Troubleshooting\Shut down and Passive Alarms

⚠ **WARNING:** This card provides only basic troubleshooting and maintenance information. Users must be familiar with all safety information and procedures described in the D Dryer User Guide.

Shut down alarms

If the alarm light remains on steady it is a shut down alarm. The dryer will shut down automatically to prevent damage to equipment or personnel.

A1 - Process High Temperature – If the process temperature exceeds the process high temperature setpoint as entered on the operator display for more than 20 seconds.
1. Is the process high temperature setpoint at least 5° F above your drying setpoint?
2. Is the RTD temperature probe installed correctly? The probe tip should be in the center of the hopper inlet tube.
3. Are the air lines restricted, or loose? Straighten crimps in hoses. Tighten any loose hoses.

A2 - Process Temperature Loop Break – If the Process temperature is outside of the operator entered deviation alarm band (see #1 passive alarm) and the process temperature is not moving towards the setpoint at a rate greater than 3° in 30 seconds
1. Is the RTD temperature probe installed correctly? The probe tip should be in the center of the hopper inlet tube.
2. Are the air lines restricted, or loose? Straighten crimps in hoses. Tighten any loose hoses.

A3 - Process Heater High Temperature – If the snap switch in the process heater tube opens due to excessive temperature.
1. Is there an air flow blockage, or are any hoses loose? Check the bedplates for being in the proper position, lined up with the hoses. Tighten any loose hoses.
2. Did the isolation contactor fail closed?
3. Did the solid state relays fail?

A4 - Regeneration Heater High Temperature – If snap switch in regeneration heater tube due to excessive temperature.
1. Is the regeneration exhaust blocked, or are any hoses loose? Check the bedplates for being in the proper position, lined up with the hoses. Tighten any loose hoses.
2. Did the isolation contactor fail closed,
3. Did the solid state relays fail?

A5 - Carousel Index Too Long – If carousel index was more than 1.5 times the normal index time.
1. Is the limit switch adjusted correctly? Adjust the switch so that it drops into the groove and stops the bedplates.

A6 - Carousel Index Failure – If carousel index is requested but no contact transition from on to off is seen within 5 seconds. (Alarm will need to be ignored on the initial power up rotation.)
1. Is the limit switch adjusted correctly? Adjust the switch so that it drops into the groove and stops the bedplates.
2. Is the bed drive motor damaged? Are the 2 set screws on the bed drive motor shaft plate tight.
3. Has the bed drive motor relay failed?

A7 - Return Air High Temperature – If the return air temperature at the inlet to the blower is greater than 180° degrees.
1. Does the hopper contain enough material? Make sure your material supply system is working.
2. Are you drying at a high drying temp (Above 250° F) or are your running at low throughputs? You may need an aftercooler, if you don't have one.
3. Does your aftercooler have water? Turn on the water supply, or fix any leaks or blockages.
4. Are the aftercooler coils dirty? Clean the aftercooler.

Passive alarms

If the alarm light is flashing the alarm is passive.
The dryer continues to operate, but this problem could prevent correct drying of your material.

P1 - Process Temperature Deviation – If process temperature exceeds the deviation band as entered on the operator display for more than 10 seconds.
1. Has one of the solid state relays failed closed?
2. Are there any loose hoses? Tighten any loose hoses.

P3 - Regeneration Temperature Deviation – If regeneration temperature exceeds the deviation band as entered on the operator display for more than 20 seconds
1. Has one of the solid state relays failed closed?
2. Are there any loose hoses? Tighten any loose hoses.

P5 - Return Air High Temperature – If the return air temperature is between 150°and 180° degrees?
1. Does the hopper contain enough material? Make sure your resin supply system is working.
2. Are you drying at a high drying temp (above 250° F) or are your running at low throughputs? You may need an aftercooler, if you don't have one.
3. Does you aftercooler have water? Turn on the water supply, or fix any leaks or blockages.
4. Are the aftercooler coils dirty? Clean the aftercooler.
5. Are there any loose hoses? Tighten any loose hoses.

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D Carousel Dryer

Models 15, 25, 50, 75 and 100 with DC-1 controls

Operation

To Start Drying

1 **Turn on main power to the dryer.** This powers up the control, the display lights will be on.

2 **Set the drying temperature.**
Press the Setpoint Adjust ▲ or ▼ buttons or enter the temperature on the numeric keypad and press enter.

3 **Press** 

◆ The green light on the start button will light-up, blowers and heaters turn on.

To Stop Drying

1 **Press** 

The drying light stays on. The blowers continue running for a few minutes to cool the heaters.
IMPORTANT: Failure to stop the dryer using this procedure could damage your dryer.

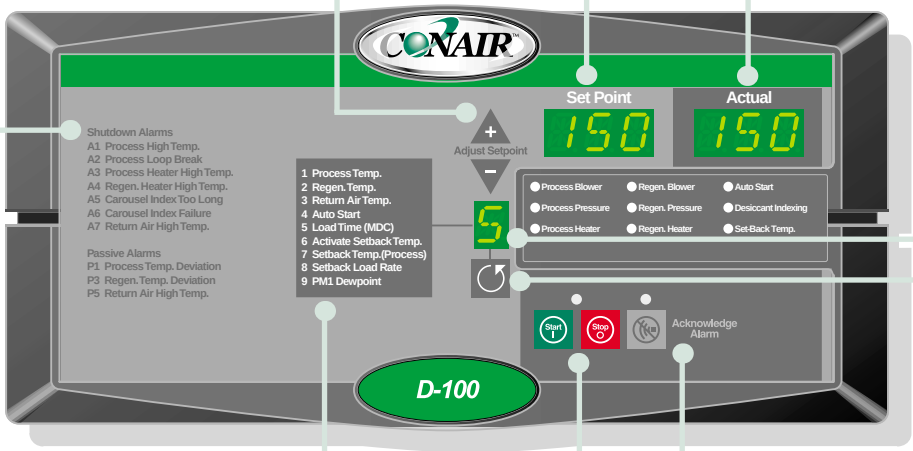
⚠ Be sure to disconnect and lockout the main power if you have stopped the dryer to perform maintenance or repair.

The D Dryer: Control Panel DC-1

Increment/ Decrement Buttons
Used to increase or decrease values.

Set Point Display
Shows the set point valve.

Actual Display
Shows the actual temperature valve.



Alarm Codes
See manual for a more complete listing of alarm codes.

Menu Number Display
Displays the menu number corresponding to what is shown in the set point and actual displays. Can also display letters for alarm and setup screens.

Scroll Button
Press to scroll through the closed loop menu list. Pressing the scroll button moves you down the list.

Menu List
Numbers 1, 2, 3, and 4 are standard items that will always be present. Numbers 5, 6, 7, 8, and 9 are screens associated with options. If the option is not installed the screen will not be displayed.

Start and Stop Buttons
Press Start to start the dryer. Press Stop to stop the dryer.

Acknowledge Alarm Button
Press once to silence the optional audible alarm and display alarm messages. Press again to clear the alarm.

Troubleshooting\Alarm Button

If there is a problem, the dryer activates the alarm light.

1. **Press once to silence the optional audible alarm and display the alarm message.**
2. **Address the alarm message and fix the problem.**
3. **Press again to clear the alarm. If the alarm reappears the problem was not fixed.**

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Maintenance

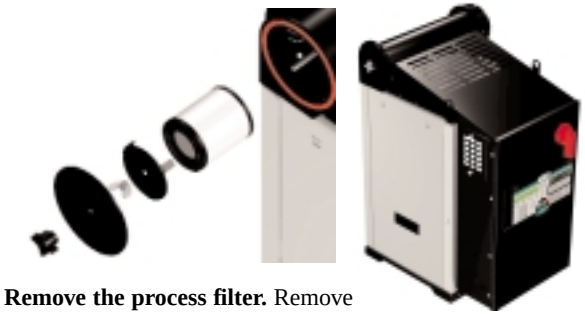
CAUTION:

Always turn off the dryer, disconnect and lock out the main power source before performing maintenance or repairs.

Protect yourself from hot surfaces inside the dryer.

Clean Filters Regularly

Clogged filters reduce air flow and dryer efficiency. Cleaning frequency depends on how much material you process and how dusty it is.



1. **Remove the process filter.** Remove the black plastic knob. Pull the cap off. Remove one wing nut. Remove the filter cap and filter.
2. **Clean the process filter.** Replace damaged, worn or clogged filters.
3. **Reverse the procedure to put back together.**

1. **Remove the regeneration filter.** Remove two bolts and the metal screen.
2. **Clean the process filter.** Clean dust, fines and dirt from the filter, or replace it with a new filter.
3. **Reverse the procedure to put back together.**