

USER GUIDE



Manufacturer:
Domaine Engineering

Product Name:
Domaine CO-6800 Programmable Epoxy Curing Oven with MT Tray - 220V

Manufacturer Part Number:
CO-6800-MT

► Click here for more details on the Domaine CO-6800 Programmable Epoxy Curing Oven with MT Tray - 220V



CO-6700/CO-6800 Ferrule Curing Oven User's Guide



Contact the professionals at Fiber Optic Center for a quote or to get more details.

focenter.com • 508-992-6464 | (800) 473-4237 • sales@focenter.com

23 Centre Street • New Bedford, MA 02740 USA

Data is subject to change without notice. FOC last update 1/14/2026.

Important Safeguards

Before using this electrical equipment, the following basic precautions should always be followed:

1. Read all instructions.
2. Keep oven out of reach of children.
3. Before use, check that the voltage of wall outlet corresponds to the one shown on the rating.
4. Do not operate equipment with a damaged cord or plug, or after the oven malfunctions, is dropped or damaged in any manner. Return oven to the nearest authorized service center in order to avoid a hazard.
5. Do not let cord hang over the edge of table or hot surface.
6. Do not immerse plug, cord or oven into water due to risk of electric shock.
7. This oven is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have proper training by a person responsible for their safety.
8. Always wear protective, insulated oven mitts or gloves when removing ferrules or handling the unit. THE OVEN GETS VERY HOT!
9. Do not touch hot surfaces.
10. Place ferrules or connectors in the tray before putting into the oven to avoid injury.
11. Do not operate the oven for any other purpose than its intended use.
12. Always move "Power" switch to "OFF" position before removing the plug from the wall outlet.
13. Do not place paper, cardboard, plastic or other flammable materials inside the oven.
14. Unplug from main power socket when not in use.
15. Servicing and repair should only be conducted by an authorized technician.

Contact the professionals at Fiber Optic Center for a quote or to get more details.

focenter.com • 508-992-6464 | (800) 473-4237 • sales@focenter.com

23 Centre Street • New Bedford, MA 02740 USA

Data is subject to change without notice. FOC last update 1/14/2026.

16. If oven is used in any manner not specified in this manual, the protection provided by the equipment may be impaired.

CAUTION: DO NOT USE THIS PRODUCT IN ENVIRONMENTS WHERE FLAMMABLE OR EXPLOSIVE GASSES MAY BE PRESENT.

WARNING: ACCESS TO THE POWER SWITCH AND PLUG SHOULD BE MAINTAINED FOR EMERGENCY DISCONNECT.



WARNING: CAUTION HOT SURFACES:

This oven generates high temperatures during use. Proper precautions must be taken to prevent the risk of burns, fires, or other injury to persons or damage to property.

WARNING: OVEN CORD MUST BE ROUTED AWAY FROM ALL HOT SURFACES.

CAUTION: This oven is hot during operation and retains heat for some time after turning off. Always use oven mitts when handling hot materials and allow metal parts to cool before cleaning.

- Position the oven so that it is never against a wall or in a corner.
- When operating the oven on a work surface keep the surrounding areas clear and free from clutter. Ensure adequate air space surrounding the oven for circulation.
- Do not place anything on top of the oven while it is operating or while it is hot.
- Do not operate this oven with other major equipment plugged into the same power socket- there is a risk of blowing the fuse.
- Do not touch the hot oven surfaces while the unit is on or while cooling.
- All users of this oven must read and understand this User's Guide before operating this equipment.
- If the oven begins to malfunction during use, immediately unplug the cord. Do not use or attempt to repair the malfunctioning oven.
- Do not leave oven unattended during use.

>Welcome

Congratulations on selecting the Domaille Engineering Ferrule Curing Oven.

This User's Guide will assist you with the operation and maintenance of the Cure Oven to maximize the use and life of this precision equipment.

Introduction

The Domaille Engineering Ferrule Curing Oven is specifically designed for 3 types of curing trays:

1. Twenty-four (24) MT and MT-RJ type ferrules at a time.
2. Forty-eight (48) of the popular single fiber connector designs, including FC, SC, ST, and LC with the single fiber connector curing block.
3. Twelve (12) PRIZM® type connectors.

A touchscreen controller is conveniently located on the front panel allowing for easy operation. The oven allows for three (3) modes of curing operations to be set at the Main Menu screen: Temperature Hold mode, Timed mode and Step & Ramp mode. In addition, "Timed" mode can be run in either "Single Timer" or "Twin Timer" modes of operation.

The Timer mode allows the oven to gradually increase to a selected temperature, maintain the temperature for a selected operating time, and then gradually decrease to room temperature by shutting off power to the heating element.

The "Temperature Hold" mode maintains the curing oven at a constant selected temperature indefinitely.

"Step & Ramp" mode allows the user to program up to a 7 step program for more advanced heating profile requirements.

The oven can be ordered in either 120 volt (Model# CO-6700) or 240 volt (Model # CO-6800).

→ Overview

CAUTION: DO NOT USE THIS PRODUCT IN ENVIRONMENTS WHERE FLAMMABLE OR EXPLOSIVE GASSES MAY BE PRESENT.

Operating Environment

Do not subject the unit to the following conditions:

- Dramatic temperature fluctuations
- High humidity or condensation
- Water, oil, chemicals, or corrosive gasses
- Dusty environments
- Severe shock or vibration
- Improperly grounded electrical outlets

Operating Location

The unit should be placed on a hard, flat surface that is sturdy enough to support the weight of the oven, jumpers and any accessories. A lab table or workbench is recommended.

- Proper handling must be maintained in order for the unit to operate correctly
- Do not drop the unit
- Do not shake the unit
- Always ship the unit in the original shipping carton, using the original packing materials

Cleaning

The oven exterior may be cleaned using a slightly dampened cloth and a gentle cleaner. The touchscreen controller should never be exposed to such items as paint thinners, benzene compounds, or strong acids or alkalis.

If cured epoxy builds up on the oven heat plate (or curing block), it may be removed by gently scraping the block with an X-Acto™ knife or similar tool.

Screen protectors are available to protect the touchscreen from scratches, epoxy, and dirt. Contact Domaille Engineering for availability and pricing.

— Cure Oven Set Up

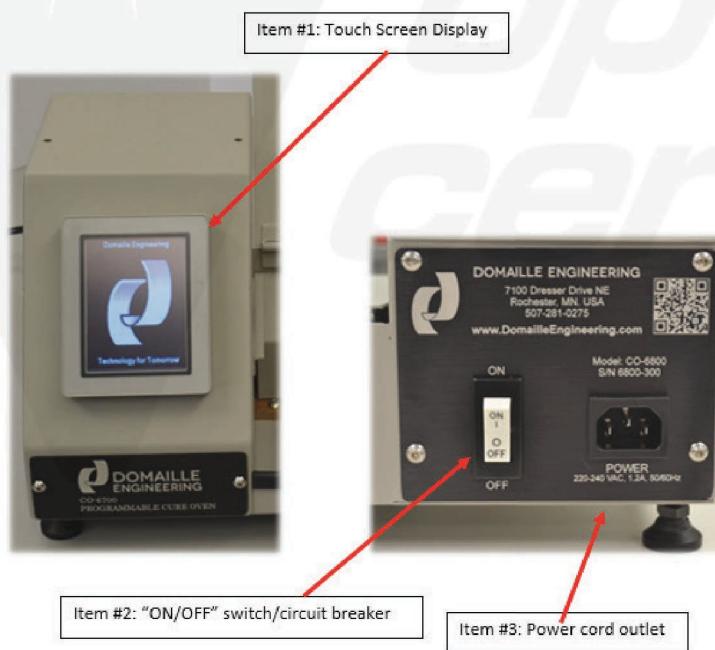
Place the curing oven on a hard, flat surface that is sturdy enough to support the weight of the oven, jumpers, and any accessories. A lab table or workbench is recommended.

Connect the curing oven to the power supply.

- Attach the female end of the supplied power cord to the curing oven power cord outlet (item #3) located on the back panel of the unit.
- Attach the male end of the supplied power cord to the power supply (wall outlet).

WARNING! TO PROVIDE PROTECTION AGAINST RISK OF ELECTRIC SHOCK, CONNECT ONLY TO A PROPERLY GROUNDED OUTLET.

Turn the curing oven power "ON/OFF" switch/circuit breaker (item #2) located on the back panel of the unit to the "ON" position.



Contact the professionals at Fiber Optic Center for a quote or to get more details.

focenter.com • 508-992-6464 | (800) 473-4237 • sales@focenter.com

23 Centre Street • New Bedford, MA 02740 USA

Data is subject to change without notice. FOC last update 1/14/2026.

→ Other Connections

The cure oven is equipped with two external data ports which are USB and ethernet

These ports are for use as follows:

USB (left port in photo):

This port is used to load new software on the cure oven.

As Domaille Engineering comes out with new software features for the oven the user will be able to load new software to the oven using this port. **WARNING: THIS PORT SHOULD NOT BE PLUGGED INTO ANY DEVICE OTHER THAN A DOMAILLE ENGINEERING SUPPLIED USB THUMB DRIVE.** The USB port is not for use as a connection to an external PC or server.



Ethernet (right port in photo): This port will be used in the future to connect the oven to external data collection devices such as a PC. Current software is not available for getting data out of the oven but the port is provided for future upgraded versions of software.

Equipment connected to the data ports shown above must provide double or reinforced isolation from hazardous voltages according to IEC 61010-1 or IEC 60950-1. Failure to connect approved devices to the ports is not recommended by Domaille Engineering.

→ Cure Oven Software Instructions

Main Menu

The Main Menu screen [Fig. 1] displays at the startup of the cure oven.

This menu allows for selection of entry into one of the three modes of use that the cure oven will operate or the user can enter into a setup screen for selecting equipment parameters.



FIG 1. Main Menu

Press the GREEN button to the left of the mode to enter that mode.
*Note: If any of the GREEN touch buttons to the left of the mode description labels are not visible they have been disabled in the setup menu [Fig. 8].

Setup Menu

The Setup Menu [Fig. 2] is used to set the parameters of the cure oven. By pressing the GREEN setup button on the Main Menu the user will see the password entry screen to get into setup as shown to the right:

The initial password to get into the setup screens when shipping from Domaille Engineering will be blank. Pressing the OPEN button without entering a password will allow the first user into the setup.

If a previous password has been setup the user must enter this password by pressing the **** field and entering the 4 digit number through a numeric keypad [Fig. 3].

After entering the password, press the OPEN button to verify if the password is correct. If a correct password has been entered the first setup screen will be displayed. If the password is incorrect, a RED text alert will display "Incorrect Password" [Fig. 4].

If the memory is not retained in the cure oven controller the password will reset to "0" and no password is needed to enter the setup screens. By pressing OPEN the user will be allowed to enter the setup screen. This is abnormal and should not happen under normal conditions.

Once the user is in the setup menu the first setup screen is displayed [Fig. 5].



FIG 2. Password Entry Screen



FIG 3. Numeric keypad to enter password

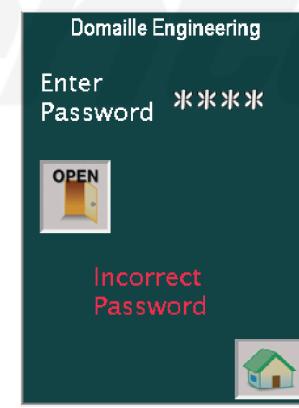


FIG 4. Incorrect Password entered

On this screen the user has the option to choose the following parameters:

- Units of Temperature (Fahrenheit or Celsius)
- “Twin Timer” mode (ON or OFF)
- “Timed” mode, “Wait for Set Point” (checked) or “Start Timer IMMEDIATELY” (unchecked)
- “Timed” mode, heater operation after time done (TURN OFF HEATER (checked) or LEAVE ON (unchecked))
- Audible Alarm after timing (ON or OFF)

Press the box next to the desired parameter to toggle the setting on or off. Once these parameters are set, the controller memory should maintain settings under normal operations.

- The ARROW buttons in the lower left of the screen will navigate the user to the next setup screen.
- The HOME button in the bottom right will return the user to the Main Menu.

By pressing the right ARROW button, the user will be taken to Setup Screen #2 [Fig. 6].

The following parameters are available to be setup:

- “Upper Temp Limit” – maximum temperature allowed to be entered as a set point (0 thru 999)
- “Lower Temp Limit” – minimum temperature allowed as a set point (0 thru 999)
- “Temp Alarm Tolerance” – tolerance +/- around the set point temp for determining the RED or GREEN color of the actual temp display on the “Temp Hold” mode and “Timed” mode



FIG 5. Setup Screen #1



FIG 6. Setup Screen #2

- “Temp Offset Correction” – This is an offset value that is added to the thermocouple reading. Use this parameter during oven temperature calibration to get the Type K thermocouple to read similar to a calibrated thermocouple standard.
- “Ramp/Hold Temp tolerance to Start Hold Time” – This parameter is used as a temperature tolerance to determine when the hold time will start in the “Step & Ramp” mode. The hold time will start when the actual temp equals the desired temp minus the tolerance. Due to PID control slowing gain when approaching programmed set point (to avoid overshoot when ramping towards a temperature set point), a user can set this tolerance to begin the hold time when the actual temp is below the desired hold temperature.

On Setup Screen #3 [Fig. 7] the user can adjust the PID parameters of the oven temperature controller either manually (not recommended) or through auto tune algorithms built into the electronics. To manually adjust the P, I, or D values press the numeric value next to the letter and enter a new number. The range of allowed values is 0 thru 99.9 for each parameter. For a typical oven configured to use the standard Domaille Engineering MT curing tray the values should be approximately P=8, I=4, and D=1, respectively.



FIG 7. Setup Screen #3

To perform an AUTO TUNE of the PID parameters of the oven the user should follow these steps:

- Place the object and tray to be heated in the cure oven while the oven is at the normal start temperature that will be used in the process.
- Set the temperature set point of the oven to the desired final set point.
- Once the setup is ready press the RUN/STOP button to turn the oven on [Fig. 7].
- Immediately press the AUTO TUNE button to put the oven in AUTO TUNE mode (Turn it ON) [Fig. 7].

Allow the oven to ramp to the set point temperature without manual intervention.

After the oven reaches the set point temperature the AUTO TUNE

button will automatically turn itself off and the user will notice that the PID parameters will be changed to new numbers maximizing efficiency in heating the object between the start temp and end set point temp.

On Setup Screen #4 [Fig. 8] the user can adjust the following setup parameters:

- “Temp Hold” Mode (Turns GREEN button on Main Menu ON or OFF)
- “Timed” Mode (Turns GREEN button on Main Menu ON or OFF)
- “Step & Ramp” Mode (Turns GREEN button on Main Menu ON or OFF)
- “Temp Setpoints” (ENABLES and DISABLES users ability to change)
- “Time Setpoints” (ENABLES and DISABLES users ability to change)

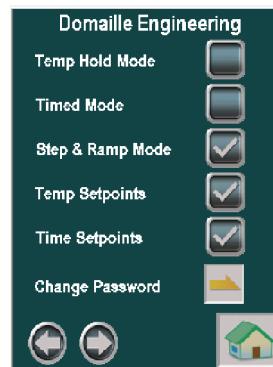


FIG 8. Setup Screen #4

FIG 9. Password and Language Setup Screen

The CHANGE PASSWORD option brings the user to the CHANGE PASSWORD Screen [Fig. 9] which allows the user to enter a new master setup menu password or select which language they want the user interface to operate in. The numeric value for each of the languages is as follows:

1. English
2. Spanish
3. German
4. Polish

Press the BACK ARROW button to leave this screen. Always be sure to write down the master password and put it in a safe and secure location, because without it, the master user will not be able to re-enter the setup menus.

After the setup has been completed, return to the Main Menu screen to begin using the cure oven. See Fig. 1 Main Menu.



FIG 9. Change Password Screen

Temp Hold

The "Temp Hold" screen [Fig. 10] will be displayed after entering the "Temp Hold" mode of the cure oven.

This mode allows for the user to select a temperature set point and to operate the oven at that constant temperature indefinitely. To select the desired temperature, the user should press the set point numeric value and enter the desired set point value on the pop-up numeric keypad [Fig 11].

Once the set point temperature has been selected the user should press the GREEN "RUN/STOP" button to put the oven in RUN mode. Once in RUN mode the oven will attempt to reach the programmed temperature and then hold. As the oven rises in temperature to reach the set point the actual temperature display will turn GREEN once temperature is actually within the alarm tolerance of the set point [Fig 12]. Refer back to the set up instructions on for details on setting the "Temp Alarm Tolerance".

The GREEN LED at the top left of the screen will indicate, when the oven is running or stopped.

The YELLOW mode indicates when the temperature controller is in PID control mode (0) or manual mode (2). This mode is not user selectable and normally should be (0).

The HOME button at the bottom right of the screen will always return the user to the Main Menu and stop the oven heating operation.

Timed Mode

The "Timed" mode screen [Fig. 13] will be displayed after entering the "Timed" mode of the cure oven.

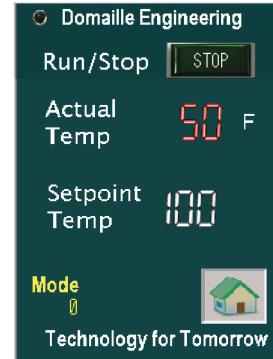


FIG 10. Temp Hold Mode Screen



FIG 11. Numeric Data entry keypad

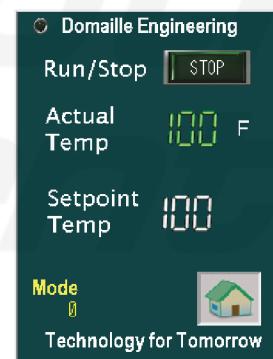


FIG 12. Actual Temp

Contact the professionals at Fiber Optic Center for a quote or to get more details.

focenter.com • 508-992-6464 | (800) 473-4237 • sales@focenter.com

23 Centre Street • New Bedford, MA 02740 USA

Data is subject to change without notice. FOC last update 1/14/2026.

"Timed" mode allows for the user to select a temperature set point and operation time for the oven cure cycle. Depending on the parameters set in the setup menu, the user can select the following options:

- Start timer immediately
- Start timer after temperature set point is reached
- After timer done, turn ON or OFF audible alarm
- After timer done, turn oven heater ON or OFF

Text indicators on the "Timed" mode screen will notify operator of mode options, once selected in the setup menu.

To select the desired temperature the user should press the set point numeric value and enter the set point value on the pop-up numeric keypad [Fig. 14].

To select the desired minutes or seconds on the timer the user should press the MINUTES or SECONDS field and enter the value on the pop-up numeric keypad [Fig. 15 and Fig. 16].



FIG 13. Timed Mode Screen



FIG 14. Numeric Data entry Pad



FIG 15. Numeric Entry for Minutes



FIG 16. Numeric Entry for Seconds

The maximum MINUTES that can be entered are 99 and SECONDS are 59.

To start the time cycle the user will press the GREEN "Start Timer" button in the lower left corner. This will initiate the oven to start heating and start the timer immediately, if in immediate mode or if in "wait for set point" mode the timer will wait until the set point temperature is reached after which the timer will start. The "Reset Timer" button can be pressed at any time to stop the time cycle and return to settings prior to starting the time cycle.

After the time cycle has run its course the time cycle end screen will appear and an audible alarm will sound (if activated). An example of this screen is shown in Fig. 17.

The operator should press the yellow button to stop the alarm and return to the "Timed" mode screen.

Twin Time Mode

The cure oven is also capable of running in a "Twin Time" mode [Fig. 18]. The "Twin Time" mode can be selected in the setup menu.

"Twin Time" mode allows the user to select a temperature set point and two (2) times for the oven cure cycle. "Twin Time" is similar to "Timed" mode except the oven will execute "Time 1" first and then a text box pops up, alerting the user "Time Period 1 Complete. Press Start to Continue" [Fig. 19]. Once the user presses the "Start Timer" button "Time 2" will begin.

To re-start the oven and initiate the second time period the user should press the GREEN "Start Timer" button, in the bottom left of the screen. After "Time 2" has elapsed the "Time Cycle Complete" screen [Fig. 17] will appear. Press the YELLOW button to return to "Twin Time" mode.

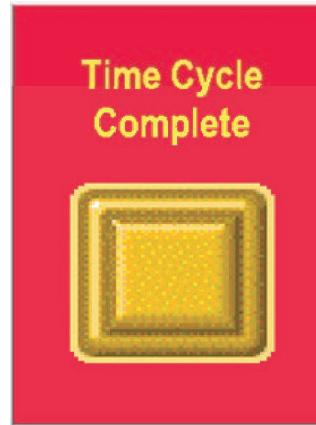


FIG 17. Time Cycle Complete Screen

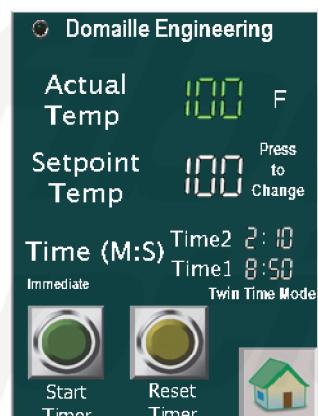


FIG 18. Twin Time Mode

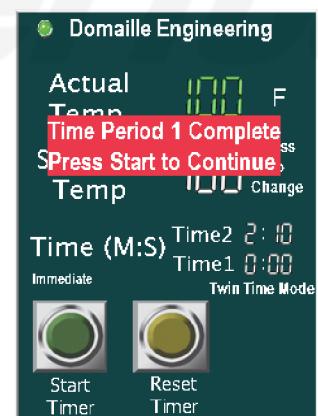


FIG 19. "Time 1" done indicator

Contact the professionals at Fiber Optic Center for a quote or to get more details.

The HOME button at the bottom right of the "Timed" mode screen will return the user to the Main Menu and stop the oven heating operation. While the timed operation is running the HOME button is not active. Pressing "Reset," it will stop the timed operation and the HOME button will re-appear.

Step & Ramp Mode

The "Step & Ramp" mode screen [Fig. 20] will be displayed after entering the step and ramp mode of the cure oven.

This mode lets the user select up to four (4) temperature set points followed by time values with linear ramp settings allowing the oven to operate in a programmable mode over an extended period of time. A text indicator in the top left will allow the user to identify the current step of the overall process. In addition, once a step has started or is completed the text of the step will change to YELLOW [FIG 21].

The "Step & Ramp" mode can accommodate exposure to multiple temperature levels for various times. It allows for easier processing versus manual intervention with timers and temperature changes.

To setup a "Step & Ramp" profile select the desired temperature(s) and/or times by pressing the numeric value displayed on the screen and enter the desired set point value on the pop-up numeric keypad as was done in other modes [Fig. 22].

Figure 23 is a temperature versus time graph showing the ideal desired curve that can be programmed into the cure oven with the "Step and Ramp" mode. Each parameter from the step and ramp screen is a point in the graph. The graph demonstrates four temp and seven cycle times. The initial time to get from the starting temperature to the first set point is handled by the standard PID control parameters

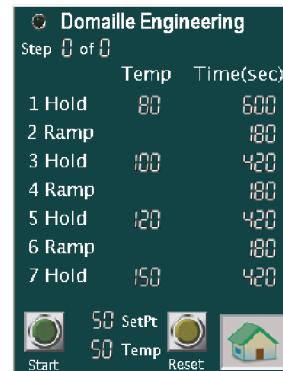


FIG 20. Step and Ramp Mode Screen

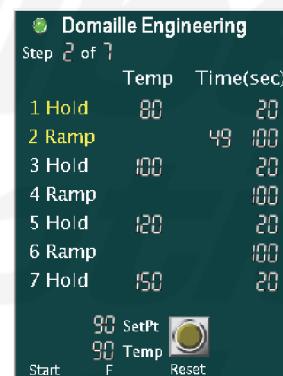


FIG 21. Step & Ramp Step Indicators



FIG 22. Numeric Entry Keypad

of the oven temp controller and the final cooling step is through ambient convection cooling.

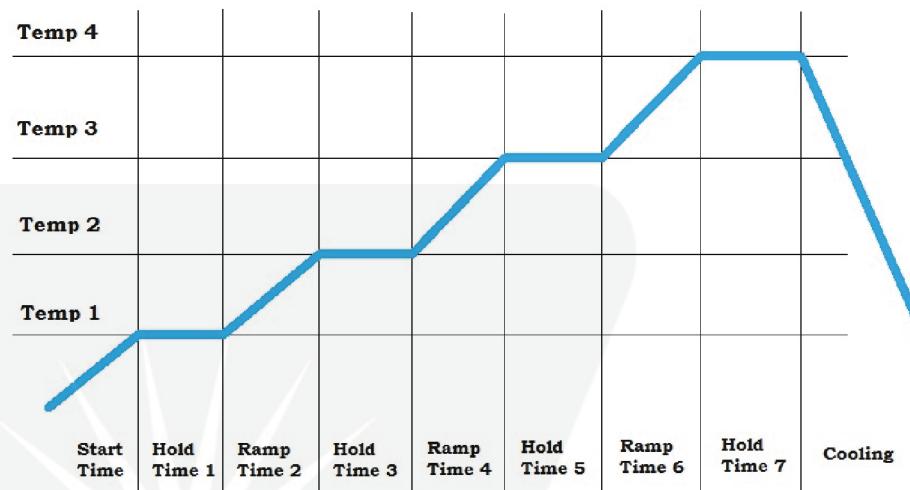


FIG 23. Ideal Step & Ramp curve

The ramps times entered into the oven are linearized by the controller and dynamic set point changes are made based on time in the ramp. The maximum ramp that can be entered is 10° C/minute or 50° F/min. If a user attempts to enter a faster ramp, the "Start" button disappears, an alert message is displayed in place of the GREEN "Start" button [Fig. 24].

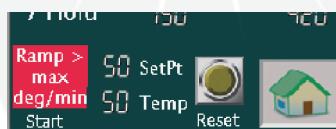


FIG 24. Ramp > Max. Degree/Min.

In a similar alert type mode, the four (4) entered temperatures must increase in value (i.e. the temperature of "Temp 2" has to be greater than "Temp 1"). If a user tries to enter a lower temperature than any of the previous, an alert message will replace the "Start" button [Fig. 25].

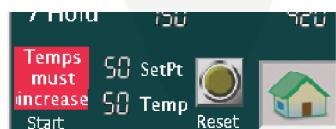


FIG 25. Temperatures must increase

Contact the professionals at Fiber Optic Center for a quote or to get more details.

After the parameters have been set, the user can start the oven into the "Step & Ramp" heating profile using the GREEN "Start" at the lower left of the screen. If the current temperature of the oven is higher than the first temperature set point, an alert message will prevent the user from starting the operation [Fig. 26].

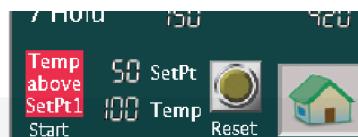


FIG 26. Temperature above Set point 1

Once the oven cools through convection the alert message will disappear and the oven can be started.

Another alert message used on the oven is the "INIT TEMP" alert. This alert is displayed when the oven is ramping at the beginning of the cycle, to the "Temp 1" parameter [Fig. 27].

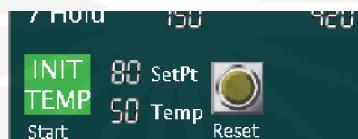


FIG 27. Initial temperature from current temp to "Temp 1"

The "Reset" button can be used at any time to cancel the current temperature profile process.

After the temperature profile has completed its cycle, the time cycle complete screen will be displayed [Fig. 28].



FIG 28. Time Cycle Complete

— Maintenance and Repair

Maintenance of internal electrical parts is not required. Do not disassemble, modify, or attempt to repair the product.

Simple Troubleshooting

Simple troubleshooting of the oven for minor issues is possible by using the following guide:

No power to the curing oven:

- Ensure the power cord is securely attached to both the power supply (wall outlet) and the curing oven Power Cord Outlet (item #3) located on the back panel of the unit.
- Ensure the curing oven Power "ON/OFF" switch/circuit breaker (item #2) located on the back panel of the unit is in the "ON" position.

NOTE: When the circuit breaker trips, the switch reverts back to the "OFF" position.

No Power to the heating element:

- Ensure the thermal overheat switch, located on the right end of the heating element under the protective cover, is not tripped.
- REMOVE POWER TO THE OVEN BY DISCONNECTING AC POWER CORD BEFORE ACCESSING THERMAL OVERHEAT SWITCH.



17

Contact the professionals at Fiber Optic Center for a quote or to get more details.

focenter.com • 508-992-6464 | (800) 473-4237 • sales@focenter.com

23 Centre Street • New Bedford, MA 02740 USA

Data is subject to change without notice. FOC last update 1/14/2026.

► Click here for more details on the Domaille CO-6800 Programmable Epoxy Curing Oven with MT Tray - 220V

- Access the switch by removing the two screws on the right side of the oven body and lifting the cover off.



- If the thermal overheat switch is tripped, reset it by pressing the WHITE button in the center of the switch. See images below.



Contact the professionals at Fiber Optic Center for a quote or to get more details.

focenter.com • 508-992-6464 | (800) 473-4237 • sales@focenter.com

23 Centre Street • New Bedford, MA 02740 USA

Data is subject to change without notice. FOC last update 1/14/2026.

→ Service & Support

Technical Specifications

Machine Height	8.1" (206 mm)
Machine Width	8.25" (210 mm)
Machine Length	21.00" (533 mm)
Power Requirements	1.7 amps; 220-240VAC; 50/60 Hz.
Machine Weight	16.5 lbs (7.48 kg)
Shipping Weight	19.0 lbs (8.61 kg)

Environmental Operating Specifications

Altitude	Up to 2000m
Temperature	5-40° C
Humidity	40-80%
Voltage Fluctuation	+/- 10%
Voltage Transients	To 2500V
Pollution Degree	2 or as restricted or extended conditions apply

Contact the professionals at Fiber Optic Center for a quote or to get more details.

focenter.com • 508-992-6464 | (800) 473-4237 • sales@focenter.com

23 Centre Street • New Bedford, MA 02740 USA

Data is subject to change without notice. FOC last update 1/14/2026.

→ CE Notice (European Union)

Marking by the symbol CE indicates compliance of the Ferrule Cure Oven Model # CO-6800 to the following directives of the European Union:

2004/108/EEC EMC Directive
EN 61010-1:2010
EN 61010-2-010:2010
EN 61326-1:2013
EN55011:2009+A1:2010

Year of CE Marking: 2014

EMC test report: NC1405660.1, NC1405660.2, NC1405660.3

Safety test report: 092-1405559-000