | AST   | Check for leak with gas leak detector           |
| or frost on coils            | Capillary tubing damaged             | AST   | Look for damage, replace tubing                 |
|                              | Compressor not running               | AST   | Contact distributor or Dri-Eaz Products         |
| Unit continuously in defrost | Room temperature too low             | FS    | Increase room temperature                       |
|                              | Defective control assembly           | AST   | Replace control assembly                        |
|                              | Defective bypass relay valve         | AST   | Replace bypass valve                            |
| Unit does not defrost        | Defective sensor                     | AST   | Replace sensor                                  |
| (heavy frost or ice          | Defective control assembly           | AST   | Replace control assembly                        |
| persists over several hours) | Defective bypass relay valve         | AST   | Replace bypass valve                            |
| Unit collects little water   | Room air too dry                     | FS    | Check humidity with a hygrometer                |
|                              | Room temperature too low             | FS    | Increase the room temperature                   |
|                              | Airflow through unit restricted      | FS    | Increase airflow; clean filter and coils        |
| Pump does not function       | Stuck float valve                    | FS    | Clean float valve shaft                         |

FOR PARTS AND SERVICE CALL YOUR LOCAL DISTRIBUTOR, or the Dri-Eaz Service Department at (360) 757-7776 in the US, or (01908) 611211 in the UK.