



**zortrax** M200

# QUICK START GUIDE

ENTER AN ENVIRONMENT OF  
PROFESSIONAL 3D PRINTING



## MEET THE ZORTRAX M200

# zortrax M200

**Zortrax M200** 3D printer transforms virtual projects into three-dimensional reality. It is used to prototype and create various three-dimensional models. 3D printing can be utilized to prototype mechanical elements, structures, industrial molds and templates, objects of everyday use and promotional gadgets.





M200  
3D PRINTER



DEDICATED  
FILAMENTS



Z-SUITE  
SOFTWARE



TECHNICAL  
SUPPORT

## HOW DOES ZORTRAX M200 WORK

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### Preparing the Model

Work with the model can be initiated in any 3D program of choice which creates 3D graphics and supports .stl file format. The next step is to export the created CAD file to this format.



### Z-Suite Software

Z-Suite is an application which prepares 3D models for printing. It allows the actual parameters of the model to be adjusted, such as: size, layer thickness or generating reinforcement material (support).

Z-Suite prepares the model by generating a project and saving it in z-code format, which is then ready to be printed using the M200 printer.



### Transferring the Model

In order to export the model to the printer, it is sufficient enough to save the z-code file generated in Z-Suite onto an SD card and insert it into the reader on the printer.



### Uploading the Filament

The following step is to upload the filament

Dedicated Z-Filaments, such as Z-ABS and Z-ULTRAT, are available in several color options. New types of filaments with different physical qualities are coming soon.



### Initiating the Printing Process

Printing is initiated after selecting a model from the SD card inserted into the reader. The printer menu and file catalog are brought up on the display which is operated by the control knob.

After choosing a file and pushing the control knob in, the printing process begins.

## FILAMENTS

# zortrax M200

Zortrax Filaments were created to ensure the highest quality of prints in the Zortrax M200 environment.

The **Z-ABS** line of filaments is the effect of work with a material which would allow the full potential of the M200 printer to be released. An ideal proportion of polycarbonate and ABS material combines the best qualities of each material.

Z-ABS is an elastic and durable material alike, suitable for mechanical treatment. It is therefore optimal for creating objects of everyday use, architectural models, mechanical parts or prototypes of home appliances or electronics. Models printed using Z-ABS can be used as prototypes of objects created further on using the technology of injection molds.

**Z-ULTRAT** is a premium plastic filament for 3D printing with Zortrax M200. Material with high hardness level, high durability and low level of deformation. Excellent for printing architectural models, utility models and working parts in machine prototypes.

Perfectly imitates the properties of materials used in mass production. Available in ivory color.



Coming soon:

### Z-PCABS

resistant to high temperatures

### Z-NYLON

durable, elastic, prone to staining

### Z-FLEX

highly elastic, shape memory properties

### Z-GLASS

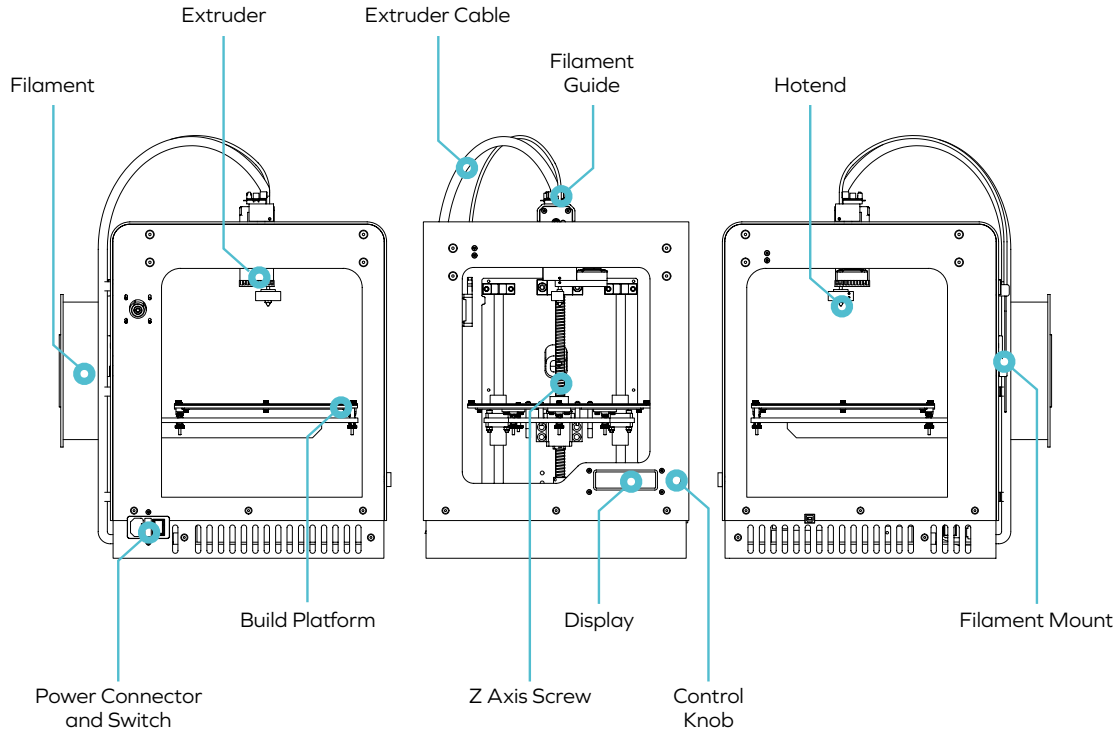
transparent, high level of hardness

### Z-ALU

hard, addition of aluminum alloy

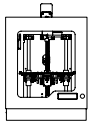
# OVERVIEW

# zortrax M200

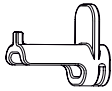


## IN THE BOX

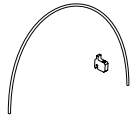
# zortrax M200



Zortrax M200  
3D Printer



Filament Spool  
Holder



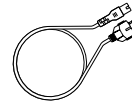
Filament Guide



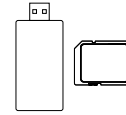
Filament Spool



Build  
Platform



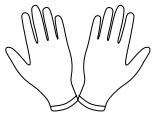
Power Cable



SD Card  
&  
SD Card Reader



Z-Suite\*  
&  
Quick Start Guide



Safety  
Gloves



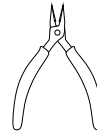
Cutting Knife  
&  
Scalpel



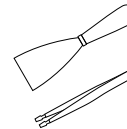
Allen Keys



Nozzle Key  
&  
Nozzle Needle



Pliers



Spatula  
&  
Tweezers



Service Grease



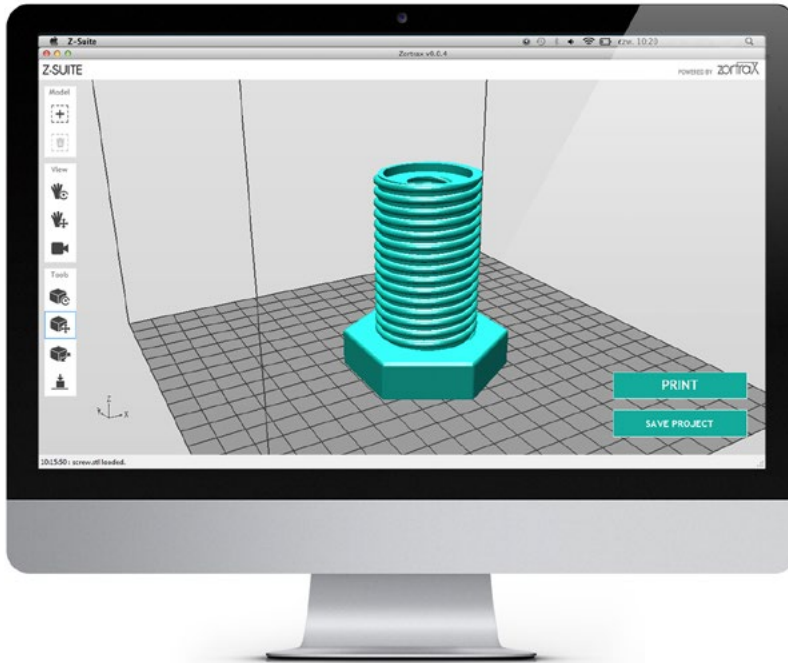
Safety Glasses

\* online



## M200 PRINTER ENVIRONMENT

# zortrax M200



### Z- SUITE SOFTWARE INSTALLATION

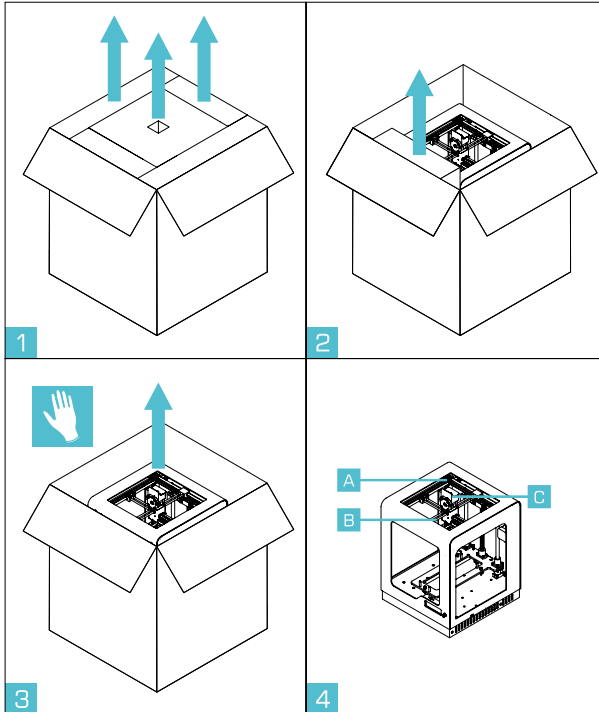
You need a model in .stl file format to print it on Zortrax M200 3D printer. Most CAD and 3D modeling software allows you to convert 3D files to this format. To prepare a file for 3D printing (in the z-code format) install the Z- Suite Software on your computer. The latest version is available to download from [www.zortrax.com](http://www.zortrax.com). To install Z-Suite Software, you need a serial number, which you will get with the printer.

### Z- FIRMWARE UPDATE

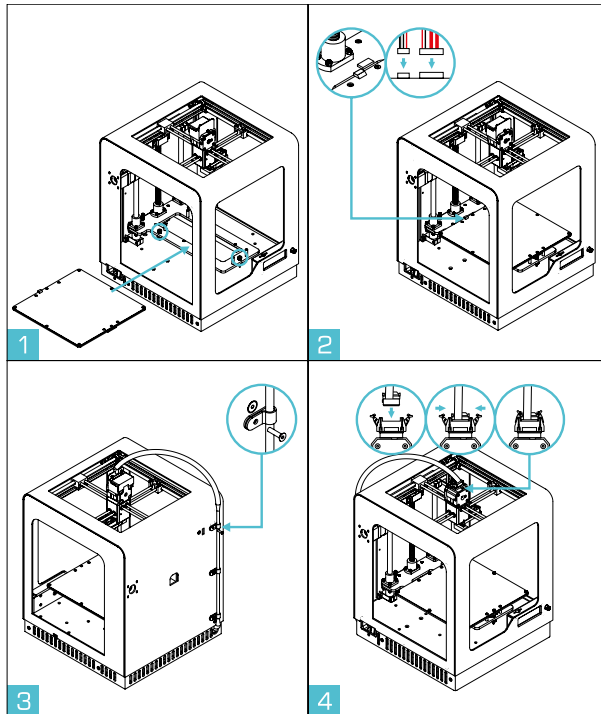
To enjoy the highest print quality it is important to have the latest version of firmware. Always update the printer's firmware when a new version is available. News about Z-Suite changelogs can be found on [www.zortrax.com](http://www.zortrax.com) and you can also subscribe to Z-Newsletter – to be up-to-date with all updates. The latest version of Z-Firmware is available to download from [www.zortrax.com/downloads](http://www.zortrax.com/downloads). To update the firmware save its latest version onto the SD Card (Update.bin file), insert the SD Card into the printer and run the device. Z-Firmware will update automatically.

## UNPACKING

# zortrax M200



1. Open the box, pull out the cushioning.
2. Cushioning from the front should be removed as the last one. Now Zortrax M200 is ready to be taken out of the box.
3. Unbox Zortrax M200. Please use gloves.
4. Your Zortrax M200 is now unpacked. While lifting or moving
5. Zortrax M200 do not grab:
  - A. belts,
  - B. smooth rods,
  - C. extruder. Please use gloves.



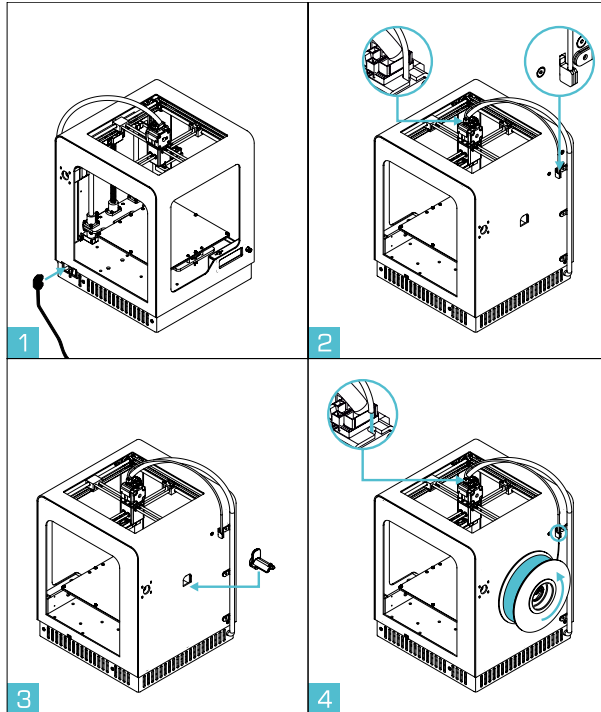
1. Insert the Build Platform and fit magnets marked in the picture.
2. Now connect carefully two connectors to the Build Platform.
3. Install wires using bands. Apply bands on wires and then tighten them to the body.
4. Connect extruder cable to extruder unit.



**WARNING!** Before removing the platform, detach connectors from the Build Platform.

## SETTING UP

# zortrax M200



1. Plug in power cable.
2. Attach the filament tube.
3. Attach the spool holder.
4. Mount the Z-ABS spool onto the filament holder. The spool should rotate anti-clockwise. Lead the filament through the filament tube and into the extruder.



**WARNING!** Always plug the power cord of your printer into a grounded outlet.

## SETTING UP

# zortrax M200

```
Models
> Filament
  Settings
  Informations
  Wifi
```

Select „Filament“ option from the main menu.

```
Back
> Unload Filament
  Load New Filament
```

To manually load a new spool of filament select „Load New Filament“.

```
Heating...
extruder: 15% 39°/260°
```

Zortrax is heating the extruder.

```
Please insert filament and wait.
```

When the display shows the message „Please insert Filament“ insert the end of the filament into the extruder. When Zortrax finishes loading filament, printer is ready to print.

```
Back
> Unload Filament
  Load New Filament
```

To remove filament select „Unload Filament“.

```
Heating...
extruder: 15% 39°/260°
```

Zortrax is heating the extruder.

```
Withdrawing filament.
```

The display will show the message “Withdrawing Filament” and filament will start to withdraw from the extruder. When the operation is finished, you can remove the filament.

```
> Models
  Filament
  Settings
  Informations
  Wifi
```

To choose a model for printing select „Models“.

```
Back
> Files:
  model_name.zcode
  model_name.zcode
  model_name.zcode
  model_name.zcode
```

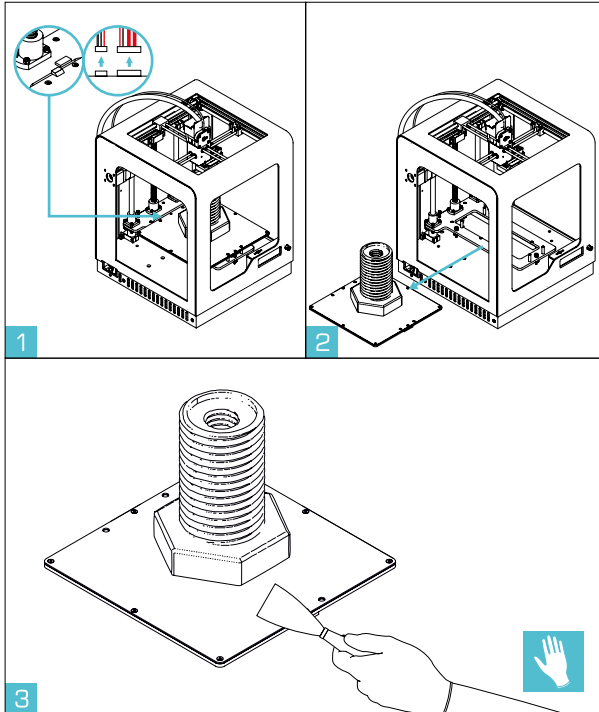
Select a model that you want to print in z-code format.

```
Heating...
extruder: 15% 39°/260°
```

Zortrax is heating the extruder.

```
Printing...
model_name.zcode 10%
```

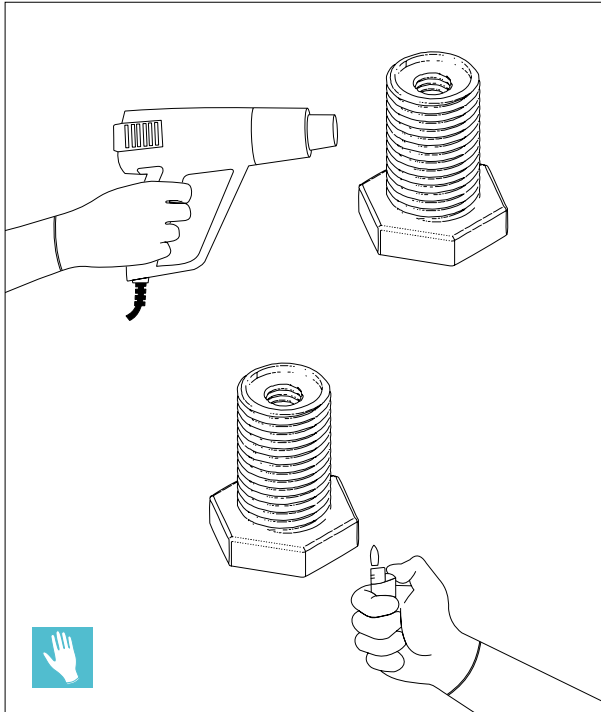
Printing process is about to get started. Progress bar will show the printing status. When the printing process is finished, turn off the printer and remove the printing platform.



1. When the printing process is finished, turn off the printer using the power switch. Disconnect cables from the Build Platform.
2. Remove Build Platform.
3. Remove printed model using spatula. Please use gloves, also using safety glasses is recommended. Place the Build Platform back in the printer and connect the connectors.



**WARNING!** Before removing the platform, detach connectors from the Build Platform.



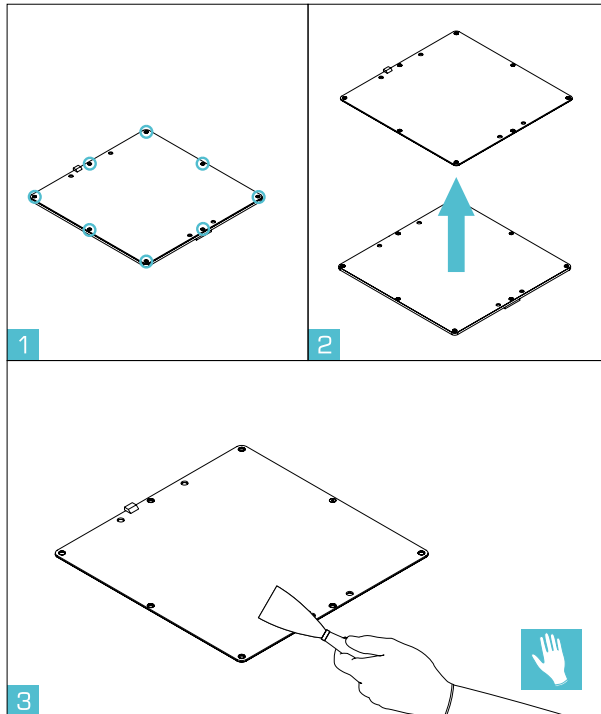
When printing with Z-Filaments you may notice white spots on models which appeared because of the support removal. In order to improve the aesthetics, we suggest a very simple solution. You'll need a lighter or a heat gun.

1. Carefully remove the support along with the raft from printed model.
2. Use a lighter to heat the spots from where the support or raft has been removed. Model should be heated with the side part of the lighter's flame.
3. Heat Gun should be heated up to 200-300°C. Direct the warm stream of air at the spots from where the support was removed. After a while, observe the color change from white to a default color of the print. Remember not to set up the heat gun to the highest temperature of the air stream. We recommend that the minimum distance between the heat gun nozzle and the model should be 10 cm.

In all mentioned above activities we recommend to use safety gloves attached to the set along with the Zortrax M200 3D printer.

## CLEANING THE PLATFORM

# zortrax M200



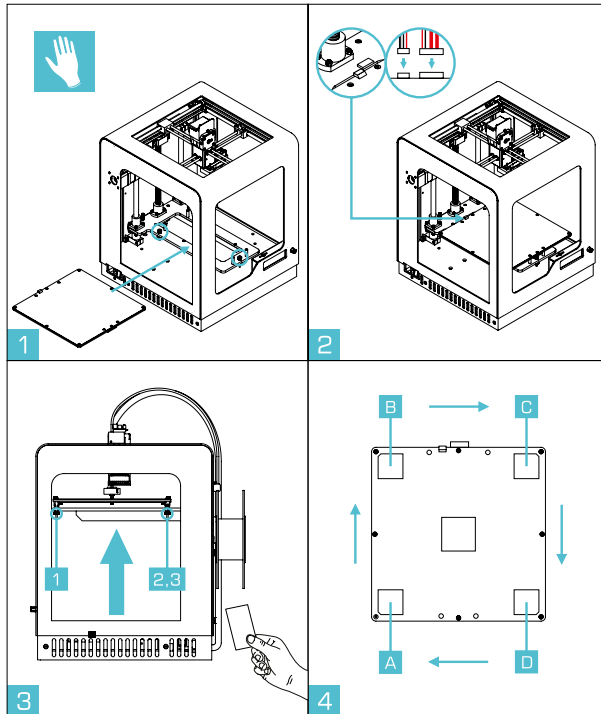
While printing, remains of the material may get stuck below printing platform. After a certain time it may affect accuracy of the machine. We recommend to follow these instructions ever few prints.

1. Please put gloves on. Unplug power cord and disconnect the cables from the Build Platform. Remove it carefully.
2. Using hex key remove 9 screws connecting perforated plate to the aluminum plate.
3. Carefully clean perforated plate from both sides using spatula.
  - A. It is not necessary to remove rest of the material from perforations – it will not affect the printing process.
  - B. After cleaning, wipe the top of the perforated plate with acetone, if necessary. Do it carefully.
  - C. Make sure that aluminum plate is clean and place perforated plate on it.
  - D. Connect both plates together.



## CLEANING THE PLATFORM

# zortrax M200



1. Zortrax M200 should be turned off. Insert the Build Platform and fit magnets (Pic. 1). Make sure that nozzle is clean. Connect two connectors to the Build Platform carefully.
2. Tighten the screws (Pic. 3 - No. 1,2,3).
3. Manually move extruder to the A position (Pic. 4). Place a sheet of paper with a thickness of a business card on the Build Platform under the extruder.
4. Rotate Z Axis screw until nozzle will gently touch your object. Note that during the following steps platform should not be moved.
5. Slowly move extruder to the B position (Pic. 4). Set the distance equal to the thickness of a business card using screw No. 2 (Pic. 3, near extruder).
6. Repeat it for C position (Pic. 4) and screw No. 3 (Pic. 3, near extruder).
7. Then repeat it again for D position and screw No. 1.
8. Carefully move extruder back to the A position and check the distance.
9. If you were able to level the platform you can start printing. If not, please repeat all the steps.

# SPECIFICATIONS

# zortrax M200

## PHYSICAL DIMENSIONS

Without Spool	345 x 360 x 430 mm [13.6 x 14 x 17 in]
With Spool	345 x 430 x 430 mm [13.6 x 17 x 17 in]
Shipping Box	460 x 470 x 570 mm [18 x 18.5 x 22.4 in]
Weight	13 kg [28.7 lbs]
Shipping weight	20 kg [44 lbs]

## TEMPERATURE

Ambient Operation Temperature	15°-35° C [60°-95° F]
Storage Temperature	0°-35° C [32°-95° F]

## ELECTRICAL

AC input	110/240V ~ 2 A 50/60 Hz
Power requirements	24 V DC @ 11 A
Power consumption	~ 190W
Connectivity	SD card (included), WiFi*

## SOFTWARE

Software bundle	Z-Suite®
File types	.stl, .obj, .dxf
Supports	Mac OS X / Windows XP, Windows Vista, Windows 7, Windows 8

\* in future updates

## PRINTING

Print technology	LPD™ - Layer Plastic Deposition
Build volume	200 x 200 x 185 mm [7.87 L x 7.87 W x 7.28 H in]
Layer resolution settings	Advanced: 25-50* microns [0.000984-0.0019685 in]  Standard: 90-400 microns [0.003543-0.015748 in]
Wall thickness	Minimal: 400 microns  Optimal: 800+ microns
Resolutuion of single printable point	400+ microns
Filament Diameter	1.75 mm [0.069 in]
Filament Type	Z-Filaments™
Nozzle diameter	0.4 mm [0.015 in]
Minimum single positioning	1.5 microns
Positioning precision X/Y	1.5 microns
Z single step	1.25 microns
Extruder maximum temperature	380° C [716° F]
Heated platform maximum temperature	110° C [230° F]



**zortrax**  
ideas turned into shapes

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