



ONULIS

W7500

User Guide



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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 W7500 comes with a 1-Year Parts Warranty and Email Support. 1-Year Warranty only applies to the WRAP W7500 machine. Consumables are covered for manufacturing defects for the first 30 days. Use of the incorrect Vat will void the WRAP W7500 machine warranty and/or Vat warranty.

Maintenance Plan is voided by the use of third party consumables.

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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://www.onulis.com/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 the Onulis W7500 Waste Resin Axial Printer, please read through the entire User Guide prior to machine installation and operation.

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Support Request: maintenance@onulis.com

Purchases: orders@onulis.com

Digital copies of the User Guide can be found at: www.onulis.com/user-guides

SYMBOLS & 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. The W7500's carbon filtration system limits vapors. Read safety precautions before operating machine.
	Ultraviolet radiation occurs from machine's UV lamp. Read safety precautions before operating machine.

SAFETY PRECAUTIONS

This machine is intended to cure used or expired UV/EB resin. Do not use the product for anything other than its intended use. If the W7500 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.
- 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-reusable 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.
- Direct contact with resin may cause an allergic reaction.
- 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 waste.

Power

- Connect the printer to a 100 – 120 VAC power outlet.
- Do not connect the power plug to an outlet that does not have a ground wire. Doing so may expose the operator to serious danger from electric shock.
- Keep the power cord away from high temperatures and/or water.
- If the power cord is damaged, do not operate the machine.

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.
- Although 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.
- Clearance is required on the side of machine for carbon filters.
- Clearance is required above the machine for loading.
- Keep fingers and all other body parts clear of door when opening and shutting.
- 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.
- UV lamps will remain hot after printing is complete. Do not touch.
- UV lamps emit dangerous radiation. In the case of a system failure resulting in the UV lamps remaining on when the printer door is open, do not stare directly, and shutdown.
- All persons operating the W7500 should know the location of first aid and emergency equipment and how to use it.

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 lenses and follow above cleaning technique.

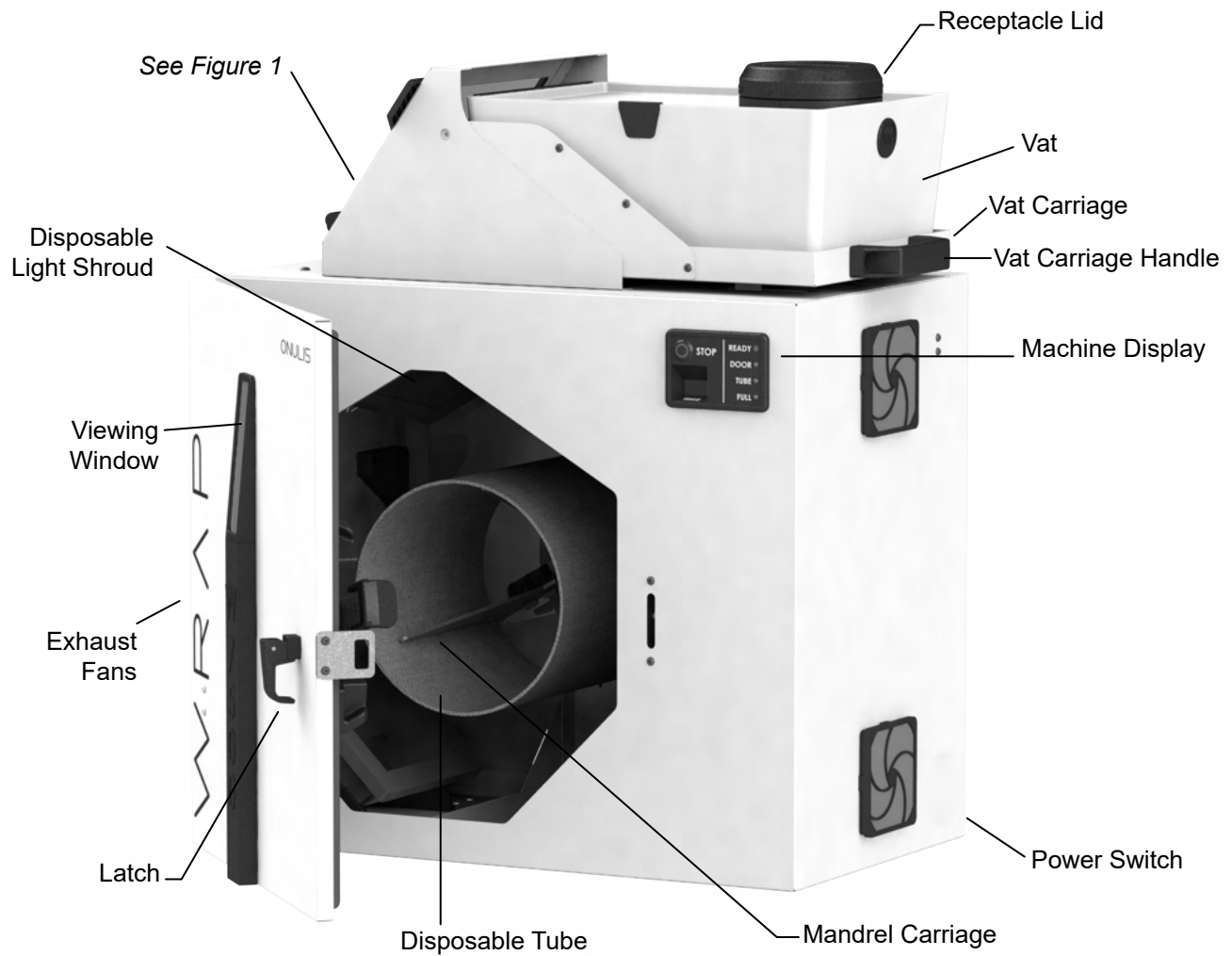
- Clean and disinfect contaminated contact lenses.
- Do not wear contact lenses until eye irritation disappears.

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

The Onulis W7500 Waste Resin Axial Printer consists of the following components.



PATENTS PENDING

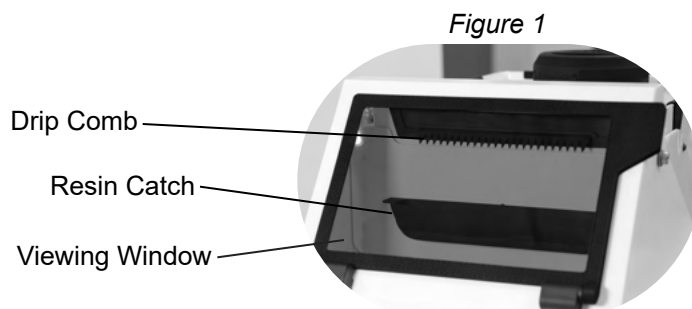
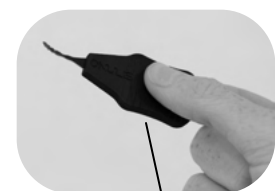


Figure 1



Machine Display Indicators

The Machine Display indicates the following.



READY: When light is green, indicates machine is ready for Vat Carriage to be lifted to begin operation.

DOOR: When light is red, indicates machine door is open.

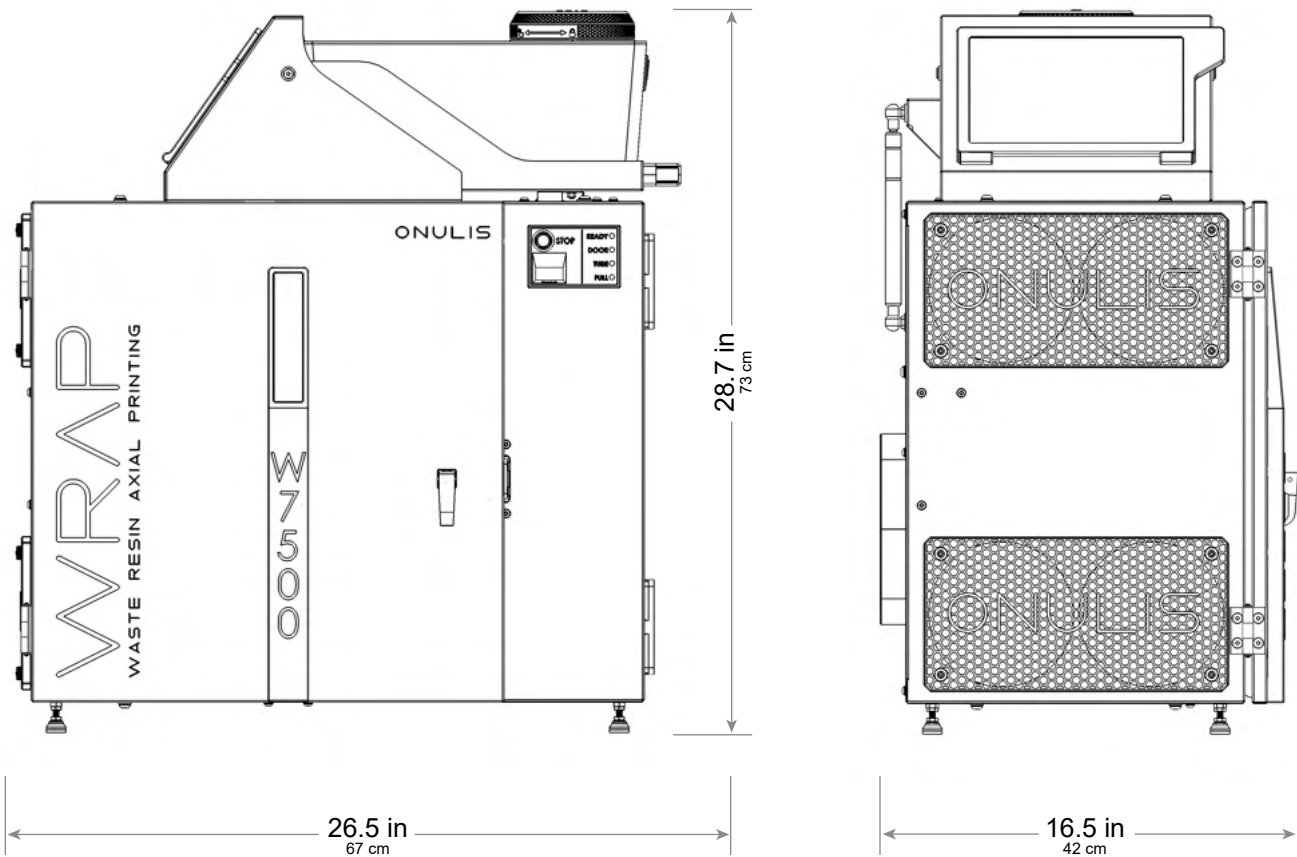
TUBE: When light is red, indicates machine door is shut, and Disposable Tube is not on Mandrel Carriage.

FULL: When light is red, indicates Disposable Tube is completely full.

STOP: When button is depressed, Vat Carriage will automatically lower.

TIMER: Shows remaining cycle time of the W7500.

System Size



Installation Guide

1. Unbox product. Remove all packing materials on outside and inside of machine.
2. Ensure contents of container:
 - W7500 Waste Resin Axial Printer (Qty 1)
 - Low Viscosity Vat (Qty 1)
 - Vat Carriage Handle (Qty 1)
 - Vat Viscosity Testing Tool (Qty 1)
 - Disposable Filler Filter (Qty 2)
 - Disposable Tube (Qty 1)
 - Disposable Light Shrouds (Qty 2)
 - Isopropyl Alcohol Bottle (Qty 1)
 - Vat Cleaning Tool (Qty 1)
 - Power Cord (Qty 1)
3. Put W7500 on flat, solid table. Attach the handle to the Vat Carriage, as shown below.



4. To ensure even printing behavior, level machine, as shown below. Adjust machine feet as necessary. Do not block exhaust fans. To avoid unwanted effects of natural UV light, do not place machine near window, or in direct sunlight.



5. Place Vat securely on Vat Carriage.
6. Plug power cord into grounded 100 – 120 VAC outlet.

IMPORTANT NOTES

Vat Carriage

Vat Carriage positioning during machine operation is shown below.

Note: When transferring Vat to and from Vat Carriage, always keep Vat level. Tilting may cause spillage of uncured resin.



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.

Disposable Tube

The Disposable Tube should be replaced after every use.

Mixing Resin

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.



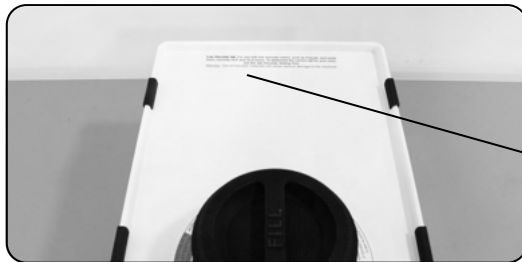
Selecting The Correct Vat

When pouring resin into a Vat, it is essential to ensure correct material selection. Vats are designed for specific material properties. Only pour a material into its intended Vat. As resin sits its viscosity can change. Pouring the incorrect resin into a Vat will cause serious damage to the machine!

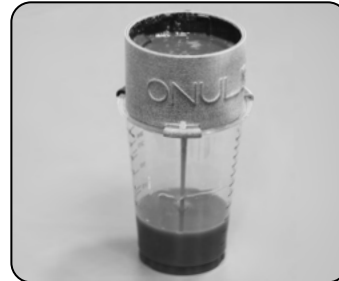
Recommended: To ensure a consistent print, mix your resin prior to filling the Vat. When waste resin sits, mineral oil rises to the surface of the mixture. Stirring the resin prevents an excess of mineral oil in each print.

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 13.

Vat Identification Label can be found on top of a Vat. See below. If disposing of Vat, refer to PM Kit User Guide for instructions.



Vat Identification Label



Pictured:
Vat Viscosity
Testing Tool

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 11. For WRAP cleaning instructions, refer to PM Kit Use Guide.

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



Solid Plastic Stock

The solid plastic stock printed on the WRAP is fully cured resin, and safe for disposal¹ 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 paper towel or cloth.



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

OPERATION GUIDE

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

1

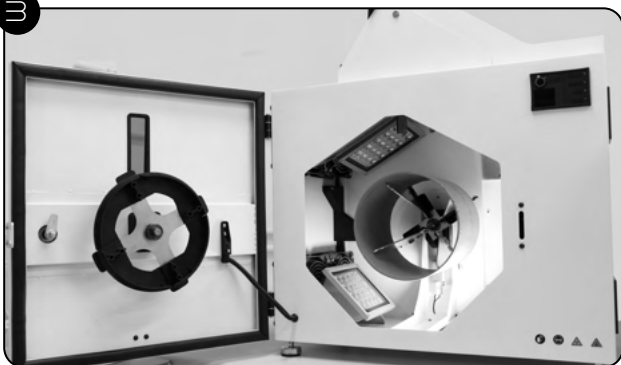
Refer to Installation Guide for proper machine placement and setup.

2



Power on.

3



Open door.

4

Form Disposable Light Shroud:

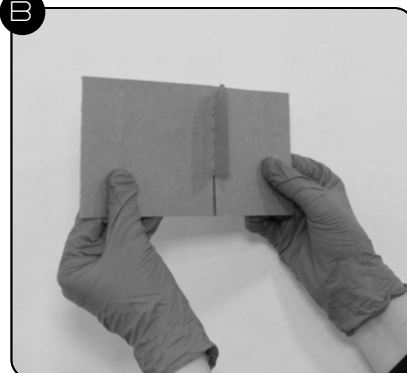
- A Exercise flaps on both sides of Disposable Light Shroud by folding in both directions.
- B Crease dotted fold lines on opposing corners of Disposable Light Shroud.
- C Apply pressure at flaps to open Disposable Light Shroud.

See below.

A

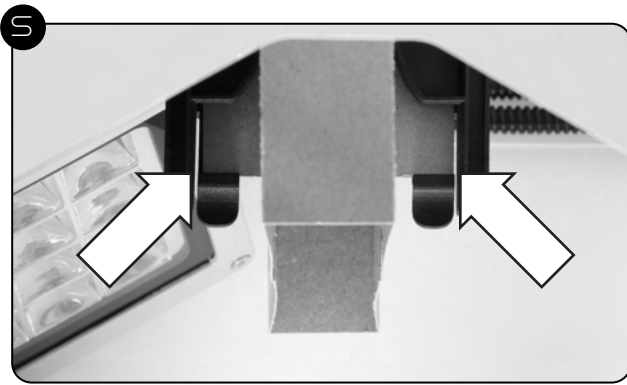


B



C





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



Place Disposable Tube on Mandrel Carriage.



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



Note: "Ready" highlighted on machine readout.



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

Fill Vat:

- Remove Vat from Vat Carriage and place on flat counter.
- Remove Vat Receptacle Lid.
- Place Disposable Filler Filter in Vat receptacle.
- Slowly pour desired quantity of resin into Disposable Filler Filter. Do not fill Vat past MAX Fill line.
- 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.)
- Replace Receptacle Lid, turning clockwise until locked.
- Hold Vat horizontally and place in Vat Carriage. Do not tilt Vat during transport.

10



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

11



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 6 hours, or machine will automatically stop when Disposable Tube is full, whichever occurs first. (Note: Machine Display will momentarily display "Full" while machine is shutting down.)
- c. In the event of power outage, Vat will lower and dripping will stop.

12



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.

13



Remove Disposable Light Shroud from machine and dispose.

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



Shut and latch machine door.



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



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:

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



Power off machine.

