DRI-EAZ

OWNER'S MANUAL

SAFETY • OPERATING INSTRUCTIONS
MAINTENANCE • SPECIFICATIONS • TROUBLESHOOTING

DRITEC™ 150 and DRITEC™ 325 DESICCANT DEHUMIDIFIERS

This manual includes important safety warnings and operating information. Please read before using the dehumidifier and save for future reference.

PURCHASE DATE: _____ **SERIAL NO.:** _____

DEALER: _____

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Congratulations on your selection of a new DriTec™ 325 Desiccant Dehumidifier or a DriTec 150 Desiccant Dehumidifier from Dri-Eaz Products, Inc. It is our goal to offer you the best high performance dehumidifier available. We invite your comments and suggestions for modifications and improvements. Reading this Owner's Manual will help you achieve maximum benefits from your dehumidifier.

Read Manual and Safety Information. Make sure that all technicians and operators who use the DriTec read and understand the owner's manual prior to operation. Pay particular attention to the safety information in order to reduce the risk of electrical shock, fire, or personal injury.

Inspect on Arrival. When your DriTec arrives, check immediately for signs of shipping damage. If you do notice any damage, report it to your supplier and the shipping company immediately. It is important to save the shipping carton for claim purposes. If your DriTec ever needs repairs at a remote location, the unit should be packed and shipped in its original carton.

INTRODUCTION

The DriTec Desiccant Dehumidifier is designed to reduce humidity by removing moisture from the air. Proper dehumidification helps to speed the drying of wet carpet, cushion, floors, walls, contents and structural materials. It also prevents mold and mildew growth caused by moist or humid conditions.

The DriTec Desiccant can create extremely low humidity conditions, and can operate efficiently in very low temperatures. These two benefits of the desiccant dehumidifier are not possible with refrigerant dehumidifiers.

Your DriTec Desiccant Dehumidifier is durable and simple to operate, needing very little maintenance. The DriTec can give you years of trouble free service if you follow the recommendations in this manual.

We strongly advise that you read and study the manual. You will learn how your desiccant dehumidifier works and how to get the best service from your DriTec Desiccant.

If you do not understand something in this manual or if you have a question about your dehumidifier, call the Service Department at Dri-Eaz Products, (360) 757-7776.

SAFETY INFORMATION

Dri-Eaz is concerned about the safety of anyone who uses or performs maintenance on the DriTec Desiccant unit. It is dangerous for an untrained individual to attempt to use or perform maintenance on the unit. Throughout this manual we point out some of the precautions which should be taken in use or maintenance of the. **We use three different kinds of messages to warn you of possible problems or precautionary measures:**

Danger – Immediate hazard which will result in severe personal injury or death.
Warning – Hazard or unsafe practice which may result in severe personal injury or death.
Caution – Hazard or unsafe practice which could result in personal injury or property damage.

Please keep these points in mind as you use or service the unit.

- **Never** use the DriTec 325 or the DriTec 150 without a proper extension cord. Do not use the 325 with any extension cord other than the one available from Dri-Eaz Products. Use of any other extension cord may cause an electrical short or fire hazard.

- **Never** alter the grounding plug or remove it from the electrical cord. Do not use an adapter that defeats the dehumidifier's electrical grounding. This could cause an electrical shock or fire hazard. Do not use the unit for any reason if it cannot be properly grounded.

- **Never** operate the unit in standing water, because of the risk of serious electrical shock hazard. The unit may be operated on damp surfaces but not in standing or pooled water.

- **Never** allow any materials, such as draperies, to obstruct the air inlet or outlets. This could cause the unit to overheat and result in a fire or electrical hazard.
- **Never** allow children to play on or around the unit. Be sure the unit is inaccessible to children when left unattended. Children could seriously injure themselves or others by playing with or around the unit.
- **Never** operate or store the unit outdoors, or otherwise expose the unit to water. The housing is not waterproof, and water allowed inside the unit could cause an electrical shock hazard or damage to the unit. If electrical components become wet, allow the unit to dry thoroughly before operating.
- **Never** insert any implement or device into the unit when it is operating, which could cause an electrical shock or damage to the unit.
- **Never** operate the unit with a damaged electrical cord or plug, which could cause a severe electrical shock or fire hazard. Visually inspect the electrical cord and plug for damage before each use.
- **Never** direct fogged chemicals or chemicals of any type into the unit, which could cause a fire hazard or damage to the unit.
- **Never** operate the unit in temperatures above 105°F (41°C), which could cause damage to the desiccant rotor or electrical components.
- **Never** allow condensate water which may collect in the reactivation ducting during operation to run back into the unit. This could cause a shock hazard or damage to the unit. Keep at least part of the ducting lower than the reactivation outlet at all times.
- **Never** operate the unit without the air filter, which could cause damage to the desiccant rotor from contaminants.
- **Never** open the unit cover with the power connected, which could cause an extreme electrical shock hazard. The power source provides enough voltage and current to cause death or severe burns. Always turn off the power before you work inside the unit. Do not work with the electrical parts unless you are a trained electrician.
- **Never** wash the rotor with any solvent. This could permanently damage the rotor.
- **Always** ensure that correct voltage is used. Failure to do so could cause an electrical shock or fire hazard.
- **Always** secure the unit to prevent sliding when transporting in a vehicle, which could cause injury to vehicle occupants, or damage to the vehicle or unit.

PRINCIPLES OF OPERATION

DriTec Desiccant Dehumidifiers are designed to reduce humidity by removing moisture from the air. This helps to dry wet carpets, cushions, floors, walls, contents and structural materials. It also prevents mold and mildew growth caused by moist or humid conditions.

Figure 1 shows how DriTec Desiccants remove moisture from the air. The heart of the system is the rotor, which has a series of air passages or channels. Air can be forced through these channels in either direction.

The passages inside the rotor are coated with a special silica gel substance which is a "desiccant," a material with a unique affinity for water. When damp air passes through rotor, the desiccant material "adsorbs" or captures the water vapor, thus drying the air. The DriTec's desiccant material employs rare metal technology to increase the attraction of water to the silica gel.

Process Air

When in use, the DriTec Dehumidifier draws in air from a room through the air inlet. This air passes through the honeycomb channels of the rotor. As this happens, the desiccant material captures most of the moisture present in the air. Once this "process air" has been dried out, it is vented back into the room.

As the rotor captures water vapor from the air, it becomes saturated with water. The saturated rotor eventually loses its ability to capture additional moisture. The process of removing this water from the rotor is called "reactivation."

DriTec 325 shown (dual air outlets)

Reactivation Air

During operation, a portion of the rotor is constantly being dried or "reactivated." In the DriTec, heated air is directed to the reactivation sector and is forced through the channels in that portion of the rotor. The heated air releases the moisture captured in the desiccant material. The moisture is discharged into the heated "reactivation air stream" and is then vented from the unit to the outdoors. As the DriTec operates, the rotor slowly turns so that only a portion of the whole rotor is exposed to the heated reactivation air at any one time.

At this point, the moisture has been removed from the room, stored on the rotor, and then released from the rotor into the outside air. The desiccant dehumidification process cycle is complete.

Here is a quick review of the operation:

1. Moist process air is drawn into inlet and through the dehumidifier.
2. Moisture in the process air is captured on the desiccant rotor and the dry process air is vented through process outlets back into the room.
3. Reactivation air is heated within the dehumidifier.
4. The wet area of the rotor turns into the reactivation sector.
5. The moisture in the desiccant rotor is released into the heated reactivation air.
6. The reactivation air, laden with moisture, is vented through the reactivation outlet to the outdoors.
7. The reactivated rotor rotates into position to capture more moisture.

OPERATING CONDITIONS

The DriTec Desiccant Dehumidifier effectively removes moisture at virtually any job temperature without the freeze-up problems associated with refrigerant dehumidifiers. Low-temperature operation is one advantage of using desiccant technology.

The DriTec dramatically reduces ambient humidity to very low levels not obtainable with refrigerant dehumidifiers. This allows faster and more thorough drying of dense materials like hardwood flooring and structural woods.

The DriTec also uses improved technology that removes humidity When a desiccant dehumidifier is first put into operation in a saturated environment, it will constantly reduce humidity. Its rate of water removal is determined by the volume of the area, the environmental conditions, and the capabilities of the machine.

Saturated Environments

On many restorative drying jobs, the initial humidity is very high as porous materials like carpet and cushion give up moisture to the air. However, as the job progresses and humidity levels fall, moisture may need to be evaporated from less porous materials including drywall and wood.

Refrigerants are most effective when both humidity and temperature are high. They are much less effective in ambient conditions under 50% relative humidity or 50°F (10°C). Desiccant dehumidifiers are generally effective in all ranges of temperature and humidity.

In saturated environments it is often helpful to use the DriTec Desiccant together with refrigerant units to speed the drying process. In these conditions the DriTec removes water as well as a comparable refrigerant unit. Also, it is actually more cost effective. (For example, a 25-gallon/day refrigerant dehumidifier that costs $2,195 removes water at $87.80 per gallon. The 48-gallon/day DriTec 325 that costs $3,699 is removing water at $77.06 – a cost savings of over $10/gallon.)

Lower Levels of Humidity

When the relative humidity falls to 40%, a refrigerant dehumidifier will remove little additional water. At this point many materials in the room such as carpets and wall surfaces may feel dry, but moisture may remain in structural materials. Ceilings, walls, and structural flooring materials typically take longer to dry. The DriTec Desiccant is superior for drying these materials. It has the capability to lower humidity over time to below 1% Rh. The low humidity environment created by the DriTec speeds the drying of structural materials which dry very slowly in conditions of normal, comfortable humidity.

The DriTec Desiccant also can be more cost-effective than refrigerant dehumidifiers in low-temperature conditions. The DriTec continues to remove moisture at temperatures down to freezing, so it may be effective even in unheated buildings.

Monitoring Specific Humidity Changes

For fast and complete drying, the specific humidity in the area being dried should be monitored. Specific humidity measurements can be obtained using a thermo-hygrometer (such as the DHT 600) to obtain relative humidity and temperature of the ambient air, plus a Psychrometric Calculator or Chart.

Specific humidity readings (measured in grains per pound) give a true indication of the amount of moisture in the air. Relative humidity readings alone is not useful information unless the temperature is always the same, wherever and whenever a measurement is taken. This is seldom or never the case in water damage restoration.

Moisture Content of Materials

The moisture content of structural materials should also be monitored with a moisture meter such as the MoisturePro. A moisture meter indicates the extent that these materials are wet. It will assist you, and your customer, in determining when the job is completely finished. A variety of moisture meters are available from Dri-Eaz Products.

MAIN COMPONENTS

Figure 1 shows most of the important parts of the DriTec Desiccant Dehumidifier: the rotor, process air stream, and reactivation air stream. The DriTec Desiccant has seals separating the two streams of air – the damp process air, and the heated reactivation air. Notice that the two air streams move through the DriTec Desiccant in opposite directions.

Air Filter

If the air in the room is dirty, the dirt can collect in and plug the passages of the rotor. A cleanable foam air filter is placed on the intake side of the rotor to catch dirt in the air stream.

Process Air Outlets

Process air is vented from the DriTec through one or two outlets, one of which is adjustable with a slide lever.

Reactivation Air Stream

The reactivation air stream uses approximately one-third of the total air stream, which flows through electrical heating elements and then through the rotor, where the heat reactivates the desiccant. The air stream then passes through the reactivation outlet and is vented through ducting to the outdoors.

Rotor Drive

The rotor is turned by a small drive motor and belt. A spring-type tensioner automatically adjusts the belt tension.

DriTec 150 Controls

The DriTec 150 is controlled by an on-off rocker switch on the front panel. The switch is lighted red with the unit is on and operating.

DriTec 325 Controls

The controls for the DriTec 325 are located on the front panel. The main power switch has three positions:

- **On –** DriTec Desiccant operates continuously.
- **Off** – Control system turned off. When the switch is turned to Off after the unit has been running, the blower and drive motor continue to run for 5 minutes to cool down the unit. Then the unit automatically shuts off the blower and drive motor.
- **Option –** Provided only for use with a remote dehumidistat which is not included with this unit.

Indicator Lights (DriTec 325 only)

The DriTec 325 has four indicator lights located on the front panel:

- **Power Light –** On when power to the unit is connected.
- **Unit On Light –** On when main switch is turned to On or Option, and the unit is operating.
- **Blower On Light –** On when main switch is turned to On; shows that the blower is operating. Stays on during cool-down period after switch is turned off (about 5 minutes) while blower and drive motor continue to operate until automatic shut-off. Turns Off if the blower circuit is overloaded and open.
- **Heater On Light –** On when main switch is turned to On; shows that the heater is operating. Like the blower light, stays on during the 5-minute cool-down period. Turns Off if the heater circuit is overloaded and open.

Heating System

The heating system uses unique PTC-heating elements which eliminate the need for conventional components for temperature control and thermal safety. (PTC means positive temperature coefficient; the element is a ceramic semiconductor.) These elements have a self regulating feature which controls the output of the elements based on the required temperature. For instance, if the reactivation airflow is reduced, the heater elements will react rapidly to the higher temperature with an increasing electric resistance, and automatically reduce the heat output. An overheating protection thermostat is therefore not needed.

INSTALLATION & STARTUP

Inspection

When the unit arrives, check immediately for signs of shipping damage. If you do notice any damage, report it to the shipping company immediately. Notify Dri-Eaz Products, Inc. about the damage as soon as possible. If the unit is damaged, do not discard the original packaging.

Positioning the Dehumidifier

The dehumidifier should be operated in a "closed system" to achieve maximum efficiency. That is, all doors, windows and other openings to the outside should be closed tightly, with the exception of an opening for the reactivation outlet (wet air) duct.

Locating the Dehumidifier

There are two options for locating the dehumidifier. Typically, it will be placed directly in the humid environment. This allows the process air to be drawn from that area, dried, and then returned to the same room.

In other cases, place the dehumidifier in a separate area and duct the dry air to the damp area, for example, when attempting to dry an attic or a crawl space under a building. Operate the dehumidifier inside the building and duct the dry air directly into the attic or crawl space.

When drying an area with no inside access, it is sometimes possible to vent dry air through a heat or ventilation register opening. To do this, direct the process air duct into a register and temporarily disconnect any ducting so the dry air is released into the area to be dried.

The DriTec has two process output vents. This allows ducting into two areas at one time, or leaving one vent open to the room while ducting the other to a second area.

Air Intake Clearance

Allow at least 7" clearance between the air intake (on the back of the unit) and any wall. Never allow any materials, such as draperies, to obstruct the air inlet or outlets. This could cause the unit to overheat and result in a fire or electrical hazard.

Air Circulation

A desiccant dehumidifier operating in an area such as a basement will have little effect in drying an adjacent enclosed area, such as a closet, unless there is adequate circulation of air in and out of the adjacent area. Open interior doors and operate Dri-Eaz TurboDryers to maintain good air movement. Doors may need to be braced to prevent them from closing as a result of air movement. In the case of individual rooms being dried, all doors and windows should be kept closed.

There are times when you will want to use special techniques to reduce the volume of airspace to be dried. These techniques will be advantageous when drying dense materials such as hardwood flooring. They are especially helpful when these materials are located in a high air volume structure such as a gymnasium. The basis of this technique is to reduce the amount of air space around the wet materials so the volume of air to be dried is reduced.

One method is to make a plastic tent over the wet materials, then direct the dry process air under the plastic tent. Use 4-6 mil plastic taped over the area. Leave two openings: one for the process airflow and another opening on the opposite side for damp air to escape. The amount of airspace between the surface of the wet materials and the plastic will vary depending on the size of the area. The wet materials are dried while minimizing dehumidification and energy use.

Duct Connections

This unit is designed to be operated with ducting. Ducting is used both to carry the wet reactivation air away out of the structure and to vent the dry process air to particularly wet areas. There are several different ways to use the machine and ducting.

Caution!

Because air conditions inside ducting can reach temperatures of 150°F (66°C), use only appropriately rated ducting.

Process Outlet Ducting

When drying an area such as a room it is not necessary to use ducting on the process out (dry air). In this case, the dehumidifier will vent dry air directly from the machine into the room. In some instances, however, you may want to direct the airflow towards a specific area. This can be done using the process out ducting, available from hardware stores or from Dri-Eaz Products. The duct outlet can be located near a slow drying piece of furniture or section of wall or flooring to achieve faster drying of that area.

The double process output vents allow for two ducts running from the machine, or one duct opening into the room while the other is ducted to another area. Use 5-inch ducting rated for temperatures of 150°F (66°C) or above.

A slide lever can be used to close the right-hand outlet partially or completely. Use this to balance airflow when ducting from just one outlet. Normally, duct from the left-hand outlet (no slide lever), and adjust the other that is venting into the room.

Reactivation Outlet Ducting

The wet reactivation air should always be vented via ducting to the outside. There are several methods of locating the react duct outlet to vent outdoors. The simplest method is to attach it to a clothes dryer vent.

If a dryer vent is not available, you can fashion your own window connection panel that permits the duct to vent through an open window. A handy window connection kit called the TecVent will be available from Dri-Eaz in the fall of 1999.

Caution!

Never allow condensate water which may collect in the reactivation duct during operation to run back into the unit. This could cause a shock hazard or damage to the unit. Keep at least part of the ducting lower than the reactivation outlet at all times.

Condensation may occur inside reactivation ducting under cold ambient conditions. Avoid any bends or sags where water can collect in the ducting. Keep part of the ducting lower that the reactivation outlet on the back of the unit, to prevent condensed water from running back into the unit.

If enough condensed water collects and blocks the air flow, the unit can shut itself down.

Ducting Length

The amount of air flow through the react and process ducting is dependent upon its diameter, length, interior wall surface conditions and configurations. For this reason, the length of ducting which can be used with the desiccant is determined by the type of ducting, and the number of bends or curves in the ducting.

The less restricted the airflow, the better the performance of the unit. It is not recommended that you use over 30 ft. of straight run process air ducting and not over 60 ft. of straight run react air ducting. When using over 20 ft. of react air ducting, condensation which can collect in bends or when the ducting is in contact with cool surfaces, can become a problem. The opportunity for condensate to collect in the react ducting is greater as the length of the ducting is increased.

Warning!

Never operate or store the unit outdoors, or otherwise expose the unit to water. The housing is not waterproof, and water allowed inside the unit could cause an electrical shock hazard or damage to the unit. If electrical components become wet, allow the unit to dry thoroughly before operating.

Connecting the Ductwork

There are some simple rules for arranging the ductwork for the DriTec Desiccant Dehumidifier:

1. **The process air outlet** may be vented to the area to which is being dried.
2. **The reactivation air outlet** can be very damp, so it should be vented to a space where this moisture is not a problem. Even though this air is heated, it is too damp for most space heating purposes. Normally, the reactivation air should be vented directly outdoors.
3. **Protect outlets.** Wherever an outlet duct opens to the outdoors, protect it from the elements. Install weather hoods to prevent water from running into the dehumidifier and screens to prevent birds or rodents from entering the unit.
4. **Duct connection clearances.** Allow the following clearances for the intake and outlets:

- **Air Intake** – Allow at least 7" clearance from nearby walls for process intake.
- **Process Outlets** – The DriTec 325 connects to 5” or larger round ductwork. The DriTec 150 connects to 4” or larger round ductwork.
- **Reactivation Outlet** – Both the DriTec 325 and DriTec 150 connect to 4" round ductwork. Always vent to outside area.

Connecting the Power

1. **Electrical Connections, DriTec 325.** The power cord on the DriTec 325 should be plugged into a 230V 50/60Hz 30A outlet. The "Unit On" light will indicate when there is power to the unit. The voltage to the unit should not vary by more than ±10%.
2. **Electrical Connections, DriTec 150**. The power cord on the DriTec 325 should be plugged into a 115V 60Hz 15A outlet.

3. **Start the unit.** Turn the switch to "On" to start the unit. Look through the process outlet grills to check the rotor rotation. The rotor should start turning clockwise as you view it through the process outlet grills. If the unit does not start, refer to the Troubleshooting section.

MAINTENANCE

The DriTec Desiccant requires very little regular maintenance. Check the following points every 30 days when using the unit on a regular basis or as needed.

Clean the Air Filter

Remove the filter from the filter shroud by inserting a finger or screwdriver into the access hole at the bottom of the filter shroud and pushing up. To clean the filter use a light vacuum, or wash with water and mild detergent. Spray directly against the foam in the direction of the air flow. Begin at the top of the filter and work down. Allow the filter to drain before reinstalling it in the filter shroud.

Check Reactivation Outlet Temperature

After the unit has been operating for 30 minutes, the temperature at the outlet of the reactivation air stream should be about 30°F (17°C) higher than the temperature of the room air. Check this outlet temperature with a thermometer. If the outlet temperature varies significantly from the above, see the section on Troubleshooting.

Warning!

Always ensure that correct voltage is used. Failure to do so could cause an electrical shock or fire hazard.

Check the Rotor Air Seals

1. Turn off all power to the unit (see ELECTRICAL DANGER note.) Unscrew the four fasteners holding on the front panel and remove to expose the front side of the desiccant rotor.

2. (DriTec 325 only.) Remove the two control panel screws and let the panel hang loosely. It is not necessary to disconnect any wires.

3. Place a 5" high block of wood under the front edge of unit for support. Remove the cover screws and lift the cover straight up, being careful not to damage any foam edge seal.

4. Air flow through the rotor is controlled by a system of air seals. Inspect the air seals for any signs of abrasion or cuts. Be sure the outer surface of the seals are smooth. If the seals must be replaced, please contact the Dri-Eaz Service Department.

Check the Rotor

1. With the cover removed, pull back the tensioner to loosen the drive belt. Check the drive belt for signs of wear. The belt should be flexible. Replace the belt if it is stiff or cracked.

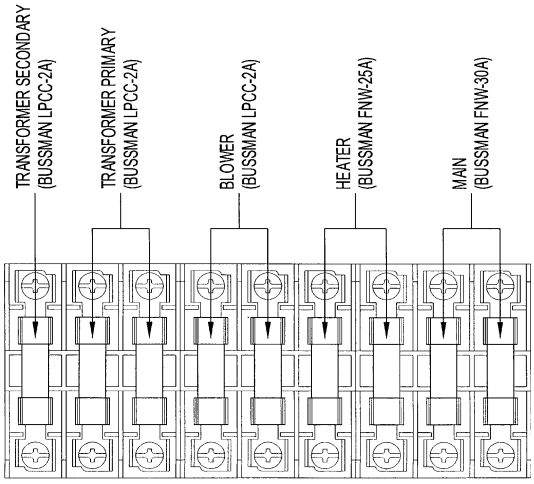
2. Remove the belt from the drive sprocket on the motor. Turn the rotor by hand and make sure it turns smoothly, though with some drag. If the rotor does not turn smoothly, the seals may be worn.

3. Check the rotor for passages clogged by dirt or dust. To inspect the passages, hold a 60 watt bulb behind the rotor. If the passages are clear, the light from the lamp should shine through the rotor. If any part of the rotor is plugged you will see a dark area. Inspect and clean the rotor once per year when operating under normal conditions, and more if the unit is operating in a dusty environment. Despite the in-line filter the rotor can pick up dirt and dust, resulting in reduced water extraction.

4. Clean the rotor if it seems dirty or clogged. Use a vacuum with a soft-bristled dusting brush attachment. Vacuum both surfaces of the rotor.

5. If you cannot clear the rotor using the vacuum, you may use compressed air to help the process. Do this carefully so that you do not damage the rotor. The compressed air should be dry and free of oil. Do not use a pressure higher than 30 PSIG. Use compressed air on one side of the rotor and the vacuum on the other side. Do not hold the compressed air closer than 12 inches from the face of the rotor. Do not wash the rotor with any solvent. Improper cleaning can permanently damage the rotor.

6. If the rotor is still is still plugged, please call the Dri-Eaz Service Department.



Fuse Diagram for DriTec 325 only.
The DriTec 150 does not include a fuse.

Warning

Replacement fuses should have the same amperage, maximum voltage, and interrupt capacity ratings.

Maintenance Quick Reference Summary

Air Filter

- Inspect and clean as necessary

Reactivation Outlet Temperature

- Should be approximately 30°F (17°C) higher than the ambient air temperature in the room.

Seals

- Check for excessive wear

Rotor

- Check for rotational binding
- Check that rotor is not plugged with dirt

TROUBLESHOOTING

Any troubleshooting procedure requiring that the unit be plugged in to a power source while the cover is removed should be done only by a qualified service technician.

Danger!

Do not work with the electrical parts unless you are a qualified service technician.

No Indicator Lights (DriTec 325 only)

Check the AC power distribution. Check the power cord into the unit and check the two "Main" 30A fuses in the DriTec Desiccant unit.

"BLOWER ON" Light Is Off (DriTec 325 only)

1. **Check the fuses**. If the blower light is off with the power switch in the "On" position, a fuse may have blown. Do not replace the fuse until you have checked to determine what caused the fault. Always use the same type and rating fuses.
2. **Check the heating elements** for electrical short (see below).
3. **Check the line voltage.** A fuse may have blown if the AC line voltage varies considerably from the specified 230 volt AC. The line voltage should be 230 volts ± 10%.
4. **Check the blower.** Turn off and unplug the DriTec Desiccant. Check to make sure that the blower wheel can turn freely. Check the motor for short circuit or open circuit or for any mechanical problem that might keep it from turning freely.
5. **Restarting the unit.** Do not attempt to restart the unit until it is determined what caused the fault condition and corrective action is taken.

"HEATER ON" Light Is Off (DriTec 325 only)

1. **Check the fuses**. If the heater light is off with the power switch in the "On" position, a fuse may have blown. Do not replace the fuse until you have checked to determine what caused the fault. Always use the same type and rating fuses.
2. **Check the reactivation air stream.** The most common cause for overheating is a blockage in the reactivation air stream.
3. **Check the line voltage.** The heating elements may also overheat if the AC line voltage rises much above the specified 230 volt AC. The line voltage should be 230 volts ± 10%.
4. **Check blower.** A jammed or slow turning blower wheel can lead to overheating. Turn off and unplug the DriTec Desiccant. Check to make sure that the blower wheel can turn freely. Check the motor for short circuit or open circuit or for any mechanical problem that might keep it from turning freely.
5. **Restarting the unit.** Do not attempt to restart the unit until it is determined what caused the fault condition and corrective action is taken.

Reactivation Outlet Temperature Too Low

1. **Check the reactivation outlet air.** The air at the outlet for the reactivation air should be about 30°F (17°C) higher than the temperature of the room air. This measurement gives you a way of making a quick check of the overall operation of the DriTec Desiccant.
2. **Increased moisture load.** If the unit is overloaded and is trying to move too much moisture, the temperature at the outlet will drop below the desired reading of about 30°F (17°C) higher than the temperature of the room air. (Think of the excess moisture as cooling off the stream of heated air). Is there some reason why the air in the system has suddenly become much more humid? The change could be overloading the DriTec Desiccant.
3. **Check the heating elements.** One of the heating elements may have stopped working. See "Checking the Heating Elements."
4. **Check the blower.** A low outlet temperature can also be caused by a problem with the blower. Turn off and unplug the DriTec Desiccant and check to make sure that the blower wheel can turn freely.

Poor Dehumidifying Performance

1. **Check the air filter.** If the filter is dirty, clean it as described in the section titled "Cleaning the Air Filter."
2. **Check inlet and outlets** make sure that obstructions are not blocking air flows.

Caution!

Excessive moisture buildup in the reactivation ducting could cause blockage of the airflow.

3. **Has the moisture load increased?** Has something changed in the process space which could have increased the moisture load on the unit? Check all openings into the process space to be sure all doors and windows are closed. Make sure that doors to the outside are opened as infrequently as possible. Check for leaks in the ductwork.
4. **Check temperature of reactivation air.** It should be about 30°F (17°C) higher than the temperature of the room air. If it is not, see the section titled "Reactivation Outlet Temperature is Too Low."
5. **Check heating elements.** One or more of the heating elements may not be working. See the section on "Checking the Heating Elements."
6. **Rotor has stopped.** The rotor may be stopped. See the next section.

Rotor Is Stopped

1. **Problem with the drive**. Remove the belt from the drive rotor on the motor. Set the switch to the "On" po-

sition to turn on the unit. The drive motor should turn slowly. For information on removing the motor, please contact the Dri-Eaz Service Department at (360) 757-7776.

Danger!

Any troubleshooting procedure requiring that the unit be plugged in to a power source while the cover is removed should be done only by a qualified service technician

2. **Check the seals.** After long use, the seals may wear and the rotor will not turn easily. Check the condition of the seals. The surface of the seals should be smooth. If the seals must be replaced, please contact the factory for instructions.

Checking the Heater Elements

1. The PTC heating elements are located behind the front panel just below the process outlet.
2. Turn off all power to the unit (see ELECTRICAL DANGER note.) Unscrew the four fasteners holding on the front panel and remove to expose the heater box.
3. Disconnect the wire leads from the heater elements. Check the resistance across each of the heating elements using an Ohmmeter. If an open or shorted condition is found, the element needs to be replaced. If you are not certain if the element needs replacing, please contact the Dri-Eaz Service Department for assistance in determining if the element needs replacing.

SPECIFICATIONS

DESCRIPTION	DRITEC 325	DRITEC 150
Utilities	230V / 1 Ph / 50-60 Hz	115V / 1 Ph / 60 HZ
Air Intake Volume	325 CFM	140 CFM
Process Air Volume	250 CFM	110 CFM
Reactivation Air Volume	75 CFM	30 CFM
Air Filter	Cleanable Foam	Cleanable Foam
Max. Reactivation Heater	4.5 kW @ 230 VAC	3.0 kW @ 115 VAC
Max. FLA	24 Amps	12 Amps
Max. Operating Temp For Ducting	150°F (66°C)	150°F (66°C)
Use Weight	133 lb. 61 kg	78 lb. 35 kg
Length	24 in. 61 cm	22 in. 56 cm
Width	25.5 in. 65 cm	21 in. 53 cm
Height	36.5 in. 94 cm	35 in. 88 cm

Dri-Eaz Service Department (360) 757-7776

TROUBLESHOOTING QUICK REFERENCE SUMMARY

WARNING: All service procedures below are to be executed with power off – i.e. unplugged!

PROBLEM	SOLUTION
POWER ON – NO INDICATOR LIGHTS	• Check that the unit is plugged in, and that the circuit is supplying power to the unit. • Check the two "Main" fuses (see Fuse Diagram).
DRITEC 325 ONLY: **"BLOWER ON" OR "HEATER ON" LIGHT IS OFF**	• Check fuses. Do not replace until determining cause of the fault. Always use the same type and rating fuses. • Check for blocked reactivation air stream. • Check for correct line voltage (± 10%). • Check heating elements and blower motor.
REACTIVATION OUTLET TEMPERATURE TOO LOW – SHOULD BE ABOUT 30°F (17°C) ABOVE THE TEMPERATURE OF THE ROOM	• Check for source of increased moisture in the space being processed, such as ducting leaks, open doors or windows, etc. • Check for failed heater elements. • Check that the blower wheel is turning freely.
POOR DEHUMIDIFYING PERFORMANCE – UNIT IS RUNNING	• Check for blocked air filter, blocked air inlet, or blocked air outlet(s). • Check for increased humidity loads. Check the process space for open doors, leaks in the ductwork etc. • Check for low temperature at the reactivation outlet. • Check the heating elements. • Check for rotation of rotor.
ROTOR HAS STOPPED	• Check fuses. Do not replace until determining cause of the fault. Always use the same type and rating fuses. • Check drive belt and motor. • Check for worn seals.

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