

# zortrax

## User Guide

### Zortrax DSS



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## **Introduction**

Read this User Guide carefully and thoroughly before operating Zortrax products for the first time. The User Guide includes basic information about the Zortrax DSS station, safety and protection guidelines as well as advice on preparing the machine for the first use and basic maintenance work. Ignorance and non-compliance with these instructions may result in property damage, injuries, device failures or improper work of the device. It is also necessary to ensure that every 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, store 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. The users should take into consideration the risk of possible damage of the device resulting from defects in material and workmanship.

## **Intended use of the Zortrax DSS Station**

The Zortrax DSS station is a device dedicated for the Zortrax Inventure 3D printer which is based on a support material dissolving system. The material used for printing support structures is dissolved in warm water. The whole process is fully automated and does not demand manual work. The water is heated inside the device thanks to two heating elements. Moreover, the Zortrax DSS station is equipped with a rotor that ensures continuous water circulation. Thanks to this solution, it is possible to remove support material from hard-to-reach areas due to the constant movement of water around the model. The user is responsible to adjust proper temperature and time settings for the dissolving process, depending on the material used to print the model.

Due to the size and specificity, Zortrax devices are not intended for use by children under the age of 14 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 Zortrax DSS station.

## General Safety Information

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

The Zortrax DSS station operates at high temperatures and has easily accessible movable components, therefore, you must be particularly careful when handling or operating the device. It is important to avoid situations that may lead to burns or interference in the device's proper functioning. Use safety gloves when removing the top cover during operation of the device to avoid potential burns.

Do not leave the machine unattended during the process of dissolving the support material - check the device periodically for proper functioning in order to avoid potential accidents or breakdowns. Turn off the Zortrax DSS station once the process is finished.

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

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

## Health and Safety at Work

All service and maintenance activities as well as device operation require wearing safety gloves included in the Starter Kit. Wearing safety gloves is also advised while removing a model from the Zortrax DSS station. Food and beverages should be kept away from both the Zortrax DSS station and 3D printed objects.

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

## Electrical Safety

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

Replace electronic units according to the instructions and be particularly careful while using the tools supplied with the device.

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 Zortrax DSS station. Avoid overloading the outlet with too many devices.

The Zortrax DSS station 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 machine. Do not damage, cut or repair the cable. A damaged cable should be immediately replaced with a new one.

All maintenance and repair work should be carried out while the device is off and unplugged. Do not expose the device to moisture and liquids. Modifications such as soldering of electronic subunits are forbidden.

## Mechanical Safety

The Zortrax DSS station has a movable component in the form of a rotor. Therefore, it is forbidden to reach into the device or put anything inside the device when it is running, about to start running or at rest. This may lead to serious injuries or damage.

Tools and accessories from the Starter Kit box should be used with special care for intended purposes only. Improper use may cause serious injuries.

Before inserting a model with support material into the Zortrax DSS station, make sure that the device contains the rinsing basket that protects the 3D printed object from coming into direct contact with the rotor and the heater.




## Risk of Burns

There is a high risk of burns while operating the Zortrax DSS station as the water heated in the device may reach up to 80° C [176° F]. Do not touch the top cover with bare hands as it may be hot. In order to remove a model from the Zortrax DSS station, use the pliers which are specially adapted for this purpose.

Do not ignore the warning labels placed on the devices.

Moreover, constructional modifications of the DSS station's operating temperature are not permitted as it may cause serious injuries or bring damage to the device.

## Warning and Safety Labels on Zortrax Devices

|                                                                                   |                                                                                                                                                      |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>The unit is hot and contains hot liquid. Allow to cool before handling</p>                                                                        |
|  | <p>Hot surface. Allow to cool before touching</p>                                                                                                    |
|  | <p>This warning symbol indicates that special care should be taken when repairing the device. Also, it points out an important step to carry out</p> |

## Safe Storage and Transport Guidance

The Zortrax DSS station must be stored between 0 and 35° C [32 and 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. One device may weigh 9 kg [19 lbs]. 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.

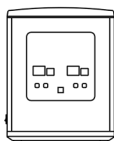
Pallet stacking and destacking should be carried out by two people. The package with the device should be lifted or moved using special handles.

## Electromagnetic Compatibility (EMC)

Each Zortrax DSS station complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

## What's in the Box



Zortrax DSS  
Station



Rubber Gloves



Brush



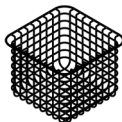
Drain Pipe



Power Cable



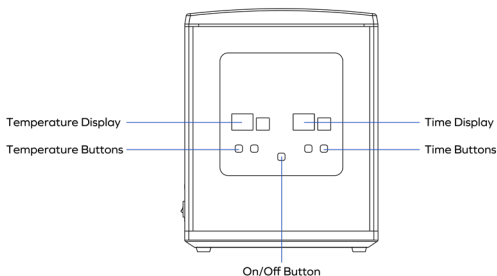
Quick Start Guide



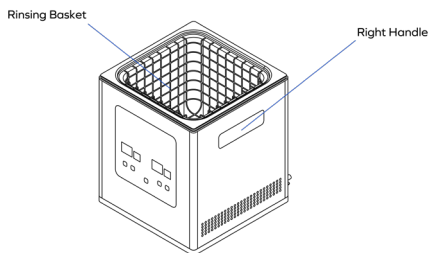
Rinsing Basket

## Main Components

1. Front view:

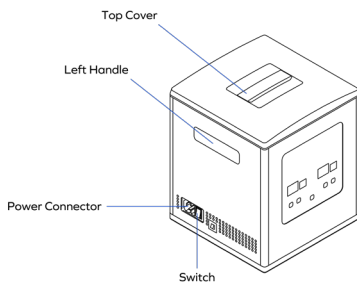


2. Right-side view:

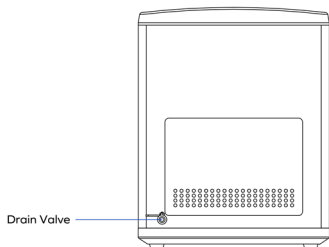




3. Left-side view:



4. Back view:



## **Zortrax DSS Station Glossary**

### **TEMPERATURE DISPLAY**

the high contrast screen displaying the temperature in which the support material is going to be dissolved. The temperature value is set manually and stays at the same level throughout the whole process of cleaning the model. What's more, the temperature display is divided into two parts: actual temperature and target temperature

### **TIME DISPLAY**

the high contrast screen displaying the time during which the support material is going to be dissolved. The time is set manually, depending on the size and complexity of the model. The screen displays two values: hours and minutes.

### **RINSING BASKET**

the metal container built of bars in which a model is inserted and then put into water in the Zortrax DSS station. The basket allows for an unrestrained water circulation around the model, and protects the model from potential damage by the rotor or the heating element.

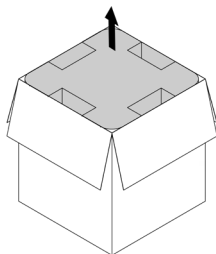
### **ROTOR**

a movable component of the Zortrax DSS station. The rotor whirls around its own axis during the support material dissolving process, and as a result ensures a constant water circulation inside the device.

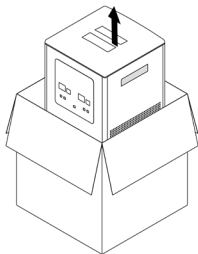
### **VALVE**

the component placed at the back of the device which regulates the flow of water. Once the dissolving process has been finished, the water with the dissolved support material can be drained into the plumbing through the valve.

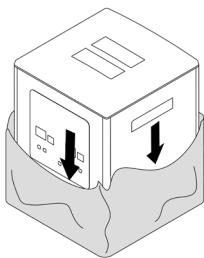
## First Use Preparations



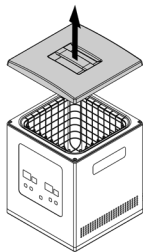
1. Open the box and remove the cushioning.



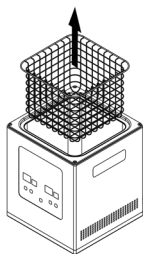
2. Use the handles to take the Zortrax DSS station out of the box. The handles are on both sides of the housing.



3. Remove the security foil.

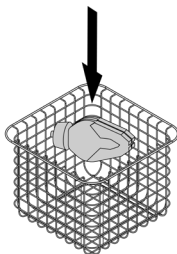


4. Remove the top cover.

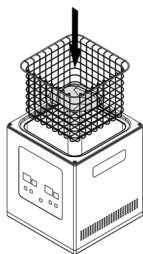


5. Remove the rinsing basket.

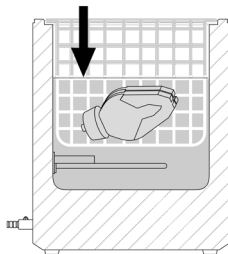
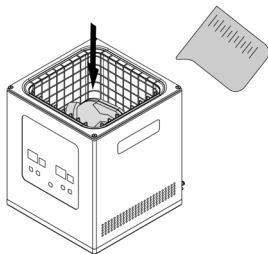
**NOTE!** Make sure that no foils or other elements have been left inside the device.



6. Put the model in the rinsing basket.

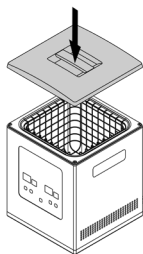


7. Carefully place the basket inside the device.

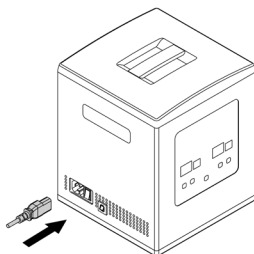


8. Fill up the device with warm water.

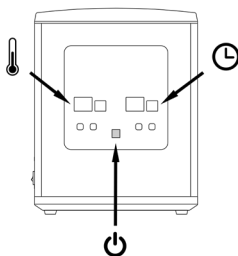
**NOTE!** Do not fill the Zortrax DSS station all the way to the top. Make sure that the water level is above the model.



9. Put the top cover back into place.

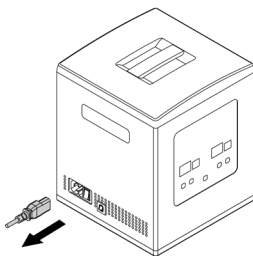


10. Plug in the power cable and turn on the device.



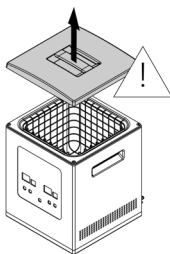
11. Press the POWER ON switch. Set the temperature and time with the buttons on the front.

**NOTE!** The recommended settings for specific materials are available at:  
<http://support.zortrax.com/preparation-first-use-dss-station/>.



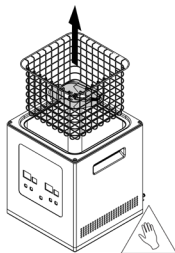
12. Once the process finished, turn off the device and unplug the power cable.





13. Remove the top cover.

**WARNING!** Be careful, the device contains hot water. Wear rubber gloves and safety goggles.

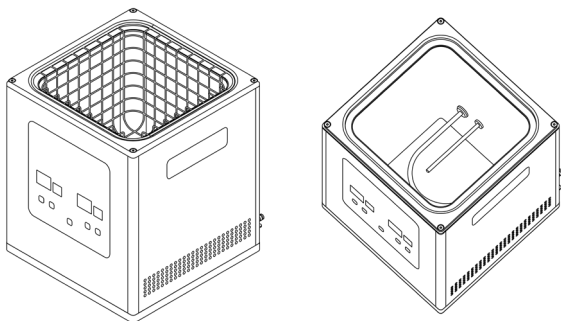


14 Remove the rinsing basket with the model. Rinse the model under running water and let it air dry. You can also use paper towels.

## Basic Maintenance and Service Work

Maintenance work should be regular in order to keep the Zortrax DSS station in good condition. Some parts require maintenance before each process of dissolving the support 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 extremely important to turn off the device and let it cool down. Remember to always wear safety gloves and glasses. The device is delivered with a full set of tools needed to carry out maintenance and service work.

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



| Activity                                                                                       | Frequency                                                                                                                                                           | Solution to problems                                                                                                                         | Necessary accessories |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Water exchange                                                                                 | Every time before starting the process of dissolving support structures or once the water becomes more and more murky/milky while removing support from a big model | Empty the device. Rinse and fill it with water                                                                                               | -                     |
| Cleaning the interior of the device (the heater and temperature sensor) and the rinsing basket | During each water exchange                                                                                                                                          | Fill the device with a little amount of water and clean the heater and temperature sensor with a brush. Clean the basket under running water | - a brush             |
| Removing limescale from the heater and temperature sensor                                      | Every 1000 working hours                                                                                                                                            | Use a descaler to remove limescale. Follow the manufacturer's instructions                                                                   | -                     |

## Support and Troubleshooting

In order to ensure safety of every user, the Manufacturer provides various support while identifying and solving technical problems independently.

In case of difficulties with operating the Zortrax DSS station, at first you should seek guidance in this User Guide, check the manuals available at: <http://support.zortrax.com/> or consult our technical specialists through the Support Form available at: <http://support.zortrax.com/support-form/>.

## Error Messages

Whenever there is a technical issue caused by a hardware failure, negligence or inappropriate use of the device, 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                                                                                                                                                                                           |
|---------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E001          | Thermistor error                 | <ul style="list-style-type: none"> <li>- Restart the device</li> <li>- If the problem continues, contact your Reseller/Distributor</li> </ul>                                                                |
| E002          | Water level error                | <ul style="list-style-type: none"> <li>- Fill the device with an appropriate amount of water</li> <li>- If the problem continues, contact your Reseller/Distributor</li> </ul>                               |
| E003          | Thermistor and water level error | <ul style="list-style-type: none"> <li>- Fill the device with an appropriate amount of water</li> <li>- Restart the device</li> <li>- If the problem continues, contact your Reseller/Distributor</li> </ul> |



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:  
<http://support.zortrax.com/support-form/>.



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: <http://support.zortrax.com/packing-DSS-station/>.

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> |                                                |
|---------------------------------------|------------------------------------------------|
| Overall Dimensions (W x D x H)        | 235 x 238 x 295 mm [9.2 x 9.3 x 11.6 in]       |
| Internal Dimensions                   | 188 x 188 x 199 mm [7.4 x 7.4 x 7.8 in]        |
| Working Volume                        | 6 l [202.9 FL OZ]                              |
| Device Weight                         | 8.4 kg [18.5 lb]                               |
| <b>Mechanical</b>                     |                                                |
| Maximum Working Temperature           | 75° C [167° F]                                 |
| Maximum Rotational Speed              | 220 rpm                                        |
| <b>Electrical</b>                     |                                                |
| AC Input                              | 110 V ~ 9 A 50/60 Hz<br>240 V ~ 4.2 A 50/60 Hz |
| Maximum Power Consumption             | 1000 W                                         |

## Recycling

Disposal of paper and plastic packaging

In order to protect the environment, we recommend placing used paper and plastic packaging in specially designated containers, according to your local recycling guidelines.

## Waste electrical and electronic equipment



The symbol placed on the device 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 the 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 seller, the Manufacturer or the importer of the product. Disposing of waste electrical and electronic equipment along with other waste is prohibited by the EU 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

**office:** [office@zortrax.com](mailto:office@zortrax.com)

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

**more information:** [zortrax.com](http://zortrax.com)

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