ONULIS
FUTURE SOLUTIONS, NOW

WRAP Pro & Prime

User Guide

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TRADEMARK

PATENTS

U.S. Patent No. 12,037,465 B2 and Patents Pending.

LIABILITY

The information provided herein is for reference only. Onulis may, at any time and without notice, make changes to this document. Onulis shall not be liable for errors contained herein or for incidental, consequential, indirect, or special damages, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

It is the responsibility of the user to determine that a material is safe, lawful, and suitable for the intended application, and to identify the proper material disposal method, consistent with local environmental regulations.

Except as provided in Onulis' standard terms and conditions of sale, Onulis shall not be responsible for any loss resulting from any use of products described herein.

WARRANTY

The WRAP comes with a 1-Year Parts Warranty and Email Support. The Warranty only applies to the WRAP machine. Irradiance values of the WRAP lights are covered for manufacturing defects for 1-Year. Consumables are covered for manufacturing defects for 30 days. 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 the use of third-party consumables, improper use of resins, physical damage, or incorrect electrical connection.

MAINTENANCE PLAN

The WRAP Maintenance Plans offer 1-Year Maintenance and Email Support. The Plan only applies to the WRAP machine. The Plan begins after the WRAP machine Warranty expires. All replacement parts are covered for the 30 days or by the remaining time in an existing Maintenance Plan, whichever is greater. Maintenance Plan is voided by the use of third-party consumables, improper use of resins, 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.

TABLE OF CONTENTS

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

* Settings only available for WRAP Prime systems.

SUPPORT

General Inquires	E: info@onulis.com Ph: 650.479.9894 Onulis 16842 Hale Ave. Irvine, CA 92606
Technical Assistance	E: maintenance@onulis.com Ph: 650.479.9894
Purchases	E: orders@onulis.com Ph: 650.479.9894

SYSTEM MODES

MODE	USE
Print	Transform unused and expired UV resin into fully cured plastic stock.
Cure	UV post-cure P3/DLP parts to material manufacturer’s specifications.

UV LED ARRAY CERTIFICATION

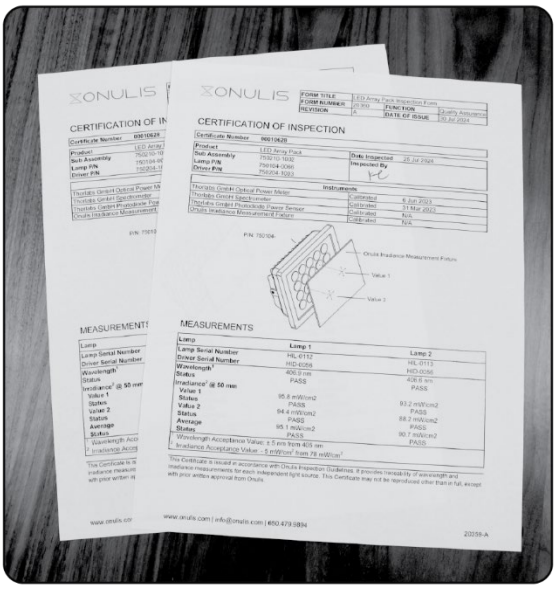
To ensure that resin is fully cured in Print Mode and that the system meets material manufacturer's technical data sheet (TDS) requirements in Cure Mode, each UV LED Array and Driver Pack is audited prior to machine shipment. Certification of Inspection Forms are included with each shipment.

PASS Requirements:

- Wavelength Acceptance Value: ± 5 nm from 405 nm.
- Irradiance Acceptance Value: ± 5 mW/cm^2 from 78 mW/cm^2

To audit the system, Onulis offers the Self-Audit Kit and UV Recharge Pack. Both are available on the Onulis website or through the Onulis Reseller Network.

Inspection Form Example Below:



WARNING LABELS

SYMBOL	MEANING
	Wear protective nitrile or neoprene gloves when handling uncured resin or operating printer.
	Wear protective goggles when handling uncured resin or operating printer.
	Vapors from uncured resin can irritate the respiratory system. WRAP's carbon filtration system limits vapors. Read safety precautions before operating machine.
	Ultraviolet radiation is emitted from machine's UV lamps. Read safety precautions before operating machine.

SAFETY PRECAUTIONS

In Print Mode, this machine is intended for unused or expired UV/EB resin. In Cure Mode, it is intended to post-cure P3/DLP parts. Do not use this product for anything other than its intended purpose. If the WRAP is not operated as specified, the user's safety may be compromised.

Material Handling

- Always wear safety goggles, nitrile or neoprene gloves, and a proper face mask when handling resin.
- It is recommended that an eye wash station be located near the printer for emergency use.
- Keep resin away from areas where food or beverages are stored, prepared, or consumed.
- Clean up any resin spills with disposable towels or another absorbent, non-renewable material. Rinse the spill area with isopropyl alcohol (IPA), followed by soap and water. Dispose of absorbent material in accordance with local regulations.
- Any contaminated clothing should be professionally cleaned; do not wash at home. Absorbed resin may re-expose user when items are worn.
- Resin vapors can be irritating to the respiratory system. If irritation occurs, seek fresh air immediately.
- Consult your local municipality to confirm disposal of hard plastic stock.

Power

- Follow all power and grounding requirements noted in the Electrical Requirements section.
- Know the location of equipment branch circuit interrupters or circuit breakers and how to turn them on and off in case of emergency.
- 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. Do not defeat or bypass the ground lead.
- Keep the power cord away from high temperatures and/or water.
- If the power cord is damaged, do not operate machine.
- Important: Only use the supplied mains cord or one with equivalent electrical ratings. Using an undersized or improper cord can cause fire or electric shock.

Environmental Conditions

- This machine has been designed for indoor and non-extreme temperature conditions only. Store and operate machine in 65 – 95°F (18 – 35° F) temperatures, with a relative humidity range of 30% to 70% non-condensing. Maintain recommended range of temperature and humidity in equipment area.
- Do not operate or store machine in direct sunlight.
- This equipment is designed for use at altitudes of up to 2000 meters (6,561 feet) above sea level. Operation above this altitude may affect cooling performance, insulation clearances, or other safety-related parameters. Users should not operate the product above 2000 m unless specifically approved by Onulis.
- The machine is designed for use in environments with Pollution Degree 2, as defined in IEC 60664-1.
- Pollution Degree 2 environments are areas where only non-conductive pollution occurs under normal operating conditions. Temporary conductivity caused by condensation may occasionally occur.
- Although the machine contains carbon filtration, harmful fumes may still be emitted during machine loading and operation. Operate machine in a well-ventilated area, away from people. An Exhaust Adapter Kit is available for purchase on the Onulis website.

Machine Installation & Operation

- System weight is 60 lbs. Use caution when lifting or carrying it during installation. A two-person lift is recommended.
- Keep fingers and all other body parts clear of door when opening and shutting. This product is rated IP20 in accordance with IEC 60529.
    - IP2X: Protected against solid objects greater than 12.5 mm in diameter (e.g., fingers or similar objects).
    - IPX0: Not protected against water ingress.
- Do not attempt to open the door during machine operation.
- If door lock fails, do not operate machine.
- Clean Drip Catch by spraying with isopropyl alcohol after every use in Print Mode.
- UV lamps will remain hot after use. Do not touch.
- UV lamps emit dangerous radiation. In the case of a system failure resulting in the UV lamps remaining on when the door is open, do not stare directly and immediately shut down unit.
- All persons operating the WRAP should know the location of first aid, emergency equipment, and of fire extinguishers and how to use them. Use only BC type extinguishers on electrical fires.
- If the equipment is used in a manner not specified by the Onulis, the protection provided by the equipment may be impaired.

FIRST AID FOR UNCURED RESIN EXPOSURE

Avoid direct contact with uncured resin. If contact occurs, wash the area immediately and thoroughly with water, and follow the first aid instructions below. If large areas of skin have been exposed, or in the case of prolonged contact, seek medical attention. If contact with eyes occurs, seek medical attention. If ingestion occurs, seek medical attention. If respiratory irritation occurs, seek medical attention.

Contact with Skin

If uncured resin comes in contact with skin, wash the affected area immediately and thoroughly with soap and cool water. When cleansing skin, pay attention to areas of the body that are not easily cleaned (hair, ears, nose, etc.). Remove any contaminated clothing.

- Do not use hot water. Cool water prevents skin pores from opening, making it difficult for uncured resin to penetrate the skin.
- Do not use solvents to clean skin.
- If skin contact results in prolonged irritation, seek medical attention.
- Avoid accidental transfer of uncured resin from the hands to other areas of the body and other surfaces.
- Professionally clean contaminated clothing; do not wash at home.
- Dispose of contaminated shoes or leather items in accordance with local regulations.

Contact with Eyes

If uncured resin comes in contact with eyes, flush immediately with cool water for 15 minutes and seek medical attention. Avoid sources of ultraviolet radiation (sunlight, fluorescent light, etc.).

The use of contact lenses when handling uncured resin is not recommended. If resin comes in contact with eyes when contact lenses are worn, immediately remove and follow the above cleaning procedure.

- Dispose of contaminated contact lenses.
- Do not wear contact lenses until eye irritation disappears.

Respiratory Irritation & Ingestion

Vapors from uncured resin can irritate the respiratory system. Always wear a proper face mask when handling uncured resin. In the case of ingestion, seek medical attention immediately.

MACHINE OVERVIEW

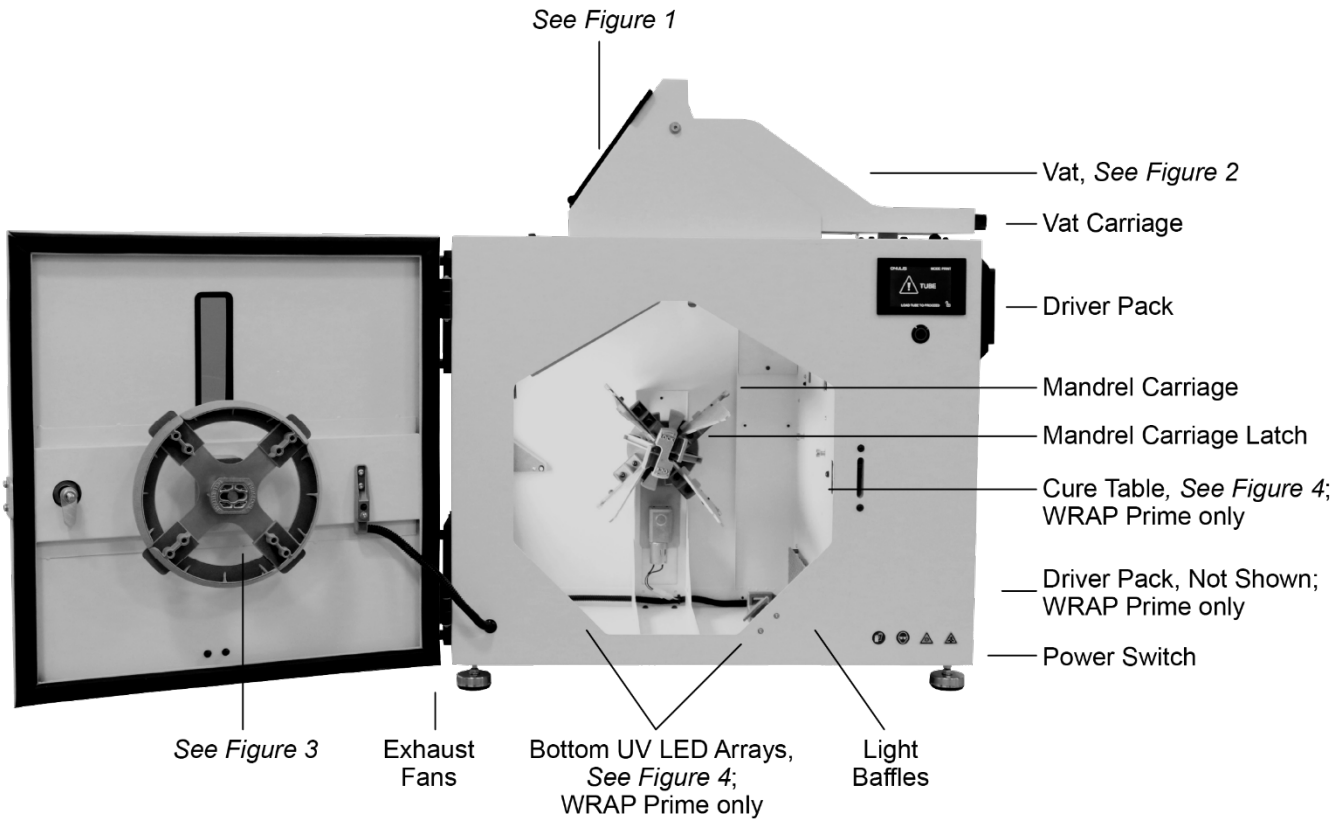


Figure 1

Figure 2

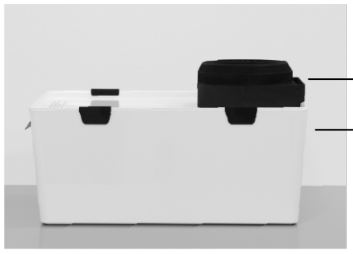


Figure 3

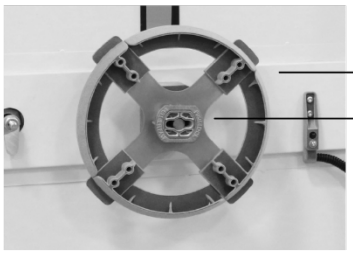
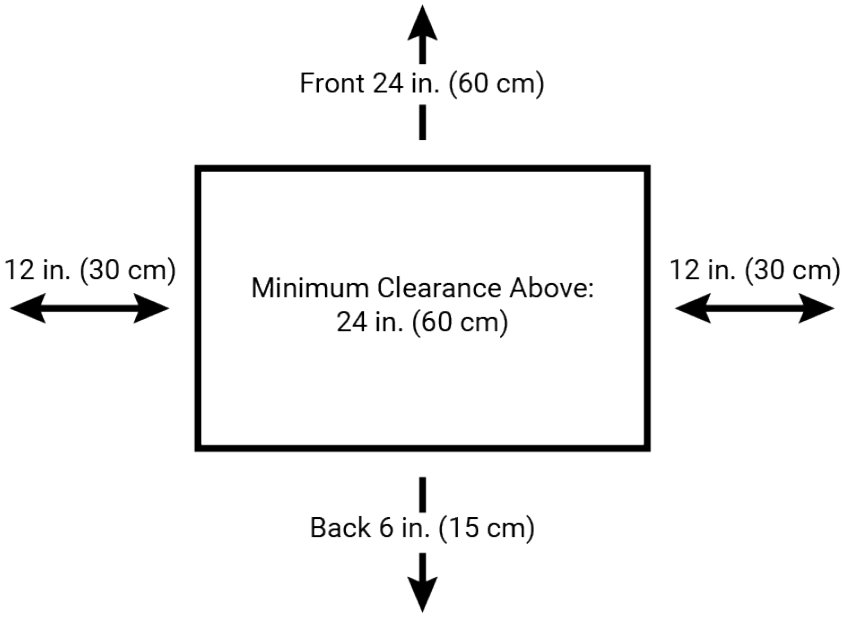


Figure 4

MINIMUM OPERATIONAL CLEARANCES

Sufficient rear and side clearances allow for proper air circulation, while sufficient top and front clearance allows for enough room to operate machine.



ELECTRICAL REQUIREMENTS

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.

This printer is designed to operate from a mains supply voltage within ±10% of the nominal voltage. Ensure that the supply voltage remains stable and does not fluctuate beyond this range to maintain proper performance and prevent damage.

System Power Rating: 100 - 120 VAC, 50 - 60 Hz, 6A, 1 phase

Fuses

The printer uses two 10A 250V fuses.

Grounding

The printer is grounded through a single-phase, AC plug. Make sure that the AC outlet is properly grounded, in accordance with local electrical codes. This machine is rated for Overvoltage Category II, in accordance with UL 61010-1. To ensure compliance, the printer should only be connected to properly installed and earthed mains outlets.

Neutral to Ground Rating: 0 volts – not to exceed 3 volts

INSTALLATION

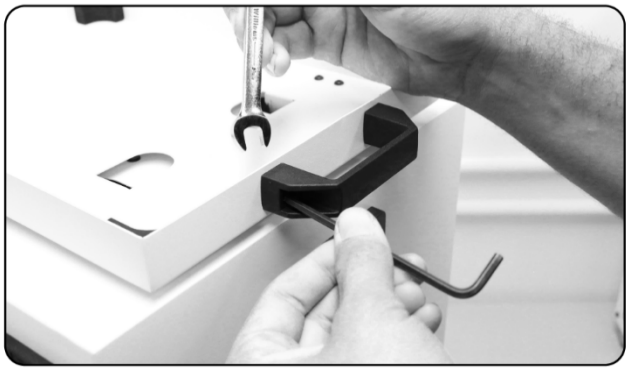
1. **Unbox product. Remove all packaging materials from outside and inside of machine.**

2. **Ensure the contents of shipment:**

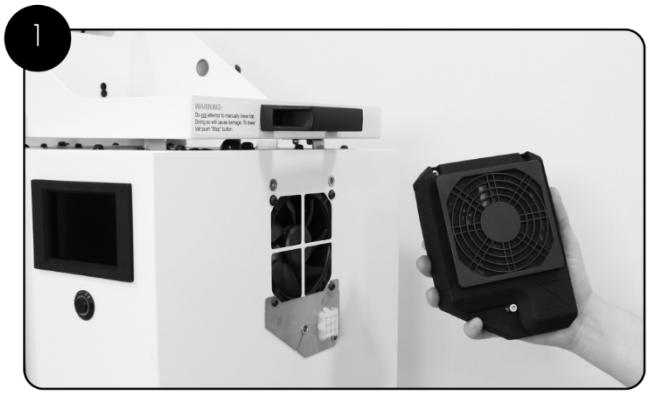
    a. WRAP Pro:
        - ❑ Certified LED Arrays (2) & Driver Pack (1)
        - ❑ Calibration & Traceability Documentation for LED Arrays
        - ❑ Low Viscosity Vat
        - ❑ Vat Viscosity Testing Tool
        - ❑ Vat Carriage Handle
        - ❑ Vat Cleaning Tool
        - ❑ Disposable Tubes (3; 1 in machine, 2 in separate container)
        - ❑ Disposable Filler Filter (3)
        - ❑ Disposable Light Shroud (3)
        - ❑ Plastic Bottle for Isopropyl Alcohol
        - ❑ Scraper
        - ❑ Power Cord

    b. WRAP Prime Upgrade Kit:
        - ❑ Every Item Listed Above
        - ❑ WRAP Prime Badge
        - ❑ Certified LED Arrays (2) & Driver Pack (1)
        - ❑ Calibration & Traceability Documentation for LED Arrays
        - ❑ Rotating Cure Table
        - ❑ Static Table

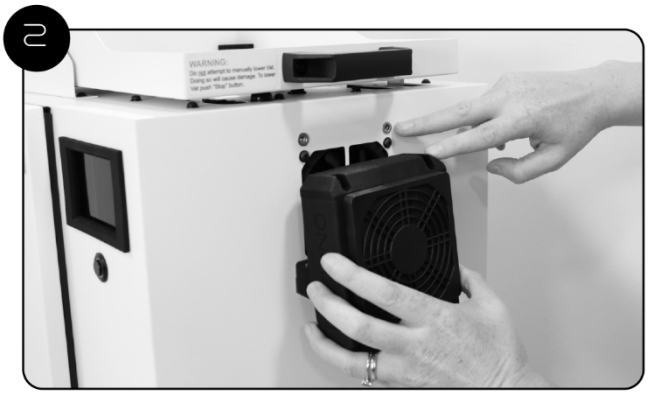
3. **Put the WRAP on a flat, solid table. Attach the handle to the Vat Carriage, as shown below. Do not block exhaust fans. To avoid unwanted effects of natural UV light, do not place machine near windows or in direct sunlight.**



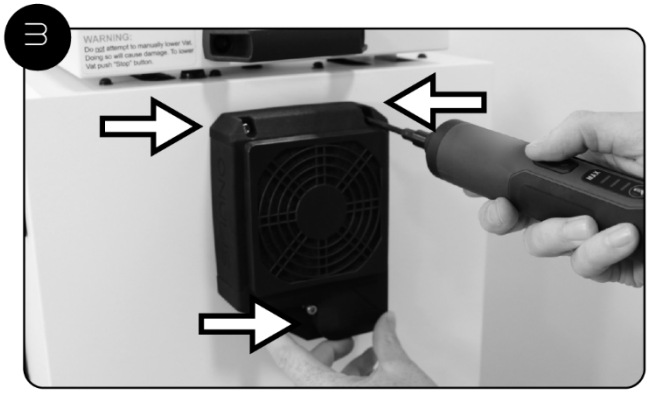
4. Install the Driver Pack.



The Driver Pack for the top of the machine is packaged inside the machine.



Line the screws in the Driver Pack up with the mount holes on the machine.

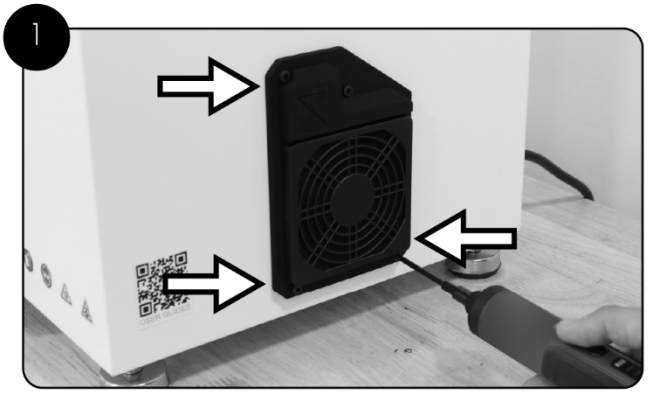


Tighten all three screws. Locations pictured above.

Final result pictured above.

For WRAP Pro users, skip to step 6.
For WRAP Prime users, continue below.

5. WRAP Prime Upgrade Kit Installation: Install Driver Pack and Lower UV LED Arrays.

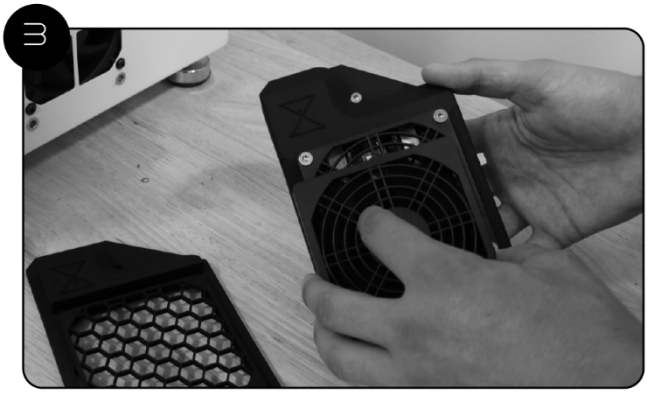


Install the Lower Driver Pack.

Remove fan filter from fan cover.

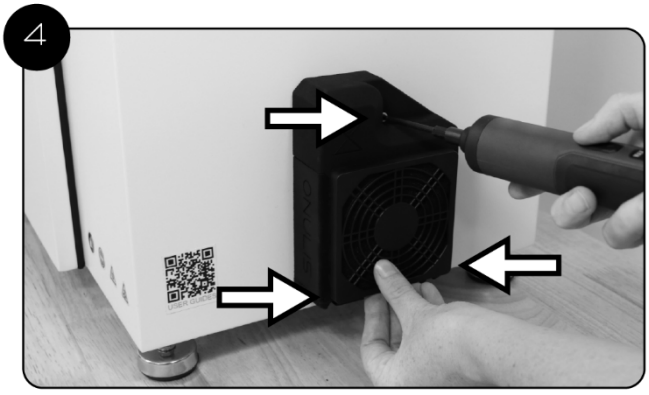
Remove all three screws from bottom cover.
Locations pictured above.

3



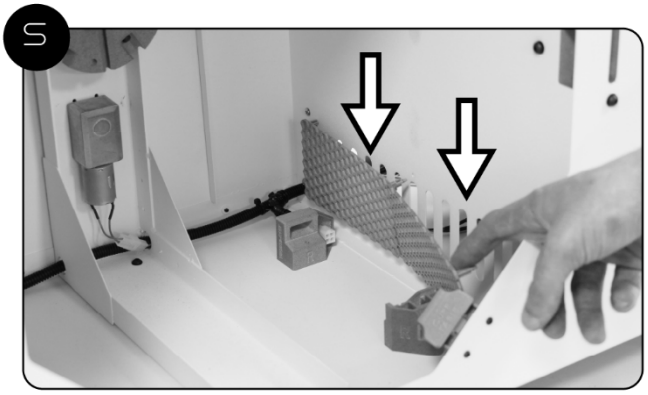
Attach fan filter to Driver Pack.

4



Line the screws in the Driver Pack up with the mount holes on the machine. Locations pictured above.

5



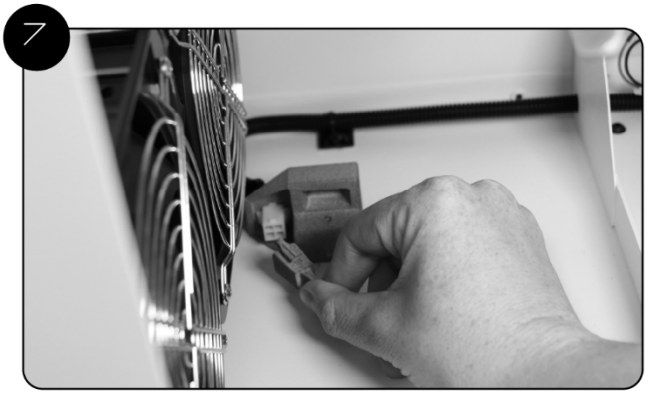
Remove the two lower light baffles by gripping and pulling out the individual pegs from their mounting holes.

6

Install the Lower UV LED Arrays.

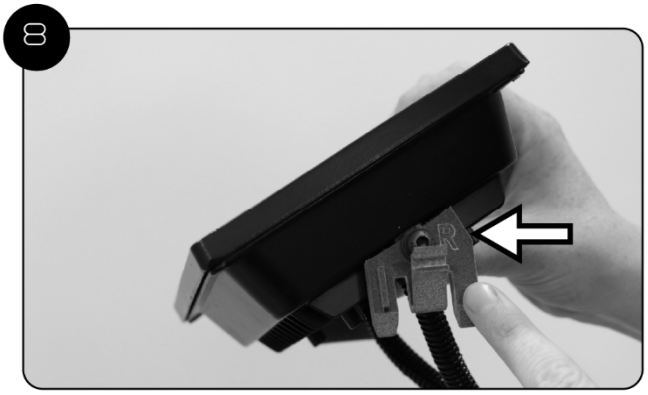
Push down lever to remove cover. Repeat on other side.

7



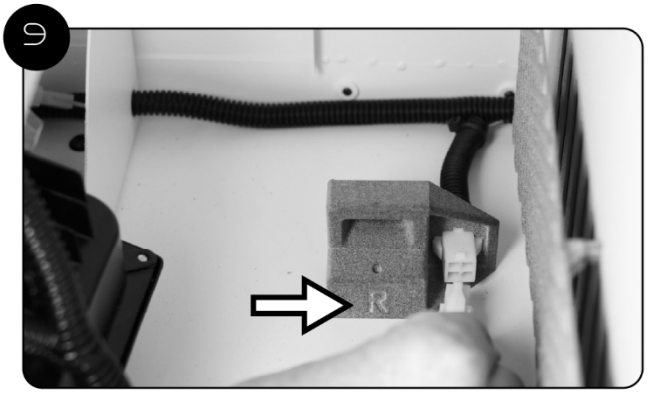
Pull to remove plug cover. Repeat on other side.

8



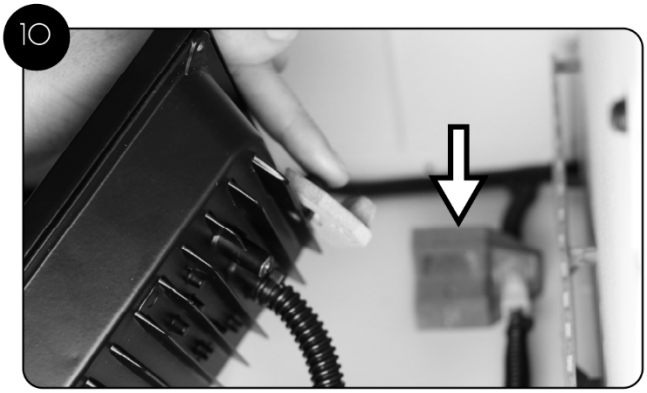
Each light is unique per side. Identify label on side of light to determine where it should be installed.

9



Plug cable on light into corresponding socket in back of machine.

10



Insert locator on light mount to corresponding socket in back of machine.

Note: Side identification.

11

Insert plug on front of light into corresponding socket in front of machine.

Repeat steps 8 – 11 on other side.

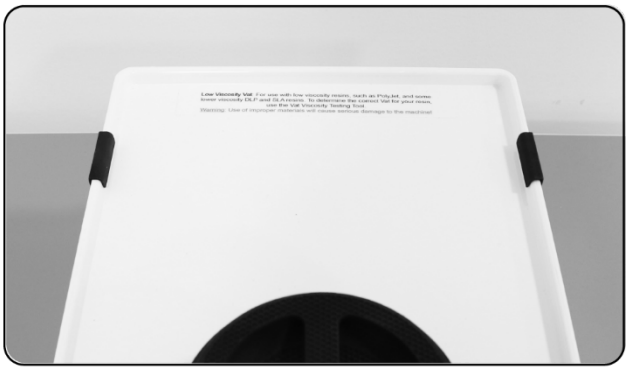
6. Level machine, as shown below. Adjust machine feet as necessary.

7. Plug power cord into grounded 100 – 120 VAC outlet.

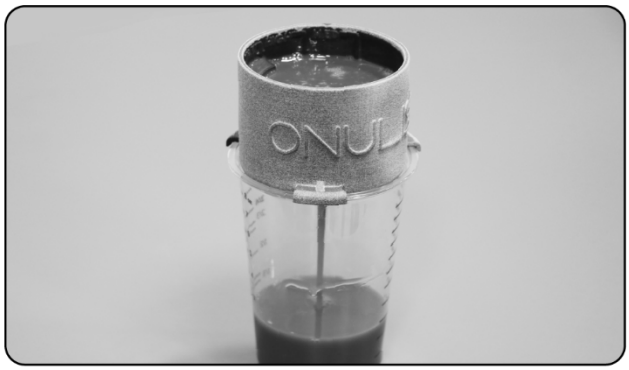
1. Selecting the Correct Vat

Determine the viscosity of your resin before filling the Vat. The Low, Medium, and High Viscosity Vat are designed for specific material properties. Only pour a material into a Vat that matches the measured viscosity. As resin sits its viscosity can change. Pouring resin into the incorrect Vat will cause serious damage to the machine.

To determine the correct Vat for your resin, use the Vat Viscosity Testing Tool. Refer to Vat Viscosity Testing Tool User Guide for instructions or see page 20.



Vat Identification Label can be found on the top of Vat. See above.



Pictured Above: Vat Viscosity Testing Tool

Note: WRAP Pro and Prime ships with the Low Viscosity Vat. The Medium and High Viscosity Vat are available through your local reseller, or on the Onulis site.

2. Mix Resin Prior To Printing

It is recommended that all materials are mixed with unused (“waste”) resin prior to printing. Specific Stratasys PolyJet materials, such as GelMatrix, are too instable to cure on their own.

Additionally, to ensure a consistent print, it is highly recommended to mix your resin prior to filling the Vat. When resin sits, mineral oil rises to the surface of the mixture. Stirring the resin prevents an excess of mineral oil in each print.

Use a paint mixer to stir the resin.

Example on the right.

3. Disposable Light Shroud

The Disposable Light Shroud is designed to mitigate cured resin droplets on the internal walls of the WRAP.

During normal use, when uncured resin droplets release from the Drip Comb, small micro-drops will randomly land on various internal surfaces of the WRAP. These drops are formed through a break in the resin's surface tension when the drop separates from the Drip Comb. These droplets are fully cured and release easily from various surfaces.

For Light Shroud installation instructions, refer to page 18. For WRAP cleaning instructions, refer to the PM Kit User Guide.

Very Important: The Light Shroud is a disposable item and should be replaced every time the Disposable Tube is replaced.

4. Disposable Tube

The Disposable Tube should be replaced after every use.

5. Essential Machine Operation

Important: When transferring the Vat to and from Vat Carriage, always keep the Vat level. Tilting may cause the uncured resin to spill.

The position of the Vat Carriage during machine operation is shown below.

Vat Carriage in POWER OFF or STOP position. Door is unlocked. Only open machine door when Vat Carriage is down.

Vat Carriage in POWER ON or PRINTING position. Door is locked.

6. Solid Plastic Stock

The solid plastic stock printed on the WRAP is fully cured resin, and safe for disposal[1] as standard household waste.

When curing PolyJet waste resin that has support mixed in, there may be small amounts of mineral oil on the surface of the solid plastic stock. The resin is fully cured. If desired, mineral oil can be wiped off with a power towel or cloth.

[1] Consult your local municipality to confirm disposal of hard plastic waste.

7. Vat Disposal

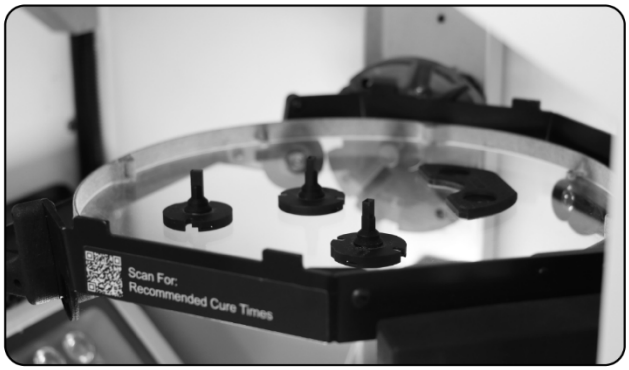
To dispose of Vat, refer to the PM Kit User Guide for instructions.

CURE MODE GUIDE

For a material to meet the material manufacturer’s technical specifications, the part(s) must be cured for the appropriate amount of time. Onulis provides an easy-access Cure Time Guide on the Onulis website.

The information is available here: https://onulis.com/cure-time-guide

The link is also provided via QR code on the curing table (pictured below).



The appropriate post-curing duration for any UV and thermal post-curing time for each material is also available on the material manufacturer's technical data sheet (TDS).

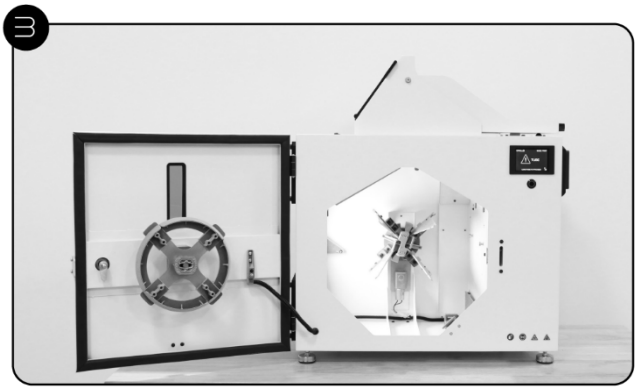
OPERATION: PRINT MODE

Note: Ensure proper gloves, goggles, and face mask are on prior to operating equipment. To convert machine from Print Mode to Cure Mode, see page 24.

1. Refer to Installation Guide for proper machine placement and setup.

2. 

Power on.

3. 

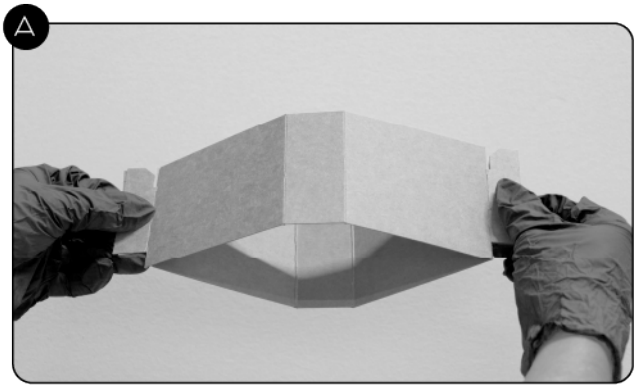
Open door.

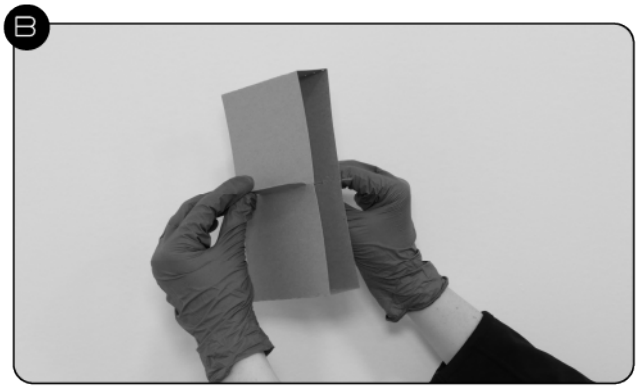
4. Form Disposable Light Shroud.

   A. Fold Disposable Light Shroud, holding both tabs.

   B. Apply pressure at tabs to open Disposable Light Shroud.

   See below.

A. 

B. 

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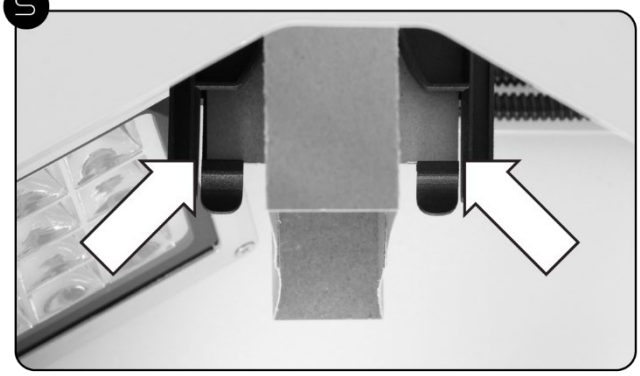


Place Disposable Light Shroud in machine. Move Disposable Light Shroud upward, until latches are fully engaged, as shown.

Note: Disposable Tube must be removed to install Disposable Light Shroud.

The Light Shroud is disposable and should be replaced every time a new Tube is used.

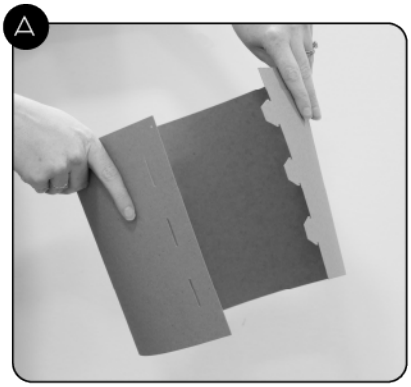
6

Form Disposable Tube. Ensure tabs go from the outside of the Tube, inwards. The tabs should be concealed once inserted.

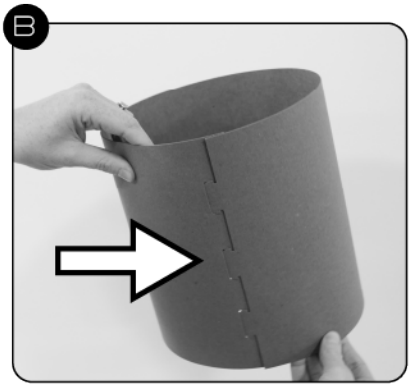
Place formed Tube on Mandrel Carriage.

See Steps A - C below.

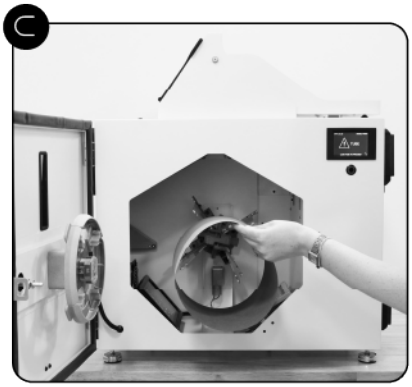
A



B



C



7

Close and latch door. Apply light pressure, turn latch handle, and fold down to secure.

8

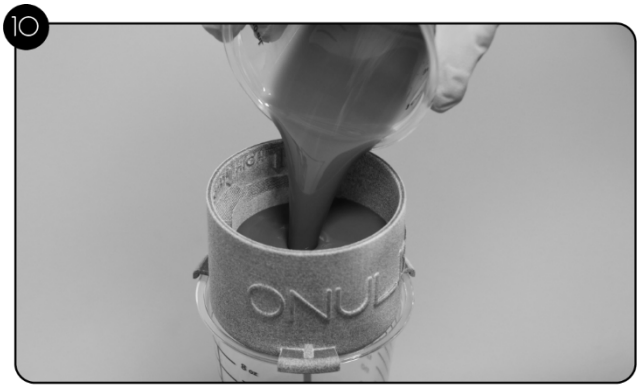
Note: “Ready” highlighted on machine readout.

9

Important! It is recommended that all materials are mixed with unused (“waste”) resin prior to printing. Specific Stratasys PolyJet materials, such as GelMatrix, are too instable to cure on their own.

Recommended: To ensure a consistent print, mix your resin prior to filling the Vat. When waste resin sits, mineral oil rises to the surface of the mixture. Stirring the resin prevents an excess of mineral oil in each print.

10



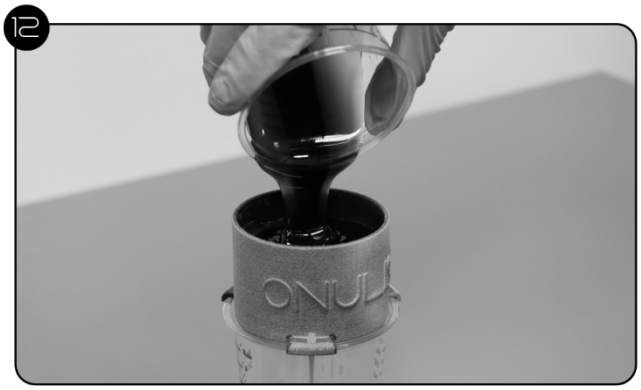
Use the Vat Viscosity Testing Tool to determine the correct Vat for your resin.

Steps 11 – 14 show how to use the Vat Viscosity Testing Tool.

11

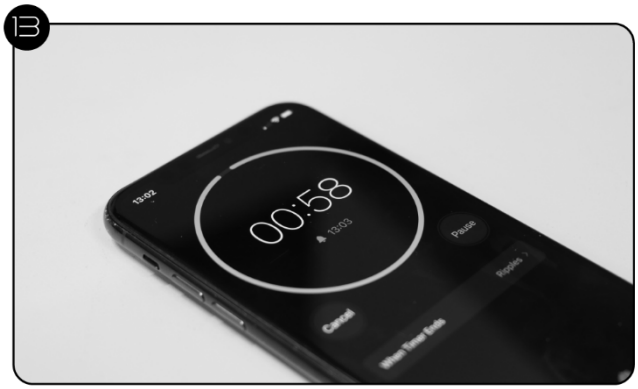
Place Viscosity Testing Tool on top of cup.

12



Pour resin sample into Tool, filling to slightly above START ledge, approximately 100ml.

13



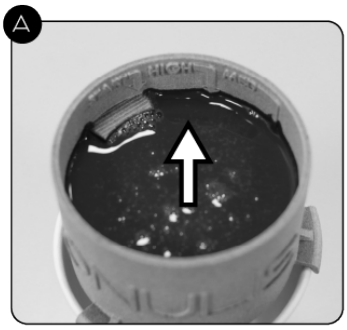
As soon as resin reaches the first ledge, start one minute timer. See next page.

14

When timer is done, check to see the lowest visible ledge, as pictured below. The visible ledge will show what Vat should be used for each print.

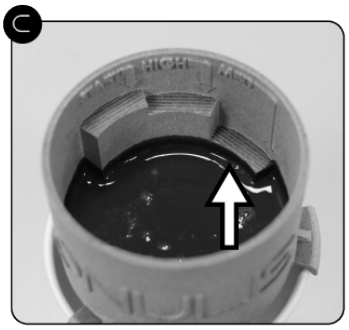
Important:

If the “HIGH” ledge is not visible after a minute, your resin is too thick for the High Viscosity Vat. If the Testing Tool fully empties in under 30 seconds, your resin is too thin for the Low Viscosity Vat. In each of these cases, attempting to cure the resin on your WRAP system will cause damage to the unit.

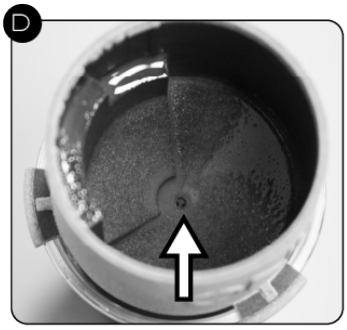


If “HIGH” ledge is not visible, resin is too thick to use in a Vat.

If “HIGH” ledge is visible, use High Viscosity Vat.



If “MEDIUM” ledge is visible, use Medium Viscosity Vat.



If Viscosity Testing Tool is empty, use Low Viscosity Vat.

If Viscosity Testing Tool empties in under 30 seconds, your resin is too thin to use in a Vat.

WARNING: Pouring the incorrect resin in a Vat will cause serious damage to the machine!

Fill Vat:

a. Remove Vat from Vat Carriage and place on flat counter.
b. Remove Vat Receptable Lid.
c. Place Disposable Filler Filter in Vat receptacle.
d. Slowing pour desired quantity of resin into Disposable Filler Filter. Do not fill Vat past MAX Fill line.
e. Remove Disposable Filler Filter.
   Note: Ensure residual resin on Disposable Filler Filter is fully cured by exposing it to sunlight prior to disposal. Dispose according to local regulations.
f. Replace Receptacle Lid, turning clockwise until locked.
g. Hold Vat horizontally and place in Vat Carriage. Do not tilt Vat during transport.

16

Click button to set print time. Programmable 1-hour intervals, from 1 – 6 hours.

17

To Power: Lift Vat Carriage handle to upright position until electromagnet holds it in place. Resin will begin dripping on rotating mandrel.

18

When stopped, Vat Carriage will automatically return to horizontal position.

To Stop Operation:

a. To manually end operation, press “Stop” button.
b. Machine will automatically stop after set print time, or machine will automatically stop when Disposable Tube is full, whichever occurs first.
c. In the event of power outage, Vat will lower and dripping will stop.

19

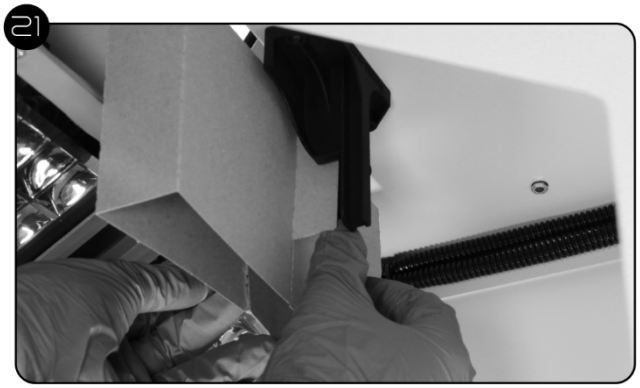
Final Cure will begin ensuring all resin is fully cured prior to Disposable Tube removal. To stop Final Cure, push button.

20

To remove cured resin, open door and remove Disposable Tube from mandrel carriage.

Note: Some mixed waste resins will contain mineral oils. If present on surface of solid plastic stock, wipe off with disposable towel.

21



Very Important: Remove Disposable Light Shroud from machine and dispose.

Ensure all resin is fully cured prior to disposal. Expose to sunlight if necessary.

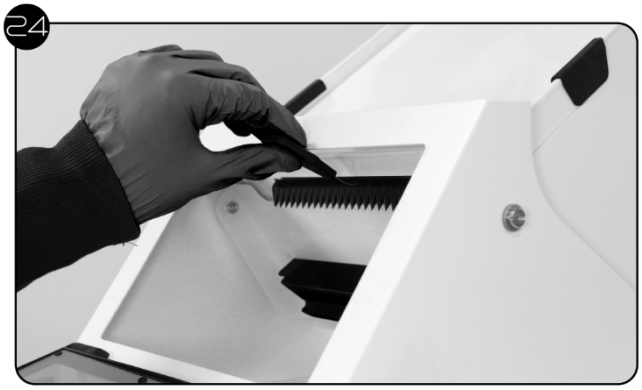
22

Shut and latch machine door.

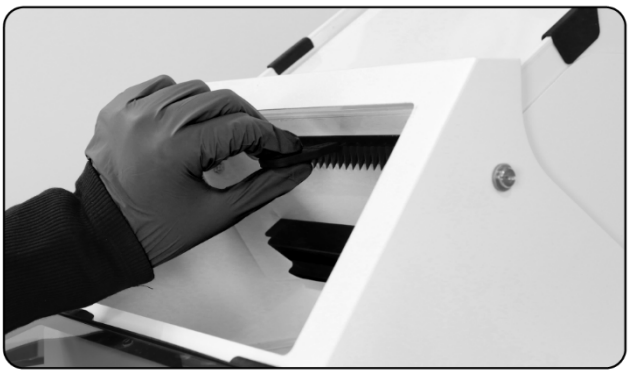
23

Very Important: To avoid clogging, spray isopropyl alcohol on Drip Comb face. Allow it to drain into Resin Catch.

24



Push Vat Cleaning Tool into holes above Drip Comb using a downward U-shape motion.
Move Cleaning Tool back and forth, letting any resin drip into Resin Catch.



Empty Resin Catch:

a. Remove Vat from Vat Carriage and place on flat counter.
b. Remove Vat Receptacle Lid.
c. Open Viewing Window.
d. Remove Resin Catch by lifting upwards, disengaging keyhole slot. Keep Resin Catch level.
e. Pour any resin from Resin Catch into Vat.

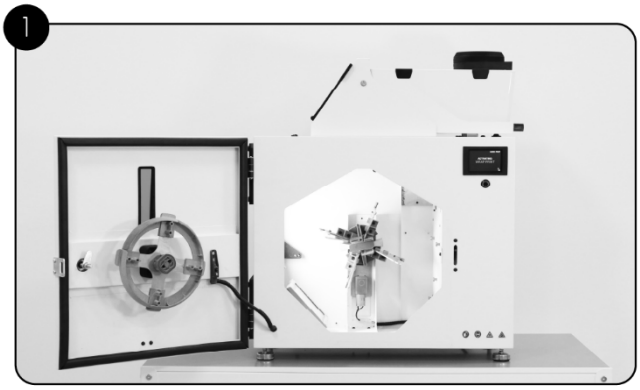
Power off machine.

<u>For WRAP Prime Machines</u>: To convert machine to Cure Mode, proceed to next page.

CONVERTING TO: CURE MODE

Important: Lower UV LED Arrays and second driver must be installed prior to using Cure Mode. For installation details, see page 11.

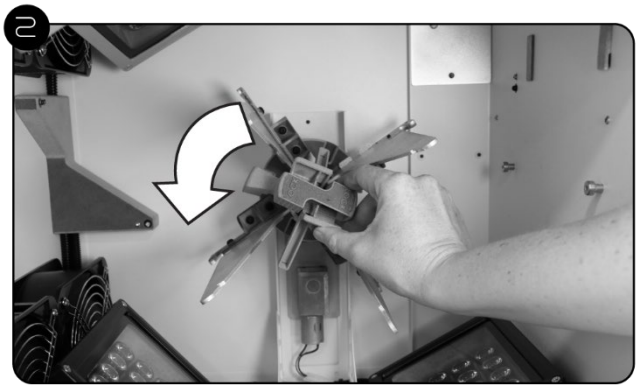
1



Open door.

Note: Disposable Tube must be moved to convert unit from Print Mode to Cure Mode.

2



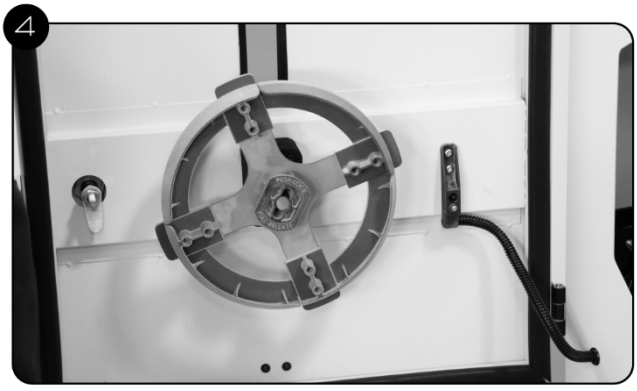
Pinch sides of Mandrel Carriage Latch and rotate counterclockwise until Latch releases.

Remove and set aside.

3

Hold spokes of Mandrel Carriage, pulling forward to remove from machine. Set aside.

4



Locate Rotating Guide on inner face of door.

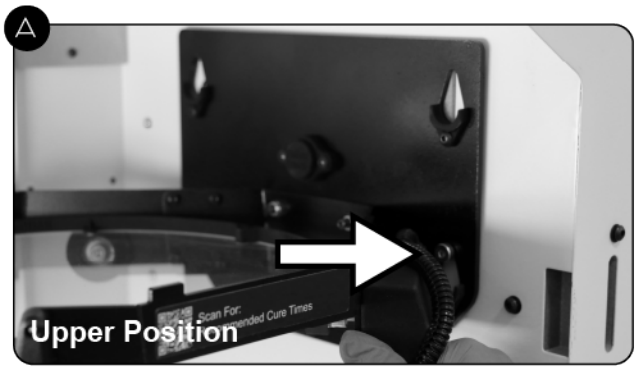
5

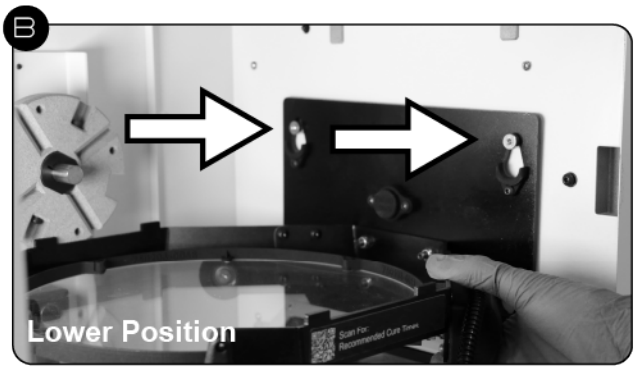
Pull Latch to release Rotating Guide and remove it from door.

6

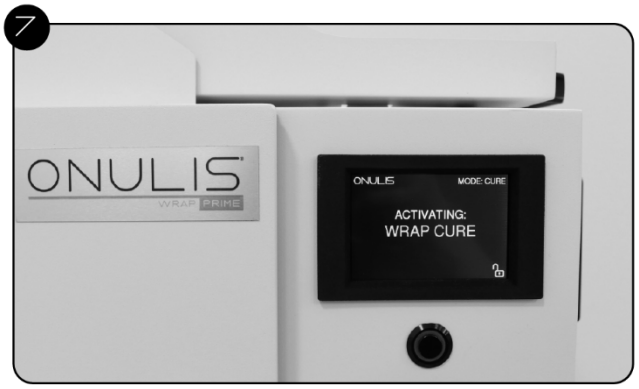
Install Curing Table in Upper or Lower position. See Steps A - B below. To install, align mounting holds on side of Curing Table Frame with Mounting Posts on right side of lower machine chamber

Upper Position: Standard.
Lower Position: Designed to accomodate taller parts.





Very Important: When Cure Table is in Lower Position, parts must be placed in middle of table. If not, parts may be knocked over by Lights when Cure Table rotates.



Note: Cure Mode is now active.

Connect plug on Curing Table cord to socket located in lower right corner of mounting wall to finish setup.

To use Cure Mode, continue to the next page.

OPERATION: CURE MODE

Note: Ensure proper gloves, goggles, and face mask are on prior to operating equipment.

1. Confirm your unit is in Cure Mode. See previous section for instructions.

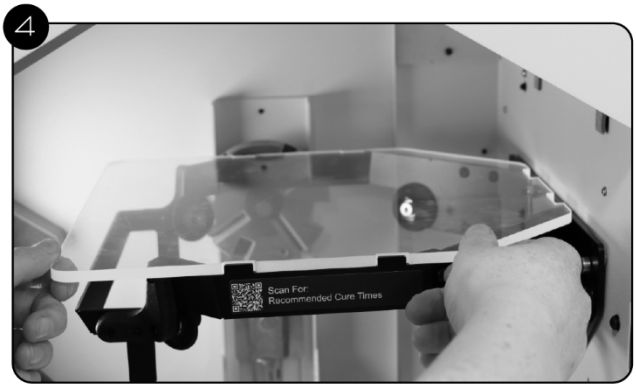
2. 

Power on.

3. 

Open door. Place cleaned parts on Curing Table. Important! Parts must be fully dry before curing.

If parts are longer than 9.5 inches, use Static Curing Table. See next step for Static Curing Table installation.

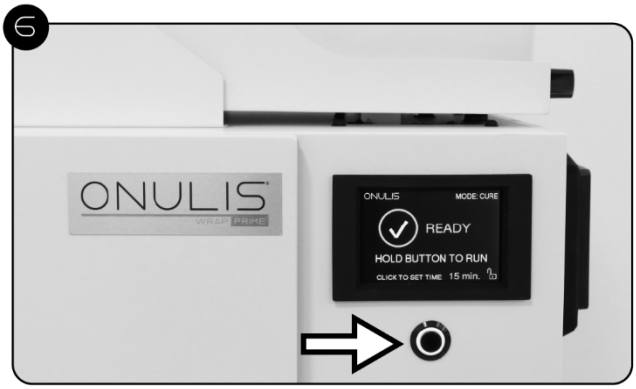
4. 

To use Static Table, remove standard Curing Table and set aside. Plastic Static Table on frame.

Place DLP parts on Static Table.

5. 

Confirm required cure time based upon model material. Information available from material manufacturer or on the Onulis website: https://onulis.com/dlp-workflow-guide.

6. 

Close door. Push button to set curing time.

7

Depress and hold button to start curing cycle.

8

Curing will stop:

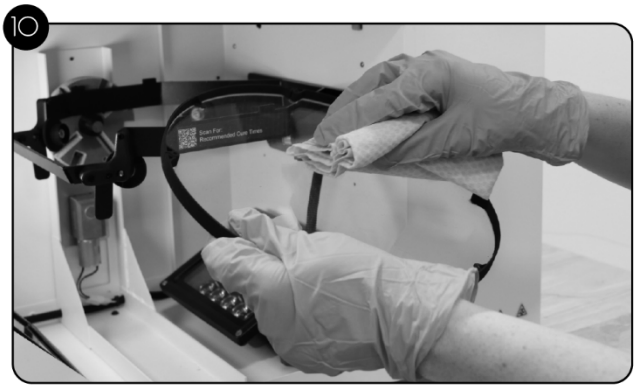
a. When timer ends, or
b. When button is pressed.

9

Once curing is complete, open door and remove parts.

Note: Some materials require a thermal post-cure. Reference Onulis' DLP Workflow Guide (linked in Step 3 and Step 5) to see if material used requires thermal curing.

10



Wipe down Curing Table with isopropyl alcohol.

11

Power off machine.

To convert machine to Print Mode, proceed to next page.

CONVERTING TO: PRINT MODE

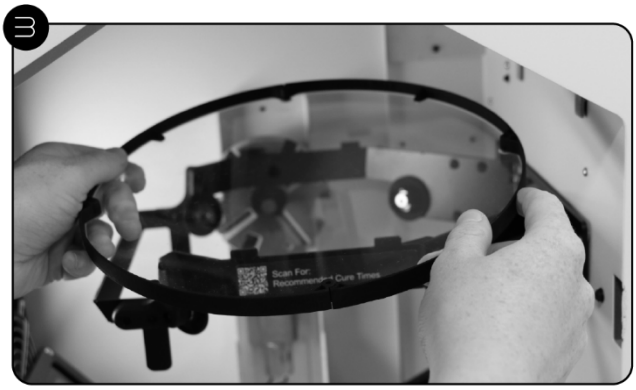
1

Open door.

2

Unplug Curing Table cord from socket.

3



Remove Curing Table. Store safely.

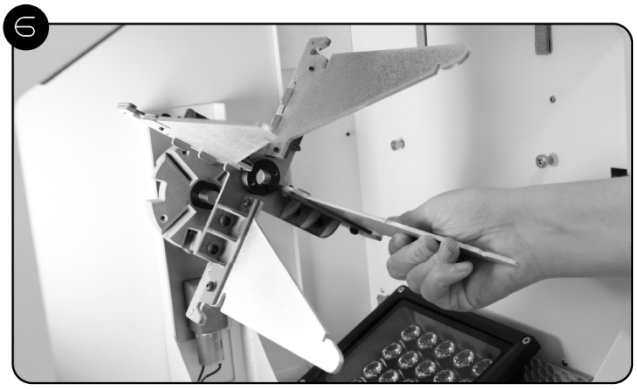
4

Hold sides of Curing Table Frame, lifting off Mounting Posts and remove from machine. Set aside.

5

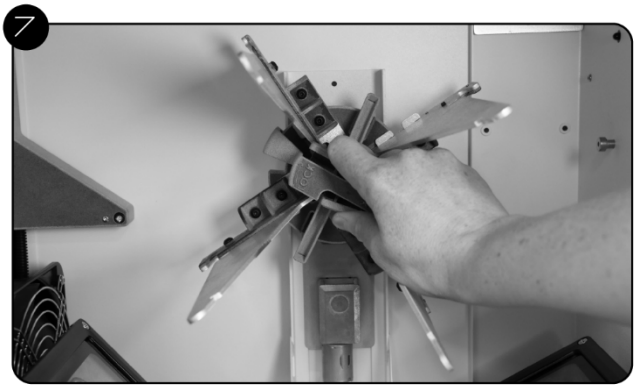
Note: Print Mode is now active.

6



Insert Mandrel Carriage, installing on back machine post. Align spokes with slots in rear mount plate.

7



Push Mandrel Carriage Latch onto drive shaft, rotate clockwise until click.

Note: If Latch not engaging, remove, rotate latch 90°, and reinstall.

8

Insert Rotating Guide on machine door post. Push into lock.

To use Print Mode, see page 20.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