

User Guide

SC Carousel Dryer

Standard Models 7.5, 15, 30 and 60



WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!

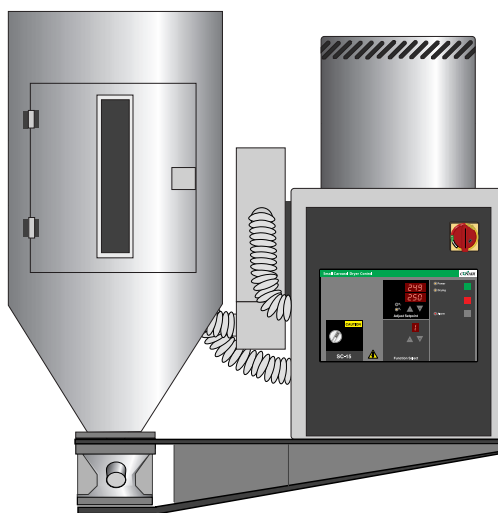
This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon. Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

Installation

Maintenance

Operation

Troubleshooting



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UGD016/0700

Please record your equipment's model and serial number(s) and the date you receive it in the spaces provided.

It's a good idea to record the model and serial number(s) of your equipment and the date you received it in the User Guide. Our service department uses this information, along with the manual number, to provide help for the specific equipment you installed.

Please keep this User Guide and all manuals, engineering prints and parts lists together for documentation of your equipment.

Date:
Manual number: UGD016/0700
Serial number(s):
Model number(s):

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This section has been provided for you to
store spare parts lists and diagrams.

INTRODUCTION

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PURPOSE OF THE USER GUIDE

This User Guide describes the Conair SC series of carousel dehumidifying dryers and explains step-by-step how to install, operate, maintain and repair this equipment.

Before installing this product, please take a few moments to read the User Guide and review the diagrams and safety information in the instruction packet. You also should review manuals covering associated equipment in your system. This review won't take long, and it could save you valuable installation and operating time later.

HOW THE GUIDE IS ORGANIZED

Symbols have been used to help organize the User Guide and call your attention to important information regarding safe installation and operation.



Symbols within triangles warn of conditions that could be hazardous to users or could damage equipment. Read and take precautions before proceeding.



Numbers within shaded squares indicate tasks or steps to be performed by the user.



A diamond indicates the equipment's response to an action performed by the user.



An open box marks items in a checklist.



A shaded circle marks items in a list.

YOUR RESPONSIBILITY AS A USER

You must be familiar with all safety procedures concerning installation, operation and maintenance of this equipment. Responsible safety procedures include:

- Thorough review of this User Guide, paying particular attention to hazard warnings, appendices and related diagrams.
- Thorough review of the equipment itself, with careful attention to voltage sources, intended use and warning labels.
- Thorough review of instruction manuals for associated equipment.
- Step-by-step adherence to instructions outlined in this User Guide.

We design equipment with the user's safety in mind. You can avoid the potential hazards identified on this machine by following the procedures outlined below and elsewhere in the User Guide.

 **ATTENTION:**
READ THIS SO NO
ONE GETS HURT



WARNING: High voltage

This equipment is powered by single- or three-phase main voltage. Always disconnect and lock out the main power source before servicing. To help you, we've equipped the dryer with a lockable, electrical disconnect device. You are responsible for developing a lockout procedure.



CAUTION: Hot Surfaces

Always protect yourself from hot surfaces inside the dryer and hopper. Also exercise caution around certain exterior surfaces that can reach temperatures of 180° to 200° F (82° to 93° C). These include the hopper door frame, the exterior of an uninsulated hopper, the return air hose and the dryer's process filter housing and moisture exhaust outlet.



WARNING: Do not place aerosol, compressed gas or flammable materials on or near this equipment.

The hot temperatures associated with the drying process may cause aerosols or other flammable materials placed on the dryer or hopper to explode.



WARNING: Hazardous substance

The electrical contactors in this dryer contain mercury, which is considered a hazardous substance and must be dealt with accordingly. Material Safety Data Sheet (#7439-97) has been included in your instruction packet. This sheet explains the potential hazards, how to avoid them and how to clean up and dispose of the mercury if it ever spills.

HOW TO USE THE LOCKOUT DEVICE

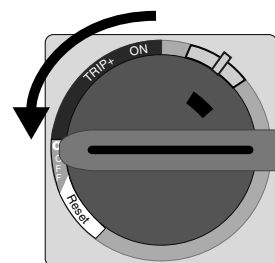


CAUTION: Before performing maintenance or repairs on this product, you should disconnect and lock out electrical power sources to prevent injury from unexpected energization or start-up. A lockable device has been provided to isolate this product from potentially hazardous electricity.

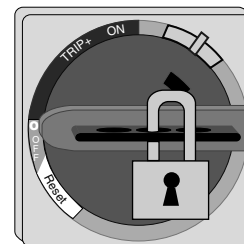
Lockout is the preferred method of isolating machines or equipment from energy sources. Your Conair product is equipped with the lockout device pictured below. To use the lockout device:

1 Stop or turn off the equipment.

2 Isolate the equipment from electrical power. Turn the rotary disconnect switch to the Off, or **O** position.



3 Secure the device with an assigned lock or tag. Pull out the center tab of the rotary handle. Insert a lock or tag in the holes to prevent movement.



4 The equipment is now locked out.

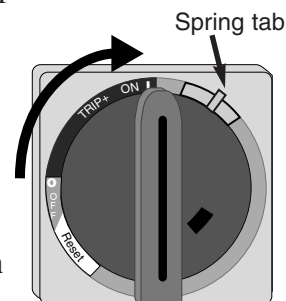
⚠ WARNING: Before removing lockout devices and returning switches to the ON position, make sure that all personnel are clear of the machine, tools have been removed and all safety guards reinstalled.

To rotate the disconnect back to the On position:

1 Remove the lock or tag and push in the center tab of the rotary handle.

2 Slide the spring tab down.

3 Turn the rotary disconnect switch to the ON or I position.



DESCRIPTION

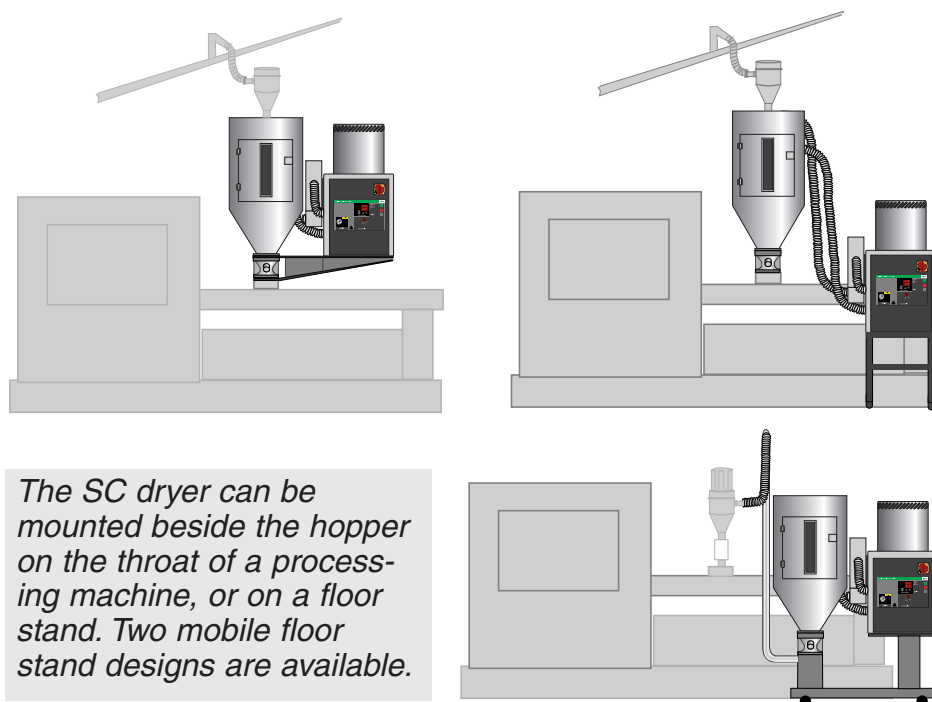
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WHAT IS THE SC CAROUSEL DRYER?

The SC Carousel Dehumidifying Dryer produces hot, low-dew point air that removes moisture from hygroscopic plastics. The dryer pulls warm, moist air from a drying hopper and pumps it through dehumidifying desiccant. The dryer then heats the air to the drying temperature you selected and circulates it through the material in the hopper.

The dryer's three-tank, closed-loop design ensures a continuous supply of hot, dehumidified air while preventing contamination from moisture in the plant.

TYPICAL APPLICATIONS



The SC dryer can be used successfully in applications that require:

- A contamination-free drying environment.
- Drying temperatures of 150° to 375° F (66° to 191° C).
- Throughput rates of 15 to 112 lbs (6.8 to 50.8 kg) per hour.
- Dew points of -40° F (-40°C).

If you are drying material at temperatures over 250° F (121°C), you will need the high-temperature package that includes an aftercooler.

The SC Carousel Dryer achieves continuous, closed loop drying by passing air simultaneously through two heaters and three tanks of molecular sieve desiccant.

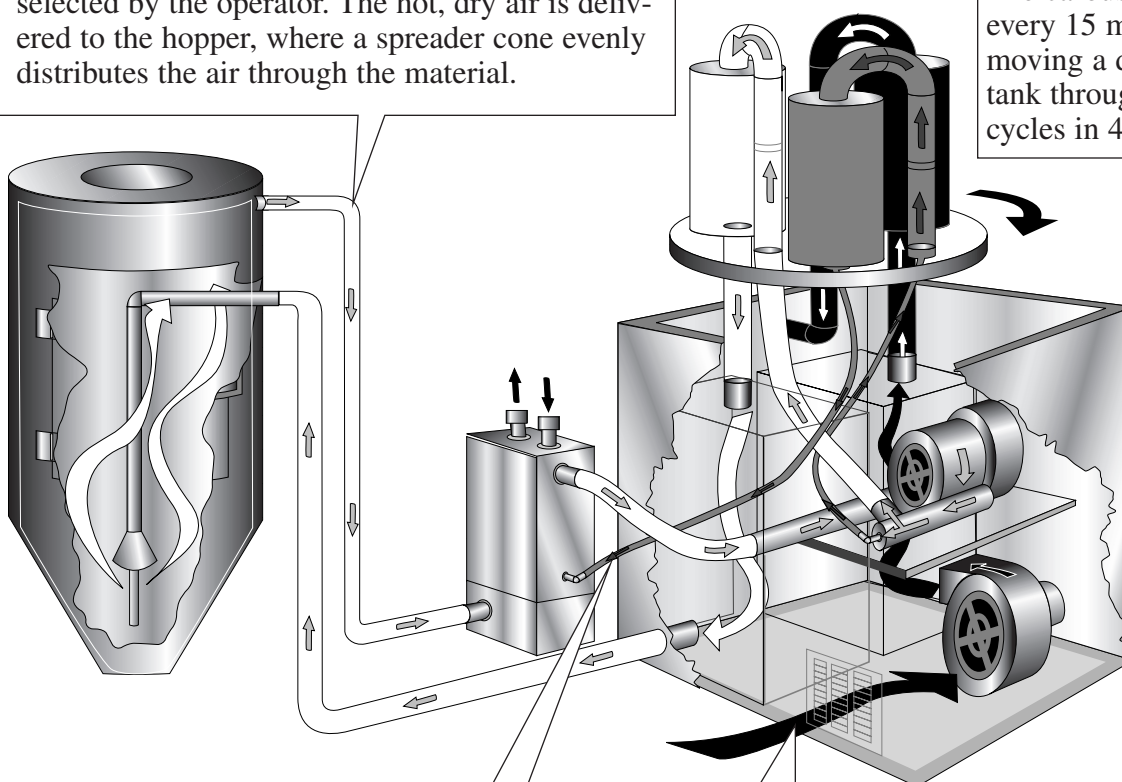
How It Works

The Process (Drying) Cycle

The process blower pulls moist air from the top of the drying hopper. The air passes through the process filter and aftercooler into the dryer's desiccant tank, where moisture is removed. The now-dry air moves through the process heater, where it is heated to the drying temperature selected by the operator. The hot, dry air is delivered to the hopper, where a spreader cone evenly distributes the air through the material.

The Carousel

The carousel indexes every 15 minutes, moving a desiccant tank through three cycles in 45 minutes.



The Cooling Cycle

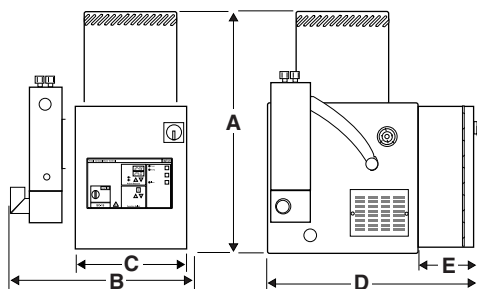
A regenerated desiccant tank must be cooled to the drying temperature range before it is moved back into the process cycle. The process blower pushes a small amount of air through the regenerated desiccant tank. The cooling air then passes through the aftercooler and repeats the circuit.

The Regeneration Cycle

The regeneration blower pulls air through the regeneration filter into the dryer's regeneration heater. The air is heated to 380° F (193° C) before it is pushed into the "wet" desiccant tank. The hot air purges moisture from the desiccant. The moist air is blown out the exhaust at the back of the dryer.

SPECIFICATIONS: SC CAROUSEL DRYER

STANDARD MODEL



SPECIFICATION NOTES:

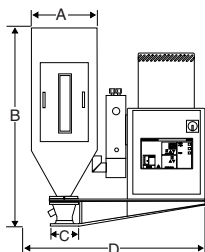
* Water temperatures outside this range may affect dryer performance. Aftercooler water may be supplied by a tower, chiller or municipal source.

Specifications may change without notice. Consult a Conair representative for the most current information.

MODEL	SC7.5	SC15	SC30	SC60
Performance characteristics				
Air flow ft ³ /min {m ³ /min}	7.5 {0.21}	15 {0.4}	30 {0.85}	60 {1.7}
Drying temperature	ALL MODELS 160 -375° F {71-191° C}			
Dew point	ALL MODELS -40° F {-40° C}			
Dimensions inches (cm)				
A - Height	30.5 {77.5}	30.5 {77.5}	36.12 {91.7}	43 {109.2}
B - Overall width	21.5 {54.6}	21.5 {54.6}	26.5 {67.3}	30.5 {77.5}
C - Control width	12.25 {31.1}	12.25 {31.1}	14.25 {36.2}	14.25 {36.2}
D - Depth	27.5 {69.9}	27.5 {69.9}	28.5 {72.4}	31 {78.7}
E - Control depth	9 {22.9}	9 {22.9}	9 {22.9}	9 {22.9}
Weight lbs {kg}				
Installed	150 {68.2}	165 {75}	215 {97.7}	280 {127.3}
Voltage Total Amps				
208 V/3 phase/60 Hz	9.9	13.3	17.7	29.6
240 V/3 phase/60 Hz	8.9	11.8	15.7	26.2
380 V/3 phase/50 Hz	6.24	9.4	10.0	15.8
415 V/3 phase/50 Hz	6.7	10.1	9.9	14.5
480 V/3 phase/60 Hz	5.3	9.0	8.0	13.2
575 V/3 phase/60 Hz	4.6	6.2	7.3	10.8
Total Kilowatts kw {BTU/min}	2.8 {159}	3.7 {208}	5.05 {287}	9.1 {517}
Water requirements {for optional aftercooler}				
Recommended temperature*	70°-90° F {21°-32° C}			
Water flow gal./min. {liters/min.}	3 {11.36}			

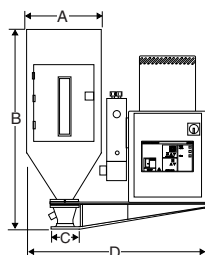
OPTIONAL HOPPERS AND MOUNTING BRACKET

CH10



HOPPER MODEL	CH10-0.5	CH10-1	CH10-1.5	CH14-2	CH14-3	CH14-4
Hopper / Mounting Frame Dimensions inches (cm)						
A - Insulated hopper diameter	12.5 {31.8}	12.5 {31.8}	12.5 {31.8}	17 {43.2}	17 {43.2}	17 {43.2}
B - Overall height	32 {81.3}	43 {109.2}	54 {137.2}	45 {114.3}	56 {142.2}	67 {170.2}
C - Base plate, square	7.5 {19}	7.5 {19}	7.5 {19}	6.5 {16.5}	6.5 {16.5}	6.5 {16.5}
D - Width with insulated hopper	31 {78.7}	31 {78.7}	31 {78.7}	36.75 {93.4}	36.75 {93.4}	36.75 {93.4}
Volume ft³ {liters}	0.5 {9.4}	1 {28.3}	1.5 {42.5}	2 {56.6}	3 {85}	4 {113.2}
Mounting Frame Weight lb (kg)	30 {13.6}	30 {13.6}	30 {13.6}	35 {15.9}	35 {15.9}	35 {15.9}
Hopper Weight lb (kg)						
Insulated	40 {18.1}	50 {22.7}	70 {31.7}	80 {36.32}	95 {43.1}	110 {48.9}

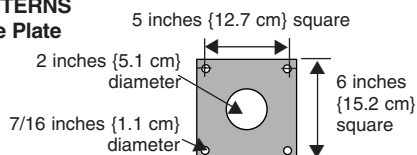
CH14/18/24



HOPPER MODEL	CH18-4	CH18-6	CH24-8	CH24-12	CH24-15
Hopper / Mounting Frame Dimensions inches (cm)					
A - Insulated hopper diameter	21 {53.3}	21 {53.3}	27 {68.58}	27 {68.58}	27 {68.58}
B - Overall height	48 {121.9}	68 {172.7}	64 {162.6}	79 {200.7}	90 {228.6}
C - Base plate, square	6.5 {16.5}	6.5 {16.5}	6.5 {16.5}	6.5 {16.5}	6.5 {16.5}
D - Width	43.75 {111.1}	43.75 {111.1}	55.75 {141.6}	55.75 {141.6}	55.75 {141.6}
Volume ft³ {liters}	4 {113.3}	6 {169.9}	8 {226.5}	12 {339.8}	15 {424.8}
Mounting Frame Weight lb (kg)	50 {22.7}	50 {22.7}	70 {31.7}	70 {31.7}	70 {31.7}
Hopper Weight lb (kg)					
Insulated	145 {66}	165 {75}	210 {95}	235 {107}	255 {116}

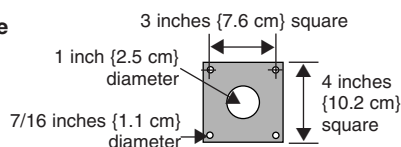
MOUNTING PATTERNS

Standard Base Plate IB02



Optional Base Plate IB01

(for mounting CH10 and CH14 hoppers independent of dryer only)

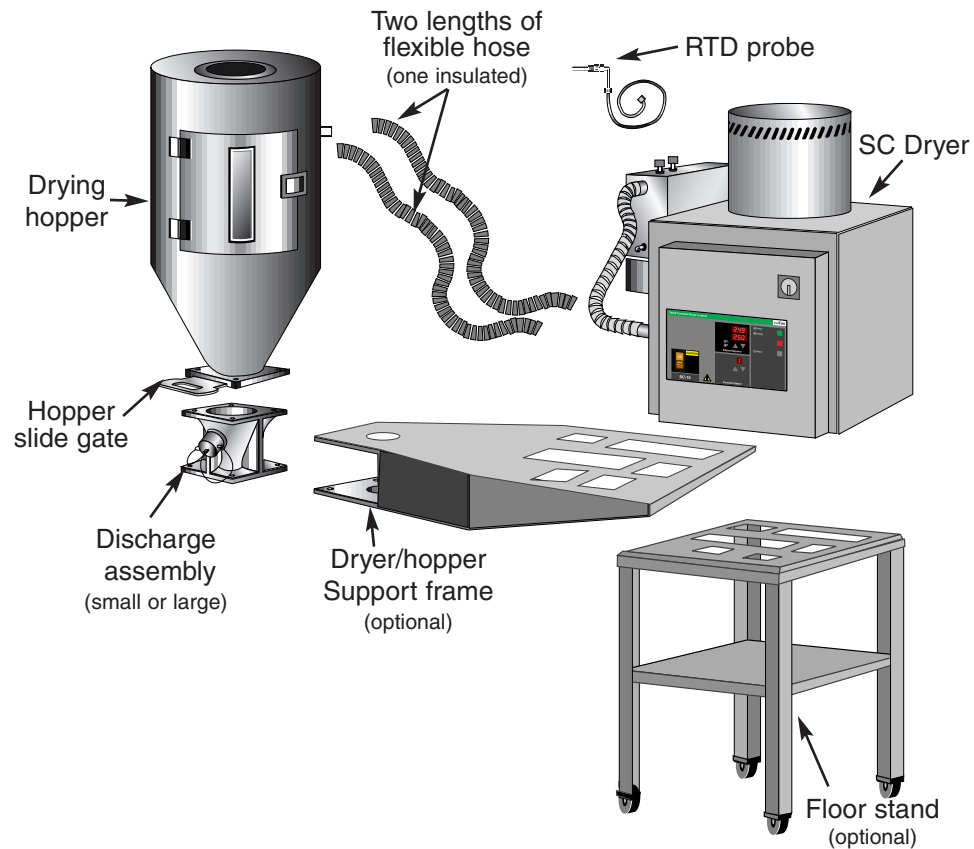


INSTALLATION

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UNPACKING THE BOXES

The SC carousel dryer comes in one to four boxes, depending on the models and options ordered. The boxes should include:



Mounting Hardware:

Floor stand option:

- ☐ four 3/8-16 self-locking bolts
- ☐ four 3/8-16 bolts with lock washers
- ☐ three 1/4-20 self-locking bolts
- ☐ four hose clamps

Support frame option:

- ☐ eight 3/8-16 self-locking bolts
- ☐ three 1/4-20 self-locking bolts
- ☐ four hose clamps

NOTE: You must mount the dryer on a floor stand, If your processing machine throat opening is 1 inch (2.54 cm) diameter or smaller and requires a 3x3 inch (7.6x7.6 cm) or smaller bolt pattern.

- 1** Carefully remove the dryer and components from their shipping containers, and set upright.
- 2** Remove all packing material, protective paper, tape and plastic.
- 3** Carefully inspect all components to make sure no damage occurred during shipping, and that you have all the necessary hardware.
- 4** Take a moment to record serial numbers and electrical power specifications in the blanks provided on the back of the the User Guide's title page. The information will be helpful if you ever need service or parts.
- 5** You are now ready to begin installation. Follow the preparation steps on the next page, then choose one of the three mounting options:
 - Dryer and hopper on a mobile floor stand. (Go to page 3-8 after completing first preparation step.)
 - Dryer and hopper on the processing machine throat.
 - Dryer on a floor stand; hopper on the throat.

The SC Dryer is easy to install, if you plan the location and prepare the mounting area properly.

PREPARING FOR INSTALLATION

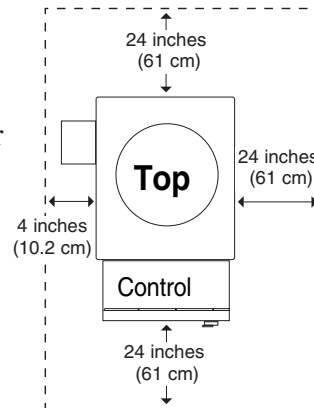
1 Make sure the mounting area provides:

❑ **A grounded power source supplying the correct current** for your dryer model. Check the dryer's serial tag for the correct amps, voltage, phase and cycles. Field wiring should be completed by qualified personnel to the planned location for the dryer. All electrical wiring should comply with your region's electrical codes.

❑ **A source of water, if you have an aftercooler.** The SC dryer's optional aftercooler can use tower, city or chiller water at temperatures of 70° to 90° F (21° to 32° C). Pipe should be run to the planned dryer location. Use flexible hose to connect the water pipes to the aftercooler.

❑ **Minimum clearance for safe operation and maintenance.**

We recommend at least 25 inches (63.5 cm) clearance above the dryer for removing the carousel housing. You should maintain 24 inches (61 cm) clearance on at least three sides of the dryer. If the dryer is mounted with a hopper on a processing machine throat, clearance between the dryer and hopper can be 4 inches (10.2 cm).

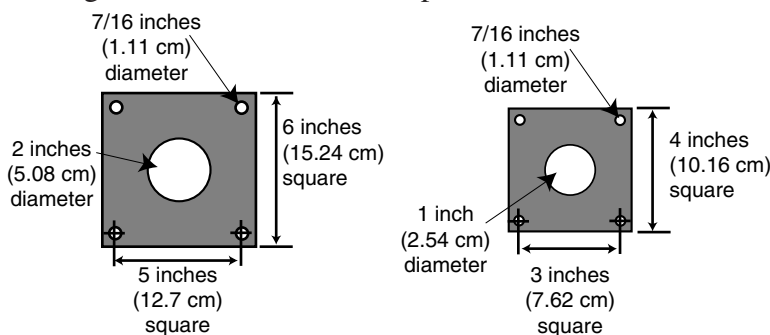


❑ **A mounting surface that will support the weight** of the dryer, support frame and a fully-loaded hopper, or just the fully-loaded hopper. See the specifications tables for weights and volumes.

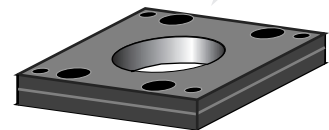
❑ **Material and conveying lines installed.** If you plan to use vacuum or compressed air loaders to fill the hopper, install conveying lines to the drying hopper location.

2 Drill and tap mounting holes or make adapter.

Available discharge assemblies and slide gates fit mounting surfaces with these bolt patterns and diameters:



If your mounting surface does not match the standard bolt patterns available, you will need an adapter. You can make an adapter using the dimensions provided or purchase one from Conair.



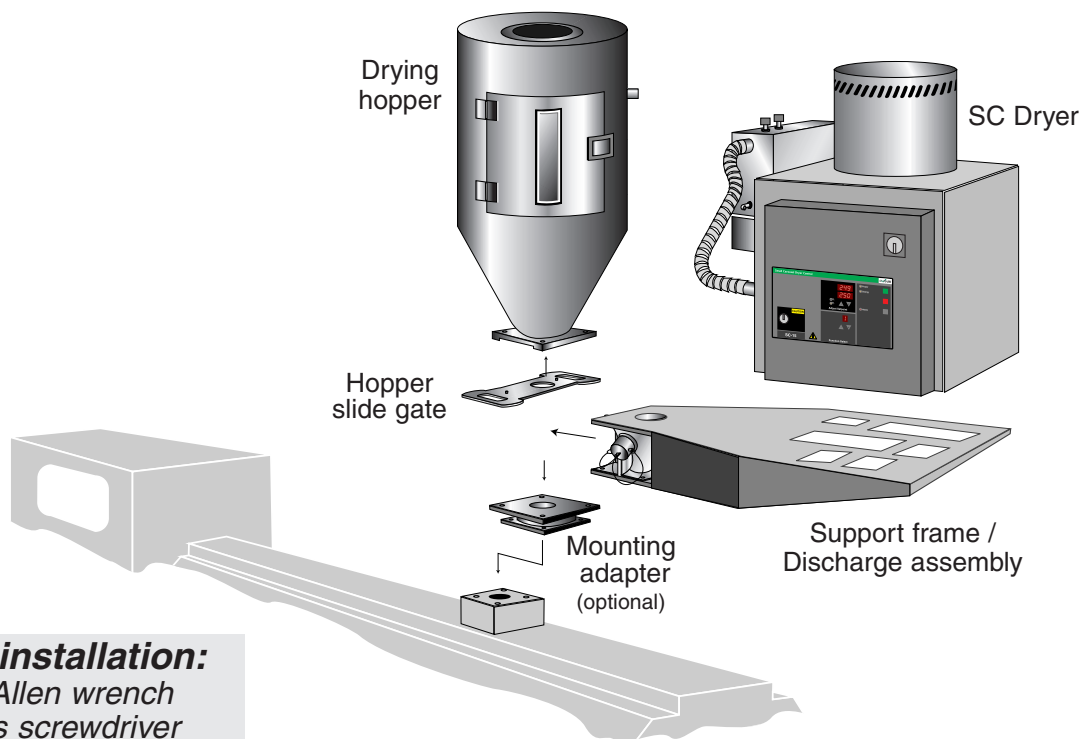
MOUNTING DRYER AND HOPPER ON A PROCESSING MACHINE



WARNING: You are responsible for the structural integrity of this installation.

We recommend that you:

- Use bolts no smaller than 3/8 inch (M 10) when mounting the hopper/dryer combination to the throat of a processing machine.
- Do not mount the hopper/dryer combination on a plate that swings away or slides away from the processing machine throat. Either remove the swing or slide plate, or mount the dryer on a floor stand.



Tools for installation:

- ☐ 5/32" Allen wrench
- ☐ Phillips screwdriver
- ☐ Flathead screwdriver
- ☐ 9/16" and 3/8" wrench
- ☐ Hoist and strap

NOTE: You must mount the dryer on a floor stand, If your processing machine throat requires the small discharge assembly or a mounting plate with less than a 3x3 inch (7.6x7.6 cm) bolt pattern and 1-inch (2.54 cm) diameter opening.

The dryer and hopper mounts on a special bracket that bolts to the throat of the processing machine, as pictured above.



CAUTION: To prevent accident and injury, lift the empty hopper onto the throat of the processing machine using a hoist and the lifting lugs provided. After the hopper is mounted, then lift the dryer onto the support frame using a hoist and strap.

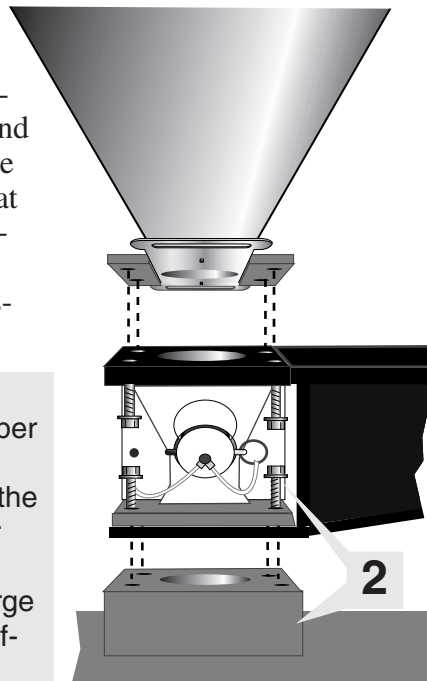
The drying hopper, slide gate, support frame and discharge assembly may have been shipped fully assembled. You can remove the drying hopper from the support frame, if you find it easier to lift and bolt the frame and then the hopper to the throat of the processing machine.

MOUNTING DRYER AND HOPPER ON A PROCESSING MACHINE

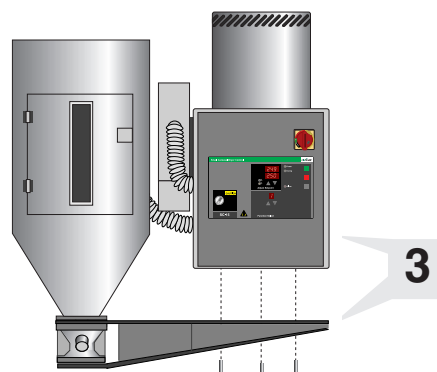
- 1 Lift the hopper, support frame and discharge assembly onto the processing machine throat.**
Use a hoist to lift the support frame and hopper. Position the frame and discharge assembly so that its bolt holes line up with the holes drilled in the throat. If hole patterns do not match, you can place a mounting adapter between the throat and the support frame.

- 2 Bolt the frame and discharge assembly to the throat.**
Using four 3/8"-16 (M 10) self-locking bolts, fasten the support frame and discharge assembly to the throat. The bolts must be long enough to reach at least 1/2 inch (1.25 cm) into the processing machine throat or mounting adapter after passing through the discharge assembly and support frame.

NOTE: If you removed the hopper from the support frame, lift the hopper onto the frame using a hoist. Make sure the slide gate is positioned in the recess on the bottom of the hopper base plate. Align the bolt holes and fasten the base plate to the discharge assembly using the four 3/8"-16 self-locking bolts provided.



- 3 Lift the dryer onto the support frame.**
Lift using a hoist and strap. Align the three bolt holes on the bottom of the dryer with the three bolt holes on the top of the support frame. Make sure the acorn nuts on the bottom of the dryer fit in the holes on the support form. Fasten the dryer to the frame with 1/4"-20 bolts.



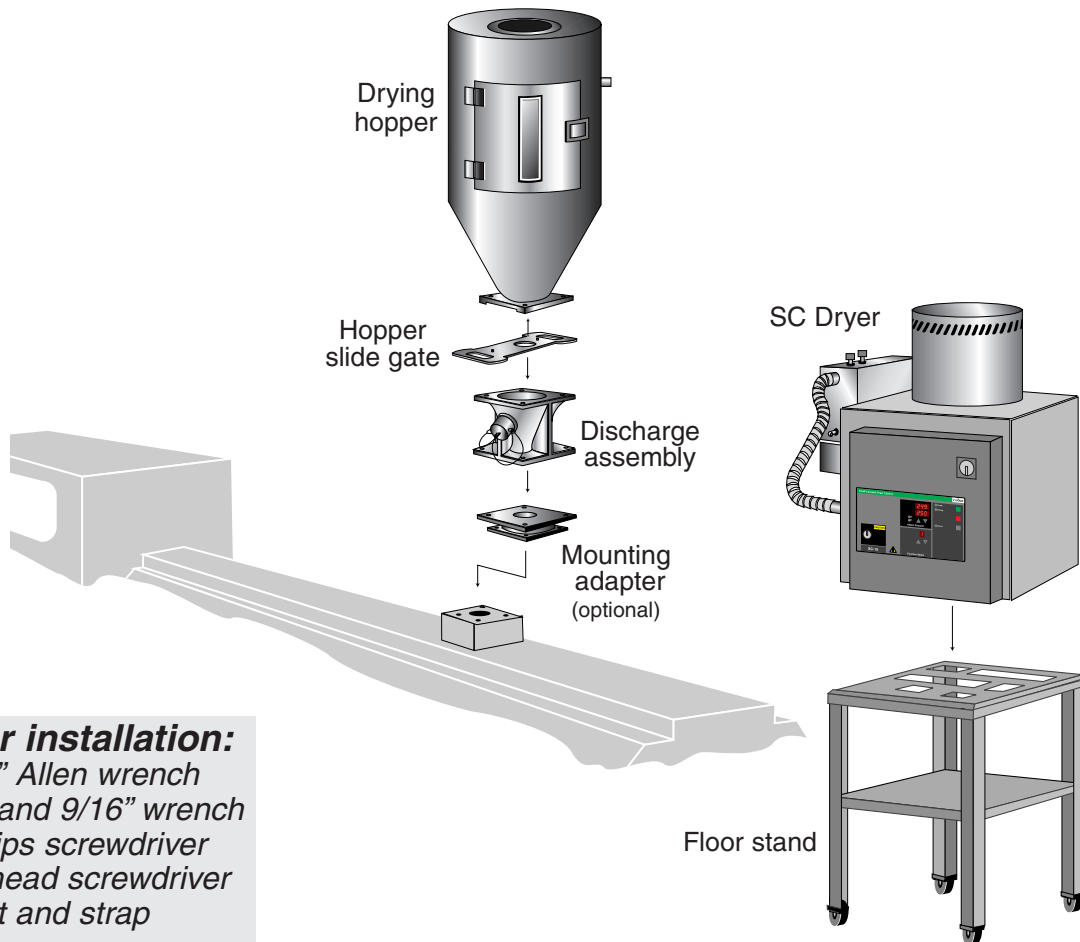
MOUNTING THE DRYER ON A FLOOR STAND; HOPPER ON THE THROAT



WARNING: You are responsible for the structural integrity of this installation.

We recommend that you:

- Use bolts no smaller than 3/8 inch (M 10) to mount the hopper on the throat of a processing machine.



Tools for installation:

- ☐ 5/32" Allen wrench
- ☐ 3/8" and 9/16" wrench
- ☐ Phillips screwdriver
- ☐ Flathead screwdriver
- ☐ Hoist and strap

The hopper bolts to the throat of the processing machine, as pictured above. The dryer bolts to a mobile floor stand.



CAUTION: To prevent accident and injury, lift the empty hopper onto the throat of the processing machine using a hoist and the lifting lugs provided. Lift the dryer onto the floor stand using a hoist and strap.

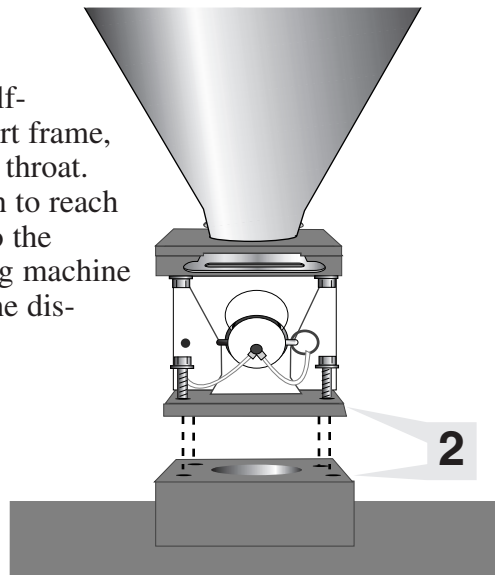
MOUNTING THE HOPPER

1 Lift the hopper onto the throat.

Lift the hopper with a hoist, using the lifting lugs provided. Make sure you align the bolt holes in the throat with the bolt holes on the discharge assembly.

2 Bolt the hopper to the throat of the machine.

Using four 3/8"-16 (M 10) self-locking bolts, fasten the support frame, discharge and slide gate to the throat. The bolts must be long enough to reach at least 1/2 inch (1.25 cm) into the mounting adapter or processing machine throat, after passing through the discharge and slide gate.

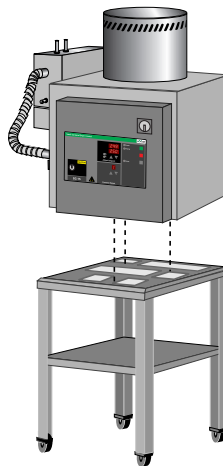


1 Lift the dryer onto the floor stand, and bolt.

Lift using a hoist and strap.

2 Align the three bolt holes on the bottom of the dryer with the three bolts holes on the top of the floor stand.

3 Bolt the dryer to the stand using the three 1/4"-20 bolts provided.



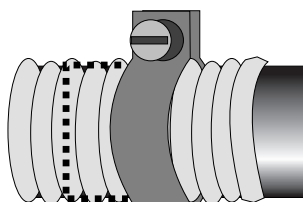
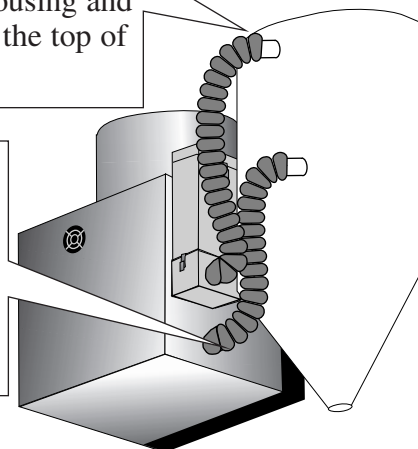
MOUNTING THE DRYER

CONNECTING AIR HOSES

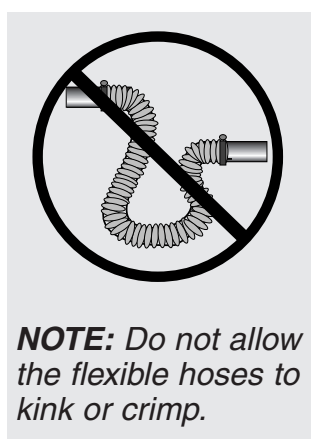
Using the two flexible hoses provided, connect the inlets and outlets of the drying hopper to the dryer. If you have mounted the dryer on a floor stand, make sure the dryer is located no more than 5 feet (1.5 m) from the hopper to reduce heat loss.

- 1 Attach the larger diameter hose** to the return air inlet in the base of the aftercooler housing and to the return air outlet at the top of the hopper.

- 2 Attach the insulated hose** to the delivery air outlet in the base of the dryer and to the hopper's delivery air inlet.



- 3 Secure hoses with clamps.**
The hose clamp should be secured at least 1/4 inch (.64 cm) from the end of the inlet or outlet tube.



NOTE: Do not allow the flexible hoses to kink or crimp.

CONNECTING WATER HOSES

The optional aftercooler requires a source of cooling water and a discharge or return line. The water source should provide 3 gallons (11.36 liters) per minute at temperatures up to 90° F (32° C).

1/2 inch NPT female couplings. If a manual shut off valve is used, it should be mounted on the inlet line.

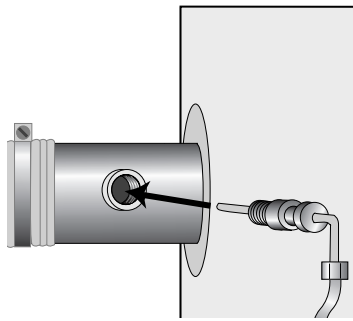


- 1 Connect the cooler inlet to the water source.**
- 2 Connect the cooler outlet to a discharge or return line.**

TIP: Make the connections with flexible hose at least 14 inches (35.5 cm) long. This allows you to easily remove the cooler coils for cleaning.

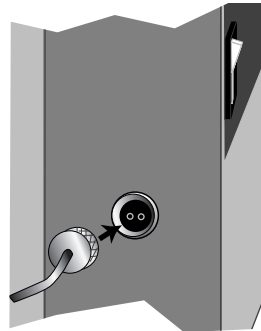
The RTD probe monitors the temperature of the drying air as it enters the hopper. If the probe is not installed correctly, temperature readings will be inaccurate.

CONNECTING THE RTD PROBE



- 1 Insert the probe in the delivery air inlet** at the top of the hopper. The end of the probe must not touch the walls of the inlet. Tighten the nuts to lock the probe in place.

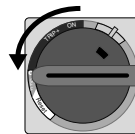
- 2 Plug the probe's cable into the receptacle on the side of the electrical enclosure.** Hand tighten the connector. Coil excess cable and secure with a wire tie.



CAUTION: Always disconnect and lock out the main power sources before making electrical connections. Electrical connections should be made only by qualified personnel.

CONNECTING THE MAIN POWER

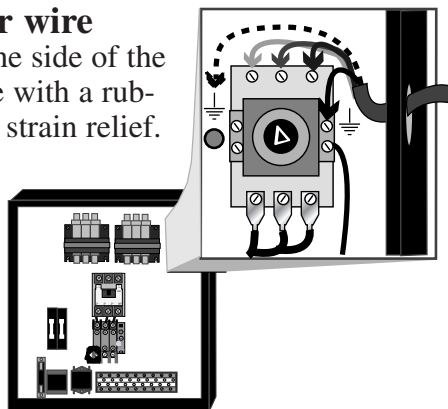
- 1 Open the dryer's electrical enclosure.** Turn the disconnect dial on the dryer door to the Off position. Lock out the main power. Turn the captive screw, and swing the door open.



- 2 Insert the main power wire** through the knockout in the side of the enclosure. Secure the wire with a rubber compression fitting or strain relief.

- 3 Connect the power wires** to the three terminals at the top of the power disconnect holder.

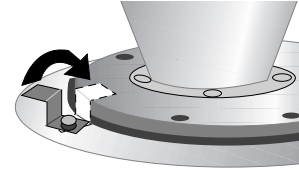
- 4 Connect the ground wire** to either grounding point shown in the diagram.



IMPORTANT: Always refer to the wiring diagrams that came with your dryer before making electrical connections. The diagrams show the minimum size main power cable required for your dryer, and the most accurate electrical component information.

MOUNTING A LOADER ON THE HOPPER

If you have a Conair loader or vacuum receiver, you can use the flange and mounting clips provided on the top of the hopper. Refer to the manuals that came with your receiver or loader for detailed installation instructions.

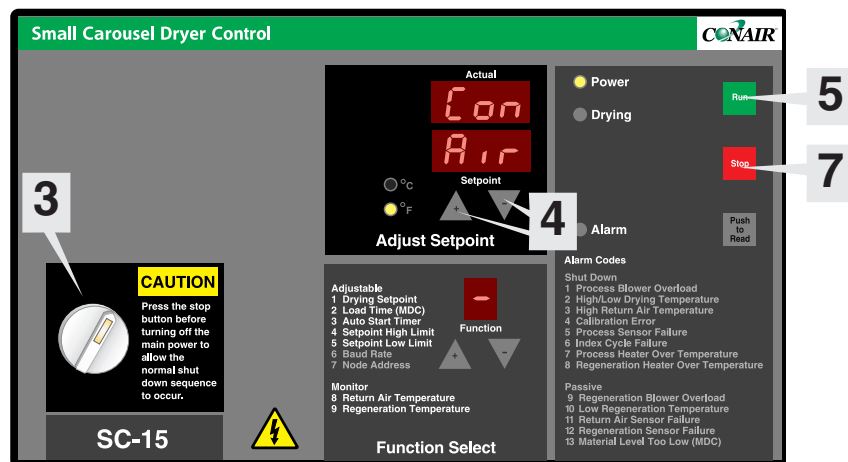


TESTING THE INSTALLATION

You have completed the installation. Now it's time to make sure everything works.

- 1 Make sure there is no material in the hopper.**
If you have mounted a loader or vacuum receiver on the hopper, disconnect the material inlet hose at the source.

- 2 Turn on main power to the dryer.**
Turn the dryer's disconnect to the ON position.



- 3 Turn the power switch into the ON position.**

If everything is installed correctly:

- ◆ The power switch and power light illuminate.
- ◆ The Actual and Setpoint windows briefly display ConAir, then change to the actual temperature and a setpoint temperature of 150° F (65° C).
- ◆ The Function Select display changes from – to 1.

- 4 Set the drying temperature.**

Press Adjust Setpoint ▲ or ▼ arrow until the setpoint temperature you want appears in the setpoint display.

- 5 Press the RUN button.**

If everything is installed correctly:

- ◆ The amber drying light turns on.
- ◆ Process and regeneration blowers and heaters turn on.
- ◆ If the desiccant tanks are not in the correct position, the carousel will turn and stop in the correct position.

TESTING THE INSTALLATION

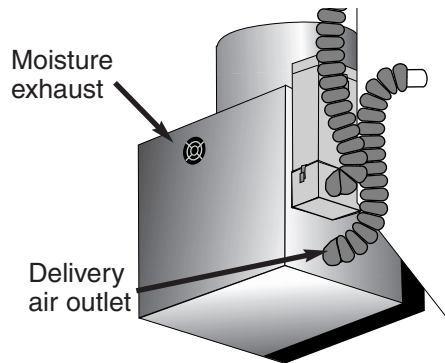
6 Check for proper air flow.

Remove the delivery air hose on the dryer. Hold your hand near the outlet with the dryer on. You should feel air blowing out of the dryer.



CAUTION: **Hot surface**

Do not place your hand on the delivery air outlet. The outlet and the air can get hot enough to burn your hand.



7 Press the STOP button.

If everything is installed correctly:

- ◆ The amber drying light turns off, but the blowers will continue running as needed to cool the heaters.

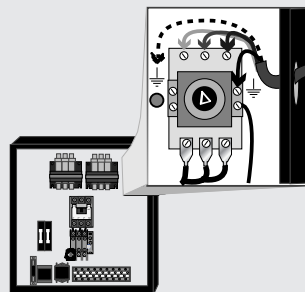
8 The test is over.

If the dryer performed the normal operating sequences as outlined, you can begin operation. If it did not, refer to the TROUBLESHOOTING section of the User Guide.

INSTALLATION NOTE: Models SC30 and SC60

These models use a three-phase process blower. If the dryer shuts down with an Err 02 alarm condition within the first few minutes of operation, check for proper air flow.

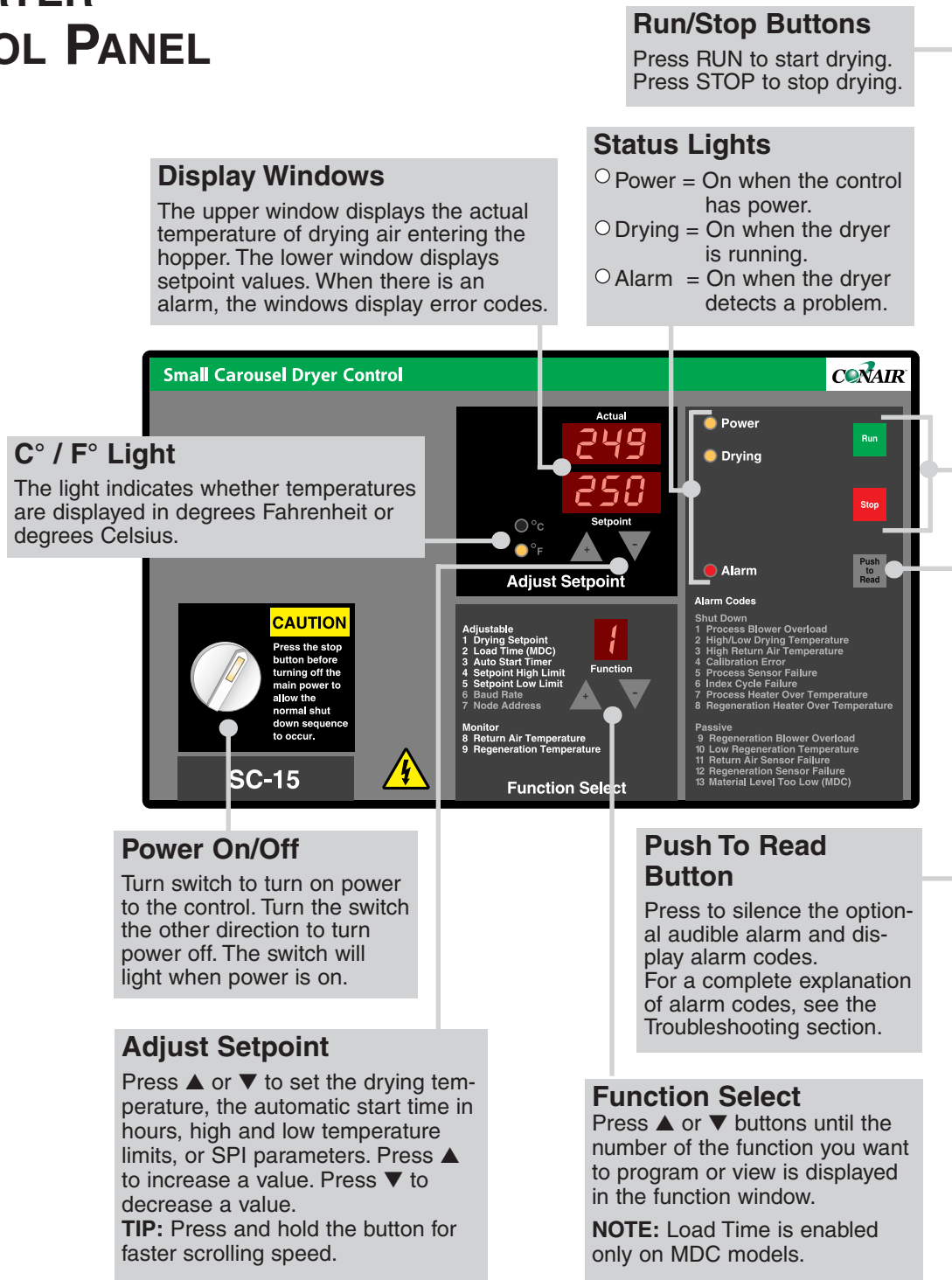
If air flow is reversed, the process blower is turning in the wrong direction. Turn off and lock out the main power source. Open the control enclosure and reverse any two leads connecting the main power supply to the dryer.



OPERATION

- *The dryer control panel 4-2*
- *SC dryer functions 4-3*
- *To start drying 4-4*
- *To stop drying 4-5*
- *Using the Auto Start Timer 4-5*
- *Setting high and low
setpoint limits 4-6*

THE DRYER CONTROL PANEL



SC DRYER FUNCTIONS

Dryer functions are values that you can set or monitor in the Actual and Setpoint display windows. Press the Function Select ▲ or ▼ buttons until the number of the function you want to set or monitor appears in the Function window.

Adjustable functions:

No.	Function	Description
1	Drying Setpoint	Used to set the drying temperature that was recommended by the resin manufacturer.
2	Load Time (MDC)	This function is disabled unless your dryer has been factory configured as a Mobile Drying and Conveying Unit.
3	Auto Start Timer	Used to automatically start the dryer. The start time can be set at 1 to 150 hours from the time you entered the setpoint temperature and pushed the RUN button.
4	Setpoint High Limit	Used to prevent someone from setting the drying temperature above an acceptable level for your material. The high limit must be set at a temperature greater than or equal to the Drying Setpoint. The maximum setting is 400° F (204° C).
5	Setpoint Low Limit	Used to prevent someone from setting the drying temperature below an acceptable level for your material. The low limit must be set at a temperature less than or equal to the Drying Setpoint. The minimum setting is 100° F (38° C).
6	Baud Rate	Used to set the baud rate for SPI communication devices connected to the dryer. Baud rate = 1200, 2400, 4800 or 9600.
7	Node address	Used to assign the dryer a network address for SPI communication. The address can be any number from 032 to 064.

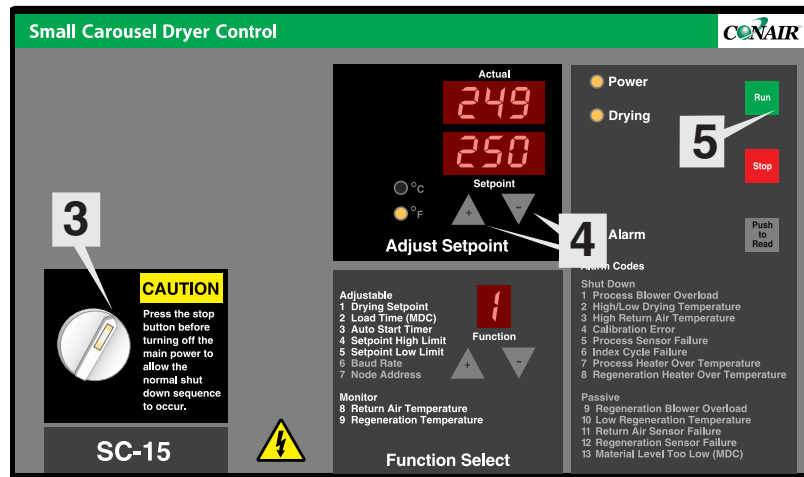
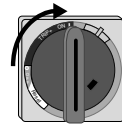
Monitoring functions:

No.	Function	Description
8	Return Air Temperature	Used to view the temperature of air returning from the drying hopper to the dryer. Lower return air temperatures indicate lower dew point and better dryer efficiency.
9	Regeneration Temperature	Used to view the temperature of air used to purge moisture from the desiccant. The regeneration setpoint of 380° F (193° C) cannot be changed. It is the optimum temperature for regenerating moisture-laden desiccant.

To START DRYING

1 Make sure there is material in the hopper.

2 Turn on the main power to the dryer.
Make sure the dryer's disconnect dial is in the on position.



3 Turn the power switch into the ON position.



If everything is installed correctly:

- ◆ The Actual and Setpoint windows briefly display ConAir, then change to the actual temperature and a setpoint temperature of 150° F (65° C).
- ◆ The Function Select display changes from – to 1.

4 Set the drying temperature.

Press Setpoint Adjust ▲ or ▼ arrow until the setpoint temperature you want appears in the setpoint display.

5 Press **RUN** .

If everything is installed correctly:

- ◆ The amber drying light turns on.
- ◆ The process and regeneration blowers turn on.
- ◆ The process and regeneration heaters turn on.
- ◆ If the desiccant tanks aren't in their correct position, the carousel will turn clockwise and stop in the correct position.

- 1 Press **STOP**.**
 - ◆ The drying light turns off. The blowers continue running for a few minutes to cool the heaters.

- 2 Turn the ON/OFF switch to OFF after the blowers stop running.**

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



IMPORTANT: Do **not** use the power ON/OFF switch to stop the dryer. Turning off power to the control or dryer during normal operation prevents the necessary cool-down period, and can trigger the shut down/high temperature alarm during your next drying cycle.

To STOP DRYING

You can set the dryer to start automatically. The start time can be set at 1 to 150 hours from the time you entered the setpoint temperature and pushed the RUN button.

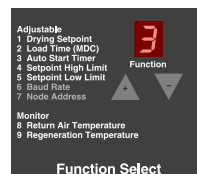
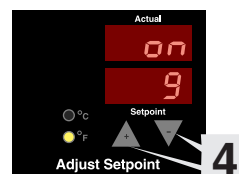
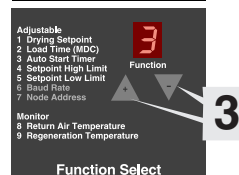
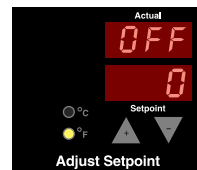
- 1 Make sure there is material in the hopper and power to the dryer is on.**
- 2 Set the drying temperature.**

Press Setpoint Adjust ▲ or ▼ arrow until the setpoint temperature you want appears in the setpoint display.
- 3 Select Function 3.**

Press Function Select ▲ or ▼ arrow until 3 appears in the Function display.
- 4 Enter the start time.**

Press Setpoint Adjust ▲ or ▼ arrow until you see the number of hours from now that you want the dryer to start.
- 5 Press **RUN**.**

- ◆ The Actual window displays ON.
- ◆ The amber drying light blinks to indicate that Auto Start has been enabled.
- ◆ The dryer will begin operating when the control has finished counting down the number of hours you entered.



USING THE AUTO START TIMER

To Stop or Reprogram the Auto Start Timer:

Press **STOP** and select Function 3. Set the time to 0 to stop, or set a new start time to reprogram. Press **RUN** to resume.

NOTE: You cannot remove or permanently deactivate the Auto Start feature to prohibit its use.

SETTING LOW AND HIGH SETPOINT LIMITS

You can protect your drying process by preventing someone from entering setpoint temperatures above or below an acceptable level for the material. You can also set the high and low limits equal to the setpoint temperature to prevent accidental or unauthorized changes to the setting during operation.

1 Turn on the main power to the dryer.

2 Turn the power switch to the ON position.

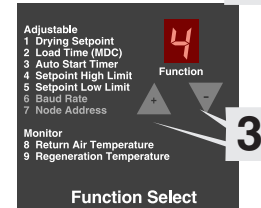
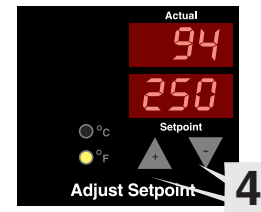


3 Select Function 4.

Press Function Select ▲ or ▼ arrow until 4 appears in the Function display.

4 Enter the high temperature limit for setpoint.

Press Setpoint Adjust ▲ or ▼ arrow until the temperature limit you want appears in the setpoint display. The high limit must be set at a temperature greater than or equal to the drying setpoint. The maximum setting is 400° F (204° C).

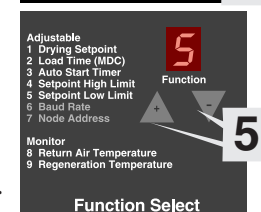
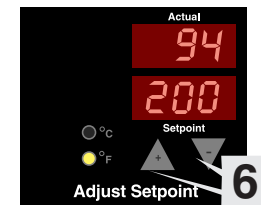


5 Select Function 5.

Press Function Select ▲ or ▼ arrow until 5 appears in the Function display.

6 Enter the low temperature limit for setpoint.

Press Setpoint Adjust ▲ or ▼ arrow until the temperature limit you want appears in the setpoint display. The low limit must be set at a temperature less than or equal to the drying setpoint. The minimum setting is 100° F (38° C).



These high and low temperature limits will remain active until you change the settings.

NOTE: The factory default settings are 400° F (204° C) for the high limit and 100° F (38° C) for the low limit.

MAINTENANCE

- *Maintenance checklist 5-2*
- *Cleaning the hopper 5-3*
- *Cleaning the process filter 5-4*
- *Cleaning the regeneration filter ... 5-4*
- *Cleaning the aftercooler coils 5-5*
- *Inspect hoses and gaskets 5-5*

PREVENTATIVE MAINTENANCE CHECKLIST

Routine maintenance will ensure optimum operation and performance of the SC Carousel Dryer. We recommend the following maintenance schedule and tasks.

● Whenever you change materials

- ☐ Drain and clean the hopper.

● Weekly, or as often as needed

- ☐ **Clean the process and regeneration filters.**
You may need to clean filters more often than weekly. Frequency depends on how much material you process and how dusty or full of fines it is.
- ☐ **Clean the return air screen in the hopper.**
Cleaning frequency depends on how much material you process and how dusty or full of fines it is.
- ☐ **Inspect hoses and hose connections.**
Check for damage, kinks or loose hose clamps. Replace any hoses that show signs of damage or wear. Reposition and tighten loose hose clamps.

● Monthly

- ☐ **Clean the aftercooler coils.**
You may need to clean the coils more often than monthly. Frequency will depend on the type and volume of material you process.

● Every six months

- ☐ **Inspect gaskets for damage or wear.**
Damaged gaskets can allow moisture to seep into the closed-loop drying system. Replace any gasket that is torn or cracked.

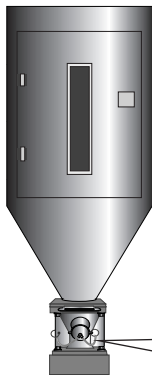


CAUTION: Hot surfaces.

Always protect yourself from hot surfaces inside and outside the dryer and drying hopper.

CLEANING THE HOPPER

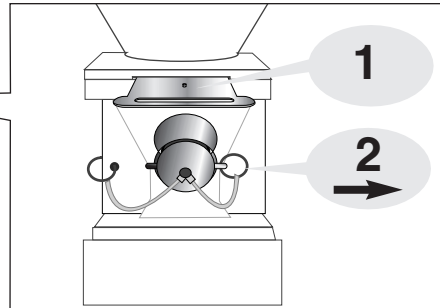
The hopper, spreader cone and discharge assembly should be cleaned thoroughly between material changes to prevent resin contamination.



Place a container beneath the hopper's drain port to catch the material.

1 Close the hopper slide gate.

2 Remove the drain-port plug.
Pull the pin and allow the plug to drop.

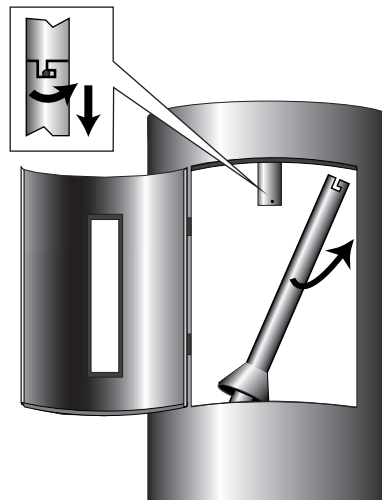


3 After draining material, open the hopper door.

You must lift the safety catch below the sight glass on the hopper door before pulling the door handle open.



4 Remove the spreader cone. Reach into the hopper. Grasp the spreader cone tube, lift up slightly, twist and then push down to release it. Tilt the cone assembly and pull it out through the hopper door.



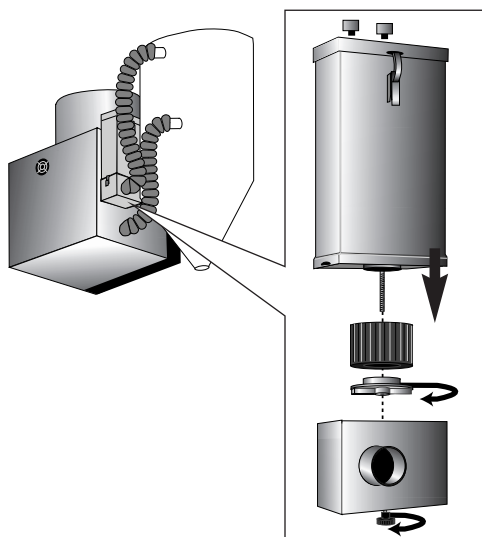
5 Clean the spreader cone and the inside of the hopper. Make sure you also clean the return air screen at the return air outlet of the hopper.

6 Repeat the steps in reverse order to reassemble the hopper before adding material.

CLEANING THE PROCESS FILTER



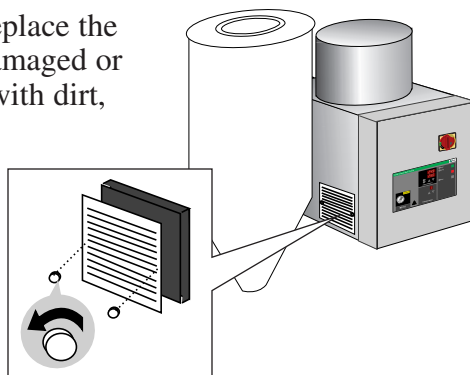
Clogged filters reduce air flow and dryer efficiency. Cleaning frequency depends on how much material you process and how dusty it is.

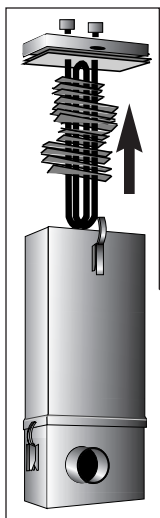


- 1 Loosen the knob** below the process filter box and remove the box.
- 2 Clean the filter box.**
- 3 Remove the filter** by turning the metal end cap. Clean the filter. If the filter is worn, damaged or clogged, replace it.
- 4 Reassemble** by repeating the steps in reverse order.

CLEANING THE REGENERATION FILTER

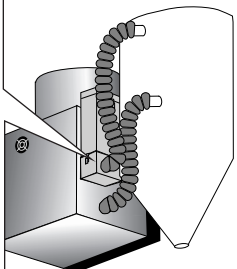
- 1 Remove the regeneration filter.**
- 2 Clean the filter.** Replace the filter if it is worn, damaged or hopelessly clogged with dirt, fines or dust.
- 3 Reassemble** by repeating the steps in reverse order.





If you have the optional aftercooler, you need to clean the cooling coils to keep them working efficiently. Cleaning frequency depends on the type and amount of material you process.

- 1 Release the latches** at the top of the aftercooler.
- 2 Pull the coils out** of the aftercooler housing.
- 3 Clean the coils** with high-pressure steam, then reassemble.



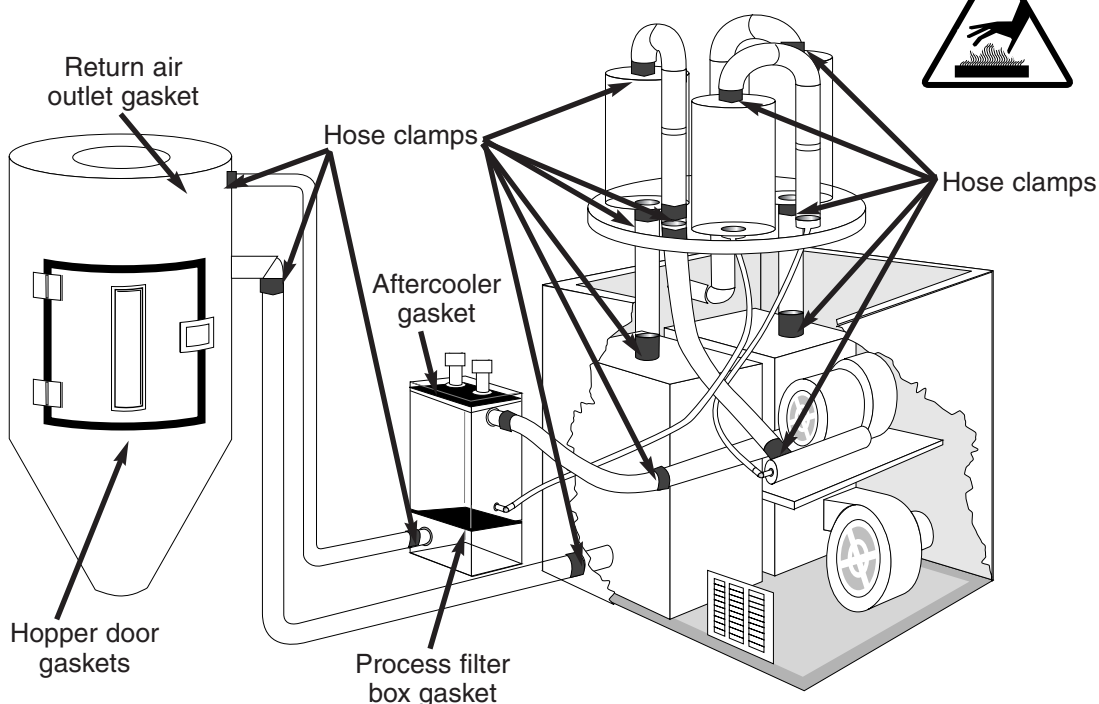
CLEANING THE AFTERCOOLER COILS



Loose or damaged hoses and gaskets can allow moisture to seep into the closed-loop drying system.

- 1 Tighten any loose hose clamps.**
- 2 Replace worn or damaged hoses and gaskets.**

INSPECT HOSES AND GASKETS



TROUBLESHOOTING

- *Before beginning* 6-2
- *A few words of caution* 6-2

DIAGNOSTICS

- *How to identify the cause
of a problem* 6-3
- *Shut down alarms* 6-4
Err 01 through Err 08
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- *Dryer will not power up* 6-12

REPAIR

- *Replacing fuses* 6-13
- *Checking heater contactors* 6-13
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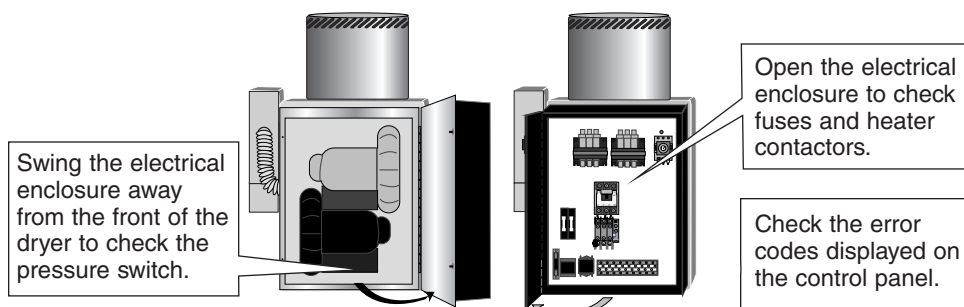
BEFORE BEGINNING

You can avoid most problems by following the recommended installation and maintenance procedures outlined in this User Guide. If you do have a problem, this section will help you determine what caused it and how to fix it.

Before you start pulling side panels off the dryer:

☐ **Diagnose causes from the front of the dryer.**

You can locate any problem from the front of the dryer.



☐ **Find the wiring and equipment diagrams that were shipped with your dryer.** These diagrams are the best reference for correcting a problem. The diagrams also will note any custom features, such as special wiring or alarm capabilities, not covered in this User Guide.

A FEW WORDS OF CAUTION

The SC Carousel Dryer is equipped with numerous safety devices. Do not remove or disable them. Improper corrective action can lead to hazardous conditions and should never be attempted to sustain production



WARNING: Only qualified service personnel should examine and correct problems that require opening the dryer's electrical enclosure or using electrical wires to diagnose the cause.



WARNING: High voltage.

Always stop the SC Carousel dryer, disconnect and lock out the main power source before troubleshooting or performing repairs.



CAUTION: Hot surfaces.

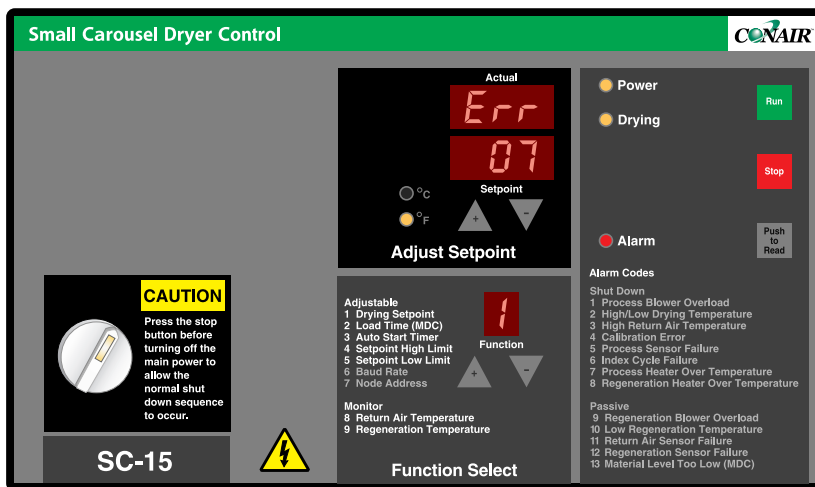
Always protect yourself from hot surfaces inside and outside of the dryer and hopper.

Most dryer malfunctions are indicated by an illuminated alarm light and error codes displayed on the SC dryer control panel.

A problem can trigger two types of alarms:

- **Shut Down:** The dryer has automatically shut down because it detected a serious problem that could damage your material or facility.
- **Passive:** The dryer continues to operate, but warns of a problem that could prevent correct drying of your material. If ignored, this problem could lead to a condition that will shut down the dryer.

HOW TO IDENTIFY THE CAUSE OF A PROBLEM



When an alarm light is displayed:

- 1 Press  to display the alarm message and silence the optional audible alarm.
- 2 Find the error code in the diagnostics table of this troubleshooting section.

NOTE: When the dryer detects abnormally high temperature in the process heater, the dryer immediately shuts down and Err 7 flashes in the display windows. The alarm light does not illuminate.

SHUT DOWN ALARMS

When a shut down alarm lights, the dryer has detected a problem or combination of problems that could damage your dryer or materials. When a shut down alarm occurs:

- ◆ The dryer automatically shuts off.
- ◆ The alarm light turns on.
- ◆ The power light remains on.
- ◆ Pressing the Push To Read button displays an error code.

Alarm	Possible cause	Solution
 The process blower overload has tripped. The blower is drawing excessive current.  WARNING: Only qualified electrical service personnel should examine and correct problems that require opening the dryer's electrical enclosure or checking electrical current to diagnose the cause of a problem.	Is the correct voltage supplied to the dryer? Is the blower overload set correctly? Is the blower damaged?	Check the process blower current against the voltage and amp rating on the motor nameplate. If currents do not match, make sure the transformer is wired correctly. Disconnect power and open the electrical enclosure. Adjust the blower overload setting, if necessary. Press the overload reset button to resume operation. See Checking Motor Overloads. Replace the blower, if supply voltage, transformer wiring and overload settings are correct, but the blower continues to draw excessive current.

When a shut down alarm lights, the dryer has detected a problem or combination of problems that could damage your dryer or materials. When a shut down alarm occurs:

- ◆ The dryer automatically shuts off.
- ◆ The alarm light turns on.
- ◆ The power light remains on.
- ◆ Pressing the Push To Read button displays an error code.

SHUT DOWN ALARMS

Alarm	Possible cause	Solution
 The RTD probe at the drying hopper inlet sensed that the actual drying temperature is more than 20° F (7° C) higher or lower than the setpoint.  WARNING: Only qualified electrical service personnel should examine and correct problems that require opening the dryer's electrical enclosure or checking electrical current to diagnose the cause of a problem.	Are process air lines restricted?	Check the delivery air hose and process filter. Remove block age. Straighten crimps in hoses. Attach any loose hoses.
	Is the dryer too far from the hopper to maintain setpoint temperature of the drying air?	The dryer should be no more than 5 feet (1.5 m) from the hopper. Move the dryer closer to the hopper, or insulate the air delivery hoses.
	Is the RTD temperature probe installed correctly?	Verify that the tip of the RTD probe is inserted into the center of the delivery air inlet of the hopper. Temperature readings will be incorrect, if the sensor touches the walls of the inlet pipe.
	Is the process blower rotating in the wrong direction?	If the process blower is turning opposite the arrow stamped on its housing, reverse any two leads connecting main power to the dryer.
	Did a process heater element fail?	Using an ampmeter, check the current in the heater element wires. If the current is lower than indicated on the wiring diagrams, replace the heater element. <i>See REPLACING HEATER ELEMENTS.</i>
	Did a process heater contactor fail?	Disconnect power. Check the continuity of the contactor outputs. If the ohm reading is zero or near zero, replace the contactor. <i>See CHECKING HEATER CONTACTORS.</i>

SHUT DOWN ALARMS

When a shut down alarm lights, the dryer has detected a problem or combination of problems that could damage your dryer or materials. When a shut down alarm occurs:

- ◆ The dryer automatically shuts off.
- ◆ The alarm light turns on.
- ◆ The power light remains on.
- ◆ Pressing the Push To Read button displays an error code.

Alarm	Possible cause	Solution
 Dew point will suffer because the air returning from the hopper is too hot for the desiccant to work at capacity. The return air sensor has been set to alarm at temperatures over 180° F (64°C).	Does the drying hopper contain enough material?	Verify that your material supply system is working. Refer to the manuals for your conveying system, if necessary.
	Are you drying with high heat or low throughputs?	You may need an aftercooler if you are drying at temperatures over 250° F (121°C), or if you are drying small amounts of material. An amount less than 50% of the dryer's rated capacity is considered small. <i>See ADDING AN AFTERCOOLER.</i> If you have an aftercooler, go to the next step.
	Is water flowing to your aftercooler?	Turn on the water supply, or fix the problem that prevents water from flowing through the aftercooler. The water flow must equal at least 3 gallons (11.36 liters) per minute at 90° F (32° C).
	Are the aftercooler coils dirty?	Clean the aftercooler coils. <i>See MAINTENANCE: CLEANING THE AFTERCOOLER COILS.</i>

When a shut down alarm lights, the dryer has detected a problem or combination of problems that could damage your dryer or materials. When a shut down alarm occurs:

- ◆ The dryer automatically shuts off.
- ◆ The alarm light turns on.
- ◆ The power light remains on.
- ◆ Pressing the Push To Read button displays an error code.

SHUT DOWN ALARMS

Alarm	Possible cause	Solution
 The dryer did not calibrate temperature correctly.	Electrical interference or a controller problem prevented correct calibration of temperature.	Turn the power off and back on. Press RUN to resume normal operation. Contact Conair service if you cannot clear the error message by cycling power off and on, or if the calibration error continues to occur.
 The RTD temperature sensor at the drying hopper inlet has failed.	Is the RTD probe (drying temperature sensor) connected correctly? Is the RTD probe damaged?	Verify that the RTD probe is plugged into the receptacle on the electrical enclosure and that the cable is not damaged. If the connections are correct, the probe or cable is probably damaged. Check for obvious signs of damage, and replace if necessary.
 The dryer shut down because the desiccant tank carousel did not rotate from one position to the next within the correct time.	Is the limit switch adjusted correctly? Is the bed-drive motor damaged? Is there contamination between the bed plates?	Adjust the limit switch so that it drops into the valley along the edge of the bed plate. See Adjusting the Limit Switch. Check the voltage and electrical connections to the bed-drive motor. If you find 110 V and secure connections, the motor is damaged. Replace the motor. Remove the upper bed plate. Spray the surfaces with a non-oil based cleaning liquid and wipe with a soft cleaning rag. Reassemble the bed plates.

SHUT DOWN ALARMS

When a shut down alarm lights, the dryer has detected a problem or combination of problems that could damage your dryer or materials. When a shut down alarm occurs:

- ◆ The dryer automatically shuts off.
- ◆ The alarm light turns on.
- ◆ The power light remains on.
- ◆ Pressing the Push To Read button displays an error code.

Alarm	Possible cause	Solution
 The dryer detected excessive heat in the process heater box, or the high temperature sensor failed. NOTE: When this alarm occurs, the alarm light does not illuminate. Instead, Err 07 flashes in the display windows.	Was there a loss of power or improper shut down using the Power ON/OFF switch or the main power disconnect? Was there an electrical short in a heater contactor? Is the high temperature sensor adjusted correctly? Did the microprocessor board fail?	Turn power to the dryer off and then on. Allow the dryer to cool, then press RUN to restart. The power interruption prevented the heaters from cooling down after normal operation. This may have triggered a high-temperature alarm. Disconnect power. Check continuity of the process heater contactor output. <i>See CHECKING HEATER CONTACTORS.</i> The high temperature should be set at 250° F (121° C) Contact Conair service.
 The dryer detected excessive heat in the regeneration heater box.	Was there a loss of power or improper shut down using the Power ON/OFF switch or the main power disconnect? Was there an electrical short in a heater contactor? Did the microprocessor board fail?	Turn power to the dryer off and then on. Allow the dryer to cool, then press RUN to restart. The power interruption prevented the heaters from cooling down after normal operation. This may have triggered a high-temperature alarm. Disconnect power. Check continuity of the process heater contactor output. <i>See CHECKING HEATER CONTACTORS.</i> Contact Conair service.

When a passive alarm lights, the dryer has detected a problem that could prevent correct drying of your material. When a passive alarm occurs:

- ◆ The alarm light turns on.
- ◆ The dryer continues to operate.
- ◆ Pressing the Push To Read button displays an error code.

PASSIVE ALARMS

Alarm	Possible cause	Solution
 The regeneration blower overload has tripped. The blower is drawing excessive current. WARNING: Only qualified electrical service personnel should examine and correct problems that require opening the dryer's electrical enclosure or checking electrical current to diagnose the cause of a problem.	Is the correct voltage supplied to the dryer? Is the blower overload tripped? Did the pressure switch fail in the open position? Is the blower damaged?	Check voltage to and from the transformer. Main power supply voltage should match the rating on the dryer name plate. Voltage from the transformer to the blower should be 110V. If voltage is incorrect, make sure the transformer is wired correctly. Disconnect power and open the electrical enclosure. Press the overload reset button to resume operation. <i>See CHECKING MOTOR OVERLOADS.</i> Using an ohmmeter, test the continuity of the switch when you start the dryer. If the switch does not close, replace it. Replace the blower, if supply voltage, transformer wiring and overload settings are correct, but the blower continues to draw excessive current.

PASSIVE ALARMS

When a passive alarm lights, the dryer has detected a problem that could prevent correct drying of your material. When a passive alarm occurs:

- ◆ The alarm light turns on.
- ◆ The dryer continues to operate.

Alarm	Possible cause	Solution
 The regeneration temperature is too low.  WARNING: Only qualified electrical service personnel should examine and correct problems that require opening the dryer's electrical enclosure or checking electrical current to diagnose the cause of a problem.	Is the regeneration filter clogged?	Clean the regeneration filter.
	Are there any leaks in the regeneration air circuit?	Check hoses, gaskets and O-rings. Replace any that are cracked or excessively worn. make sure hose clamps are secure.
	Is the regeneration temperature sensor installed correctly?	Verify that the temperature sensor is positioned properly at the outlet of the regeneration heater box.
	Was there an electrical short in a heater contactor?	Disconnect power. Check continuity of the regeneration heater contactor outputs. <i>See CHECKING HEATER CONTACTORS.</i>
	Did a regeneration heater element fail?	Check the regeneration heater elements. Only qualified electrical service personnel should check amperage and voltages of heater wires at the front of the dryer. <i>See REPLACING HEATER ELEMENTS.</i>
	Did the regeneration blower fail?	Compare motor current to the amp rating on the motor nameplate. If currents, do not match and the transformer is wired correctly, replace the blower.
	Is the desiccant contaminated?	If air and electrical circuits work correctly, the problem probably is contaminated desiccant. <i>See REPLACING DESICCANT TANKS.</i>

When a passive alarm lights, the dryer has detected a problem that could prevent correct drying of your material. When a passive alarm occurs:

- ◆ The alarm light turns on.
- ◆ The dryer continues to operate.

PASSIVE ALARMS

Alarm	Possible cause	Solution
 The return air temperature sensor has failed.	Is the return air temperature sensor connected correctly? Is the return air temperature sensor damaged?	Verify that the return air temperature sensor wire is connected to the dryer's micro-processor board. Refer to the wiring diagrams that came with your dryer. Check the sensor for damage, and replace if necessary.
 The regeneration temperature sensor has failed.	Is the regeneration temperature sensor connected correctly? Is the regeneration temperature sensor damaged?	Verify that the regeneration temperature sensor wire is connected to the dryer's micro-processor board. Refer to the wiring diagrams that came with your dryer. Check the sensor for damage, and replace if necessary.
 The material level inside the vacuum receiver is too low.	This error code should be active only on SC-MDC model dryers.	Contact Conair service if this error code is displayed on an SC dryer that has not been equipped for mobile drying and conveying.

DRYER WILL NOT POWER UP

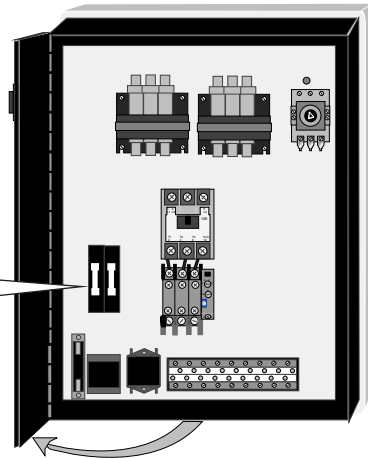
You have a problem with the main power circuit or the dryer's microprocessor board, if the dryer control panel does not light when the Power ON/OFF switch is turned to the ON position.

Symptom	Possible cause	Solution
Turning the Power ON/OFF switch does not turn on the dryer control.	Is the main power supply to the dryer on?	Verify that the main power supply is on and that the dryer's main power disconnect dial is in the ON position.
	Has the dryer blown a fuse?	Disconnect power. Open the dryer's electrical enclosure and check the main power fuses. <i>See REPLACING FUSES.</i>
	Is the microprocessor board in the dryer damaged?	Contact Conair service.

- 1** Disconnect power.
- 2** Open the electrical enclosure door.
- 3** Check the fuse.
If necessary, pull the fuse out and replace it with a fuse of the same type and rating.

Fuse Block

To locate the appropriate fuse and replacement part, refer to the wiring diagrams that came with your dryer.



REPLACING FUSES



IMPORTANT:

Always refer to the wiring diagrams that came with your dryer to locate specific electrical components. Illustrations in the User Guide are intended to be representative only.

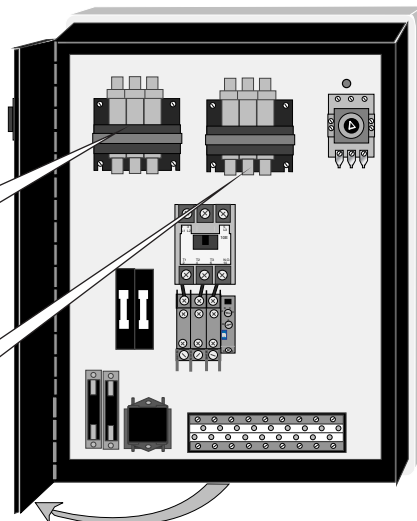
- 1** Disconnect power.
- 2** Open the electrical enclosure.
- 3** Locate the process or regeneration contactors.
Refer to the wiring diagrams that came with your dryer.
- 4** Check continuity using an ohmmeter.

Process heater contactors

If ohms equal zero or infinity, replace the contactor.

Regeneration heater contactors

If ohms equal zero or infinity, replace the contactor.



CHECKING HEATER CONTACTORS

IMPORTANT:

Always refer to the wiring diagrams that came with your dryer to locate specific electrical components. Illustrations in the User Guide are intended to be representative only.

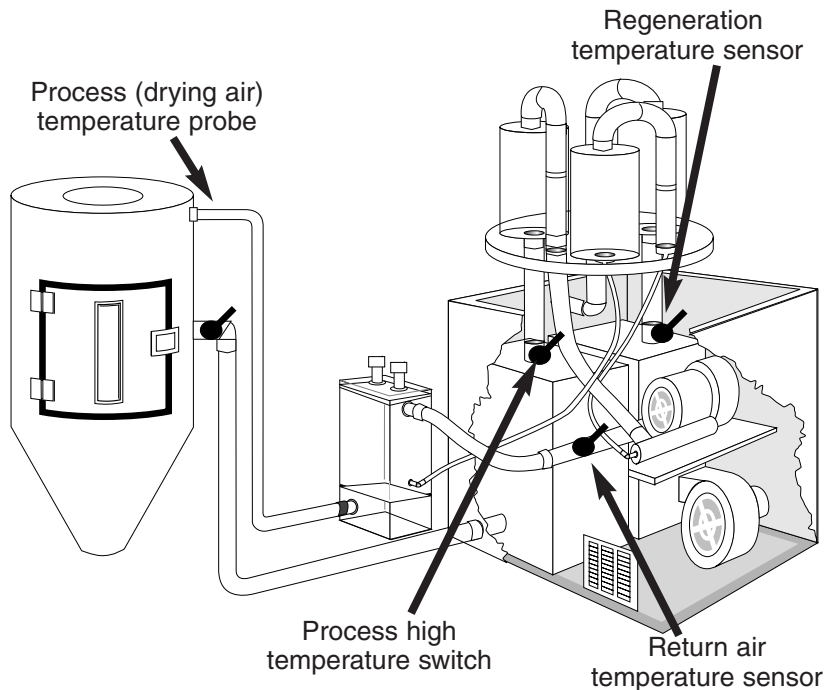
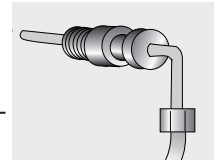
CHECKING OR REPLACING TEMPERATURE SENSORS



IMPORTANT:

Always refer to the wiring diagrams that came with your dryer to locate specific electrical components. Illustrations in the User Guide are intended to be representative only.

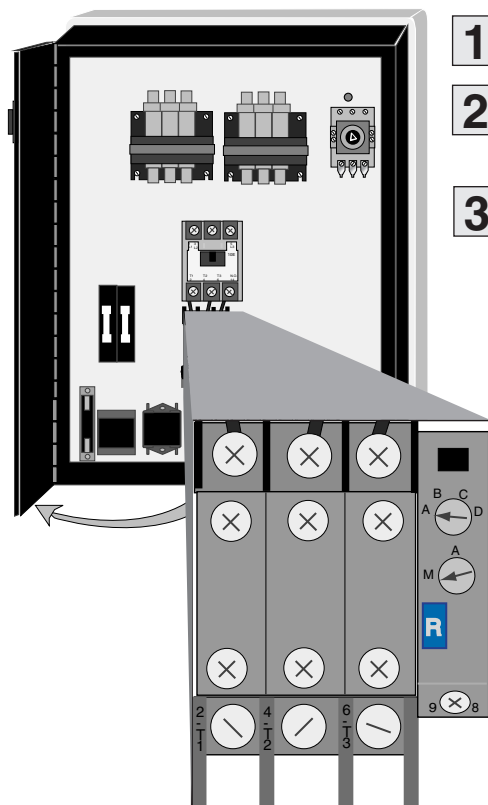
The SC dryer uses RTD sensors to monitor the temperatures of the drying air, the return air, the regeneration exhaust and the regeneration and process heater boxes.



To check or replace an RTD sensor:

- 1 Disconnect and lockout the main power supply.**
- 2 Remove dryer panels, as necessary.**
- 3 Locate the temperature sensor.**
- 4 Check the sensor position and condition.**

Temperature readings will be incorrect, if the sensor is touching the wall of an air hose or pipe or if the sensor or wiring is damaged. The tip of the sensor should be centered within the air hose or pipe. Sensor wires should be attached to the appropriate connection points on the dryer's electrical enclosure or microprocessor board.
- 5 Replace the sensor, if necessary.**



- 1** Disconnect power.
- 2** Open the electrical enclosure door.
- 3** Check the overload.
If the blue reset button is out, the overload has tripped. Press the button to reset the overload and resume normal operation.

If the overload continues to trip, check the overload settings. The factory setting for the overload is the blower's amp rating plus 0.1 amp.

CHECKING MOTOR OVERLOADS



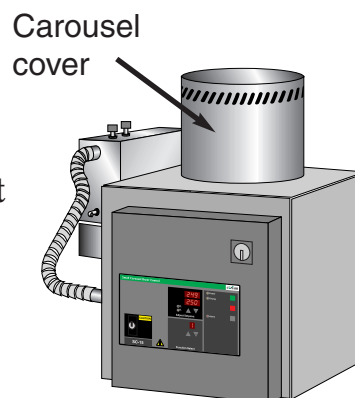
IMPORTANT: Always refer to the wiring diagrams that came with your dryer to locate specific electrical components. Illustrations in the User Guide are intended to be representative only.

ADJUSTING THE LIMIT SWITCH



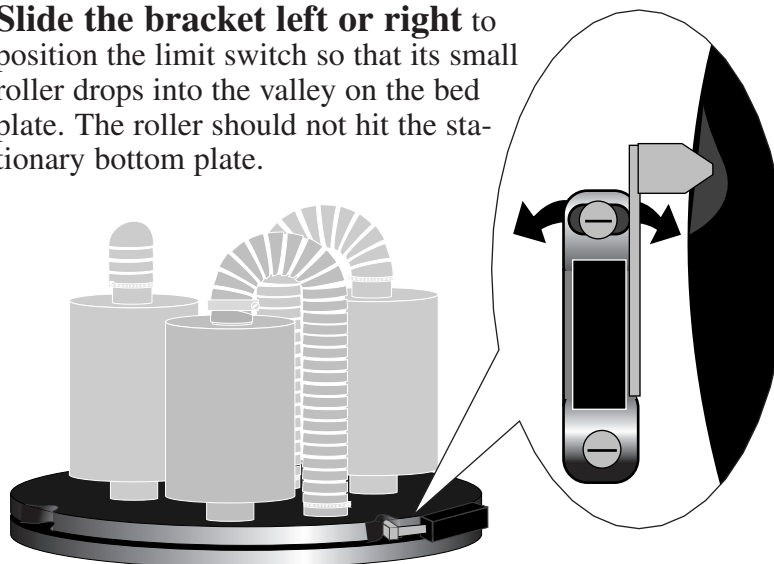
1 Stop the dryer.
Disconnect and lockout
the main power.

2 Remove the carousel
cover.



3 Loosen the screw on the
limit switch bracket.

4 Slide the bracket left or right to
position the limit switch so that its small
roller drops into the valley on the bed
plate. The roller should not hit the sta-
tionary bottom plate.

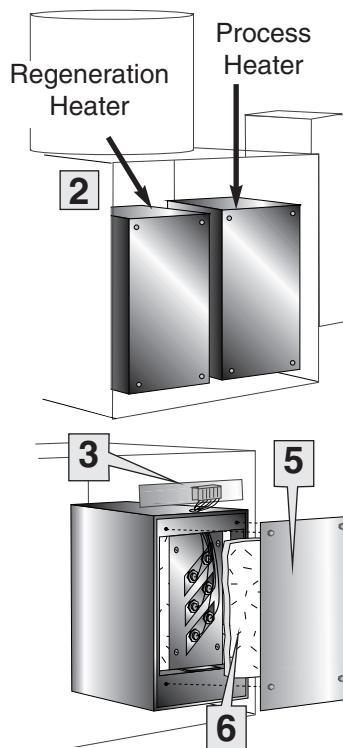


5 **Test for correct indexing of the carousel.**
Restore main power to the dryer. Hold the limit switch out
of the valley on the carousel bed plate while you flip the
toggle switch to START. Once the bed plate starts turning,
release the switch.

If everything is adjusted correctly:

- ◆ The carousel bed turns.
- ◆ When the limit switch reaches the next valley in the
bed plate, the carousel should stop turning.

6 **Reset the desiccant carousel.**
Continue indexing until the desiccant tanks return to the
positions they were in when the dryer shut down.



1 Disconnect power and remove the dryer's back panel.

2 Locate the appropriate heater box.

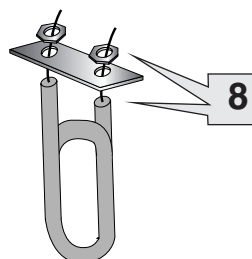
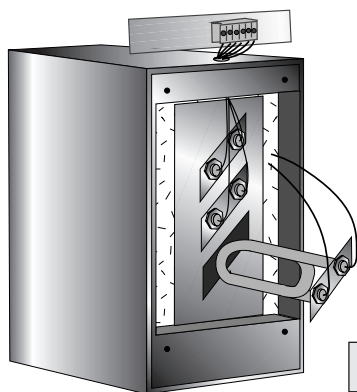
3 Detach the heater element wires from the terminal strip above the heater box. Each element has two wires.

4 Check continuity of the heater element wires.
Replace any element that shows an ohm reading of zero or infinity.

5 Remove the heater cover.

6 Remove the insulation.
Set the insulation aside for reassembly.

7 Remove the heater element assembly.
Loosen the screws and pull the assembly out of the box.



8 Replace the faulty heater element(s). Remove the nut holding the element to the assembly plate. Pull the element out of the plate. Insert the wires of a new element through the plate. Secure the element with the nut.

9 Reassemble. Follow steps in reverse order

REPLACING HEATER ELEMENTS



TIP: For faster repairs, keep a spare heater assembly that can be swapped for the assembly containing a faulty element.

Number of heating elements

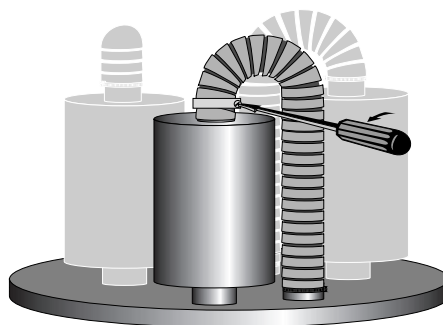
	Process	Regeneration
SC7.5	2 (450w)	2 (450w)
SC15	3 (450w)	3 (450w)
SC30	6 (450w)	3 (450w)
SC60	6 (900w)	3 (900w)

REPLACING DESICCANT TANKS

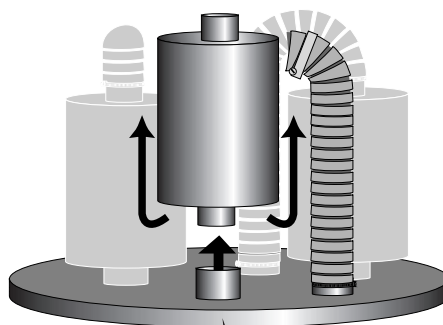


TIP: It's important that the new tanks are connected to the correct hoses. Mark the hoses as they are disconnected, or replace one tank at a time, to ensure that you install the new tanks in the correct positions.

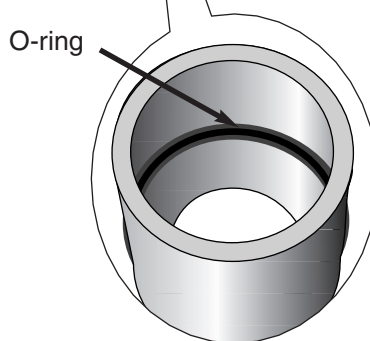
The SC Carousel Dryer has refillable desiccant tanks. When desiccant becomes clogged or contaminated, you should replace the desiccant in all three tanks to ensure optimum performance.



- 1 Stop the dryer and disconnect power.**
- 2 Remove the carousel cover.**
- 3 Disconnect the hose from the desiccant tank.**
Loosen the hose clamp with a screw driver.



- 4 Lift the tank off the carousel assembly.**
- 5 Refill the tank with fresh desiccant.**
- 6 Check the O-rings in the carousel coupling.**
Replace any O-rings that are cracked, worn or damaged. Apply petroleum jelly on the inside of the coupling around the O-ring.

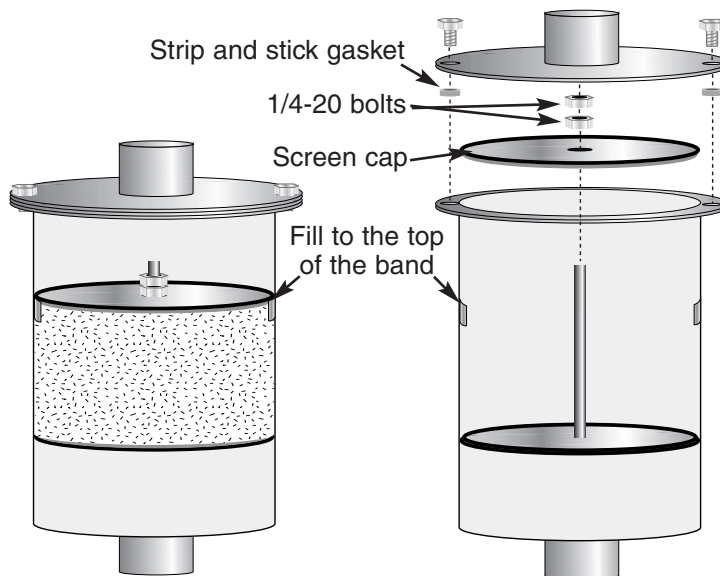


- 7 Place the refilled tank on the carousel assembly.** Make sure the inlet/outlet tube of the tank seats fully into the O-rings on the carousel pipe.
- 8 Connect the hose to the top of the tank.** Secure with the hose clamp.
- 9 Reinstall the carousel cover.**

When desiccant becomes clogged or contaminated, you should replace the desiccant in all three tanks to ensure optimum performance.

REFILLING THE DESICCANT TANK

- 1 Remove the desiccant tank from the carousel.**
See [REPLACING DESICCANT TANKS](#).
- 2 Remove the screws on the tank end plate.**
- 3 Remove the screen cap.**
Remove the two 1/4-20 nuts from the center post and pull the screen cap out.



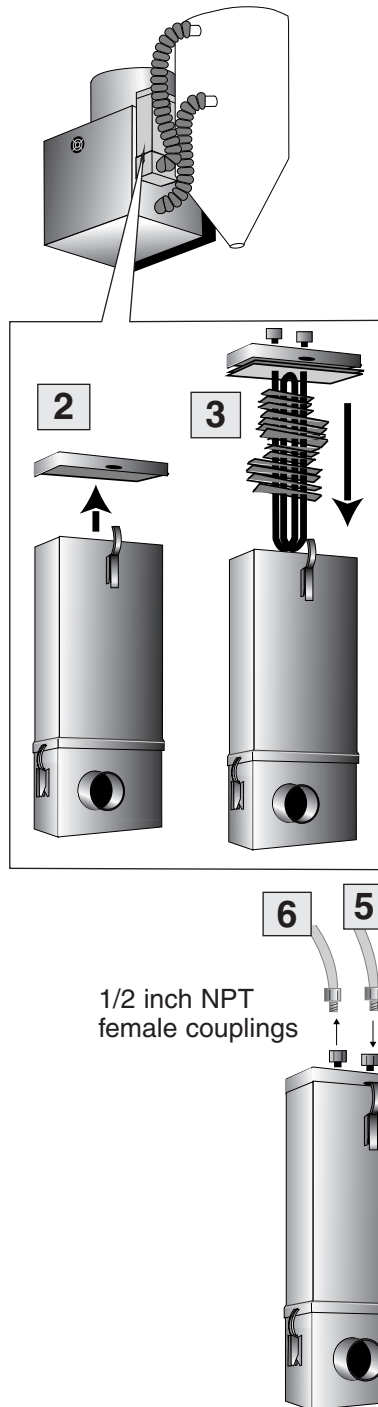
- 4 Remove the old desiccant.**
- 5 Replace the gasket on the flange, if necessary.**
- 6 Fill the tank with fresh desiccant.**
Fill the tank to the top of the band. Vibrate the tank for 15 minutes, then add more desiccant until the desiccant is level with the top of the band.
- 7 Reinstall the screen cap.**
Place the cap on the band. Install one of the 1/4-20 nuts on the center post and tighten. Do not over-tighten. Install the second 1/4-20 nut and tighten.
- 8 Reinstall the tank end plate.**
Place the end plate on the tank and tighten the screws.
- 9 Reinstall the desiccant tank on the carousel.**
See [REPLACING DESICCANT TANKS](#).

IMPORTANT: After filling with fresh desiccant, vibrate the tank for at least 15 minutes. Add desiccant as needed until level with the top of the band.

ADDING AN AFTERCOOLER

You can add an aftercooler to the SC Carousel Dryer by ordering the optional aftercooler coils. Installation is easy.

The optional aftercooler requires a source of city, tower or chiller water and a discharge or return line. You can use water at temperatures of 70 to 90° F (21° to 32° C). But the water flow should be at least 3 gallons (11.36 liters) per minute.



1 Stop the dryer and disconnect power.

2 Remove the aftercooler housing cover.

3 Insert the aftercooler coils into the housing.
Make sure the latches on the housing are aligned with the latch holes in the aftercooler coil lid.

4 Secure the latches.

5 Connect the cooler inlet to the water source.
If a manual shut off valve is used, it should be mounted on the inlet line.

6 Connect the cooler outlet to a discharge or return line.

TIP: Make the connections with flexible hose at least 14 inches (35.5 cm) long. This allows you to easily remove the cooler coils for cleaning.

Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.

WE'RE HERE TO HELP

To contact Customer Service personnel, call:



HOW TO CONTACT CUSTOMER SERVICE

From outside the United States, call: 814-437-6861

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department. Standard rates include an on-site hourly rate, with a one-day minimum plus expenses.

If you do have a problem, please complete the following checklist before calling Conair:

- ☐ Make sure you have all model, serial and parts list numbers for your particular equipment. Service personnel will need this information to assist you.
- ☐ Make sure power is supplied to the equipment.
- ☐ Make sure that all connectors and wires within and between control systems and related components have been installed correctly.
- ☐ Check the troubleshooting guide of this manual for a solution.
- ☐ Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.
- ☐ Check that the equipment has been operated as described in this manual.
- ☐ Check accompanying schematic drawings for information on special considerations.

BEFORE YOU CALL ...

Additional manuals and prints for your Conair equipment may be ordered through the Customer Service or Parts Departments for a nominal fee.

EQUIPMENT GUARANTEE

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

PERFORMANCE WARRANTY

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

WARRANTY LIMITATIONS

Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.