

# zortrax

## 3D Printer User Guide

### Cleaning Station



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## Introduction

Read this User Guide carefully and thoroughly before operating the Zortrax Cleaning Station for the first time. The User Guide includes basic information about the device, safety and protection guidelines as well as advice on preparing the machine for the first cleaning process and basic maintenance work. Ignorance and non-compliance with these instructions may result in property damage, injuries, and device failures or lower quality of 3D prints. It is also necessary to ensure that every device user knows, fully understands and follows the instructions provided in this User Guide.

The Manufacturer makes every effort to ensure that Zortrax products are safe in transportation, installation, usage, storage and disposal. However, given the lack of direct and indirect control over the device and a number of other factors influencing the device, the Manufacturer is not responsible for damage, injuries, failures, and costs resulting from improper transportation, installation, usage, storage, and disposal.

Furthermore, the users should take into consideration the risk of possible damage of the device resulting from defects in material and workmanship.

The users are responsible for qualifying and determining the intended use of 3D printed models. The Manufacturer takes no responsibility for any use of printed objects, especially when those objects constitute a part of safety devices or strictly regulated by specific rules medical, military or space science equipment.

Due to the size and specificity, the Zortrax Cleaning Station is not intended for use by minors and by people with reduced manual, motor and psychomotor skills. The Manufacturer recommends providing assistance and guidance to people with disabilities and older adults who wish to operate the device.

## General Safety Information

This User Guide contains important safety directions that should be followed during installation and operation of the Zortrax Cleaning Station. It also mentions situations which require special attention and includes warnings against negligence and misuse that could cause damage or injuries.

Always read the safety data sheets available at: <https://zortrax.com/resins/>. They are a source of basic information and safety procedures for the materials you bought. It is essential to regularly update the firmware to avoid any kind of failures.

Visit our website: <https://zortrax.com/> to learn about the latest news and updates.

The cleaning process with the Zortrax Cleaning Station involves using cleaning agents and synthetic liquid resin, both of which can be toxic and may cause allergic reactions. Therefore, you must protect your skin and eyes when using the device by wearing safety gloves and glasses. Provide proper ventilation on site while the machine is in operation.

It is also extremely important to avoid spilling the cleaning solvent on the device and its surroundings while operating the device, filling the tank and removing platform with prints. Ensure that the device is leveled and placed on a stable surface. Do not open the device during the cleaning process.

Do not leave the machine unattended during the cleaning process - check it periodically for proper functioning in order to avoid potential accidents or breakdowns. Do not ignore warnings and notifications displayed on the screen.

Monitor your device for wear and tear regularly. Contact our Support Center via the support form at: <https://support.zortrax.com/support-form/> for assistance while replacing worn or broken parts.

Keep the device away from heat sources, flammable materials, equipment emitting radiation, sources of fire, humidity, water and other liquids. To prevent any inadvertent use, keep the device out of reach of children and animals. It is forbidden to drop or shake the device as it may cause breakdowns. The equipment is not intended for use in a potentially explosive environment.

The Manufacturer strongly recommends setting up a special room dedicated only to 3D printing and post-processing. The room should be as free of daylight as possible and properly ventilated. It is important to avoid situations in which liquid resin is exposed to daylight.

## Workplace Health and Safety

All service and maintenance activities as well as device operation and maintenance require using safety gloves and glasses included in the Starter Kit. It is also advisable to wear protective clothing.

Keep the workplace clean. Containers with cleaning agents should be tightly closed and kept in a dark place.

The device should be configured according to its intended purpose. Improper configuration may cause defective operation which may lead to damage of the device.

Food and beverages should be kept away from both the device and the 3D printed objects. Do not put any objects inside the device.

While operating the Zortrax Cleaning Station, all measures regarding health and safety that are provided in this User Guide as well as in separate regulations should be taken into account.

If the device begins to operate in an unidentified way, safely unplug it from the power source and immediately contact the Manufacturer through the support form at: <http://support.zortrax.com/support-form/>.

## Electrical Safety

Zortrax devices have been tested for compliance with Low Voltage Directive. In order to ensure the highest safety standards, including protection against short circuit, overload, overvoltage and device overheating, do not attempt to modify the device and do not use electronic replacement parts other than those recommended by the Manufacturer.

Before plugging the power cable into the outlet, make sure that the power supply voltage in the outlet matches the required value provided on the nameplate at the back of the device. Avoid overloading the outlet with too many devices.

The device must be well-grounded. Always make sure that the ground complies with local and national regulations.

Use only the original power cable supplied with the device. Do not damage, cut or repair the cable. A damaged cable should be immediately replaced with a new one. The cable should be used according to its intended purpose and should be protected from heat, oils, sharp edges and moving components of the device. A damaged cable increases the risk of an electric shock.

Do not expose the device to rain and humidity. While filling the tank with the cleaning solvent, be careful not to spill it outside the tank. Liquid that enters the inside of the device increases the risk of an electric shock.

All maintenance and repair work should be carried out while the device is off and unplugged. Modifications such as soldering of electronic subunits are forbidden.

## Mechanical Safety

The Zortrax Cleaning Station has movable components, such as the impeller and the Z axis. Therefore, it is forbidden to reach into the device or put anything inside the device when it is running or about to start running. This may lead to serious injuries or damage.

Tools and accessories delivered with the device should be used with special care only for intended purposes. Improper use may cause serious injuries.

While following post-processing procedures, wear safety gloves and glasses to avoid injuries that may be caused by sharp edges and fragile elements of models.

## Risk of Burns

There is no risk of burns as all components working in high temperatures are enclosed and protected from being touched.

Constructional modifications of the device's operating temperature are not permitted as it may cause serious injuries or bring damage to the device.

## Safe Storage and Transport Guidance

Zortrax devices must be stored between 0 and 35° C [32 - 95° F]. The storage space should be free of moisture and other extreme conditions.

Transport instructions:

When stacking several devices on a pallet, follow the instructions provided on the packaging. Once device may weigh more than 40 kg [88.2 lb] without the cleaning fluid. It is therefore advisable to provide safe pallet storage but not higher than 1.7 m [5'7"]. It should be noted that the packages must not project beyond the outline of the pallet. Packages stacked on the pallet should be then bound together and wrapped in foil. The pallet prepared as above can be then forwarded to the shipping company.

Pallet stacking and destacking should be carried out by two people. The package with the device should be lifted or moved using special handles.

## Electromagnetic Compatibility (EMC)

The Zortrax device complies with Part 15 of the FCC rules. Its operation is subject to the following two conditions: this device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation.

The device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the following User Guide, may cause harmful interference to radio communications. Operation of this device in a residential area is likely to cause harmful interference, in which case the user will be required to eliminate the interference at his own expense.

## How does the Zortrax Cleaning Station work?

The Zortrax Cleaning Station is a device which removes excessive, unsolidified resin from models' surfaces. The entire cleaning process lasts for about 5 minutes and is fully automated. This is a standalone device that can be used to support all types of resin 3D printers available on the market. It's dedicated to post-process even the most professional and demanding resins (quality approved by BASF Forward AM and Henkel/Loctite). The device also supports the most popular 3D printing technologies, such as UV LCD, DLP, and SLA.

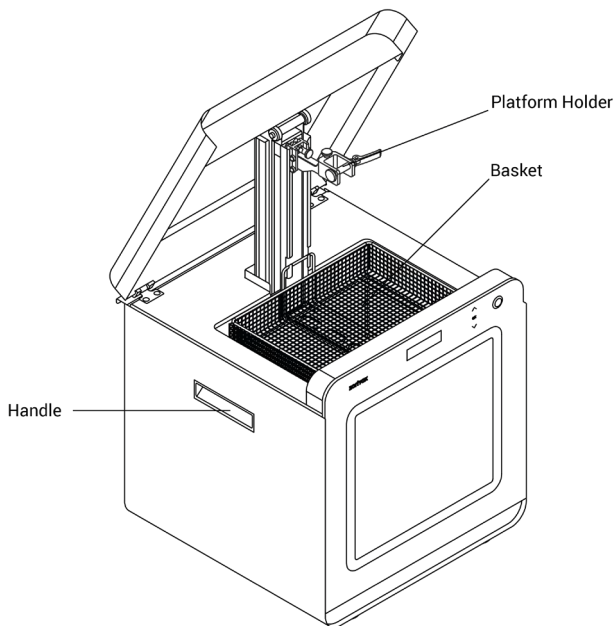
The impeller-based cleaning system reduces the risk of damaging precise, fragile prints. When the cleaning process is done, the top cover opens up and the basket and/or the build platform with clean prints is moved out of the cleaning fluid.

Due to filters constantly working in the Zortrax Cleaning Station, the isopropyl alcohol can be reused in multiple cleaning sessions.

The build platform holder in the Zortrax Cleaning Station is compatible with the Zortrax Inkspire 2 build platform which enables placing the printed models in the device without touching them. Zortrax Cleaning Station does not need calibration before the first use.

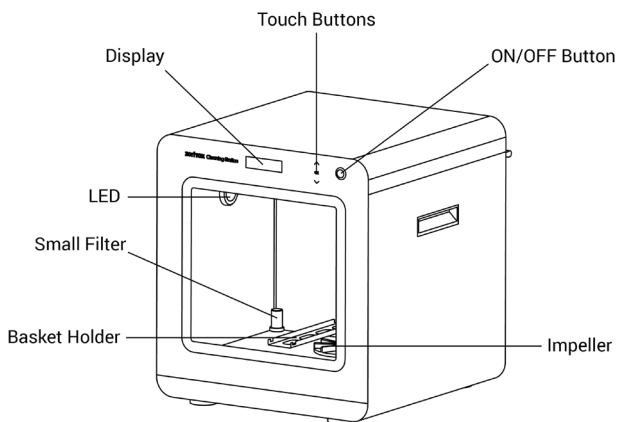
## Main Components

### 1. Front view (opened)

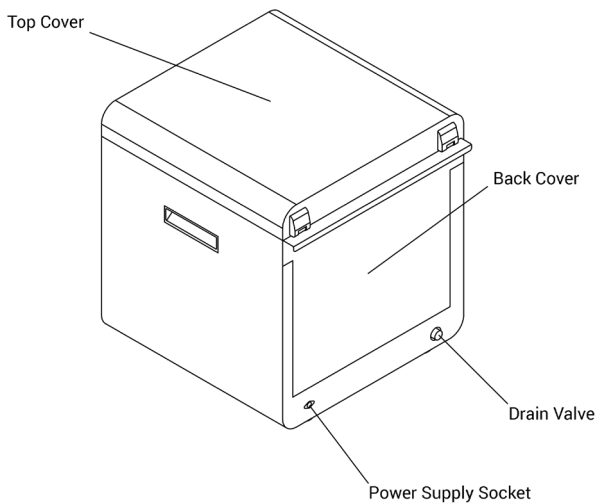




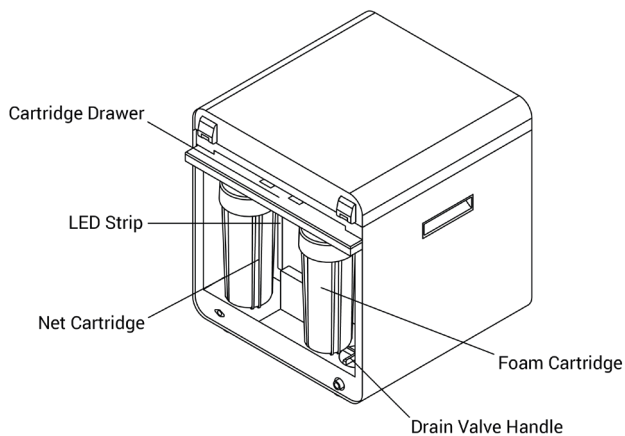
## 2. Front view (closed)



3. Back view (closed)



4. Back view (opened)



## What's in the Box



Zortrax Cleaning Station



Power Supply with Cable



Quick Start Guide



Plastic Box



Safety Gloves



Safety Glasses



Funnel



Drain Pump



Drain Hose



Small Filter Key



Cartridge Key

## Zortrax Post-Processing Technology Glossary

### BASKET

the metal container in which a model is inserted and then put into the cleaning solvent in the Zortrax Cleaning Station. Thanks to the basket, the solvent circulates around the model without restraint and the model is protected from potential damage by the impeller.

### CLEANING SOLVENT

Isopropyl alcohol (IPA) is the most popular cleaning agent used in the post-processing of resin 3D prints in the Zortrax Cleaning Station. Some resins need two-stage cleaning, therefore, Zortrax Cleaning Station can also work with glycol-based cleaning fluids.

## **DRAIN VALVE**

the component placed at the back of the device which allows users to drain the solvent from the device's cleaning chamber.

## **FILTERING SYSTEM**

during the cleaning process, the fluid circulates through a filtering system that catches remnants of the resin. This way the solvent can be safely reused in multiple cleaning sessions. The lifespan of filters depends on the geometry and size of cleaned models. It is recommended to check the filters condition periodically and replace them when they are clogged.

## **FIRMWARE**

the software programmed into Zortrax devices, which controls and monitors all the data in the device. It also gives the possibility to enable/disable the device's functions.

## **IMPELLER**

a movable component of the Zortrax Cleaning Station. The impeller whirls around its own axis during the cleaning process, and as a result ensures a constant liquid circulation inside the device.

## **PLATFORM HOLDER**

the component which secures the Zortrax Inkspire 2 build platform during the cleaning session in the Zortrax Cleaning Station.

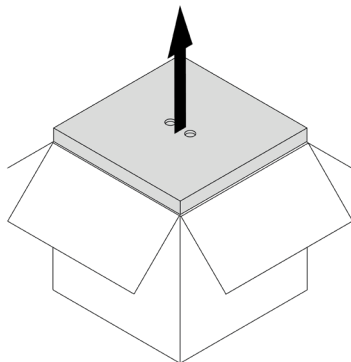
## **STARTER KIT**

several pieces of equipment that are put together in one set and delivered with the printer. The set contains tools and protective equipment. The tools from the starter kit are required for operating the device as well as for performing maintenance work.

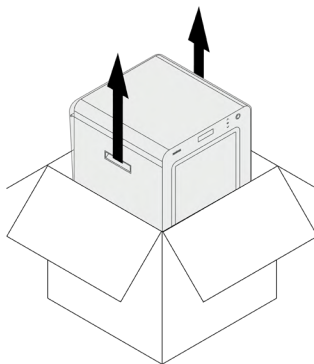
## **UV LCD TECHNOLOGY**

a technology which relies on curing photopolymers layer after layer. This UV LCD technology involves projecting images of successive layers on the underside of the tank with liquid resin and curing them using backlight from a UV lamp.

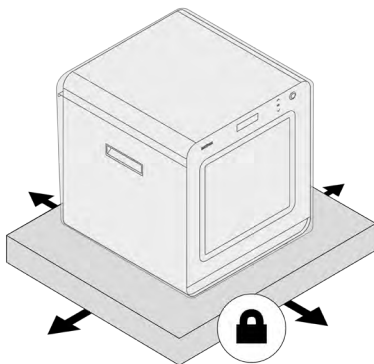
## First Use Preparation



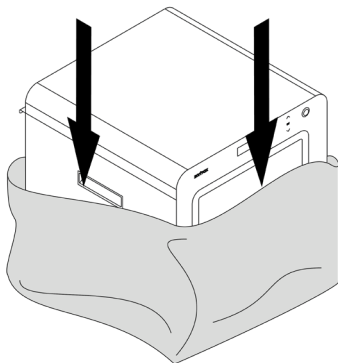
1. Open the shipping box and remove the upper cushioning.



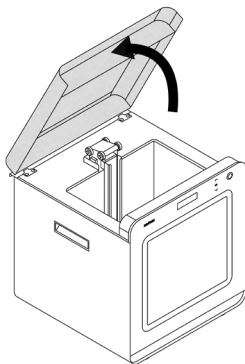
2. Take the device out of the box.



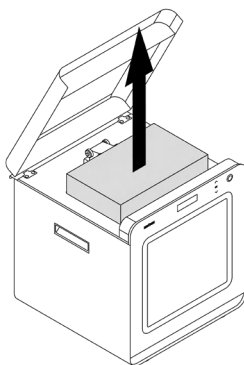
3. Place the device on a flat and stable surface.



4. Remove the protective foil.

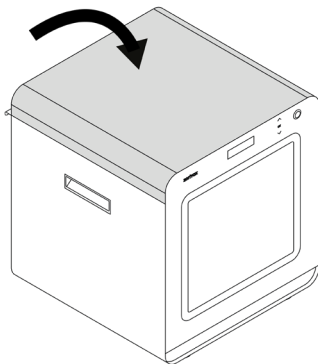


5. Open the top cover.

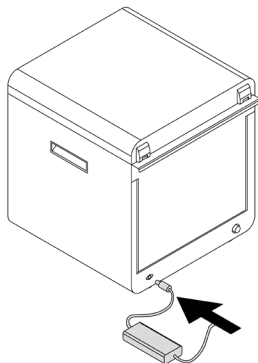


6. Remove the box with accessories and remove the cardboard protection from the inside of the chamber.

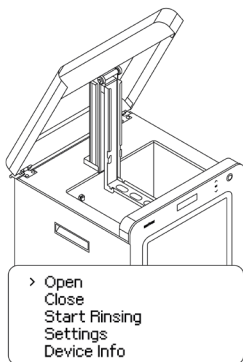




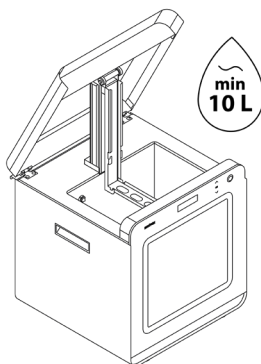
7. Close the top cover.



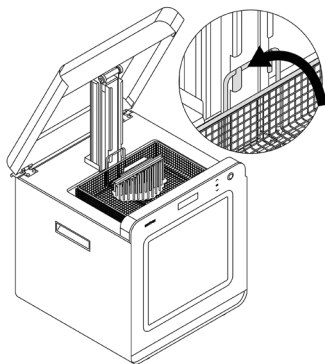
8. Plug the power cable in.



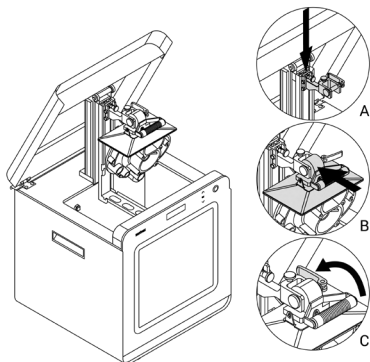
9. Open the top cover using the *Open* option from the menu.



10. Pour the cleaning agent into the chamber - at least 10 liters (338 fl oz) of liquid.

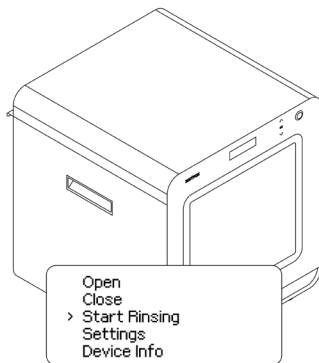


11a. Place the models in the rinsing basket. Next, mount the basket in the cutout in the guide.

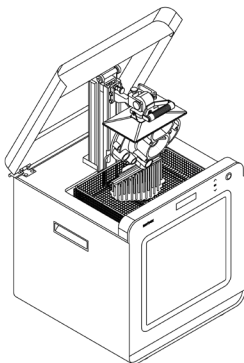


11b. Insert the platform handle in the guide and set its height (A). Install the platform with the model in the handle (B) and lock it with the lever (C).

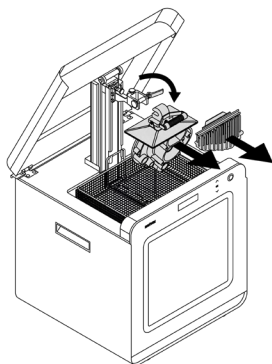
\*In the case of models heavier than 0.5 kg (1.1 lb), it is recommended to put them in the basket for the cleaning process as they may fall off the platform and get damaged.



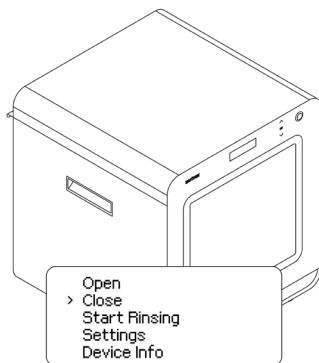
12. Run the rinsing program with appropriate time settings using the *Start Rinsing* option from the menu.



13. Once the process has finished, the top cover opens up automatically. Wait a few minutes for the cleaning agent to drain from the models.



14. Remove the models from the basket. / Remove the platform from the holder.



15. Close the top cover using the *Close* option from the menu.

## Navigating through the Menu

*Open* - this option allows you to *open* the top cover of the device.

*Close* - this option allows you to *close* the top cover of the device.

*Start Rinsing* - this option allows you to start the washing procedure. First, you have to set the washing time. Once the process is finished, the device automatically opens the top cover so that the models are not submerged in the cleaning agent for too long.

Settings:

*Mixing Power* - this option allows you to set the mixing power (impeller) in the range of 10 to 100%,

*Buzzer Settings* - this option allows you to change the Button Click Sounds (Disabled/Enabled) and the Procedure End Sound (Disabled/Single beep/Melody),

*Language* - this option allows you to change the language of the menu,

*Standby Time* - this option allows you to set the time after which the device goes into the sleep mode.

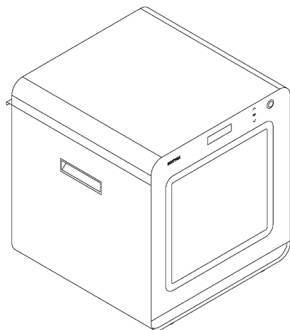
*Lighting:*

*Idle state* - backlight color in the idle mode

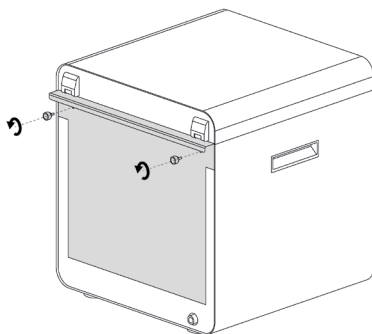
*Rinsing* - backlight color during the washing

*Device Info* - this tab contains information which identifies the device model, its firmware and hardware version, serial number, and total rinsing time.

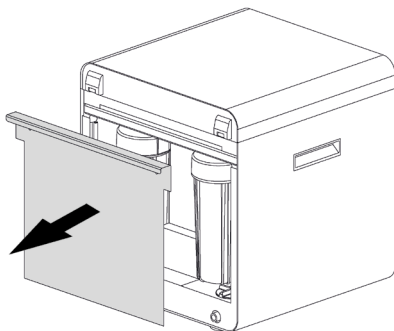
## Changing the Solvent



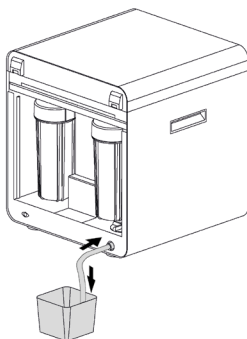
1. Turn the device off.



2. Unscrew the two screws holding the back plate.

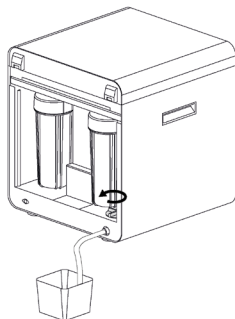


3. Remove the back plate.



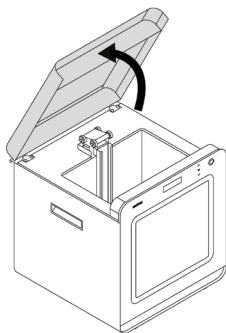
4. Install the drain hose in the valve outlet at the back of the device. Place the end of the hose in the container to which you want to transfer the cleaning agent.



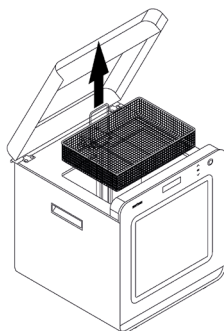


5. Open the valve at the back of the device.

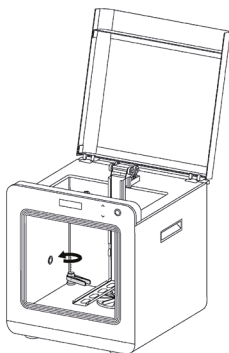
\*If you have to change the container, close the valve, replace the container and open the valve again.



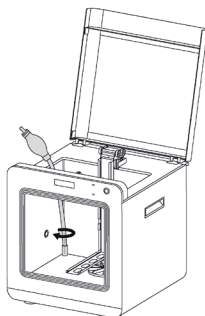
6. To remove the cleaning agent from the filters, open the top cover.



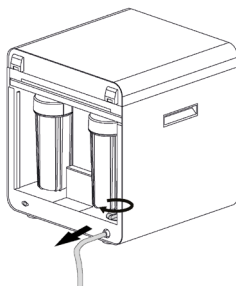
7. Remove the basket.



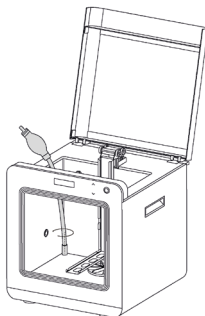
8. Unscrew the small filter inside the device.



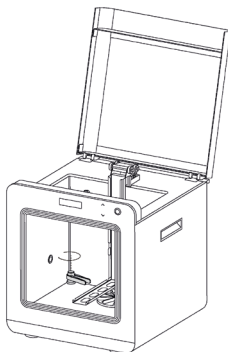
9. Screw the pump with a hose onto the filter and pump the cleaning agent out.



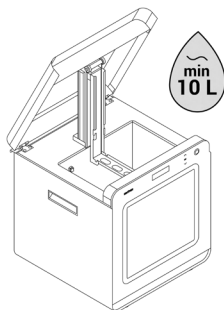
10. Once the process is finished, close the valve and remove the hose.



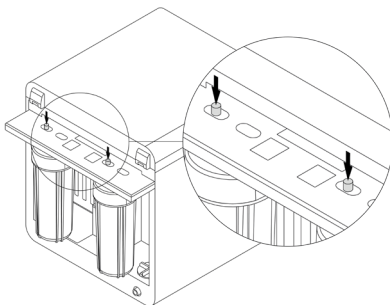
11. Unscrew the pump from the filter.



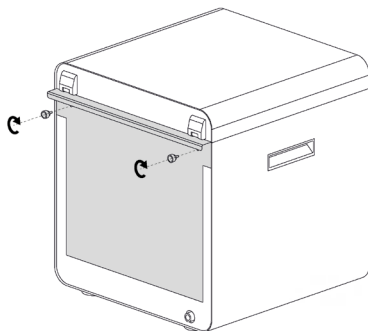
12. Secure the small filter back.



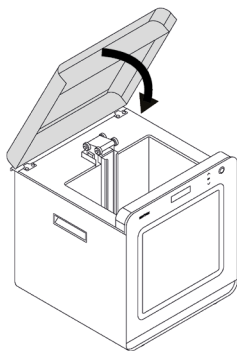
13. Make sure that the valve is properly closed (see step 10 on page 27). Next, pour the cleaning agent into the chamber - at least 10 liters (338 fl oz) of liquid.



14. Once the device has been filled up, vent the filters. To do this, press and hold the white button on the top of the filter until all air is removed and liquid begins to flow.

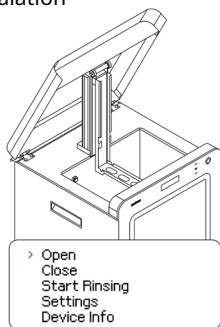


15. Secure the back plate with the two screws.

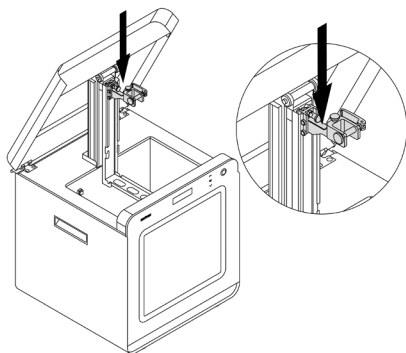


16. Close the top cover.

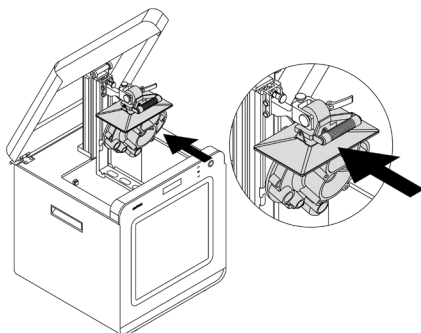
## Platform handle instalation



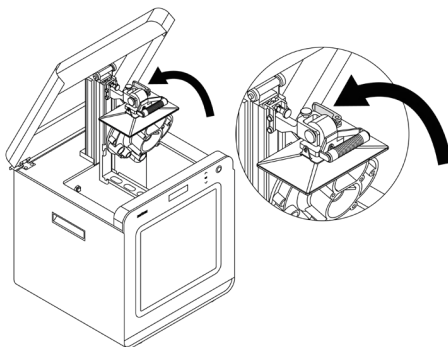
1. Open the top cover using the *Open* option from the menu.



2. Insert the platform handle in the guide and set its height.



3. Install the platform with the model in the handle.



4. Lock the platform with the lever.



## How to Clean a Print

### Caution

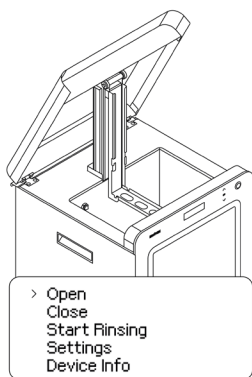
Wear gloves and glasses during all procedures.

Prepare paper towels and keep them in your workplace for wiping up liquids.

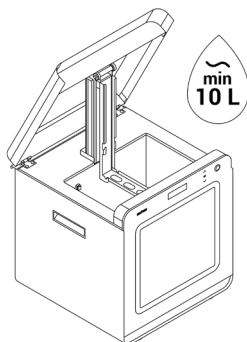
### Note

Printing and post-processing waste, including empty bottles, failed prints, supports, rafts as well as paper towels with resin residues should be put in the Zortrax Curing Station or in any source of UV light before disposal. Uncured resin has to be disposed of in accordance with national and local regulations concerning hazardous waste.

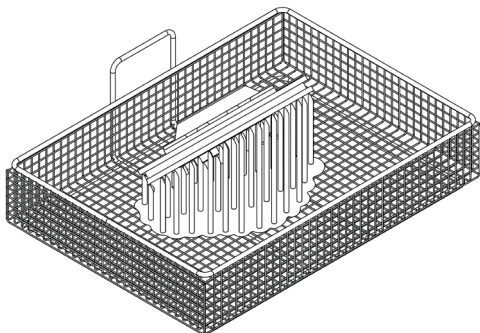
Detailed information regarding usage and waste disposal of the liquid agent utilized to clean 3D prints should be found in the SDS delivered by the producer of the liquid.



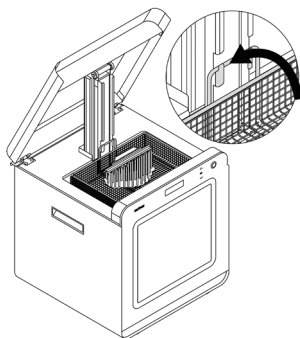
1. Open the top cover using the *Open* option from the menu.



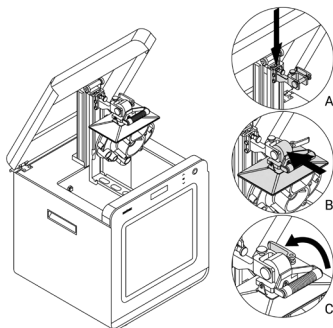
2. Pour the cleaning agent into the chamber - at least 10 liters (338 fl oz) of liquid.



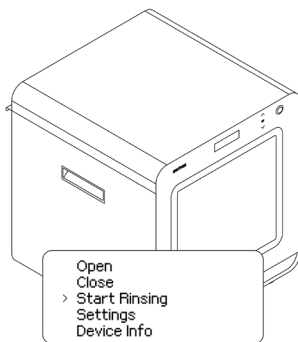
3a. Place the models in the rinsing basket.



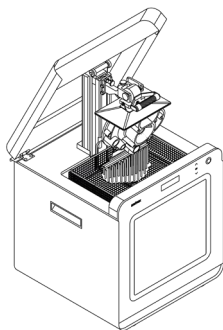
3b. Next, mount the basket in the cutout in the guide.



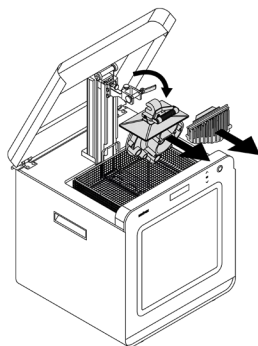
4. Insert the platform handle in the guide and set its height (A). Install the platform with the model in the handle (B) and lock it with the lever (C).



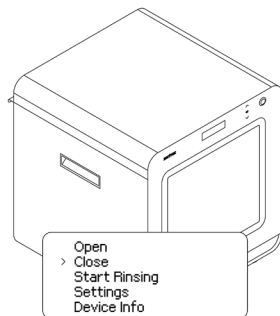
5. Run the rinsing program with appropriate time settings using the *Start Rinsing* option from the menu.



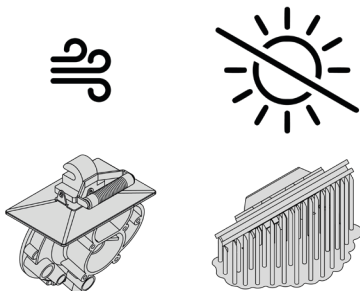
6. Once the process has finished, the top cover opens up automatically. Wait a few minutes for the cleaning agent to drain from the models.



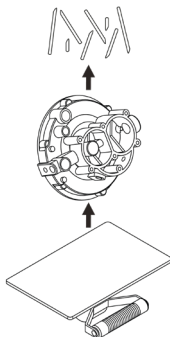
7. Remove the models from the basket. / Remove the platform from the holder.



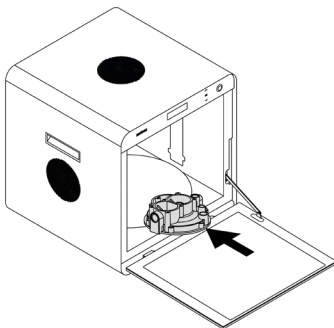
8. Close the top cover using the *Close* option from the menu.



9. Leave the models to air dry and ensure that they are not exposed to the UV light until they are completely dry.



10. Remove the prints from the platform by hand or use a spatula. If you have problems with removing the models, use a cutting knife. Next, remove the raft and supports.

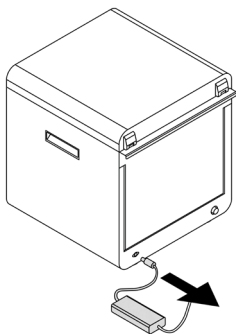


11. Put the prints in the Curing Station or in any source of UV light (e.g. direct sunlight).

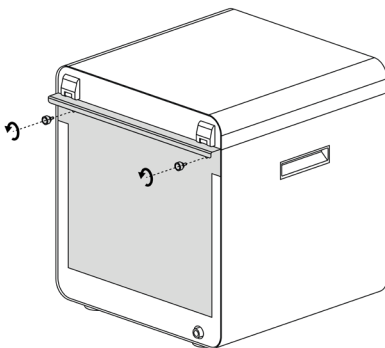
\*Depending on the type of resin you've used for printing, this step is optional.

## Packing

Before sending the Cleaning Station to service, you have to remove the cleaning solvent from the chamber and filters, and pack the device in the original packaging.

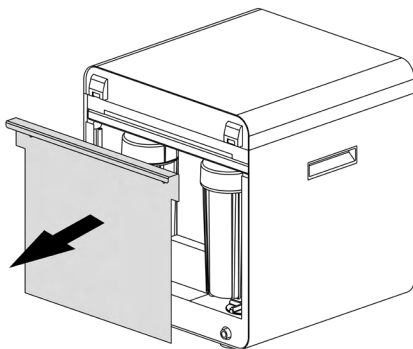


1. Turn the device off and unplug the power cable.

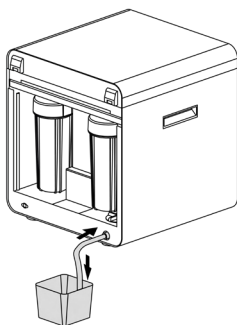


2. Unscrew the two screws holding the back plate.

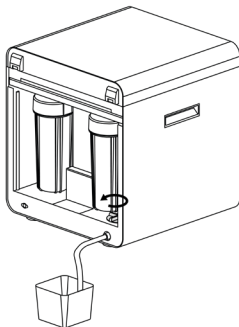




3. Remove the back plate.

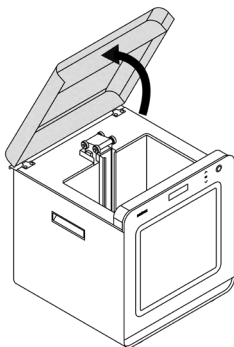


4. Install the drain hose in the valve outlet at the back of the device. Place the end of the hose in the container to which you want to transfer the cleaning agent.

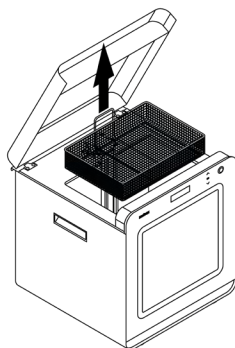


5. Open the valve at the back of the device.

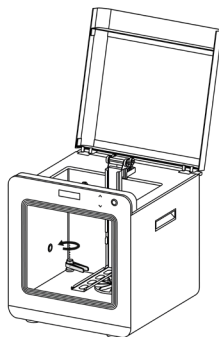
\*If you have to change the container, close the valve, replace the container and open the valve again.



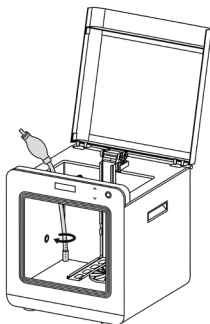
6. To remove the cleaning agent from the filters, open the top cover.



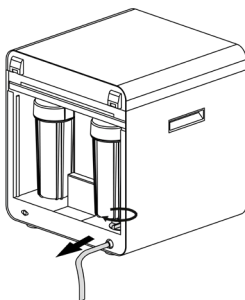
7. Remove the basket.



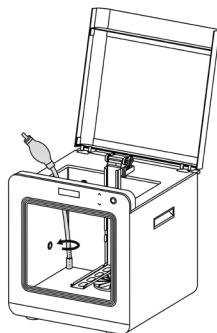
8. Unscrew the small filter inside the device.



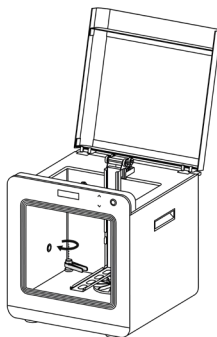
9. Screw the pump with a hose onto the filter and pump the cleaning agent out.



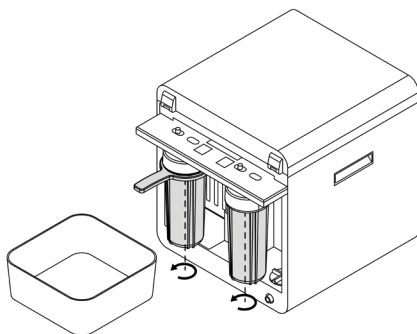
10. Once the process is finished, close the valve and remove the hose.



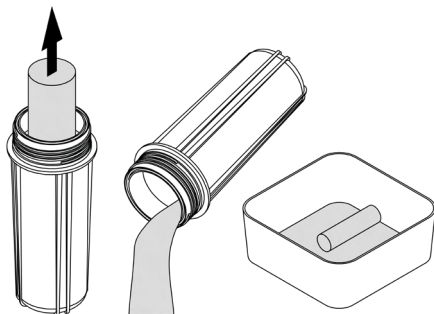
11. Unscrew the pump from the filter.



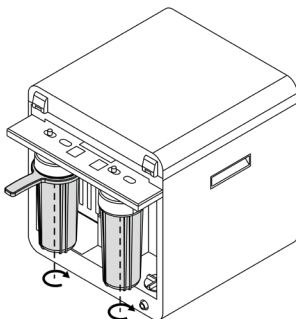
12. Secure the small filter back.



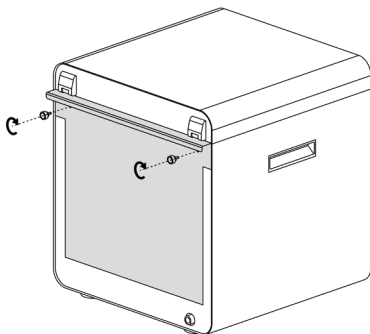
13. Prepare the plastic box which you can find in the Starter Kit. Unscrew the filters using the key and place them in the plastic box.



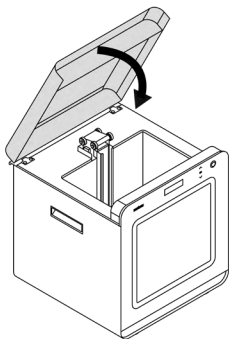
14. Remove the filter cartridges and pour out the rest of the cleaning solvent.



15. Screw the filters in their place.



16. Secure the back plate with the two screws.



17. Close the top cover.

## Basic Maintenance and Service Work

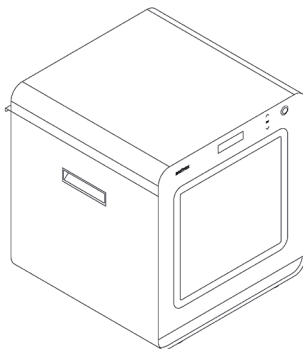
Maintenance work should be regular in order to keep the device in good condition. Some components require maintenance before each cleaning session and some every few hundred working hours. All maintenance activities do not take much time and are not complicated. Before commencing any repair, it is important to turn the device off and let it cool down. Remember to always wear gloves and glasses.

The device is delivered with a full set of tools needed to carry out maintenance service work.

The following tables present maintenance and repair guidelines connected with each section of the Zortrax Cleaning Station, together with specific check points, necessary activities and their frequency.



## 1. Main





Activity	Frequency	Solutions to the problems	Necessary accessories
Cleaning the machine, its interior and surroundings	Before each cleaning process	Remove dust and drops of resin from the machine with paper towels. If it's necessary, use IPA.	-paper towels, -IPA, -safety gloves
Checking the degree of wear of the filters	Every 500 working hours	-	-
Replacing the filters	Every 3-4 months	The filters are installed at the back of the device.	-a new filters, -cartridge key, -plastic box, -safety gloves, -safety glasses

## Error Messages

Whenever there is a technical issue caused by a hardware failure, negligence or inappropriate use of Zortrax Cleaning Station, the firmware immediately displays an error message on the screen. The following list explains all error messages and provides potential causes and suggested solutions.

Error Message	Potential Cause	Suggested Solution
#01 Closing failed	The device is unable to close the top cover and immerse the basket	- Remove the cause of the blockage, - Contact Zortrax Support Center through the support form: <a href="https://support.zortrax.com/support-form/">https://support.zortrax.com/support-form/</a>
#02 Opening failed	The device is unable to open the top cover and elevate the basket	- Remove the cause of the blockage, - Contact Zortrax Support Center through the support form: <a href="https://support.zortrax.com/support-form/">https://support.zortrax.com/support-form/</a>
#03 The fluid level is too high	There is too much liquid in the cleaning chamber	- Remove the excess liquid, - Contact Zortrax Support Center through the support form: <a href="https://support.zortrax.com/support-form/">https://support.zortrax.com/support-form/</a>
#04 The fluid flow is disrupted	There is too little liquid in the cleaning chamber	- Fill the cleaning chamber with liquid, - Contact Zortrax Support Center through the support form: <a href="https://support.zortrax.com/support-form/">https://support.zortrax.com/support-form/</a>

	If the device begins to operate in an unidentified way, safely unplug it from the power supply and immediately contact the Support Center specialists via the support form at: <a href="http://support.zortrax.com/support-form/">http://support.zortrax.com/support-form/</a> .
	While shipping the device to the Manufacturer's technical service, it is important to properly prepare a package. Use the original packaging. Detailed instructions on how to pack the device are available at: <a href="http://support.zortrax.com/cleaning-station-packing/">http://support.zortrax.com/cleaning-station-packing/</a> .

More manuals and tips & tricks articles are available at our Support Center.

[www.zortrax.com](http://www.zortrax.com)

## Specification

<b>Weight and physical dimensions</b>	
Device (W x D x H)	460 x 460 x 490 mm (18.1 x 18.1 x 19.3 in)
Weight	- 40 kg (88.2 lb) - without cleaning fluid - around 80 kg (176.4 lb) - with cleaning fluid (full tank)
<b>Device</b>	
Working area dimensions	300 x 210 x 270 mm (11.8 x 8.27 x 10.6 in)
Tank capacity	18 l (608.65 fl oz)
Filters	Two mechanical filters: - polypropylene cartridge (1 micron) - stainless mesh cartridge with UV lighting (150 microns)
Security	- excessive cleaning fluid level sensor - flow meter preventing operation without the cleaning fluid in the system
<b>Electrical</b>	
AC Input	100-240 V AC 4 A 50/60 Hz
Maximum Power Consumption	48 W
<b>Additional information</b>	
All information contained in this User Guide and specification is subject to change without notice.	

## Recycling

### Disposal of paper and plastic packaging

To protect the environment, the Manufacturer recommends placing used paper and plastic packaging in specially designated containers, according to your local recycling guidelines.

### Disposal of resin

Printing and post-processing waste, including empty bottles, failed prints, supports, rafts as well as paper towels with resin residues should be put in the Zortrax Curing Station or in any source of UV light before disposal. Uncured resin has to be disposed of in accordance with national and local regulations concerning hazardous waste.

### Disposal of cleaning solvent

Detailed information regarding usage and waste disposal of the liquid detergent utilized to clean 3D prints should be found in the SDS delivered by the producer of the liquid.



### Waste electrical and electronic equipment

This symbol indicates that it is electrical and electronic equipment which must not be disposed of with household waste. Substances contained in the equipment may be harmful to natural environment. Waste electrical and electronic equipment cannot be disposed of in landfills and must be recycled. For information on where to dispose of waste equipment, contact the reseller, the Manufacturer, or the importer of the device. Disposing of waste electrical and electronic equipment along with other waste is prohibited by the Directive 2012/19/UE.

## Certification



The Manufacturer ensures that the equipment complies with all relevant standards. In case of questions and problems contact the Manufacturer through the support form: <http://support.zortrax.com/support-form/>.

# zortrax

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technical support: [support@zortrax.com](mailto:support@zortrax.com)

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