

ONULIS

CrossLink

User Guide



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WARRANTY

The CrossLink comes with a 1-Year Parts Warranty and Email Support. The Warranty only applies to the CrossLink machine. All replacement parts are covered for the 30 days or by the remaining time in an existing Warranty, whichever is greater. Warranty is voided by improper use, physical damage, and incorrect electrical connection.

DISCLAIMER

User acknowledges that the contents of this document and all Onulis products are subject to its standard terms and conditions of sale, available at <https://onulis.com/legal/terms-and-conditions-of-sale>, and incorporated herein by reference.

Specifications in this document are subject to change without notice.

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To ensure proper use of your Onulis system, please read through the entire User Guide prior to machine installation and operation.

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For any questions about your purchase, please reach out to the following:

- **General Inquiries:** info@onulis.com
- **Support Request:** maintenance@onulis.com
- **Purchases:** orders@onulis.com

WARNING LABELS

SYMBOL	MEANING		
 <table border="1" data-bbox="280 363 467 527"><tr><td>CAUTION</td></tr><tr><td>Hot Surface. Do NOT touch. Allow to cool before servicing.</td></tr></table>	CAUTION	Hot Surface. Do NOT touch. Allow to cool before servicing.	CrossLink is an oven. When operating, surfaces will be hot. Use caution. Do not touch heating elements or internal components when hot.
CAUTION			
Hot Surface. Do NOT touch. Allow to cool before servicing.			
	Wear protective nitrile or neoprene gloves when handling uncured resin or operating CrossLink.		
	Wear protective goggles when handling uncured resin or operating CrossLink.		

SAFETY PRECAUTIONS

This system is intended to thermally cure UV resin 3D printed parts.

Heat

- CrossLink is an oven designed for thermally curing UV resin 3D printed parts. Interior surfaces of the oven become hot enough to cause burns. Use caution.
- Remove all packaging materials from the system before operating. Keep clothes, plastics, and paper parts away from parts of the oven that may become hot.
- During and after use, do not touch or let clothing or other flammable materials contact heating elements or interior surfaces of the oven.
- Never use your CrossLink system for warming or heating a room.
- Do not line the oven walls, racks, bottom, or any other part of the oven with aluminum foil or any other material; doing so will disrupt heat distribution, creating poor thermal curing results and can cause permanent damage to the system.
- Do not store or use combustible materials, gasoline, or other flammable vapors and liquids in the vicinity of the CrossLink.

Power

A stable, reliable source of power is required. Power to the system (or the UPS) should be supplied directly from the main electrical panel. Other electrical outlets should not be connected to the line.

System Power Rating: AC110V, 11A, 60 Hz

- Only connect the power plug to an outlet that has a ground wire. If not, the operator may be exposed to serious danger from electric shock.
- Ensure the power cord and plug are in good condition and free from damage before use. Do not use if cord is damaged.
- Unplug the machine when not in use. Unplug the machine before performing any cleaning or maintenance.
- Always use the power cord provided with the machine to ensure proper operation and safety.
- Keep the power cord away from high temperatures and/or water.
- Do not operate the machine if any electrical components are wet or damaged.

Machine Operation

- This machine has been designed for indoor and non-extreme temperature conditions only. Store and operate machine in 65 – 95°F (18 – 35°C) temperatures.
- Place and operate the device on a clean, level surface.
- All persons operating the CrossLink should know the location of first aid and emergency equipment and how to use it.
- Should a fire occur, leave the door closed and turn the CrossLink off. If the fire continues, use a fire extinguisher.

Maintenance

- Keep the equipment clean. Window glass should be cleaned with soft cotton fabric. Do not clean with corrosive or flammable solvents; this could cause a chemical reaction or a glass scratch.

MACHINE SPECIFICATIONS

Performance

Convection Mode	Forced Convection
Temperature Range	5°C - 300°C (41°F - 572°F)
Temperature Fluctuation	±1 in the range of 50 - 300°C
Temperature Accuracy	0.1°C (32.18°F)
Temperature Uniformity	2%

Structure

Shell	Cold-rolled steel plate with electrostatic spray surface
Insulation Layer	High-quality rock wool board
Heater	Stainless steel electric heating tube
Power	1.2W
Fume Extraction Hole	φ30 mm behind (with test hole function) 50 mm test hole on the side

Controller

Control System	Touch screen; programmable, pre-programmed
Temperature Control Method	Intelligent PID
Temperature Display Method	Measured Temperature: Top row of LED display Set Temperature: On LED numeric display Set Time: Displayed on the instrument
Timer	0 - 99 hrs. or 0 - 9999 mins.
Operating Function	Ambient Temperature: 10 - 30°C (50 - 86°F) Humidity: <70%
Sensor	pt100; Instrument has an over-temperature alarm function

Specifications

Internal Dimensions	420 x 450 x 350 mm (16.5 x 17.7 x 13.8 in.)
External Dimensions	600 x 790 x 545 mm (23.6 x 31.1 x 21.5 in.)
Interior Volume	70L
Number of Shelves	2
Minimum Spacing Between Shelves	48 mm (1.9 in.)
Load-Bearing Capacity of Shelves	15 kg (30 lbs.)
Power	AC110V, 11A, 50 - 60 Hz
Weight	50 kg (110 lbs.)

MACHINE OVERVIEW

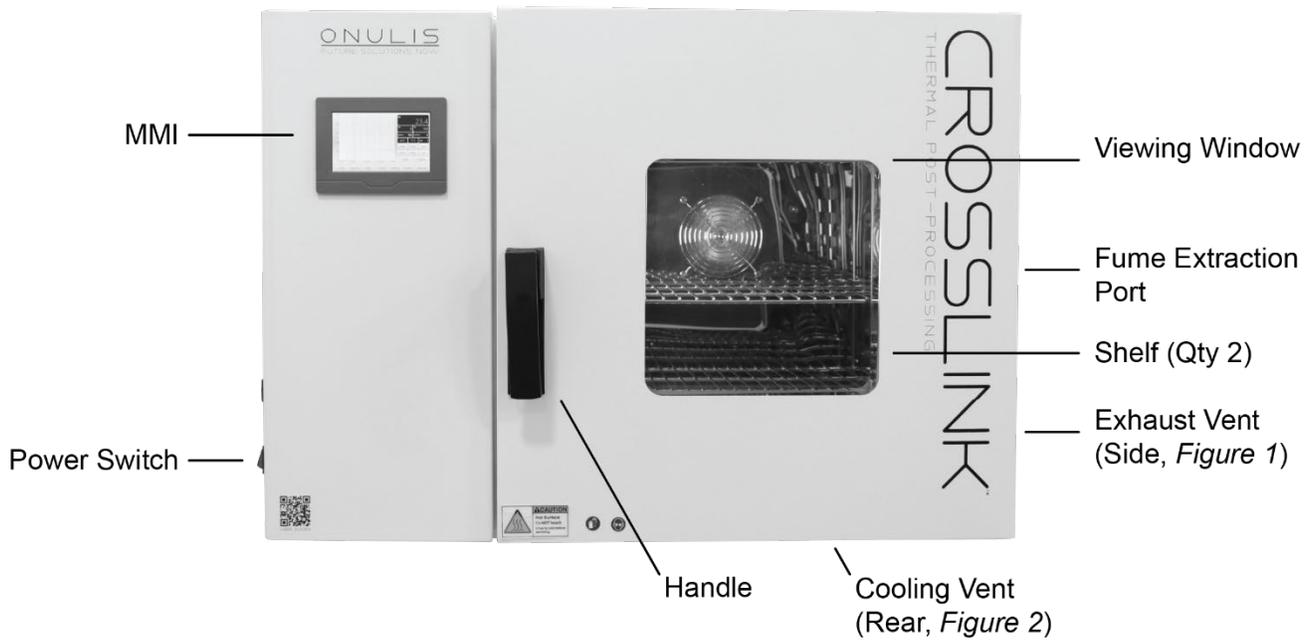


Figure 1
Exhaust Vent (Side)



Figure 2
Cooling Vent (Rear)



INTERFACE OVERVIEW

ABBREVIATION	MEANING
PV	Current Temperature
MV	Power To Heating Unit (0 – 100)
SV	Set Temperature Value
SetTime	Amount of Time in Current Curing Step
RunTime	Amount of Time Elapsed in Current Step
SP#	Set Point, Temperature Value Between Each Time Period
T-#	Amount of Time System Will Stay at Set-Point



PV: Current Temperature

MV: Power To Heating Unit (0 – 100)

SV: Set Temperature Value

SetTime: Amount of Time in Current Curing Step

RunTime: Amount of Time Elapsed in Current Step



SP#: Set Point, Temperature Value Between Each Time Period

T-#: Amount of Time System Will Stay at Set-Point

INSTALLATION GUIDE

1. Unbox product. Remove all packaging materials from outside and inside machine.
2. Put CrossLink on a flat, solid table, at least 24" away from a wall.
3. Plug power cord into a grounded outlet.
System Power Rating: AC110V, 11A, 50 - 60 Hz
4. Optional: Attach an external exhaust fan to the Exhaust Vent to purge air inside oven prior to opening door. Open the Cooling Vent prior to turning on the exhaust fan.

OPERATION



Turn on CrossLink.

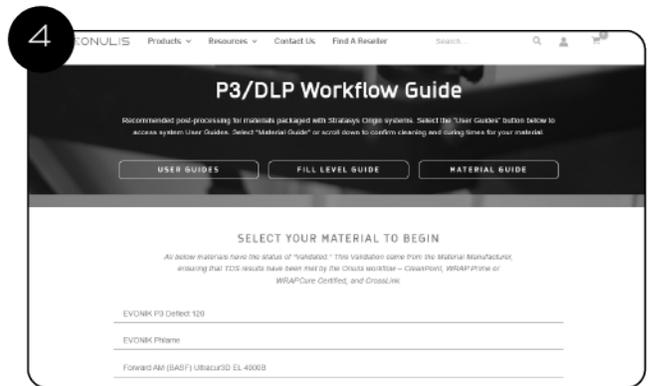


Scan QR code on Machine to find the program your 3D printed material requires.

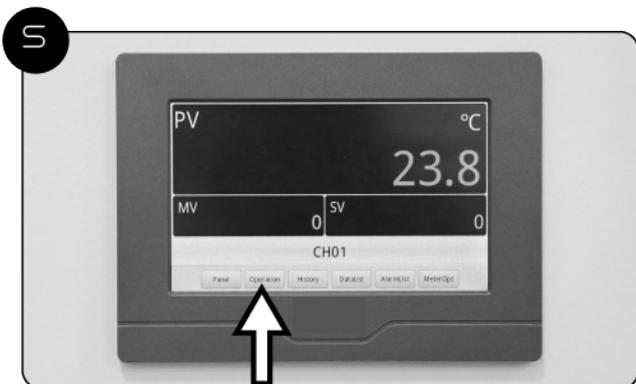
Link: <https://onulis.com/p3-dlp-workflow-guide>



Place part(s) inside of CrossLink.



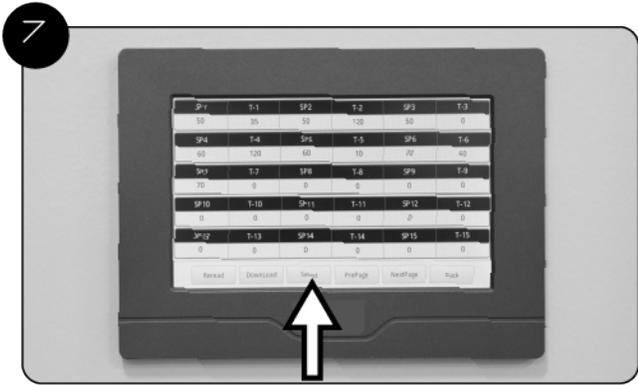
On the Onulis website, select your material. Navigate to the "Thermal Curing" section to identify what Program your material requires.



On the CrossLink interface, select Operation.



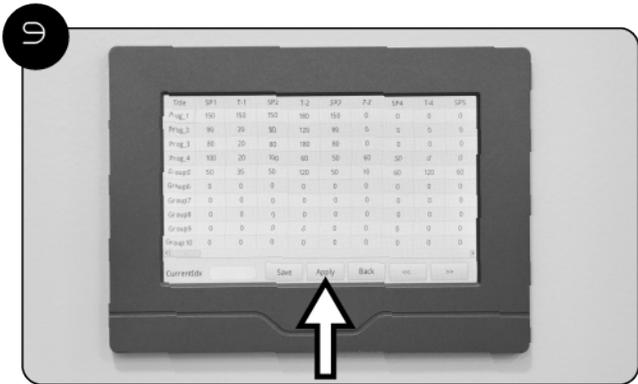
Select Program.



Select the Select button to view system Programs.



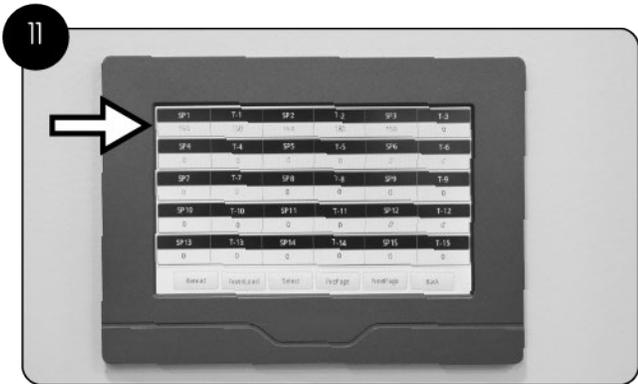
Select the appropriate program name, as per the Onulis website in step 4.



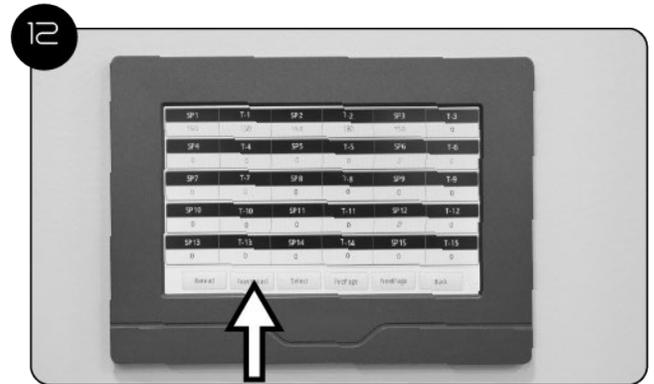
Select Apply.



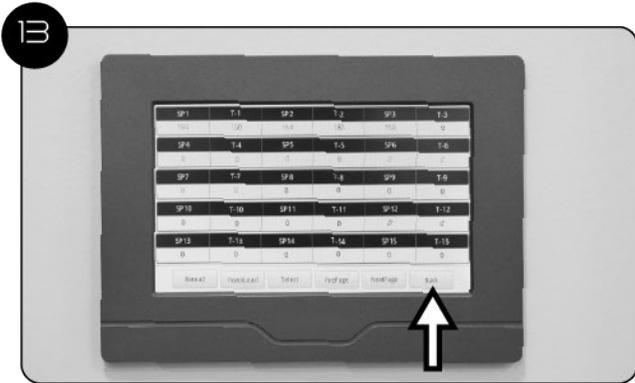
Select Back.



Confirm the Program is applied to the CrossLink by reviewing the text on the screen. SP1 shows temperature for Step 1. T-1 shows the run-time for Step 1. SP2 shows temperature for Step 2. T-2 shows run-time for Step 2, etc.



Select Download.



Select Back to return to main screen.



Select Run to run Program.

15 Optional: At the end of the heating cycle(s) for any program, if a faster ramp down is desired, open the Cooling Vent



When the thermal cycle is complete, remove parts from Machine. Turn off CrossLink.

CUSTOM PROGRAMMING

For any Custom Programming assistance, please contact Onulis at info@onulis.com.



On the CrossLink interface, select Operation.



Select Program.



Select the Select button to code new Program.

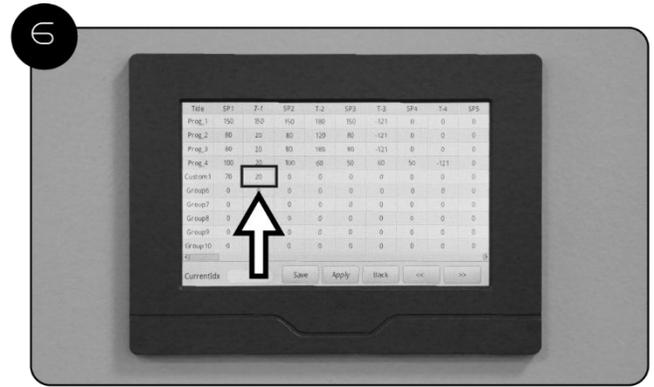
4 Select the "Title" of the first blank program (Group5 in example). Type in your new Program Name. Hit "Enter" when complete.

See Steps A - B below.

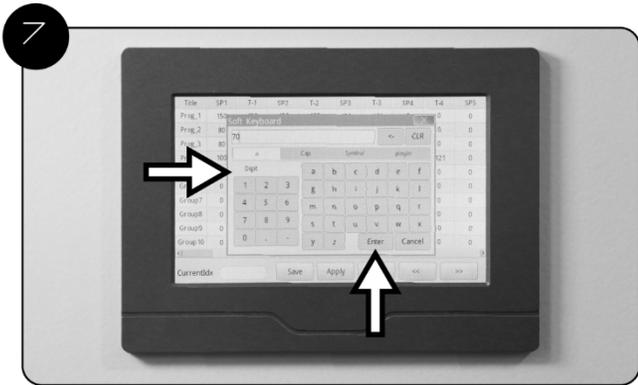




5 Select SP1 and type in the temperature that you would like the oven to be set to. Hit Enter to apply.



6 Select T-1 and type in the "Ramp Up" time for the oven to get to SP1. Hit Enter to apply. A minimum of 20 minutes is recommended.



7 Select SP2 and type in the next temperature you would like the oven to be set to. Hit Enter to apply.

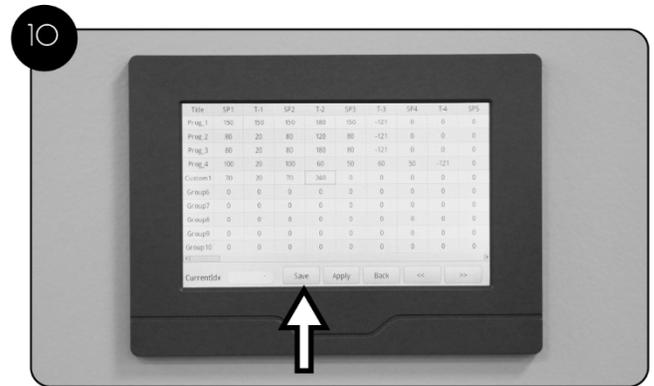


8 Select T-2 and type in the amount of time you would like the oven to remain at SP2. Hit Enter to apply.

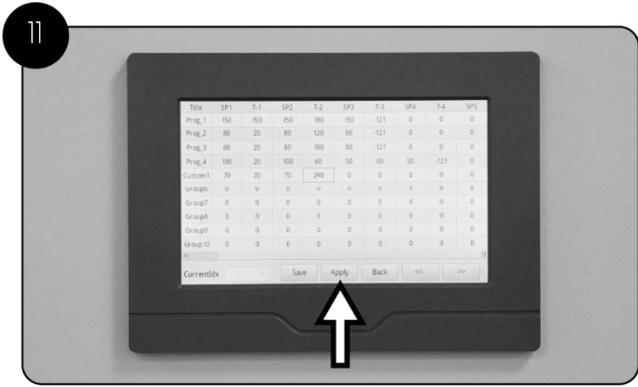
If you would like the oven to remain at a static temperature, type in the same value added to SP1.



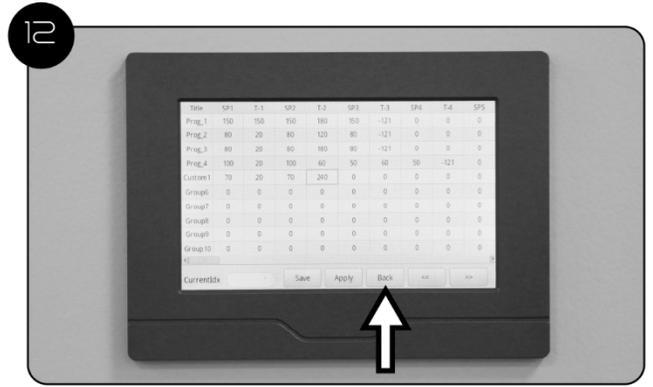
9 Repeat process as needed. To end the Program, set both SP and T values to be 0.



10 Select Save to Save Program.



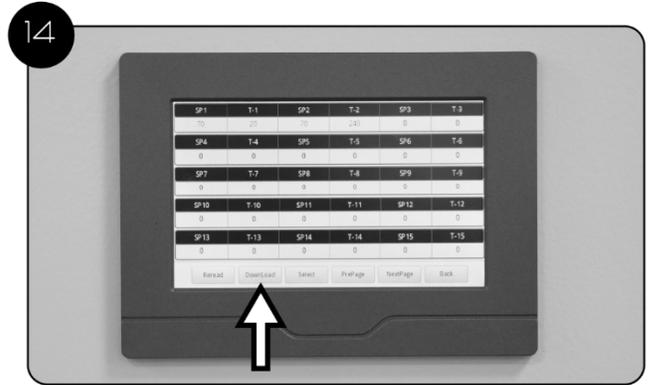
Select Apply to apply Program.



Select Back.



Confirm the Program is applied to the CrossLink by reviewing the text on the screen. SP1 shows temperature for Step 1. T-1 shows the run-time for Step 1. SP2 shows temperature for Step 2. T-2 shows run-time for Step 2, etc.



Select Download.



Select Back to return to main screen.



Select Run to run Program.

