Instruction Manual

Original Instructions

Vida® & Vida HD®

Keep for further reference!

EnvisionTEC GmbH
Brüsseler Str. 51
45968 Gladbeck
Germany

Table of Contents

1 Identification

1.1 Identification Data

Manufacturer:	EnvisionTEC GmbH
Product:	
Type:	
Serial number:	
Order number:	
Year of manufacture:	
Customer:	
Inventory number:	
Site:	

1.2 Manufacturer

EnvisionTEC GmbH
Brüsseler Straße 51
45968 Gladbeck
Germany

EnvisionTEC, Inc.
15162 S. Commerce Dr.
Dearborn, MI 48120
USA

1.3 Copyright

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1.4 Registered Trademarks

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1.5 History of Changes

Date	Changes	Version
2015-08-17	Document creation	1.0
2015-09-28	Added hint on Wi-Fi description	1.1
2015-09-30	Removed superfluous passages from annexes	1.2
2015-11-03	Removed all references to software and post-processing, see software manuals and cookbooks.	2.0
2015-11-10	Minor changes, updated screenshots, Changed power supply information	2.1
2015-11-30	Removed computer requirements	2.2
2015-12-03	Added VNC clients for different OS	2.3
2016-01-11	Added safety warning remote machine control	2.4
2016-01-29	Home calibration description changed	2.5

Date	Changes	Version
2016-03-04	Added warning: Do not disconnect from mains when machine is switched on.	2.6
2016-03-22	Added description: *Load a Job File*	2.7
2016-05-12	Added description: *Retrieve Log Files from your Machine*	2.8
2018-01-19	• Added *Technical Data* of Vida HD • Added description of *M-Type* basement of the machine and how to *Calibrate the Home Position* • Updated description of *Start a Job* and *Quick Start Guide*: manual setting of the home position before starting the job is no longer necessary	3.0
2018-06-08	• Added chapter *Storage Conditions for Photopolymers* • Added note on using the *Basement* • Added note on closed *Hood* during build jobs • Added notes about *Filtering Material* before and after build jobs • Added a note about the check if the used buildstyle matches the material tag before starting a job • Added recommendations to document the execution of calibration and maintenance tasks • Updated *Technical Data* • Added *Typographic Conventions* • Added notes how to *Verify the Calibration of the Home Position* • Added notes how to *Check the Grey Mask*	3.1
2019-06-25	• Changed section *Software presentation*: DLPCS instead of UMCS • Replaced photos with mechanical drawings • Added information on *build platforms* • Added note on cleaning the basement requirement when changing the material • Changed the working temperature requirements	3.2

2 User Information

2.1 Purpose of the Document

This instruction manual

- describes the working principle, operation and maintenance of the machine, and
- provides important information on safe and efficient handling of the machine.

This document forms an elementary part of the system, includes important notes, tolerances for calibration tasks if applicable, and must be paid close attention to both when starting up the machine and during the operation. Keep the hardware documentation in close proximity of the machine, so that the operator can access it at all times.

2.2 Target Group

This instruction manual is intended for:

- the customer (company operating the machine) whose responsible employees have been trained by the manufacturer or the distributor,
- trained operators for operation and
- persons with specialist technical training (mechanics/electrical engineering) for troubleshooting/fault elimination and maintenance.

2.3 Locations in the Instruction Manual

All the directions and locations in this instruction manual are always seen from the working position of the operator.

2.4 Typographic Conventions

This instruction manual uses different formatting elements and symbols. Their meaning is explained in this section.

Formatting Element	Example
Enumerations are indicated by a dot.	• Safety gloves • Safety goggles
Instructions with a defined order are numbered consecutively.	1. Loosen the screws. 2. Remove the build platform 3. Clean the holding. 4. Install the build platform. 5. Tighten the screws.
Cross-references or document references are in italics and highlighted in gray.	see chapter *Maintenance*
Software user interface items, menu paths, file names, and product names are in bold.	input field **Machine name** menu **File | Save as…** file **Config.xml** Start **3SP Control**.
Elements of a menu path are separated by a vertical bar.	**About | Help…**
Buttons are marked with square brackets and bold letters.	**[Save]**
Keys that you want to click individually or together are in angle brackets.	<Ctrl>+<S>
User input are displayed in a different font.	`ipconfig -all`

Formatting Element	Example
Tips for operation are marked with an icon.	

2.5 Representation of Safety Symbols

Safety instructions are indicated by a pictogram and a signal word. The signal word describes the severity of the risk.

Pictogram	Signal Word	Description
	**DANGER**	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION	Indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.
	**NOTICE**	Application hints and particularly useful information.
	**IMPORTANT**	Indicates an obligation to special behavior or an activity required for safe machine handling.

2.5.1 Specific Risk Signs

 Electrical danger	 Hand crushing	 UV radiation	 Hot surface

2.5.2 Mandatory Action Signs

 Use protective hand wear	 Use protective goggles	 Use protective clothing

3 General Safety Instructions

3.1 Intended Use

The printers of the Vida® line are designed to produce small, premium components requiring a high level of precision. The machines work with industrial UV LEDs as light source.

It is the machine owner's responsibility to ensure that the machine is used for the intended purpose and within its limitations only.

This includes that the electrical requirements indicated in chapter *Technical Data* and on the rating plate of the machine must not be exceeded.

3.2 Reasonably Foreseeable Misuse

IMPORTANT

The machine may only be used for the intended purposes.

The machine may only be operated if in a flawless state in terms of technical safety.

Only then the operational safety of the machine is guaranteed!

Any other use than that defined in section *Intended Use* or which goes beyond that use is considered misuse!

Reasonably foreseeable misuse is e.g.:

- Operating the machine with inappropriate materials
- Exceeding the technical values specified for normal operation
- Operating the machine with damaged machine parts or electric cables

- Unauthorized modifications and changes to the machine

For any damage resulting from misuse:

- The machine owner bears the sole responsibility.
- The manufacturer assumes no liability whatsoever.

Modifications or Changes

Unauthorized modifications or changes will result in the warranty being null and void.

Therefore, do not make any alterations or complements to the machine without previous consultation and written confirmation of the manufacturer.

Spare and wear parts as well as auxiliary materials

The use of spare and wear parts from third party manufacturers can lead to risks. Only use original parts or parts released by the manufacturer.

The manufacturer shall accept no liability for damage caused by the use of unreleased spare and wear parts or auxiliary materials not released by the manufacturer.

3.3 Risks in Handling the Machine

Operating the machine may cause risks

- to the health and safety of the operator or third persons;
- to the machine and
- to other goods.

Knowledge of the safety information and user information of this instruction manual is a basic requirement for safe handling and fault-free machine operation.

IMPORTANT!

This instruction manual must always be kept where the machine is operated! This instruction manual must be easily accessible for operators and maintenance personnel.

Furthermore, observe:

- general and local regulations pertaining to accident prevention and environmental protection;
- the information contained in the supplied Safety Data Sheets.

3.4 Residual Risks

The machine has been constructed according to the state-of-the art and the approved safety regulations. Nevertheless, the operation of the machine can cause especially the following risks to the health and safety of the operator or third persons.

Mechanical hazards

- Risk of hand crushing caused by automatically moving machine parts.
- Always keep the hood closed when operating the machine. The machine may only be operated if the protecting devices are working properly.
- The machine may only be operated by instructed and specially trained personnel. Only execute the calibration tasks described in this user manual. For the remaining tasks, have the machine calibrated by trained and authorized service personnel only.
- Machine overturning during transportation can cause injury.
- Do not try to move the machine yourself.
- Have the machine transported by trained personnel only.

- Risk of injury caused by improper handling of the build platform. Before taking the build platform out, make sure that all persons are clear of the danger zone.
- Avoid unnecessary movements. Avoid non-ergonomic joint positions.
- Risk for the operator to slip, stumble or fall. Keep the floor of the machine area clear of loose cables, objects or liquids.

Electrical hazard

Improper use of conducting components can lead to severe injuries.

Make sure that all conducting components are in good order and condition!

The switch cabinet may be opened by trained and authorized service personnel only.

Particular hazards can be caused by:

- Incomplete covers or broken parts
- Improper assembly, incorrect wiring, defective parts etc.

Do not try to set up the machine yourself. Have the machine set up by trained and authorized service personnel only.

UV radiation hazard

WARNING!

Never look directly into the projectors beam!

Looking into the projector with unprotected eyes may cause injury.

Use protective goggles!

Particular hazards can be caused by:

- Incomplete covers or broken parts;
- Improper assembly, incorrect wiring, defective parts etc.

UV radiation can damage the skin. Wear safety gloves!

Hazardous substances

Risk to health from photopolymers:

- Use the appropriate personal protective equipment.
- Observe the relevant Material Safety Data Sheets supplied with the photopolymers.

Particular hazards can be caused by:

Thermal hazards

WARNING!

ONLY AUTHORIZED, TRAINED PERSONEL MAY TOUCH THE LIGHT SOURCE!

Touching the hot light source might result in severe burns:

- Use heat-resistant protective gloves!

Hazards caused by insufficient stability

- The machine must be positioned on a flat and even surface to prevent the machine from moving.
- Check the horizontal orientation of the machine at regular intervals. This can be done by use of a spirit level placed on the build platform.
- If the machine is not levelled any more, e. g. if it has suffered an impact, have the machine repositioned by trained and authorized service personnel.

3.5 Risks when handling photopolymers

WARNING!

The use of the photopolymers intended for the machine may cause risks to the health and safety of the operator or third persons.

In order to ensure a safe handling of the photopolymers, the following hazard and precautionary statements must be observed!

Hazard statements

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H360f May damage the unborn child. Suspected of damaging fertility.
- H361f Suspected of damaging fertility.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H412 Harmful to aquatic life with long lasting effects.
- H413 May cause long-lasting harmful effects to aquatic life.

Other hazards:

- Polymerization with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances or heavy metal ions.

- People who suffer from skins problems, asthma, allergies, chronic or recurring respiratory illnesses must not be deployed in processes, which use this substance. Process vapors can irritate airways, skin and eyes.

Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P201 Obtain special instructions before use.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection.
- P302+P352 If on skin: Wash with water and soap.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P404 Store in a closed container.
- P405 Store locked up.
- P501 Dispose of contents and container in accordance with local regulation.

IMPORTANT

Do not use other materials than the photopolymers delivered by EnvisionTEC.

Read the relevant Material Safety Data Sheets supplied with the photopolymers before use.

Those components of the photopolymers delivered by EnvisionTEC that have been classified as hazardous do not have a threshold limit value (TLV). Therefore, it is not necessary to give concrete instructions concerning the TLV.

Please observe the following hint concerning air change:

IMPORTANT

Make sure that the extraction is sufficient. EnvisionTEC recommends an air change of 25 m^3/h per m^2 effective surface of the laboratory as described in EN 13779.

3.6 Obligations of the Machine Owner

The machine has been produced for commercial use. Therefore, it lies within the owner‘s responsibility to ensure that all general safety regulations and codes of practice as well as the safety measures described in this manual are observed at all times. Apart from this, all environmental regulations must be observed when disposing any of the components or consumables.

Also make sure that the Material Safety Data Sheets for the materials used are observed and kept in proximity to the machine.

3.7 Obligations of the Personnel

Before starting to work, anyone involved in working with/on the machine is obliged:

- to comply with the basic workplace safety instructions and accident prevention regulations.
- to read and follow the safety information chapter and the safety instructions in this instruction manual.

If you still have queries, please contact the manufacturer. See section *1 Identification* under *Manufacturer*.

3.8 Personal Qualification

Employees / Activity	Personnel specially trained for the activity	Trained operators	Instructed personnel with specialist training (mechanics/electrical engineering)
Transport	X	–	–
Set-Up	–	–	X
Basic calibration tasks	–	X	X
Advanced calibration tasks	–	–	X
Operation	–	X	X
Troubleshooting and fault elimination	–	X	X
Maintenance	–	X	X
Disposal/Recycling	X	–	–

Legend: X permitted, – not permitted

3.9 Personal Protective Equipment

IMPORTANT

When working with photopolymers, observe the instructions regarding personal protective equipment in the relevant Material Safety Data Sheets supplied.

For reasons of accident prevention, make sure that all operators wear suitable protective clothing:

- protective gloves
- safety boots
- laboratory coats
- safety goggles
- dust mask during post-processing

4 Technical Data

4.1 Mechanical Data

	Vida	Vida HD
Length	39.5 cm (15.6 in.)	39.5 cm (15.6 in.)
Width	39.5 cm (15.6 in.)	39.5 cm (15.6 in.)
Height	39.5 cm (15.6 in.)	39.5 cm (15.6 in.)
Weight	34kg (75lbs)	34kg (75lbs)
Build Envelope	140mm x 79mm x 100mm (5.5in. x 3.1in. x 3.95in.)	96mm x 54mm x 100mm (3.78in. x 2.13in. x 3.95in.)
X/Y Resolution	73µ	50µm
Dynamic Z Resolution	25 to 150 µm (0.001 to 0.006 in.)	25 to 150 µm (0.001 to 0.006 in.)

4.2 Power Requirements

- a clean single-phase 110-volt AC line at 3 amps with clean ground (directly from the earth of building or ground);
- for overseas use the power supply is universal: 100 VAC and 250 VAC/ 50-60 Hz;
- hook the machine up to a battery backup for uninterrupted power supply;
- battery backup should be rated to support two computers for 8 hours.

WARNING!

Risk of injury! Risk of damage to the machine!

Static control area! Failure to use the grounding devices may lead to damage or injuries!

- Connect ground wire before using!
- Only use the grounding adapters of the plug & socket type targeted for the country of intended use of the machine!

Grounding of electrical receptacles is an important safety feature that minimizes the risk of electric shock and protects electrical equipment from damage. For proper operation and in order not to disrupt the operation of the machine, ground the machine before start working with it!

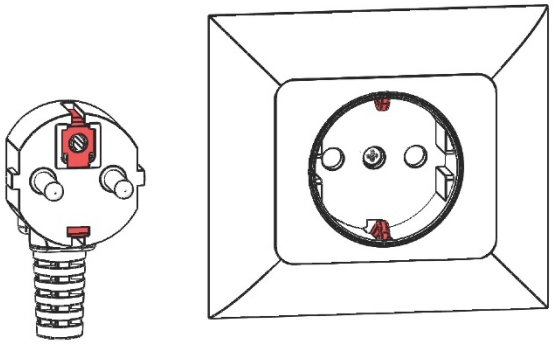


Figure 1: Grounded plug and outlet for Europe

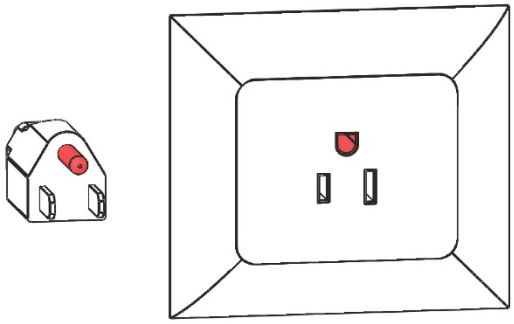


Figure 2: Grounded plug and outlet for the US

4.3 Intended Environmental Conditions

4.4 Environmental Conditions for Machines

- Ensure that the room temperature does not fall below 21°C or exceed 28°C. Generally, the ideal working temperature is around 23°C.
- Humidity is not to exceed 70%.
- Do not set up the machine in humid or dusty places or in places where it may come into contact with smoke or steam. That is very important for getting usable build results.

- Do not expose the machine to direct sunlight or any other UV radiation.
- The room must be temperature controlled to ensure the correct operation of the machine.
- Air conditioning units should be at least three meters away from the machine with no airflow pointing directly at the machine.
- Do not place the machine near to any door way, avoid temperature drops.
- Room must allow heat generated from the system to dissipate at 0.03 m³/min airflow.

4.5 Storage Conditions for Photopolymers

Photopolymers should be stored under the following conditions:

- at room temperature
- dry
- in closed bottles
- lightproof

If photopolymers are filled in the basement, the machine hood should always be closed. If you don't need the basement for a longer time, pack the basement and store it under the same conditions as mentioned above.

NOTICE

You can find more specific storage conditions for photopolymers in the appropriate cookbooks or Instruction of Use provided by your manufacturer or distributor.

5 Unpacking and Positioning

5.1 Unpacking the Machine

Your new machine will come shipped packaged tightly in one box. Before opening the box, make sure that no visible damage can be observed or any sensors are broken. If these are present, please inform the office immediately.

If everything is in good condition, open the box and carefully lift out the machine, then place it feet down on the designated space.

5.2 Positioning the Machine

IMPORTANT

Risk of damage to the machine!

Incorrect positioning of the machine can cause damage to the machine and and/or to built parts. Please follow the guidelines!

In order to obtain the best possible results, take the following factors into account when positioning the machine:

- Avoid installing the product in a place exposed to vibrations or impacts. Make sure the area it is placed on is a flat and even surface.
- Ensure you have sufficient electrical sockets near the machine location.
- A minimum 31cm of clearance is required at the rear of the machine to gain access to the main power plug and USB port.
- A minimum of 62cm of clearance is required on both sides to prevent overheating.
- Keep workspace clear of any potential source of fire at all times.
- Any heat generated from machine must be allowed and able to dissipate.

6 Machine Description

This chapter contains a comprehensive overview of the construction and the function of the machine. It should be read when actually at the machine in order to get familiar with the machine in an optimal way.

6.1 Fields of Application

The Vida® machine builds 3D models by curing liquid photopolymers through a projector system.

The model created on a CAD (Computer Aided Design) software is loaded to Perfactory Software Suite supplied with the machine. Perfactory Software Suite slices the model, which then can be sent to the machine.

6.2 Functional Description

During the build process, the model is built layer by layer. A mechanical system moves the build platform up so that the cured material sticks to the build platform or to the previous layer.

Before starting the build process, certain calibration functions need to be carried out, which are performed at the factory.

The photopolymer is then directly poured into the basement. The job is transferred to the machine through Perfactory Software Suite or via USB drive. The build process can be started.

After the build process has finished, the built parts are removed from the build platform using a scalpel or scraper and treated according to the corresponding cookbook.

6.3 Construction of the Machine

Figures below give an overview of the most important machine components and show their position on the machine.

6.3.1 Front View

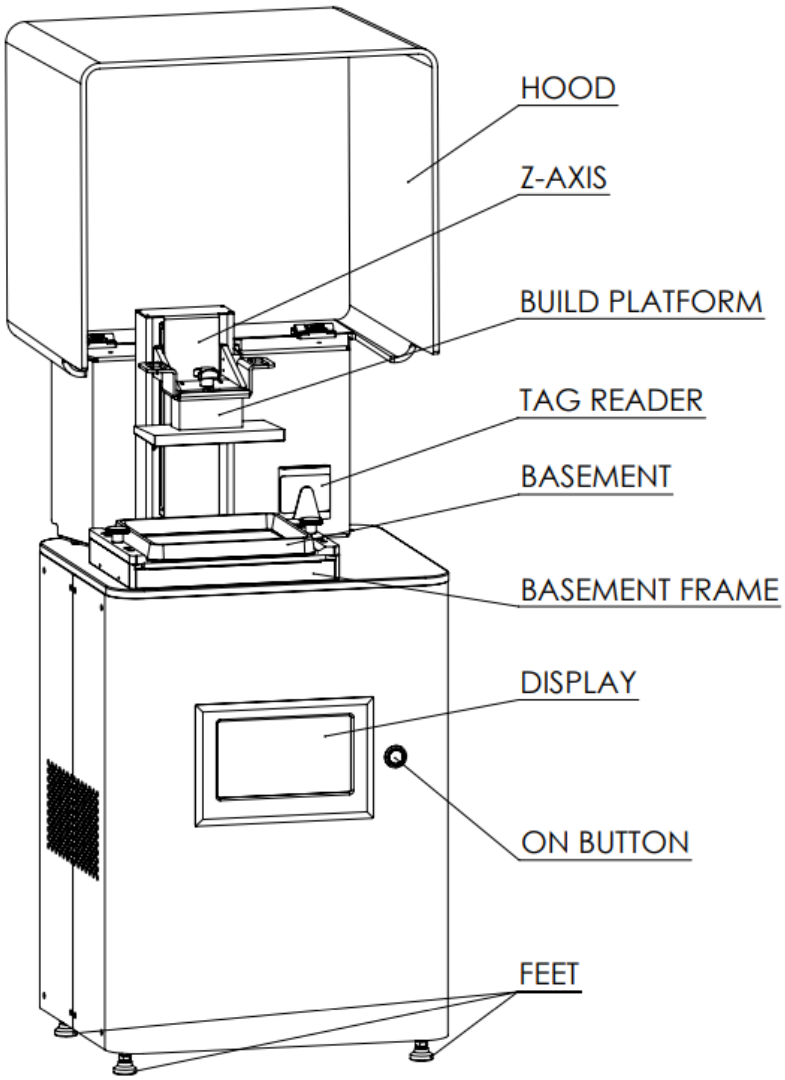


Figure 3: Front view

6.3.2 Back View

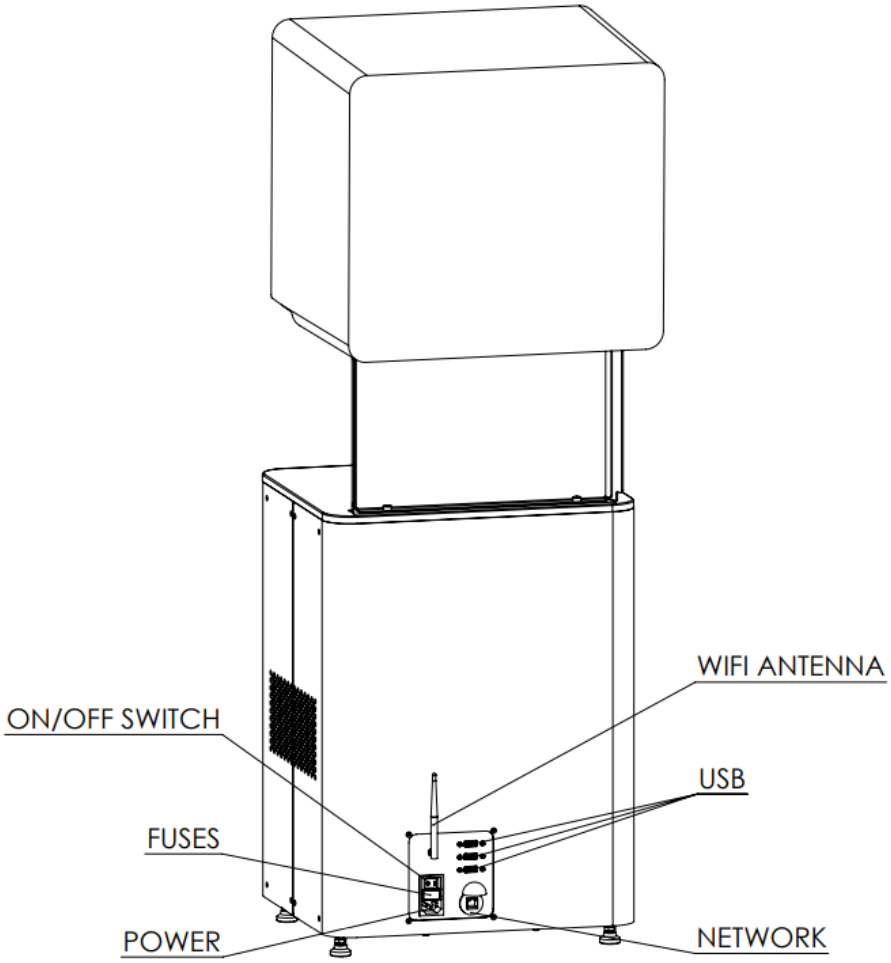


Figure 4: Back view

6.4 Machine Components

6.4.1 Hood

IMPORTANT

Risk of injury!

The protection hood must be always closed, except when removing build parts from the machine. When the parts are already removed, place the hood back on the machine.

NOTICE

No jobs can be started if the protection hood is

- open or
- not properly closed.

The hood of the machine has no locking mechanism. You can open or close it by picking it up or down.

6.4.2 RFID Tag Reader

IMPORTANT

Risk of damage to the machine!

Ensure that you put the material tag into the reader as shown in the image! Failure to do so can result in damage to the RFID tag and reader!

The software is written utilizing the very latest RFID technology (Radio Frequency Identification). This helps keeping track of the lifetime left on the material.

It also does not allow usage of a material that doesn't match the buildstyle or RFID tag.

Place the RFID card that comes with your material into the clips on the reader, where it is read and processed by the machine to ensure accuracy.

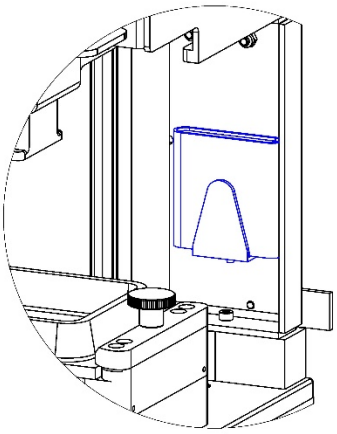


Figure 5: RFID Tag Reader

6.4.3 Build platform

According to the purpose of use, there are three types of build platforms for the Vida machines: granite, aluminum and aluminum anodized. Depending on height, they can be low or extended.

All platforms can be used for technical application, but only the aluminum anodized (black) and granite platforms can be used for medial application!

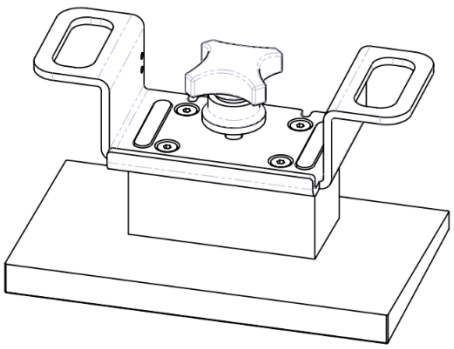


Figure 6: Build platform

6.4.4 Basement

IMPORTANT

Use a different basement for each kind of material to avoid contamination. If not possible, clean the basement carefully and thoroughly.

6.4.4.1 Pre-Stretched Assembly (PSA)

The Pre-Stretched Assembly, or most commonly known as PSA, has been designed to work with the downward movement of the build platform.

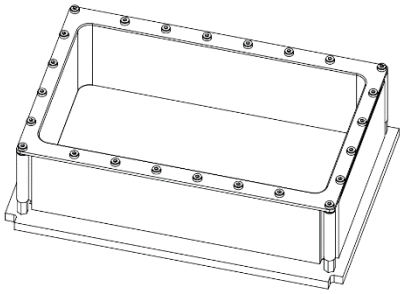


Figure 8: PSA basement

The PSA consists of two metal frames with a special membrane stretched between them, which fits snuggly over a piece of glass. Between the glass and the membrane we have a separation film which acts to stop the PSA from sticking to the glass. As the build platform moves up taking the exposed part away from the PSA, it pulls the membrane up finally releasing it and allowing the parts to separate. The build platform then moves back down and the next image in the sequence is projected; the cycle repeats itself.

6.4.4.2 M-Type

The M-Type features optical glass coated in a film that is similar to a Mylar-type film and allows for easy separation of each exposure layer during the 3D printing build. The outer perimeter of the tray is a flexible silicone.

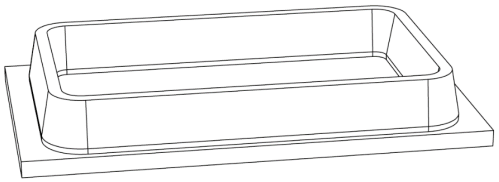


Figure 9: M-type basement

6.4.5 Calibration Plate

NOTICE

The calibration plate is only available with the M-Type basement.

The calibration plate consists of a carrier glass plate and a smaller calibration glass plate attached to this.

Figure 10: Calibration plate

6.4.6 Z Axis

The build platform moves up and down along the z axis.

6.5 Starter Kit

The delivered starter kit includes useful tools for operating and cleaning the machine and the built parts.

6.5.1 Contents of the Starter Kit

The contents will be as follows:

- Vida® User Manual
- Magics and Perfactory Software Suite
- software manuals
- 50mm scraper
- X-Acto knife with blade
- hex wrenches
- power supply cord, 230V, 1.8m
- 0.15mm feeler gauge, length 200mm

- SFTP patch cable, category 5e, black, 5m
- playing cards with company logo
- protective gloves, non-powdered
- basement kit: basement, 0.5kg of material, 1kg material tag, two build styles

6.5.2 How to Use the Starter Kit

Scraper

The main use for the metal scraper is to remove the built parts from the build platform. Apart from this, the scraper can also be used to remove material residues from the build platform.

Feeler Gauge

The feeler gauge is used to exactly align the basement to the build platform. This is done indirectly by feeling the distance between the calibration plate and the built platform. The feeling when the feeler gauge is inputted between them should be the same at every side and corner. In this case, it can be ensured that the film from the basement and the built platform are parallel to each other.

Playing Cards

The supplied set of cards is ideal to clean the basement from big cured material residues after the building process without scratching the surface. This is important, as only using a perfectly transparent basement, exact build results can be guaranteed.
It is highly recommended that the material should be filtered after each finished job or at least every time that there is a presence of residues in the material inside the basement.

Rubber Gloves

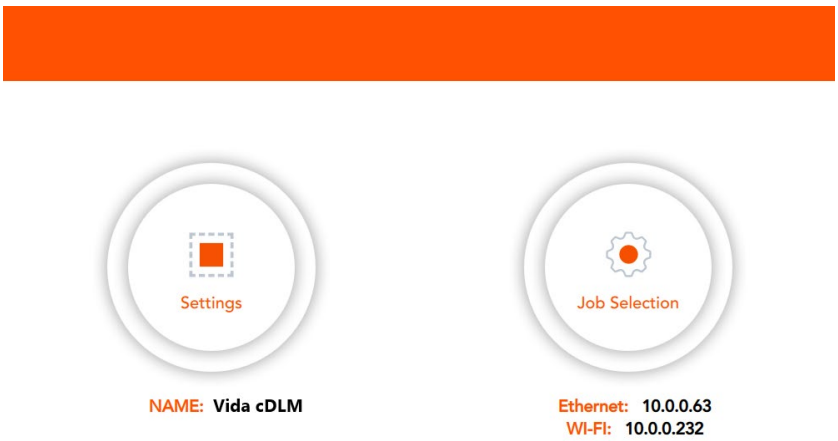
Make sure to always use the supplied protective gloves while working with resins!

7 Software Presentation

NOTICE

Please contact customer support for any questions regarding this manual and the machine!

DLP Controller Software

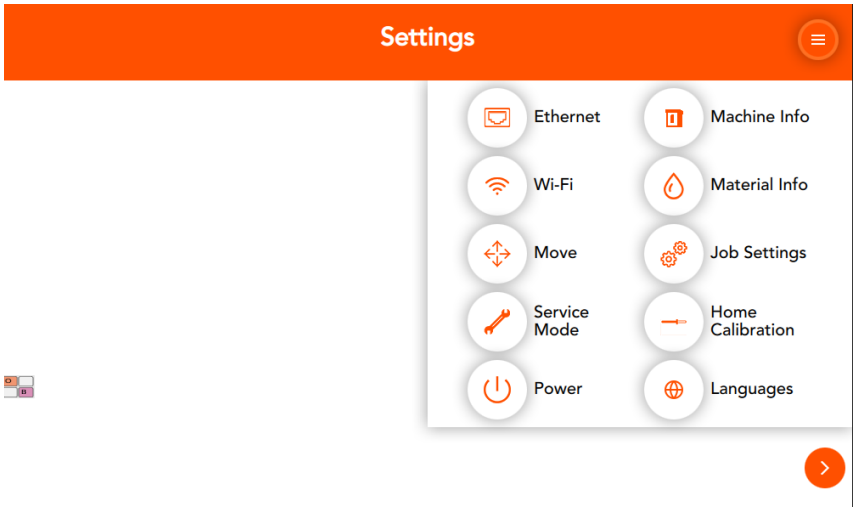


In **DLP Controller Software** there are two main menus:

- **Settings** Menu,
- **Job Selection** Menu.

7.1 Settings Menu

The **Settings** Menu allows the user to change settings of the tabs displayed below, gives further information about the machine or the LAN connection of it and allows the user to switch the machine off electronically.

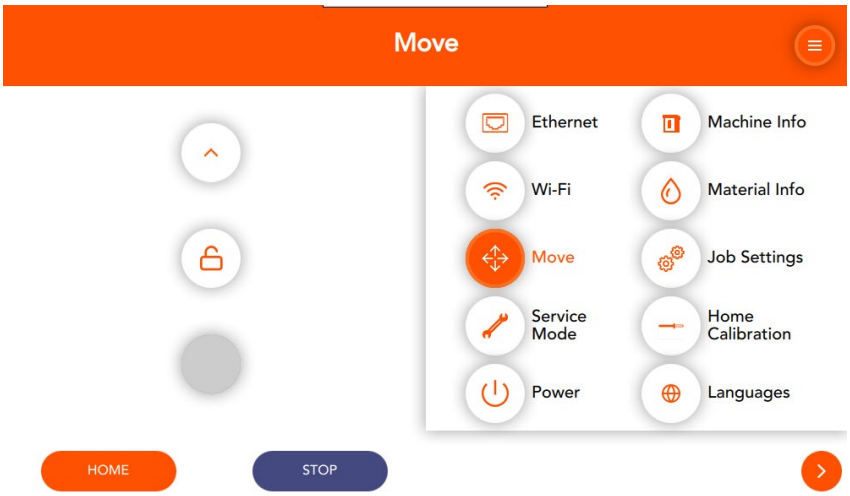


To exit the Settings Menu, click the button on the bottom right part of the screen.

7.1.1 Move Tab

The **Move** tab is used for moving the build platform.

Click **Settings | Move** to enter.



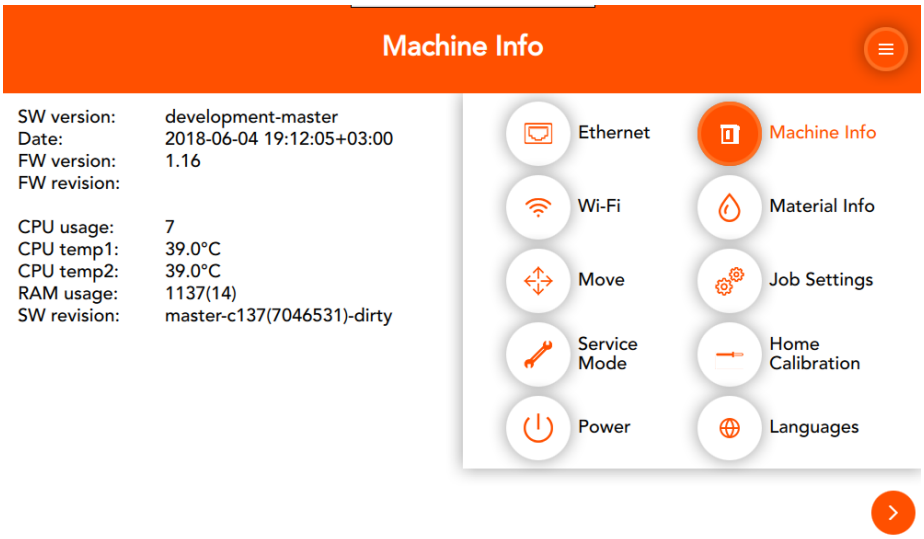
The **[Lock]** button turns the down movement of a platform on and off. It is intended for not letting click the **[Down]** arrow button unintentionally and move the platform down causing crash of glass.

Click the **[Up]** arrow button to move the platform up and the **[Down]** arrow button to move the platform down.

7.1.2 Machine Info Tab

The **Machine Info** tab provides information about the machine.

Click **Settings | Machine Info** to enter.



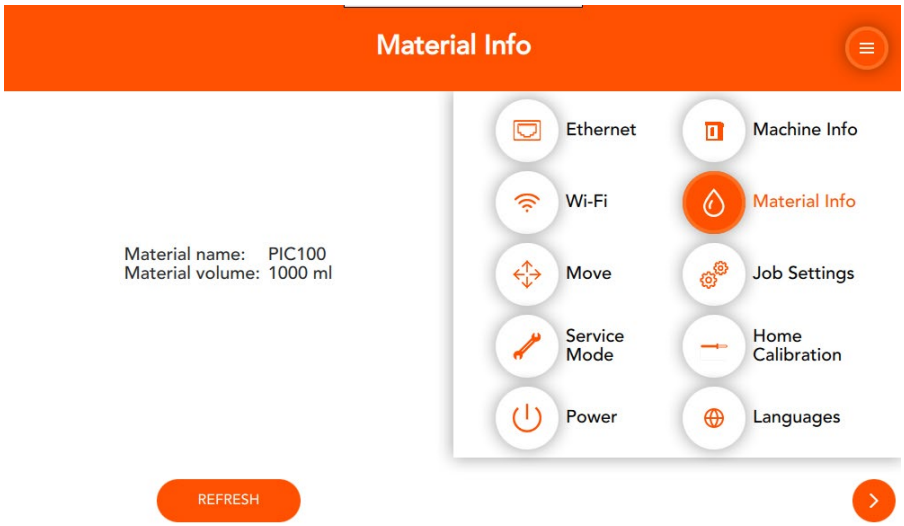
- **SW version** shows the version of software set on the machine.
- **Date** shows the date of a build.
- **FW version** shows the version of firmware set on the machine.
- **FW revision** shows the revision of firmware on the machine.
- **CPU usage** shows CPU utilization.
- **CPU temp1 and 2** shows the temperature of each core of the CPU.
- **RAM usage** shows the volume of the occupied memory (as percentage of the total volume).

- **SW revision** shows the revision of software on the machine.

7.1.3 Material Info Tab

The **Material Info** tab provides information about material used on the machine.

Click **Settings | Material Info** to enter.



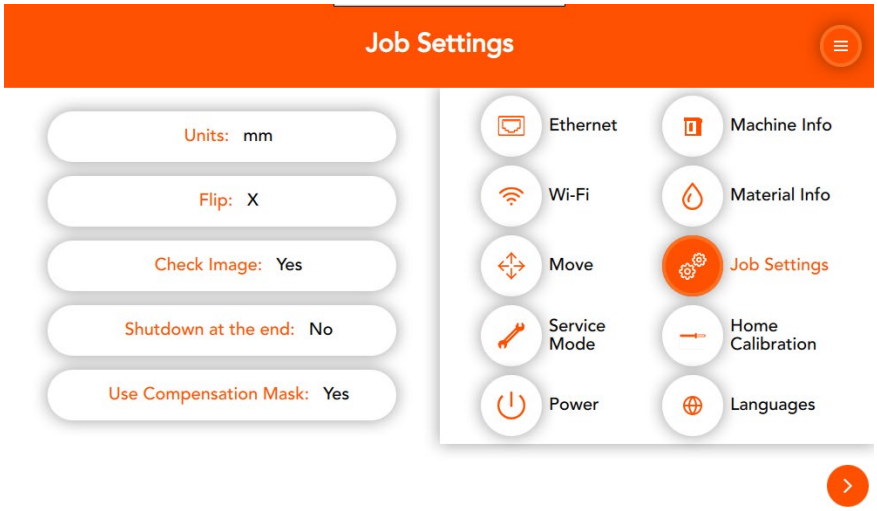
This section shows information on the type of the material and the amount of the material left on the card.

To update the data from a card, click **[Refresh]** button.

You can remove an existing card from the machine, insert a new one, click **[Refresh]** and see the name and volume of a material on it.

7.1.4 Job Settings Tab

Click **[Job Settings]** to check or change the machine settings.



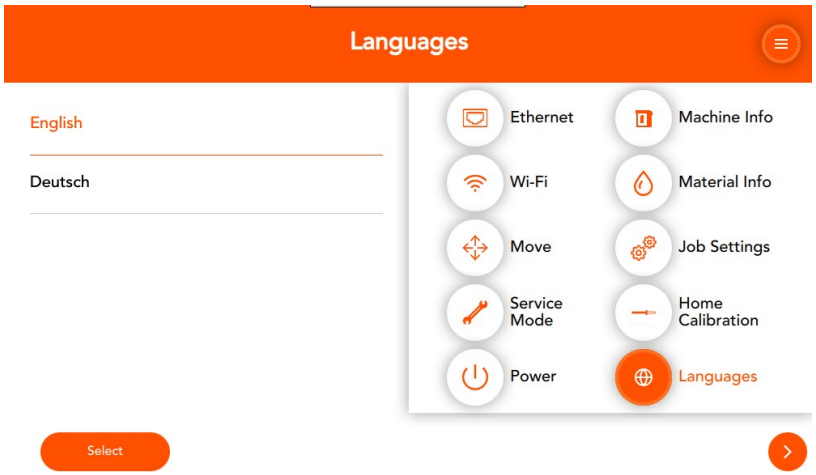
- Click **[Units]** to set the value in millimeters or inches.
- Click **[Flip]** and select X or Y to flip your image in X or Y axes.
- Click **[Check image]** to check all layers of the image before starting a job.
- Click **[Shutdown at the end]** to shut down the machine when the job is finished.
- **Click [Use Compensation Mask]** and select between **Yes** and **No** to turn the usage of a compensation mask on and off.

7.1.5 Languages Tab

The **Language** tab allows the user to change the language of the GUI.

Click **Settings | Languages** to enter.

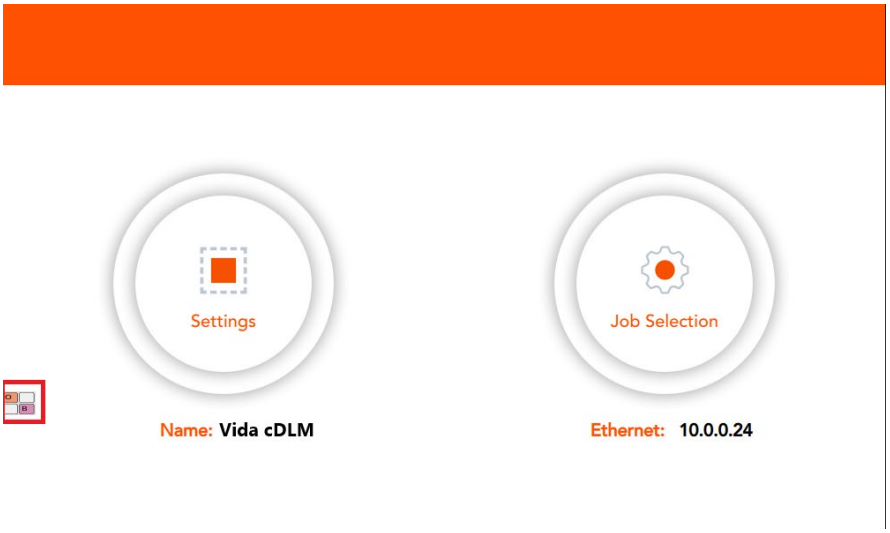
- Click **English | Select** to select the English version of GUI.
- Click **Deutsch** | **Select** to select the German version of GUI.



7.2 Virtual Keyboard

The machine provides a virtual keyboard that allows you to enter letters, numbers and symbols in a comfortable way.

To activate the keyboard, click the **OB** virtual key button located in the bottom left corner:



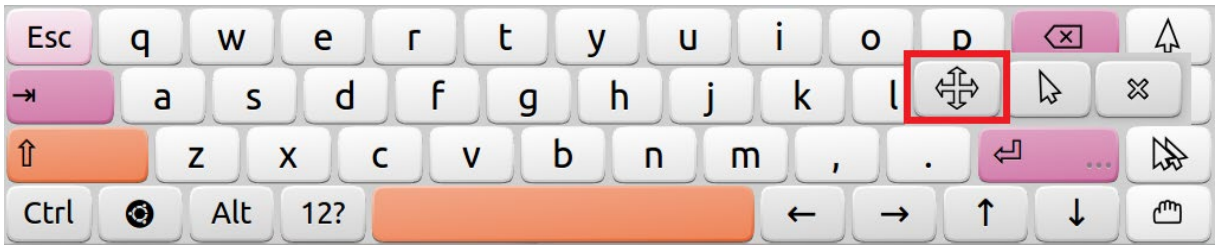
The virtual keyboard appears. It now allows you to enter letters:

To change to numbers and symbols, click the **12!@** button:

The virtual keyboard changes to numbers and symbols. Click the **12!@** button again to get back to letters.

As the virtual keyboard always hides part of the screen, it has been designed to move upwards and downwards. To do this, click the enter button in the bottom right corner and hold it for one second.

New buttons appear. Click the arrow button.



In the center of the virtual keyboard, a new button appears. Use it to drag the virtual keyboard upwards or downwards.

To hide the virtual keyboard again, first click the enter button in the bottom right corner and hold it for one second. New buttons appear. Click the **x** button. The virtual keyboard is hidden.

7.3 Perfactory Software Suite

You will find information on the Perfactory Software Suite in the *Perfactory Software Suite manual*.

7.4 Magics EnvisionTEC

You will find information on Magics EnvisionTEC in the *Magics EnvisionTEC manual*.

8 Operate the Machine

8.1 Before Switching the Machine on

WARNING!

Risk of injury!

Risk of injury from crushing caused by moving machine Parts.

Body parts may be crushed by movements of the build platform.

- The machine may only be operated by instructed and specially trained personnel.
- Before starting the process make sure that all persons are clear of the danger zone.
- The machine may only be operated if the protecting devices are working properly.

8.2 Switching the Machine on

Prerequisites:

- The Ethernet cable is plugged in (if connecting directly).

1. Click the power button on the front of the machine and hold it for two seconds.

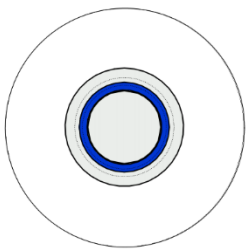


Figure 11: Power button

→ The button will illuminate and the screen will switch on.

→ After a booting sequence, controller software will be opened automatically.

IMPORTANT

Make sure the projector had enough time to warm up the LED to achieve the required level of energy at the surface of the platform.

If the machine was switched off for a long time, switch on the projector at least 20 minutes before starting any job print!

IMPORTANT

Do not try to touch or open anything on the screen before the Controller Software has finished booting! This can cause damage to the files on the machine!

8.3 Interventions in Emergency Situations

An intervention in emergency situations includes individually or in combination:

- Shutdown in case of an emergency;
- First aid measures and medical attendance.

8.3.1 Shutdown in Case of an Emergency

In case of an emergency, click the power button to immediately shut down the machine.

8.3.2 First aid measures and medical attendance

Initiate the necessary first aid measures and seek medical attendance.

If a person has been exposed to the photopolymer, follow the instructions given in the respective Material Safety Data Sheet.

8.4 Insert and Remove the Basement

To insert the basement:

1. Unlock the two locking screws on the right and left of the build area.
2. Slide the basement under the bars on the sides as far in as it will go.
3. Tighten down the two screws on the right and left of the build area.

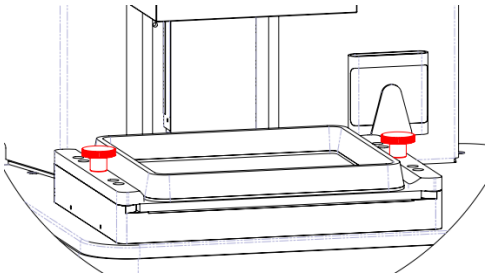


Figure 12: Basement locking screws

To remove the basement:

1. Unlock the two locking screws on right and left of the build area.
2. Take out the basement from the bars on the sides.

IMPORTANT

Tightening the screws is very important. If they are not tightened properly, the material will splash inside the machine!

Double check it before starting a build process!

8.5 Clean the basement

IMPORTANT

Risk of damage to the machine!

Always remove the platform before taking the basement out of the machine! Failure to do so can result in material dripping on the projector causing failed builds and ruined equipment!

IMPORTANT

Always clean the basement each time you need to change the material for printing parts on the machine!

IMPORTANT

Risk of damage to the machine!

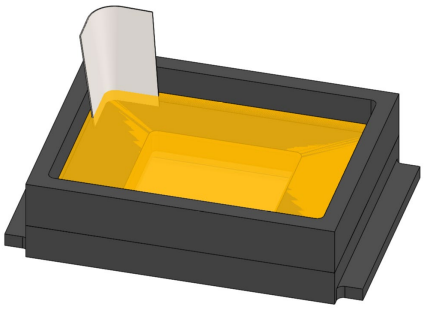
Do not pour material from your basement into the bottle it came from! This can potentially contaminate the whole bottle of material and ruin it!

IMPORTANT

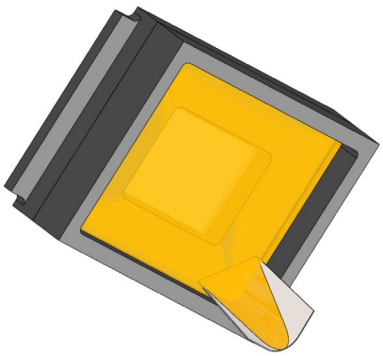
Never use chemicals inside the basement!
This will contaminate and ruin any material you put into the basement!

To empty the basement, tilt it from one side so the material would flow from the corner out of the basement.

1. Put the metal duct tape on the edge of the basement.



2. Pour the material from the basement. Assist the material with a playing card if needed.



3. Take time to get as much material out of the basement as possible.
4. Strain the material while pouting it from the basement to ensure there is no cured material floating around in a good material.
5. Finish cleaning the basement wiping it out with a clean, dry paper towel.

8.6 Attach and Detach the Build Platform

To attach the build platform, proceed as follows:

1. Loosen the handle screw on top of the build platform.
2. Slide the build platform onto the receptor held on the Z slide.
3. Tighten down the screw handle on top of the build platform.

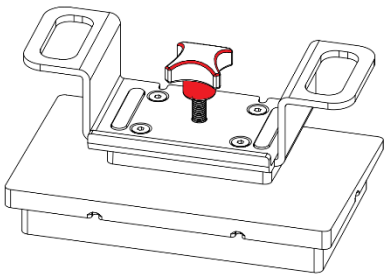


Figure 13: Build platform

To detach the build platform, proceed as follows:

1. Loosen the handle screw on top of the build platform.
2. Slide the build platform out the receptor held on the Z slide.

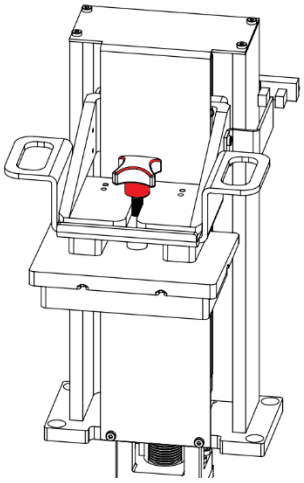


Figure 14: Mounted build platform

IMPORTANT

Make sure the build platform is tightened down securely before building. Failure to do so will cause the build platform to be uneven and can cause build failures.

8.7 Connect the Machine

IMPORTANT

Risk of software malfunction of the machine!

Do not change any system settings of the machine!

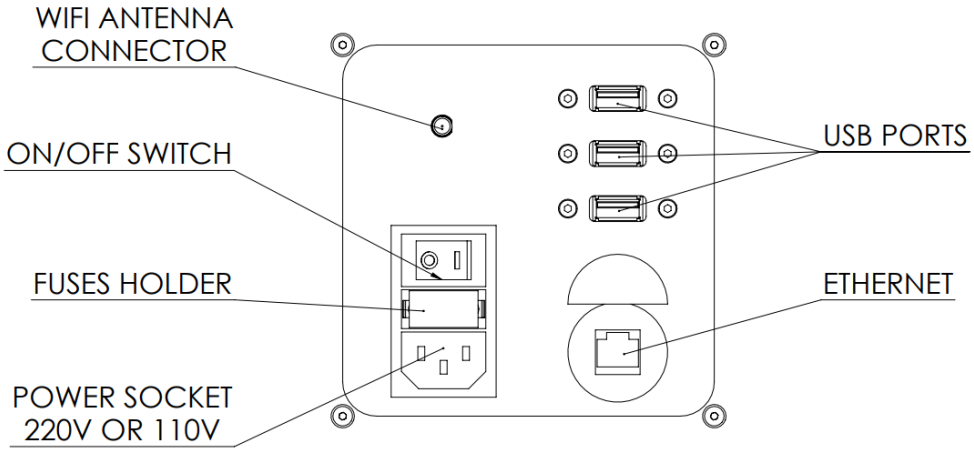


Figure 15: Connectors

8.7.1 Power supply

To connect the machine to power supply, proceed as follows:

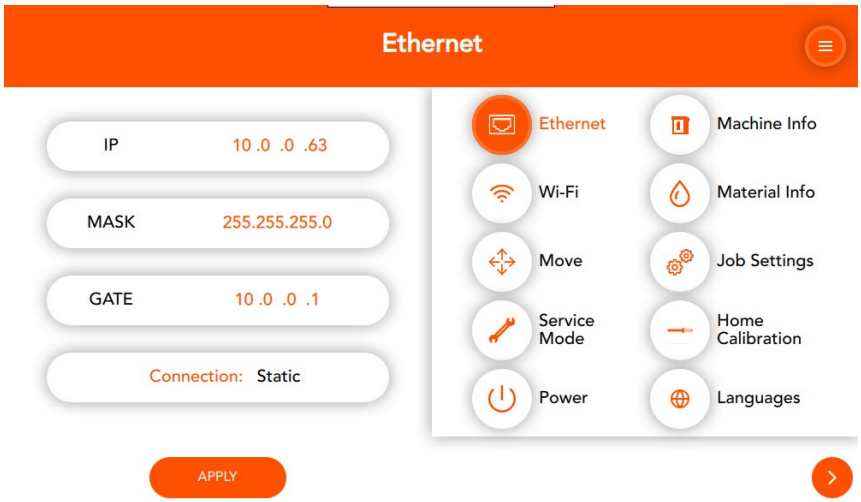
1. Take the power cable located at the back of the machine.
2. Connect the power cable to a power socket.

8.7.2 Network

To connect the machine to your network, proceed as follows:

1. Plug the Ethernet cable into the network connector located on the back of the machine.
2. Connect the Ethernet cable to your network.

3. In the main screen of Control Software, click **Settings | Ethernet**.



4. Click the Connection field to select the Static or Dynamic type of connection.

   → **Dynamic connection** or **DHCP** – machine gets dynamic IP address. All the fields are greyed out.

   → To set the **Static** connection, all the fields need to be filled manually.

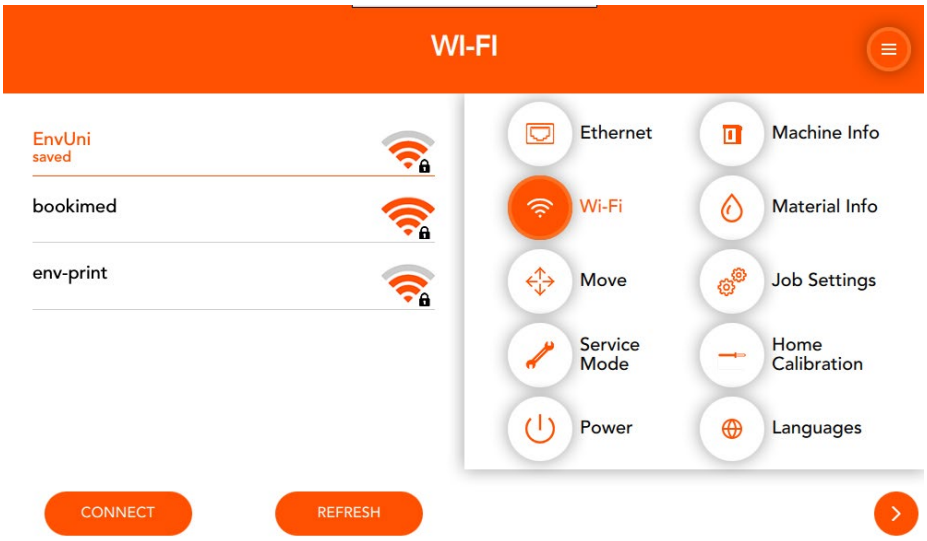
5. After selecting the type of connection, press **[Apply]** to save changes.

8.7.3 WI-FI Set on the machine

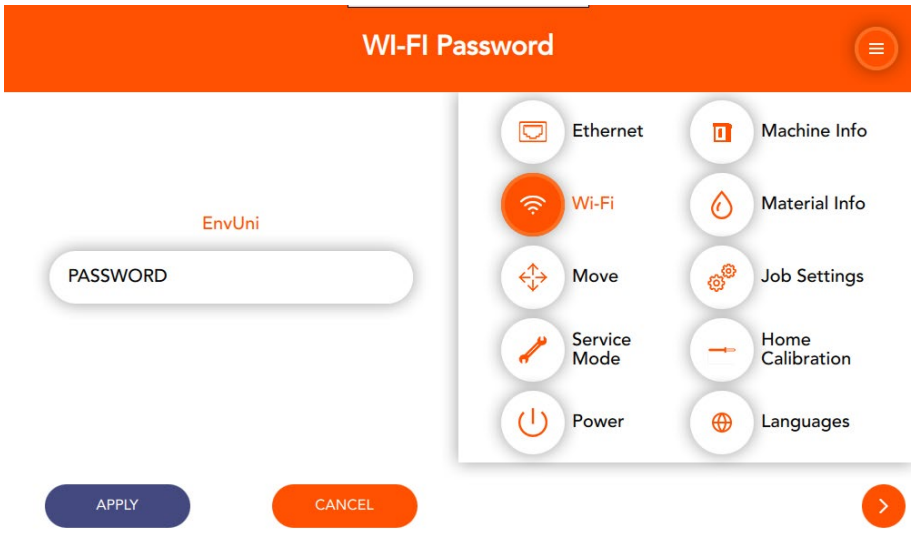
To Set Wi-Fi on the machine, proceed with the following steps:

1. Enter the **WI-FI** tab by clicking **Settings | WI-FI**.

2. On the left part of the screen, choose the required **Wi-Fi** name and click on it.



3. Click **[Connect]**.
4. In the **Password** field, type a password for the chosen Wi-Fi name.



5. Click **[Apply]**.

NOTICE

The **[Refresh]** button updates the list of available WI-FIs.

8.8 Perfactory Software Suite

The modules of the Perfactory Software Suite are used to place 3D models on the build platform, create Perfactory supports, generate build jobs and transfer jobs to the machine.

With each machine we send a thumb drive containing the following program and data:

- Perfactory Software Suite
- Buildstyles for the machine (.bsx)

You will find information on how to install and operate the Perfactory Software Suite in the *Perfactory Software Suite manual*.

NOTICE

Please note that the Perfactory Software Suite does not allow for sending jobs directly to the machines.
Therefore, use the Perfactory Software Suite to create the job and store the job locally on your computer. Then locate the machine in your local network and copy the job to the machine. The job can then be started directly on the machine or via a VNC client.

8.9 Connect to the Machine via VNC Clients

WARNING!

Risk of injury!

Improper use of the remote machine control over local network using VNC software may lead to damage or injuries.

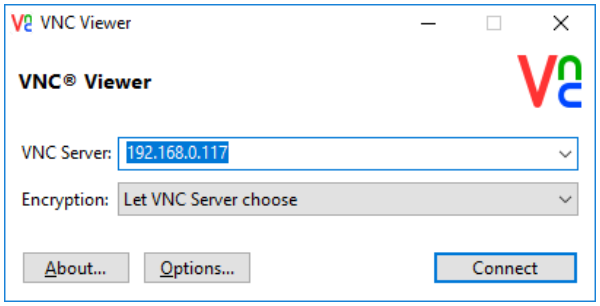
- Use the remote machine control with great attention.
- Do not use the remote machine control without an operator being next to machine.
- The machine owner is responsible for any unsafe operation of the machine using the remote machine control.

8.9.1 Supported Clients for Windows

VNC Viewer

Step-by-step:

1. Download the VNC Viewer and open it.
2. Put the IP address in the VNC Server box.

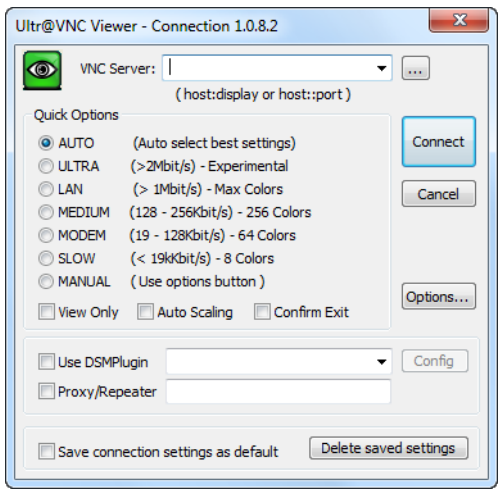


3. Click **[Connect]**.
   → The control screen will appear.
4. Proceed working on the machine.

UltraVNC Viewer

Step-by-step:

1. Start the UltraVNC Viewer.
2. Put the IP address into the **VNC Server** box.



3. Click **[Connect]**.

→ The control screen will appear.

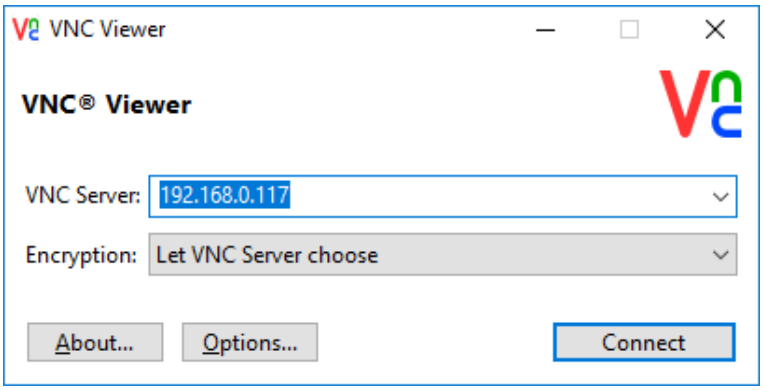
4. Proceed working on the machine.

8.9.2 Supported Clients for Linux

VNC-Viewer

Step-by-step:

1. Download the VNC Viewer and open it.
2. Put the IP address in the **VNC Server** box.



3. Click **[Connect]**.

→ The control screen will appear.

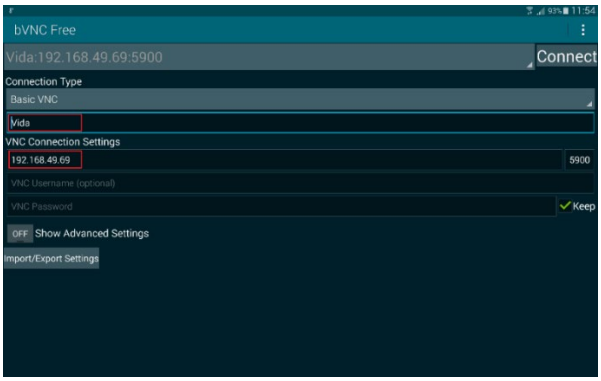
4. Proceed working on the machine.

8.9.3 Supported Clients for Android

bVNC Free

Step-by-step:

1. Put the connection name and the IP address into the boxes marked below.



2. Click **[Connect]**.

   → The control screen will appear.

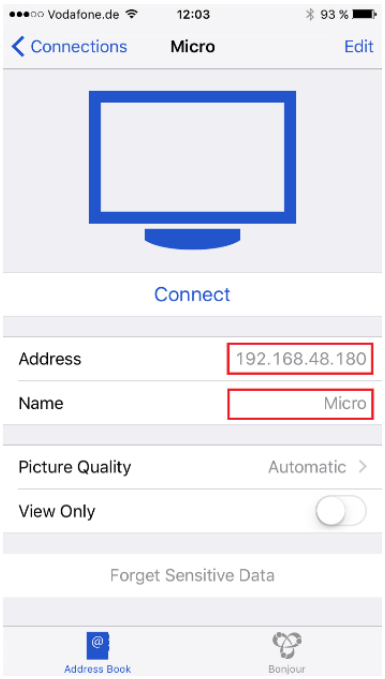
   → Proceed working on the machine.

8.9.4 Supported Clients for iOS

VNC-Viewer

Step-by-step:

1. Put the connection name and the IP address into the boxes marked below.

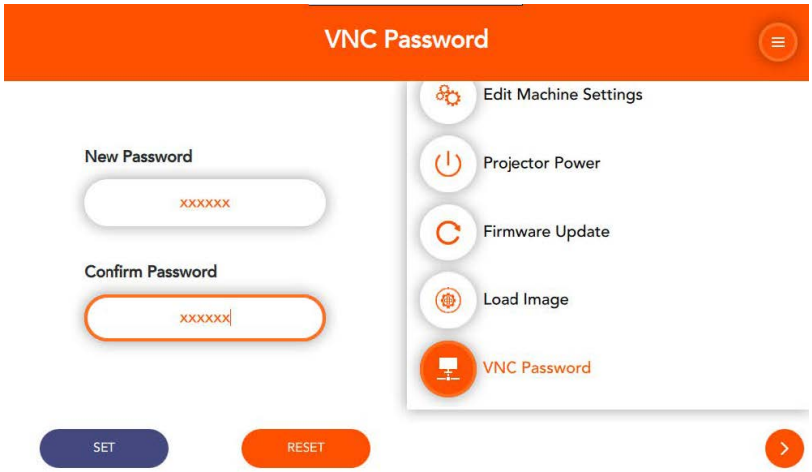


8.10 Set and Reset a Password for the VNC client

NOTICE

This function can only be used in service mode.

If necessary, it is possible to set a password for VNC client. To do this, click the **VNC Password** tab on the control screen after entering service mode. In the same dialog you can reset an already set password.



Setting a Password

To set a password, take the following steps:

1. Enter your password in the **New Password** field.
2. Confirm your password in the **Confirm Password** field.
3. Click **[Set]**.
4. Click **[YES]** in the confirmation window.
5. Restart the machine to apply new settings.

Resetting a Password

To reset a set password, take the following steps:

1. Click **[Reset]**.
2. Click **[YES]** in the confirmation window.

9 Calibration

The machine is completely calibrated and tested during fabrication. However, some of the calibration steps have to be carried out regularly by the machine owner to guarantee uniformly accurate build results.

9.1 Calibrate the Home Position

NOTICE

The machine is already calibrated at the factory. Calibration is usually not required.

9.1.1 Verify the Calibration of Home Position

To check if the home position has been set correctly, the following steps are recommended:

1. When building the first job after setting the home position, add a flat additional structure to your model on all four corners of the build platform.
2. Build your model and the additional structures.
3. After completing the construction job, measure the thickness of the four additional structures.
4. Compare the thickness with the given thickness from the buildstyle.

- If there is a deviation of more than 100µ in at least one of the four additional structures, the home position is not set correctly. In that case, repeat the procedure for setting the initial build position.
- If the deviations of all four additional structures are smaller than 100µ, then the home position is set correctly.

9.2 Check the Grey Mask

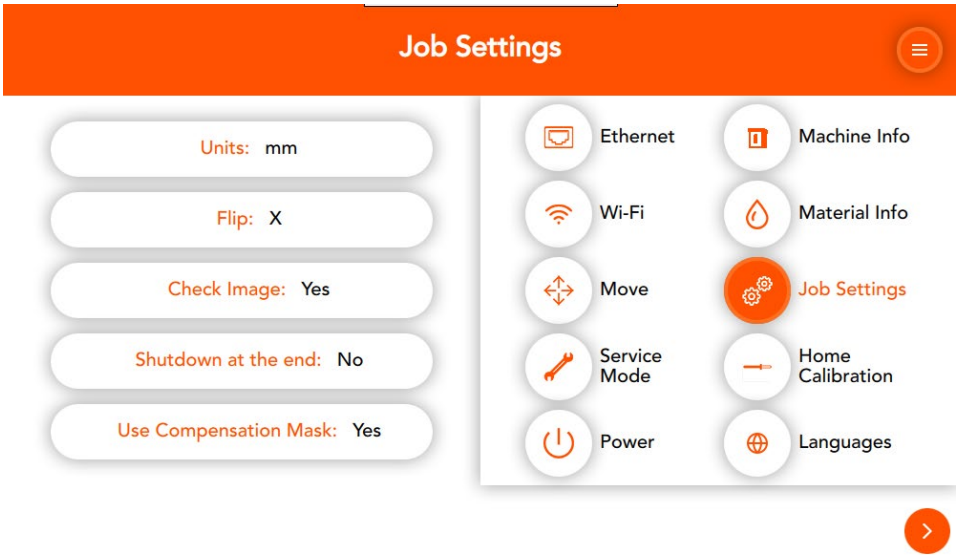
NOTICE

This function can only be used in Service Mode.

The Grey Mask is the Compensation Mask for the Vida® machine. It is set in the factory.

To check the Grey Mask on your machine, proceed as follows:

1. Click **Settings | Job Settings** on the screen of the Control Software.
2. Make sure the **[Yes]** option is selected in the **Use compensation mask** field.



10 Build Jobs

The next subsections describe the main functions to build a job.

WARNING!

Risk of injury!

Risk of injury from crushing caused by automatically moving machine Parts.

Body parts may be crushed by movements of the build platform.

- The machine may only be operated by instructed and specially trained personnel.
- Before starting the process make sure that all persons are clear of the danger zone.
- The machine may only be operated if the protecting devices are working properly.

WARNING!

Risk of injury!

Risk to health due to photopolymers.

Body parts may be crushed by movements of the build platform.

- Do not use other materials than the photopolymers delivered by EnvisionTEC®.
- Observe the relevant Material Safety Data Sheets supplied with the photopolymers.
- Use the appropriate personal protective equipment.
- Make sure that the extraction is sufficient. EnvisionTEC® recommends an air change of 25 m^3/h per m^2 effective surface of the laboratory as described in EN 13779.

NOTICE

The execution of job preparatory activities, including date and performing operator, shall be documented for reasons of traceability.

10.1 Fill in the Photopolymer

IMPORTANT

Use the appropriate personal protective equipment!

Before processing a build job, the photopolymer must be added to the basement.

Prerequisites:

- The machine has been calibrated. At least the **Mask Adjustment** and **Check Compensation Mask** functions must have been carried out.

IMPORTANT

Risk of damage to the machine!

Do not fill the basement more than half with photopolymers.

Step by Step:

1. Open the protection hood.
2. Place the photopolymer tag in front of the tag reader.

   → The photopolymer data are registered by the machine.

3. Prepare the material.

REFERENCE

For information on proper preparing of materials, consult the cookbook provided by your manufacturer or distributor.

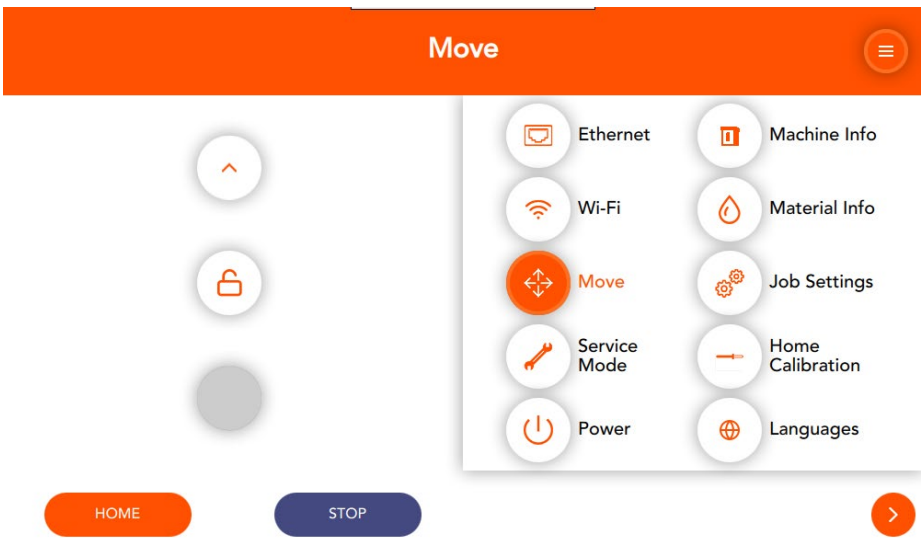
4. Open the photopolymer bin.
5. Pour the photopolymer slowly into the basement.
6. Mix the photopolymer thoroughly with the supplied playing cards.
7. Close the protection hood.

10.2 Check Z-axis

First, make sure the machine has its Z-axis slide activated:

1. Click **Settings | Move** on the main screen of the Control Software.
2. Press the **[Up]** and **[Down]** arrow buttons and make sure the building platform moves along the Z-axis. If the build platform does not move up, the reason could be that it has already reached its highest point.

Refer to the *Move Tab* description for details.



3. Make sure your material has been properly mixed.
4. Take your basement and fill it with roughly half way (between 10mm and 12mm) of material.

IMPORTANT

Risk of damage to the machine!

Never fill the basement over half full as it will result in material spilling out and into the machine.

5. Place the basement into the machine by unlocking the two locking screws on the right and left of the build area and sliding the basement in.
6. Tighten down the two screws on the right and left of the build area again once the basement is in place.

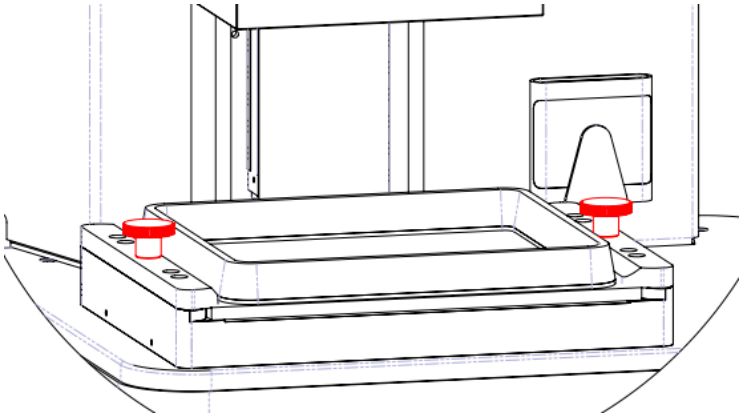


Figure 16: Basement locking screws

IMPORTANT

Risk of damage to the machine!

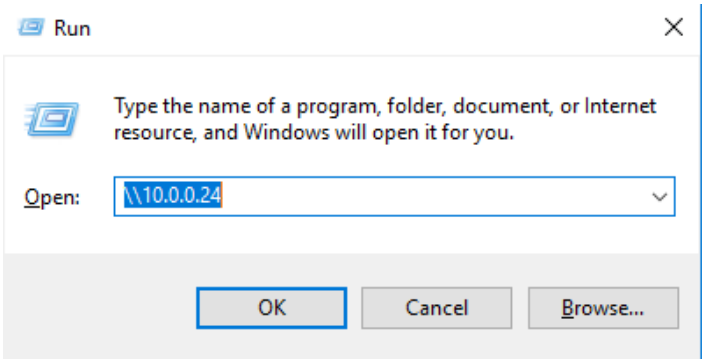
It is important to always remove the platform before taking the basement assembly out of the machine!

Failure to do so can result in material dripping down into the safety glass causing failed builds and ruined equipment!

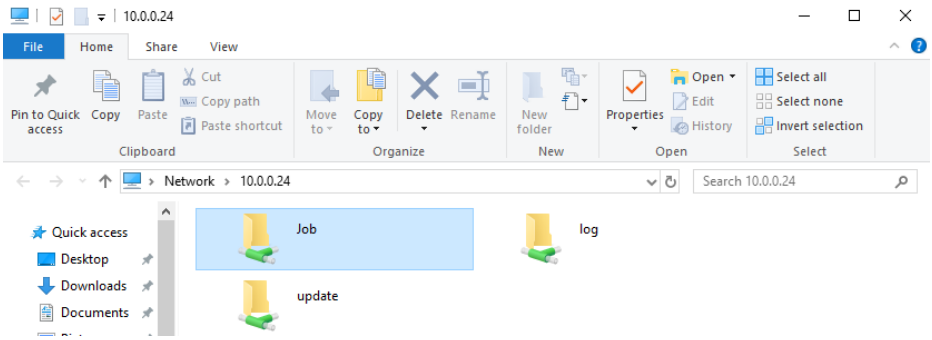
10.3 Load a Job File

Step by Step

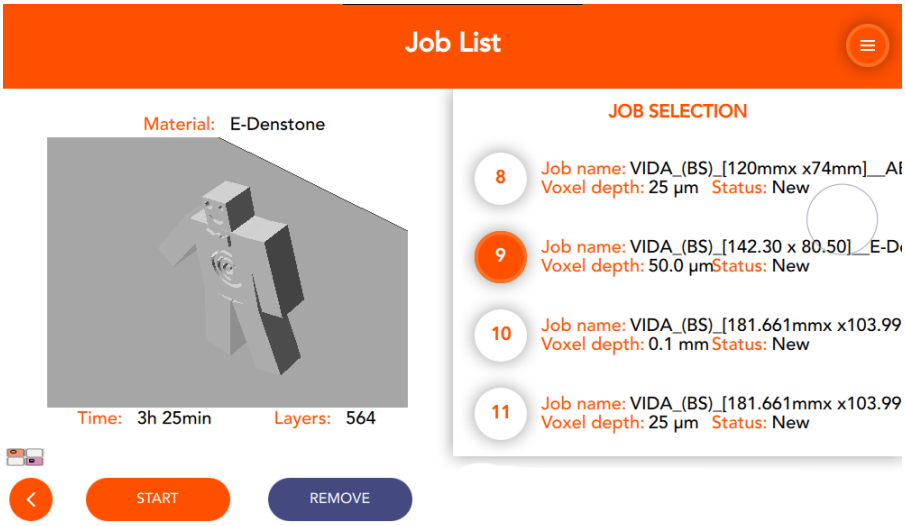
3. Enter **Run** into the Windows search field or click <Windows> + <R> key on your computer keyboard at the same time.
   → The **Run** window opens.



4. Enter the IP address of the machine, e. g.: \\10.0.0.24.
   → The Windows file explorer opens, showing the folders on the machine.



5. Open the **Job** folder.
6. Put the job files to the folder.
   → All the files from Job folder are now shown in the **Job List** tab.



5. Click **[Job Selection]** on the main screen of the Control Software.

Now you can scroll through the list to view different jobs. There is the information on job statistics:

- the number of layers for the job;
- voxel depth;
- estimated time when the job will be finished. This calculation is approximate and is updated dynamically after each exposure. The average build process will take 30 minutes to one hour, depending on the Z layer thickness.

Load a job from USB drive

To load a job directly from USB drive:

1. Write the required job to the USB drive.
2. Insert the USB drive with the written job into the corresponding plug of the machine.

   → The job will be automatically added to the **Job List**.

10.4 Start a Job

IMPORTANT

Risk of damage to the machine!

Make sure the build platform is clean and the basement is in place and has material in it before performing homing!

Failure to do so will result in failed builds and damage to the equipment!

NOTICE

Before starting a build job, it is checked if the used build style matches the material tag of the machine. If this is not the case, the job will not start.

IMPORTANT

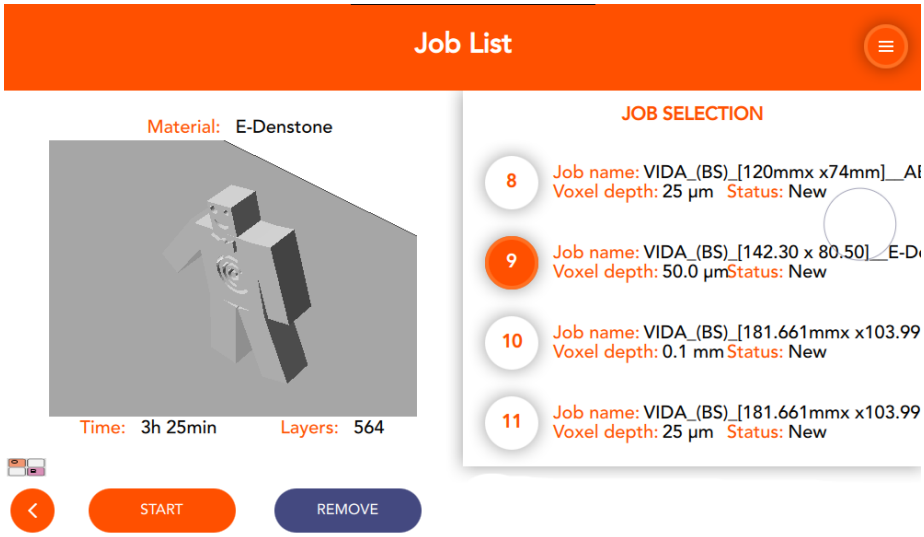
Do not move the build platform on your own when in this mode!

IMPORTANT

If you stop the job and move the build platform, unless it is done by using the **[Pause Job]** button, your build will not line back up properly and will likely result in a failed build. Please proceed with attention!

To start a job, proceed as follows:

1. Open the **Job List** by clicking the **Job Selection** tab on the main screen.



2. Choose the job you want to print from the list of jobs on the right.
3. Click **[START]** button.

11 Part Processing and Curing

11.1 Post Cleaning Supplies and Post Curing Equipment

Recommended list of cleaning supplies:

- spray bottle (optional)
- two beaker glasses or plastic containers with lid for holding the isopropyl alcohol
- isopropyl alcohol (99%) for cleaning extra material off of cured models
- soft artist or make-up brush
- X-Acto knife/surgical blade or small nail scissors for removing supports from models
- air compressor for blowing out extra material and alcohol that may be stuck on models
- paper towels
- post curing unit

11.2 Remove Parts from the Build Platform

WARNING!

Risk of injury! People could be injured!

As handling chemicals puts you at risk of coming into contact with corrosive chemicals, being burnt, inhaling poisonous vapors, etc., always put on suitable protective clothing (gloves, protective goggles, etc.) before working with construction substances.

- Take utmost care to avoid getting any chemicals in your eyes or breathing the chemical vapors in.

- Always wash your hands thoroughly afterwards with soap and water only. Don't use Isopropyl alcohol to wash your hands if you come in contact with photopolymers.
- Take care not to spill any chemicals.

Once the job is complete, the built part will hang off of the build platform.

To remove it, proceed as follows:

1. Detach the build platform for part cleaning (refer to *Attach and Detach the Build Platform* Section for details).

IMPORTANT

Close the hood after removing the build platform.

2. Once the build platform is removed, take a metal scraper and slide it under the build rectangle starting from a corner. Start gently as rough removal can damage delicate parts!

   → The built model should come off without much force.

   → At this point you are ready to begin cleaning the parts.

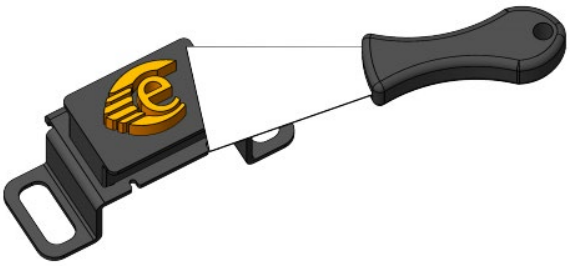


Figure 17: Separation of a model from the build platform

11.3 Clean Parts and Remove Supports

REFERENCE

For information on cleaning of the parts, consult the cookbook or Instruction of Use provided by your manufacturer or distributor.

11.4 Post Curing

After the parts have been cleaned, they will have to be post cured in a curing unit.

REFERENCE

For information on post curing of the parts, consult the cookbook or Instruction of Use provided by your manufacturer or distributor.

11.5 Prepare for the Next Build Job

Before starting the next build job, check if there are any cured parts in the material inside the basement. If this is the case, filter the material to remove these parts.

Also, clean the build platform before the next build job.

12 Service and Maintenance

WARNING!

Risk of injury!

Risk of injury from crushing caused by automatically moving machine parts.

Body parts may be crushed by movements of the build platform.

- The machine may only be operated if the protecting devices are working properly.

WARNING!

Risk of injury!

Risk of slipping, stumbling or falling of persons through loose cables, objects or liquids on the floor.

- Keep the machine area clean and dry.
- Make sure that no loose cables or objects are lying on the floor of the machine area.
- Place all machine cables carefully to prevent trip hazard.
- After repairing the machine, place cables back carefully to prevent trip hazard.
- Remove tools and other objects from the machine.
- Inform the personnel of residual risks.

CAUTION!

Risk of injury!

Residual risks caused by the ergonomics of the machine.

- Maintain a healthy posture.
- Instruct the personnel accordingly.

The following sections contain information on service and maintenance of the machine. A regular maintenance according to the maintenance plan is an essential precondition for an efficient use of the machine.

- Section *Operational Maintenance* describes the operational maintenance and how to carry out the maintenance tasks.
- Section *Auxiliary Materials and Consumables* gives an overview of all auxiliary materials and consumables.

12.1 Customer Service

EnvisionTEC GmbH
Brüsseler Str. 51
D-45968 Gladbeck
Germany
Phone: 49 2043 9875-0 (This phone number is available only during office hours).
E-mail: support@envisiontec.de

12.2 Operational Maintenance

IMPORTANT

Carry out the maintenance tasks according to the table below and the intervals specified therein.

NOTICE

The execution of maintenance activities, including date and performing operator, shall be documented due to traceability.

The operational maintenance helps ensuring a smooth and efficient production process. The operating personnel can carry out these tasks after being trained accordingly.

Task	Maintenance Interval
Cleaning the build platform	After each build job
Cleaning the basement	After each build job
Checking the safety equipment	Daily and every time the machine is put into operation and every time the machine has been repaired (see *Check the Safety Equipment*).
Cleaning the protection hood	Once a week

NOTICE

Some of the above-mentioned tasks depend to a great extent on the usage and the ambient conditions.

The above-mentioned cycles are minimum values. In individual cases, different maintenance cycles may be required.

12.2.1 Check the Safety Equipment

IMPORTANT

All emergency stopping devices and protection doors must be checked one by one and separately.

In case of defective safety equipment, shut the machine down immediately and secure it against being switched on again.

12.2.2 Clean the Protection Hood

WARNING!

Risk of injury from electric shock!

Improper use of conducting components can lead to severe injuries!

- Before cleaning the machine, switch off the machine and disconnect it from the power supply.

WARNING!

Risk of injury!

- To clean the machine, only use the specified cleaning agents.

IMPORTANT

- Avoid contact with cleaning agents. Wear protective gloves.
- Use the provided equipment for physical protection.
- If clothes come into contact with cleaning agents, change and wash the clothes.
- In the event of skin contact, wash the affected areas thoroughly.
- Observe the relevant Material Safety Data Sheets for the cleaning agents.

IMPORTANT

- Remove resin stains immediately using isopropanol!

The protection hood must be cleaned regularly from dust.

IMPORTANT

Clean the protection hood only with a damp paper using small quantities of isopropanol!

Step-by-Step:

1. Switch the machine off (refer to *Power Tab* for details).
2. Disconnect the machine from power supply.
3. Moisten a paper wipe with a bit of isopropanol and carefully wipe the protection hood.

12.2.3 Filter the Material

It is recommended to filter the material after each failed build. Use a paint strainer and run your material through it. The paper paint strainers are the most suitable, as they can be discarded after each use.

Figure 18: Paint strainer

Do not use a paint strainer that requires cleaning, as cleaning solutions can contaminate and ruin material.

12.3 Auxiliary Materials and Consumables

The following materials and machine parts are considered consumables:

- Material: Materials have varying shelf lives (between 6-12 months). You will likely use all of the material before it expires. You can order more material from the EnvisionTEC office.

Annex 1: Troubleshooting

IMPORTANT

For each task, the safety warnings contained in this instruction manual must be observed.

In case of any problem not listed in this troubleshooting chapter, contact your customer support.

Do not try to fix the problem without consulting the customer support first as it will void your warranty!

Problem	Remedy
My Z slide isn't moving when I click the relevant buttons in the controller.	Close the controller software and unplug both the power supply and the USB from the back of the machine. Wait 10 seconds and reconnect. If the problem still persists, call technical support.
The built model fell off the build platform or nothing substantial built.	First, filter your material using a paint strainer to ensure there is no debris left from the failed job in it. Wipe out and check your basement to ensure it is still in good condition. If your basement or material is over 6 months old then it may be time to order new ones. If this is not the case and you still cannot get a good job after straining or using fresh material; you may have an issue with your LED or the homing position of the build platform. Call technical support.
Time out Reached message appears on the screen.	It means that the projector cannot be initialized. In this case, restart the machine by shutting it down and then powering it on again, and proceed with the step by step specified in the *Quick Start Guide*.

Problem	Remedy
Sporadic feathering on part.	This is contaminated material from alcohol or some other chemical. Pour old material in separate container. Do not pour back into new or unused material container. Completely clean out the basement with dry soft paper towels only, don't use any chemicals. Clean the corners of the basement with dry Q tips. Replace with new material and rebuild parts. To avoid future contamination do not have any chemical near basement or resin. Do not post clean the part near the basement, and do not clean the build platform with any chemicals but only dry paper towels.
Partial build failure	This could be several things or a combination of the following: • Damaged, scratches, hole or worn basement will cause a build failure. The basements (resin reservoir) are consumables and need to be replaced when and if needed. Replace basement. • Weak supports. A weak or improperly placed support will cause a part feature not to build. Add additional supports to the failed area. • Small feature is not properly Boolean, attached or errors in file. A small feature is not completely attached to the main body of the part. In Magics or your CAD program check to ensure there is no gap, all small features are completely attached and the part is one single entity.

Problem	Remedy
Baseplate/ Build falling off build platform	• Damaged, scratches, hole or worn basement will cause this build failure. • Dirty optics: completely clean machine optics. • Call customer service.

IMPORTANT

In case of any problem not listed in this troubleshooting chapter, contact your customer support.

Do not try to fix the problem without consulting the customer support first as it will void your warranty!

Annex 2: Quick Start Guide

Workflow

1. Export stl from your CAD program.
2. If you use **Magics**:
    - Import part into **Magics**.
    - Fix part using fix wizard.
    - Translate part into place.
    - Save part at this point.
    - Open the Generate Support module.
    - Support part as you wish.
    - Export supports to save them at this time.
    - Save part as inside of the SG Module if you wish to save a MAGICS File (part and supports saved together in one file – not used for building).
    - Exit Support Module.
    - If you use cones, save part at this time!
    - Unload part.
    - Repeat this process for all parts you wish to build.
    - Once all parts are supported and fixed: import all parts into **Perfactory RP**. Make sure to import stl file as well as _s support file.
3. If you use **Perfactory RP** only:
    - Open the stl file in **Perfactory RP**.
    - Use automatic placement to place parts and finish placing parts manually by using the control buttons.
    - Generate supports.
4. Generate job in **Perfactory RP** and save it in an own folder.
5. Make sure that the machine is plugged into the computer.

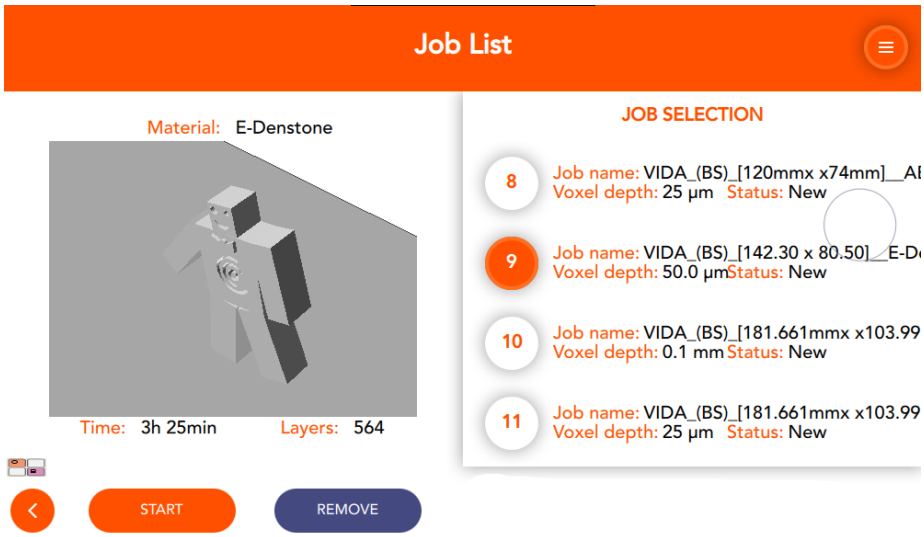
6. Locate the machine in the local network.
7. Copy job to machine.
8. Place basement with material into machine.
9. Close the hood.
10. Load job file.
11. Start job.

DLP controller software

Prerequisites:

- At least one job file loaded on machine. Check *Load Job File* section for details.

1. Open the **Job Selection** menu.



2. Select the job you want to print from the list of loaded jobs and click on it.
3. Start the job by clicking the **[Start]** button.