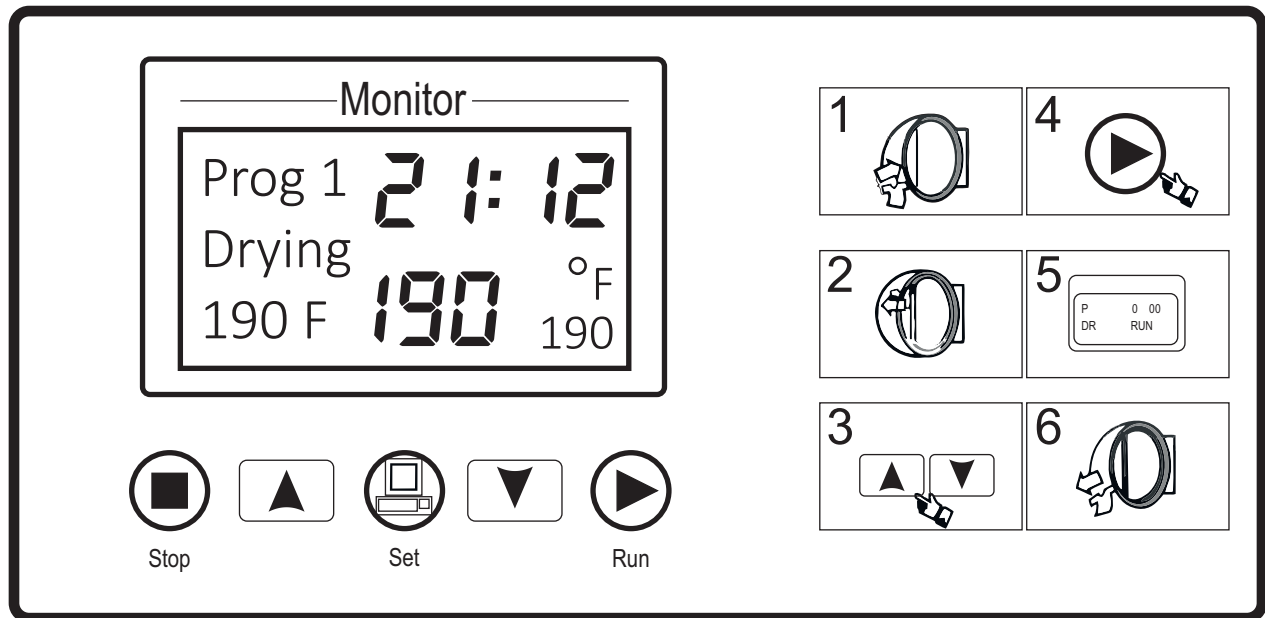


Dryer

SimpliDri Computer Programming and Operating Instructions



B&C Technologies

Panama City Beach, FL

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SimpliDri Control Installation & Operation Manual



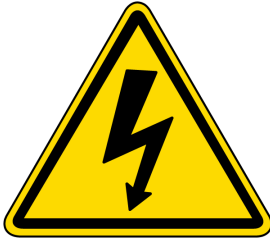
Read this manual carefully and become familiar with it before trying to install, operate, and maintain the dryer.



B&C TECHNOLOGIES
Panama City Beach, Florida
Phone 850 249 2222

GENERAL EXPLANATION OF SAFETY KEY SYMBOLS

Anyone operating or servicing this machine must follow the safety rules in this manual. Particular attention must be paid to the DANGER, WARNING, and CAUTION blocks which appear throughout the manual.



The lightning flash and arrow-head within the triangle is a warning sign alerting you of the presence of dangerous voltage.



This warning symbol indicates the presence of hot surfaces that could cause serious burns. Stainless steel and steam lines can become extremely hot and should not be touched.



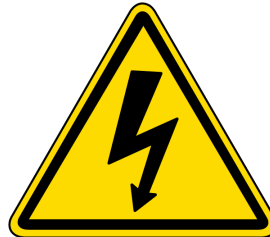
The exclamation point within the triangle is a warning sign alerting you of important instructions concerning the machine and possible dangerous conditions.



This warning symbol indicates the presence of possible dangerous pinch-points. Moving mechanical parts can crush and/or sever body parts.



This warning symbol alerts you to the presence of possible dangerous drive mechanisms within the machine. Guards should always be in place when the machine is in operation. Be careful when servicing any drive.



Before servicing any equipment, make certain it is disconnected from the electrical power source. Never allow operation of the machine when any safety device is malfunctioning. Never bypass safety devices.

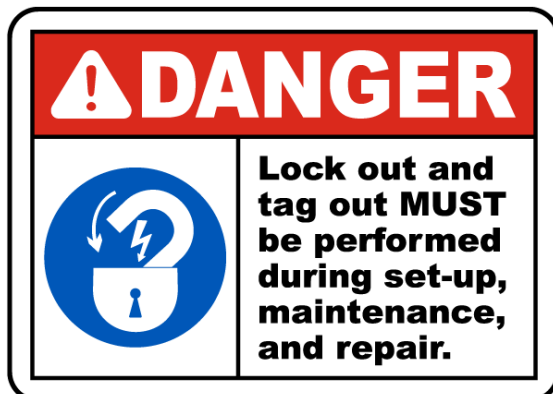


This warning symbol indicates the presence of possible dangerous chemicals.

Proper precautions should be taken when handling corrosive or caustic material.

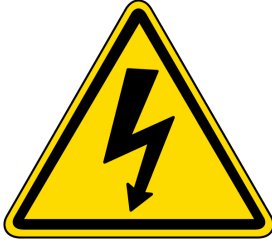


READ THE INSTRUCTION MANUAL



For good safety a lock out tag must be performed during set-up, maintenance and repair of the machines. This eliminates the possibility of someone else to connect the electrical service and starting the machine while under maintenance.

INSTALLATION AND SAFETY



Properly install the controller firmly to avoid damage.
Install the controller on flame resistant material.

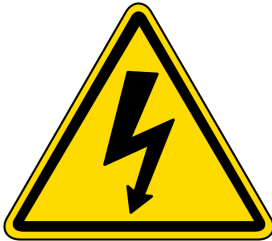


Do not install a damaged controller.

Provide adequate space for cooling and wiring.

The electrical cabinet temperatures should be between 10-50 C (50-122F). If higher install a cooling fan if necessary.

Prevent the controller from sunlight, strong airflow and moisture. Protect the controller from corrosive airflow such as sulfide gas and/or salt mist.



Make sure power is disconnected while installing or wiring the controller.

Only properly trained technicians should service the controller.

Supply adequate power for the controller.

Do not bypass safety interlocks or circuit protections to avoid dangerous or deadly situations.



Separate the controller from Heat, High Voltage and Electrical noise.

Separate the low voltage signal wires from the high voltage wires.

Use quality wire approved by UL/CSA.

RS485 communication wire should be shielded and the ground wire end connected only to one end of the wiring.

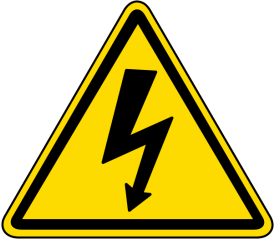
Connect the ground according to the applicable national and local standards.



Set the parameters according to the machine configuration. See parameter settings section of this manual.

Wrong parameter settings can result in machine failure.

INSTALLATION



Confirm that the wiring is OK before turning on the power.

Confirm proper power supply and installation location before operation

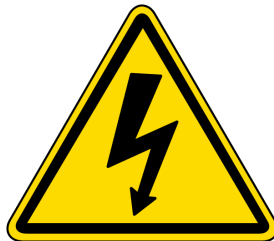
Do not change the parameters without authorization.



Do not attempt to repair the controller. Contact B&C Technologies for assistance.

Do not pull or twist the power and the communication lines.

Do not touch the electronic parts of the controller directly to prevent static damage.



Do not attempt to repair the controller without proper static protection.

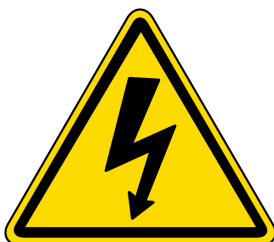
Test should only be performed in a laboratory environment.



Responsibility statement

THE BUYER HEREBY ASSUMES ALL RISKS ASSOCIATED WITH THE USE OF PURCHASED PRODUCT AND WAIVES ALL LIABILITY CLAIMS AGAINST THE SELLER OF ANY KIND OR NATURE, INCLUDING LIABILITY FOR PENALTIES, FINES, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH, TO THE FULLEST EXTENT PERMITTED BY LAW. ADDITIONALLY, BUYER ACKNOWLEDGES AND AGREES THAT SELLER IS NOT LIABLE FOR AND HEREBY EXCLUDES ANY AND ALL INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES RELATING TO THE PRODUCT(S) COVERED BY THIS DISCLAIMER.

THIS DISCLAIMER IS A MATERIAL CONDITION OF SELLER'S WILLINGNESS TO SELL THE PRODUCT TO BUYER.



SPECIFICATIONS

VARIABLE SUPPLY: Input 100-240VAC 50-60Hz Output 12V DC 2.1 Amp. Suitable for 120V single phase.

DIGITAL OUTPUTS: Relay Output 24 VDC 5Amp.

TEMPERATURE MEASUREMENT: Range -20C to 150C (-4 to 300F). Accuracy 1 C degree.

WORK ENVIROMENT: Temperature range -20 to 55C (-4 to 130F) Humidity 80% non-condensing.

STOCK ENVIRONMENT: Temperature 10-70C (50-125F) Accuracy 1 degree .

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INSTALLATION AND PRODUCT OVERVIEW

3. INSTALLATION

The SimpliDri is a simple and effective dryer control which replaces the mechanical timer manual controller.

The control is easy to install via four (4) clips that are tighten to the front plate of the dryer.

On the back of the control has connections for inputs/outputs and communications.

The display provides information on selected programs, time, and temperature.

Parameters and settings can be easily adjusted to various drying conditions.



HOW TO GET THE MOST OUT OF YOUR DRYER

4. TIPS TO MAXIMIZE THE PRODUCTIVITY OF YOUR DRYER

There are many variables to meet productivity demands and efficiency when using a dryer.

First establish if the washer-extractor has a low or high extraction force as this will affect the residual moisture content of the goods going into the dryer. Low extraction speeds mean longer time in the dryer. High extraction speeds mean faster drying and lower fuel consumption in the drying process. Productivity increases considerably when using a high extraction washer.

Installation of the dryer is also important. The exhaust duct should be as short as possible with few elbows, as they reduce the airflow.

The dryer filter should always be clean to maintain high efficiency drying.

Overloading the dryer causes tangling, reducing heat and airflow through the goods while increasing wrinkling and drying time. Do not overload the dryer, the goods should clearly tumble and fall in the dryer when in operation. Always remove the goods immediately after cooldown to avoid wrinkling.

Drying temperature must be selected correctly depending on the goods being dried. This means the dryer must have several set drying cycles for various textiles as shown in the below table. This controller has 5 programs that are the factory defaults. See below.

DRYER CONTROLLER FACTORY DEFAULT PROGRAM SETTINGS

| DRY CYCLE | COOL DOWN TIME Minutes | TOTAL CYCLE TIME Minutes | TEMPERATURE | | DRYER LOAD TEXTILE MATERIALS |
|-----------|---------------------------|-----------------------------|-------------|---------|---------------------------------|
| | | | Farenheit | Celcius | |
| 1 | 5 | 40 | 180 | 82 | Towels, Heavy Cotton, Pads |
| 2 | 5 | 25 | 170 | 77 | Sheets and Blended Materials |
| 3 | 5 | 30 | 180 | 82 | Cotton |
| 4 | 3 | 25 | 130 | 54 | Synthetic materials |
| 5 | 3 | 30 | 165 | 75 | Blended materials |

NOTE! These standard cycles can easily be changed in the settings to reach maximum productivity and reduction of energy consumption. See programming instructions on page 11. **NOTE!** This controller does not support humidity sensing.

EXPLANATION OF CONTROL BUTTONS


Monitor


Prog 1


<Start>


° F


--- F ———— ———— ———— ---



 Stop



 Up



 Set



 Down



 Run


1 

4 



2 

5 

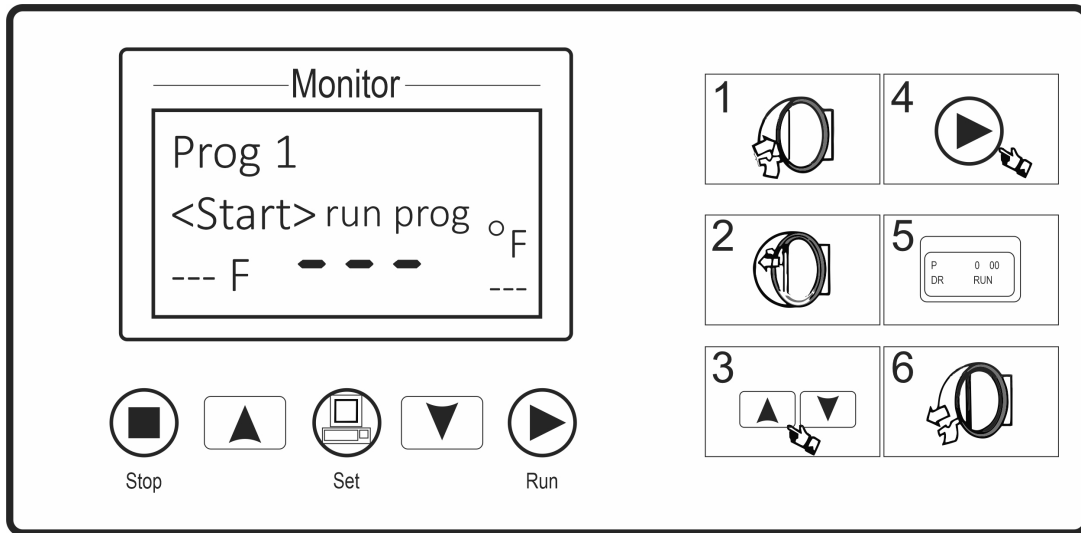
3 




6 

5. BUTTON EXPLANATION

| ICON | FUNCTION |
|---|--|
|  | <p>UP</p> <ol style="list-style-type: none"> 1 In the parameter menu, selects your desired program 2 When machine is idle, selects a drying program. 3 When programming or operation, increases the value 4 Changes the rotation mode to standard or reversing. |
|  | <p>DOWN</p> <ol style="list-style-type: none"> 1 In the parameter menu, selects your desired program 2 When machine is idle, selects a drying program. 3 When programming or operation, decreases the value 4 Changes the rotation mode to standard or reversing. |

EXPLANATION OF CONTROL BUTTONS



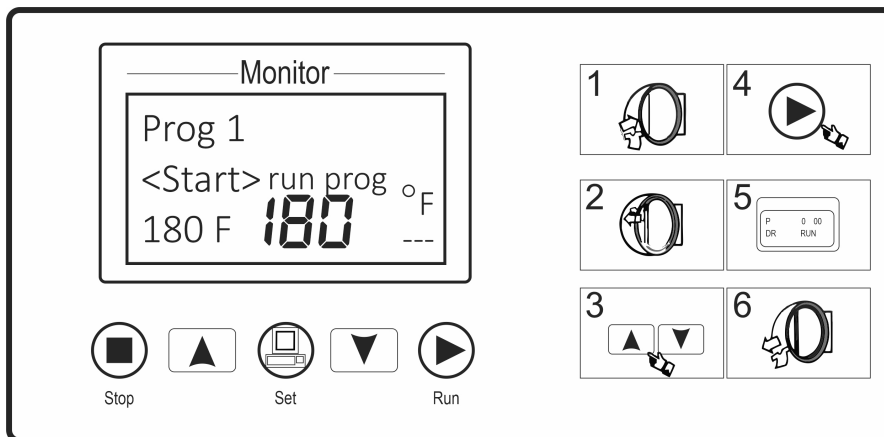
| | |
|---|---|
|  | <p>SET</p> <ol style="list-style-type: none"> 1 In the count down status press and hold for 3 seconds to enter parameter set up. 2 In the idle status press and hold for 3 seconds to enter user program edit. 3 During program setting or operation, selects desired parameter |
|  | <p>STOP</p> <ol style="list-style-type: none"> 1 During auto mode, stops current program 2 In an alarm condition, the control will alert audibly. Press to silence the alarm. After the alarm has been resolved, press to clear the alarm from the display, causing the control to return to idle status. 3 Under program setting or parameter setting status, press this button for 3 seconds to exit the idle status. |
|  | <p>Run</p> <ol style="list-style-type: none"> 1 When the door is closed, starts the selected cycle. |

OPERATING INSTRUCTIONS

6. Before starting your new dryer with the SimpliDri controller please follow the instructions below:

6.1 Open the door and load the machine with wet untangled goods. Do not overload the dryer.

6.2 Apply power to the dryer and select program. The display will show the following information. Note that there are 5 programs available for various textiles with operation times and temperatures.



The front of the controller also has an illustration depicting how to load the dryer and select a program.

6.3 Press the “Run” button to begin the drying program.

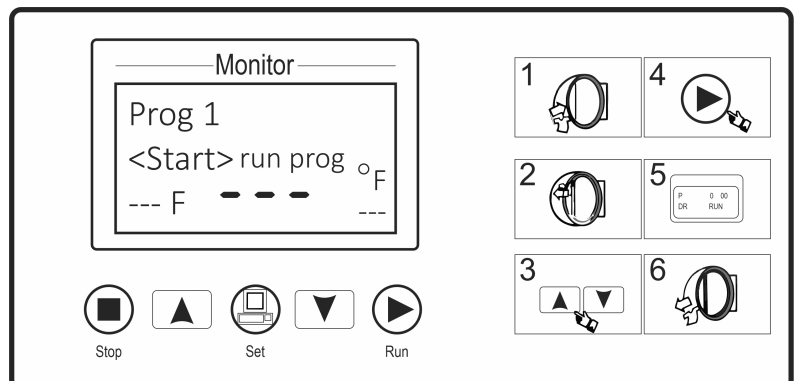
6.4 During drying cycle the temperature and the time remaining in the cycle are displayed. The temperature can be modified during operation by pressing the “Set” button and either the “UP” or “DOWN” key.

6.5 The program always ends with a 5 minute cooldown. The cooldown time can be changed in the parameter settings as well as the cooldown temperature.

6.6 When the cycle is complete the dryer stops automatically and the buzzer sounds for 60 sec.

6.7 Remove the goods immediately to avoid wrinkles.

This illustration shows the main screen where the program and the temperature are set. Press the run button and the dryer will start.



OPERATING INSTRUCTIONS AND PROGRAMMING

7. RUNNING THE DRYER

7.1 START UP

After power is applied, controller shows the software version, after which the display shows time counting down. The "IDLE" page is displayed after 10 seconds.

- Press "STOP" to enter the "IDLE" page directly without displaying the information.
- Press and hold "SET" for 3 seconds to enter parameter setting page.

The parameters are set from the factory. Do not change without authorization.

7.2 AUTOMATIC RUNNING

7.2.1 To run a drying program:

When the controller is idle, close door and press "UP" or "DOWN" to select the formula
Press "Run" to start the program.

7.2.2 You can also change the drying time and/or temperature while a program is running:

- While running press "Set" button to change the preset program. The item setting value will highlighted once switching.
- Press "UP" or "DOWN" buttons to modify the setting value.

7.2.3 Ending Auto running:

- * The dryer will stop automatically when formula is completed. The buzzer will sound for 60 seconds.
- While drying press "STOP" to go to cool down phase. In cooldown, press "STOP" to stop the dryer.

7.3 PROGRAMMING

There are 5 formulas which can be edited.

7.4 SELECT and ENTER

While door is closed the numeric screen shows program numbers "PROG. 1 - PROG. 5" which means program 1 to 5.

Press "UP" or "DOWN" to select formula number. Press "Set" to enter or edit programs.

7.5 EDIT.

Press "Set" to switch the display items. Press "UP" or "DOWN" to modify value.

See following table for default settings.

SETTINGS

8. SETTINGS

| ITEMS | DEFAULT | RANGE | INTRODUCTION |
|---------------------------|----------------------------|--------------|---|
| Drying Hours | 1 hour | 0-9 hours | H1 means one hour |
| Drying Minutes | 0 minutes | 0-59 minutes | |
| Drying Temperature | 90C 194F | 0-255C 490F | Setting values of outlet temperature |
| Cool Down Hours | 10 minutes | 0-59 minutes | H1 means one hour |
| Cool down minutes | 10 minutes | 0-59 minutes | |
| Cooldown Temperature | 30C 86F | 0-255C 490F | Setting value of outlet temperature |
| | | | |
| Basket direction | Reversing Non-reversing | | Reversing Non-reversing |
| Dry mode | Temperature | Time | When running, time will count down |
| | Temperature | Temperature | Time will not count down until temperature is reached |
| Dry temperature in basket | 120C 250F | 0-255C 490F | Setting value of inlet temperature |
| | | | |

8.1 EXIT and SAVE

After program edits are complete, press “STOP” to exit programming mode and save the modifications.

PARAMETER SETTING

9. PARAMETER SETTINGS

Press and hold “Set” for 3 seconds to enter parameter setting page during the 10 second countdown after power is applied.

- Press “UP” or “DOWN” to select an item.
- Press “Set” to select the value (highlighted). Press “UP” or “DOWN” to modify the value.
- After modification press and hold “STOP” button for 3 seconds to return and enter “IDLE” page.

PARAMETERS

| ITEMS | NAME | DEFAULT | RANGE | INTRODUCTION |
|-------|--|-----------|---------------------------|--|
| P01 | Basket rotating time | 35 sec. | 0-255 | Time of basket rotation |
| P02 | Basket stop time | 7 sec. | 0-255 | Basket stop time |
| P03 | Differential of heat 1 | 2C 4F | 2C 4F | Temperature difference of heat (main) |
| P04 | Differential of heat 2 | 5C 8F | 5C 8F | Differential of heat 2 |
| P05 | Door closed | 0-NO | 0-NO | NO: Door closed when input signal is open NC: Door closed when input signal is closed |
| P06 | Motor overloaded | 1-NC | 0-NO 1-NC | NO: Motor overload when input signal is open NC: Motor overlaod when input signal is closed |
| P07 | Overheat | 1-NC | 0-NO 1-NC | NO: Overheat when input signal is open NC: Overheat when input signal is closed |
| P08 | Emergency | 1-NC | 0-NO 1-NC | NO: Emergency stop when input signal is open NC: Emergency stop when input signal is closed |
| P09 | In basket sensor | NO | Yes- No | Yes: Use in basket sensor No: Not used in basket sensor |
| P10 | Standby | | | |
| P11 | In basket alarm | 150C 300F | 1-225C 490F | Set the alarm value in basket temp sensor |
| P12 | Differential of outlet temperature alarm | 15C 59F | 1-255C 490F | Max. Differential temp value of setting and actual value for outlet temperature |
| P13 | Laanguage | English | English | |
| P14 | Temperature unit | 0-Celcius | 0-Celsius 1-Fahrenheit | Select temperature unit C or F |

ALARMS

10. Alarm reset.

In top menu press “ALARM” to enter alarm page. Current alarms list will display including current alarm number and name. Press “RESET to re-check the alarms. The buzzer will be silenced but alarm information will still display if errors are not corrected. The buzzer will stop and alarm information will disappear if errors are corrected.

10.1. Alarm

When error occurs it displays the error number and the buzzer sounds. Press stop to silence the buzzer. Press stop again to reset the alarm.

10. ALARMS

| NO. | ALARM NAME | TROUBLE SHOOTING |
|-----|---------------------|---|
| #2 | Temp sensor outlet | 1. Check the temperature sensor connection |
| #4 | Motor Overload | 1. Check the setting 2. Check the motor overload for overload 3. Check the voltage to the machine |
| #5 | Overheat | 1. Check the overheat switch |
| #6 | Temp High on outlet | 1. Check the airflow 2. Check the setting |
| #8 | Emergency stop | 1. Check the emergency stop switch |

TROUBLESHOOTING

CAUTION: Label all wires prior to disconnecting when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after service.

12. TROUBLESHOOTING

| SYMPTOMS | PROBABLE CAUSE | SUGGESTED REMEDY |
|--|--------------------------------------|--|
| Basket does not turn | Loading door | Check that loading door is completely closed |
| | Lint compartment door | Check that the lint compartment door is completely closed |
| | Drive belts | Check for excessive wear. Replace as needed |
| Basket turns, but no burner flame is present | Gas shut-off valve | Make sure gas shut-off valve is in the open position |
| | Ignition Module | Follow the procedure for checking the ignition cycle listed in the dryer ignition section of the main manual |
| Slow drying | Control | Check that proper temperature setting is present |
| | Lint screen | Clean lint screen |
| | Airflow restrictions/ Make up air | Follow installation guidelines for static back pressure and make-up air. |
| | Exhaust | Check exhaust for obstructions-follow installation guidelines |
| Fault codes on display | Temperature sensor | Check instruction manual or contact B&C distributor |
| | Control error | Check fault code in this manual or contact B&C Distributor |
| | Drying temperature error | Check fault code in this manual or contact B&C distributor |
| Preventive Maintenance | Instructions | Check service manual for Daily, Weekly ,Monthly, Quartely and annual maintenance |
| | | |
| | | |



Much more information is available on our website:
www.bandctech.com

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