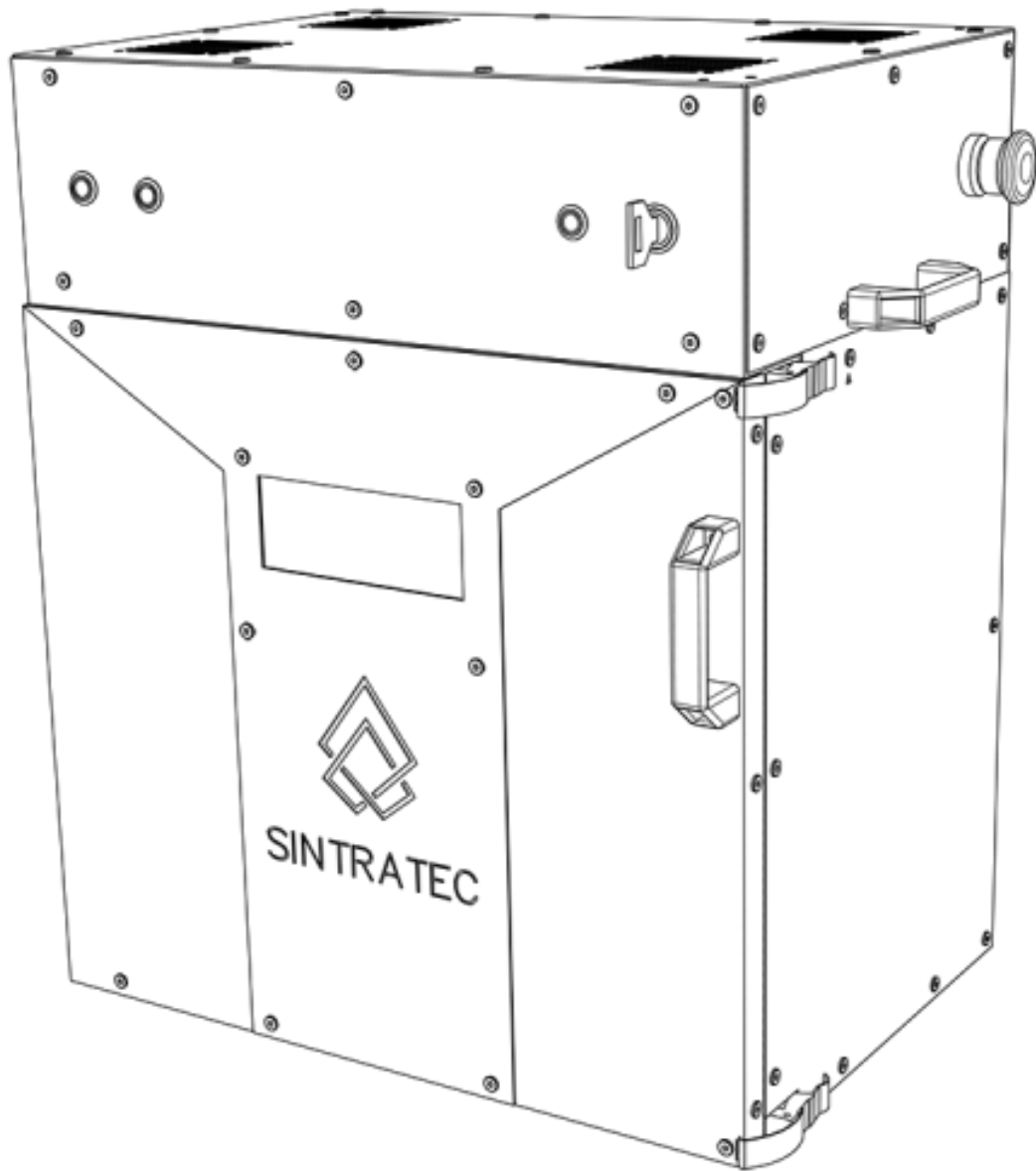


Sintratec Kit

User Manual



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Customer Portal

You should have received an Email with your login credentials for the Sintratec customer portal. If you haven't received this Email, please check your spam folder and write an email to support@sintratec.com.

Please provide your portal credentials

E-mail	<input type="text"/>	Customer portal:	https://sintratecgmbh.od1.vtiger.com/portal
Password	<input type="password"/>	Login name:	Your Email address
Language	<input type="text" value="US English"/>	Password:	Sent to your Email address
<input type="button" value="Sign in"/>		Forgot password?	

In the Sintratec Customer Portal you can get support and download all manuals & the software for your printer. If you need support you can open a ticket in the Customer Portal and describe your problems and upload photos. Our support team will solve your problem as fast as possible.

Assembly

Please download the assembly manuals in the Customer Portal, you will need them to assemble your Kit. There are also photos for every step. The assembly takes approximately 4 days for one person.

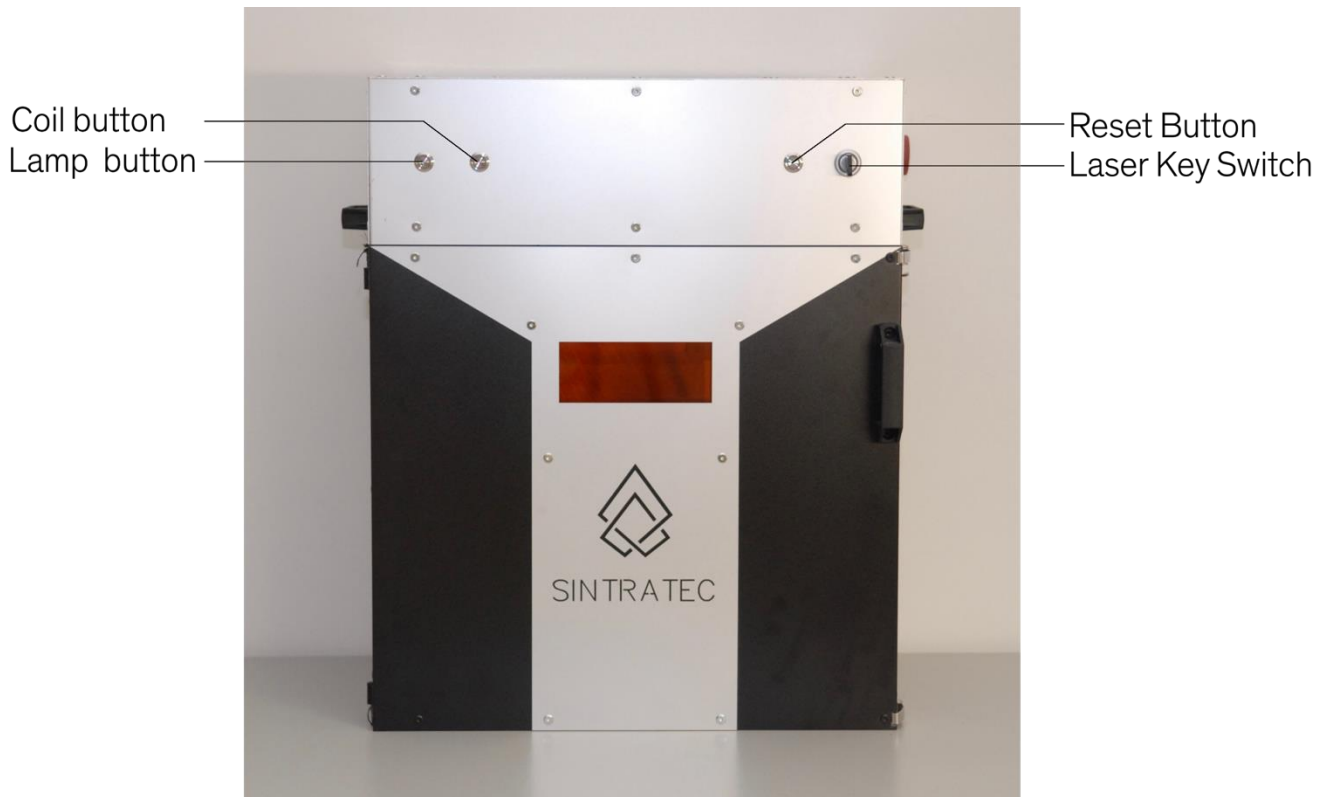
0. Best Practice
1. Door
2. Base
3. Core
4. Lamp
5. Hat
6. Electronics
7. Initial Commissioning

Please read the Best Practice before you start to assemble. In the folder Pictures you'll find helpful images for almost every step of the assembly.

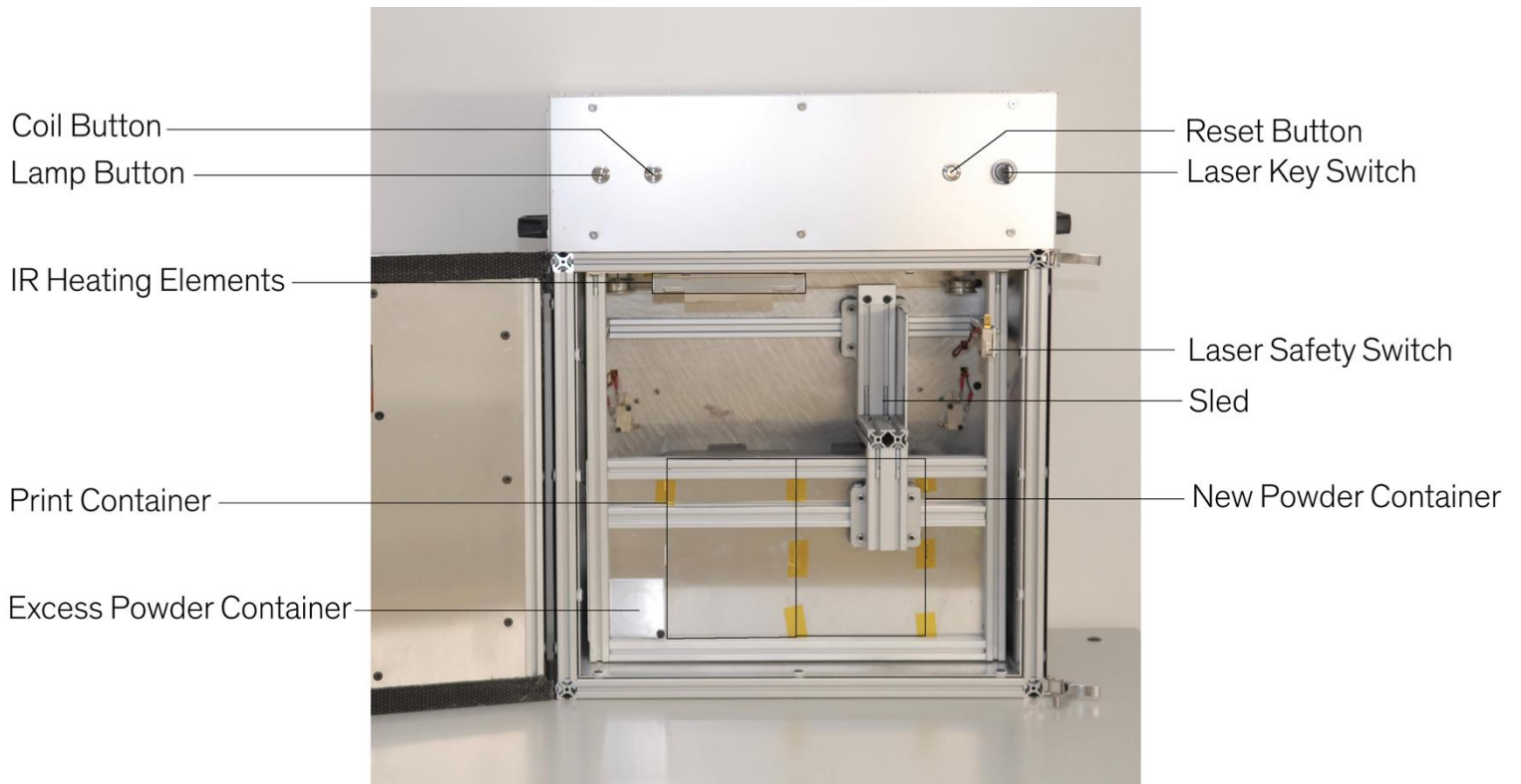
Hardware

Hardware Overview

Front

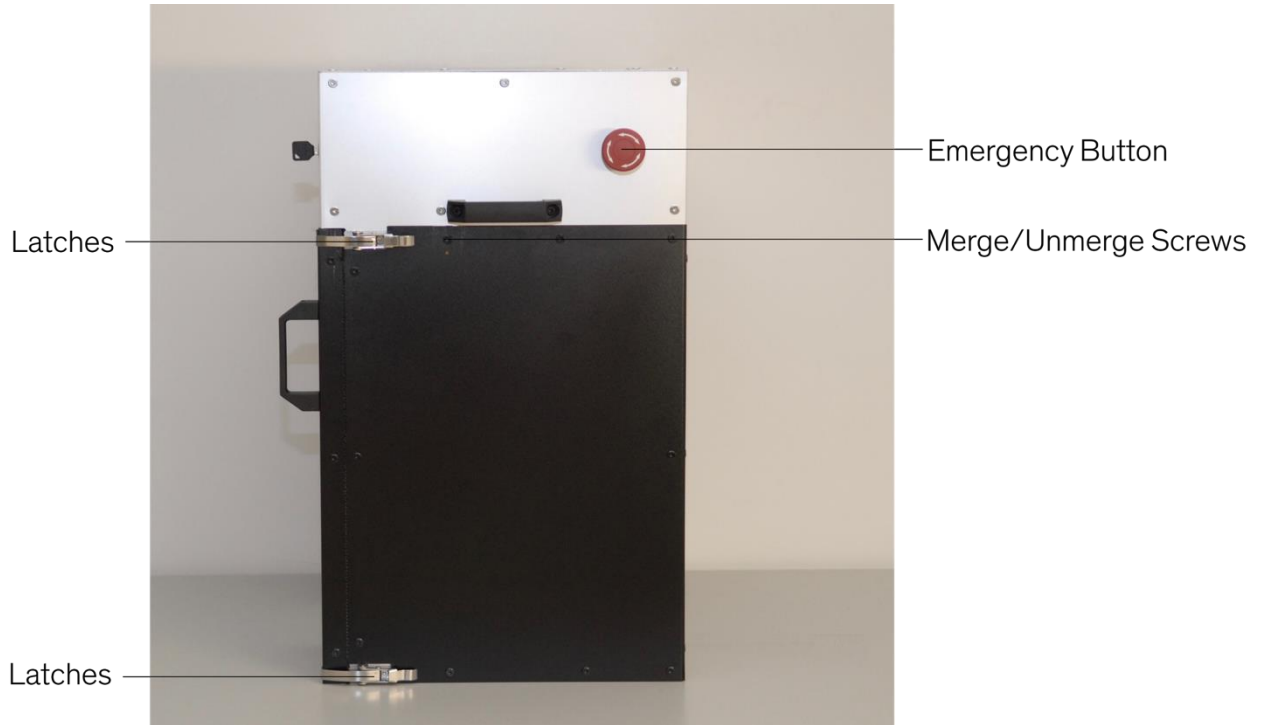


	Function
Coil Button	LED ON if coil ON, no function when pushed.
Lamp Button	LED ON if IR lamps ON, no function when pushed.
Reset Button	RESET when pushed.
Laser Key Switch	LED ON if laser ON, Laser activated when key -> right.



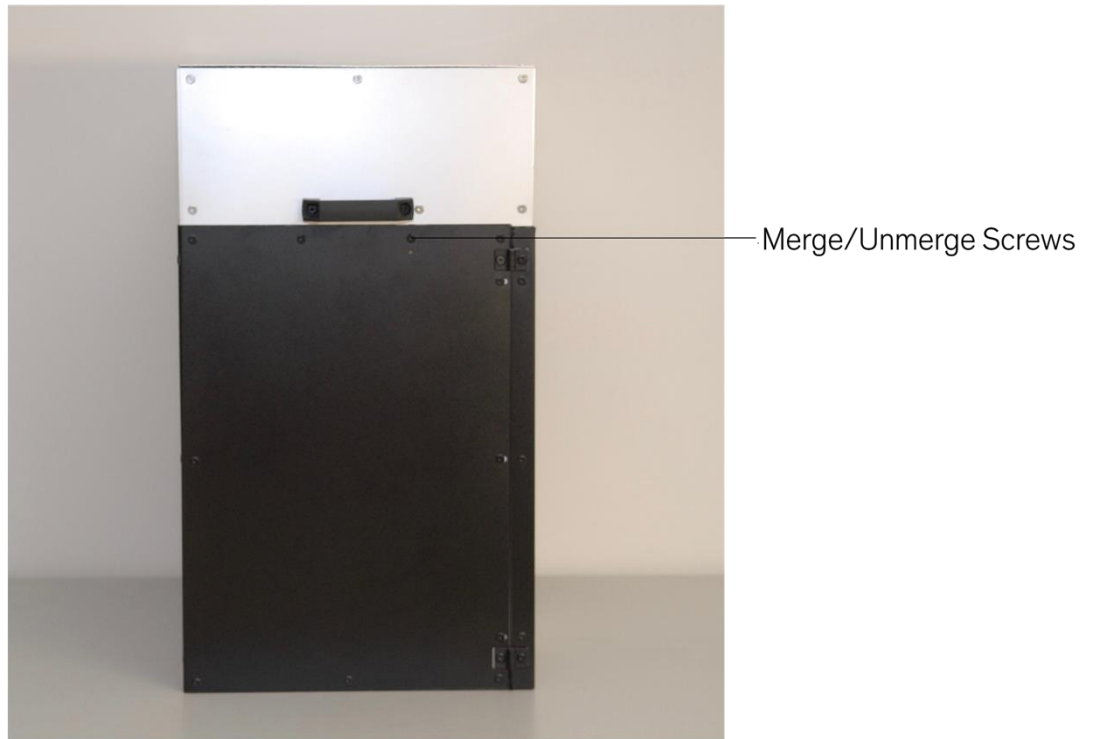
	Function
IR Heating Elements	IR Lamps to heat the powder surface.
Print Container	Here, the part will be printed.
Excess Powder Container	Used to extract the excess powder from the
Laser Safety Switch	Door triggers laser safety switch when closed to activate laser.
Sled	Used to apply new powder layer.
New Powder Container	Loose powder.

Right Side



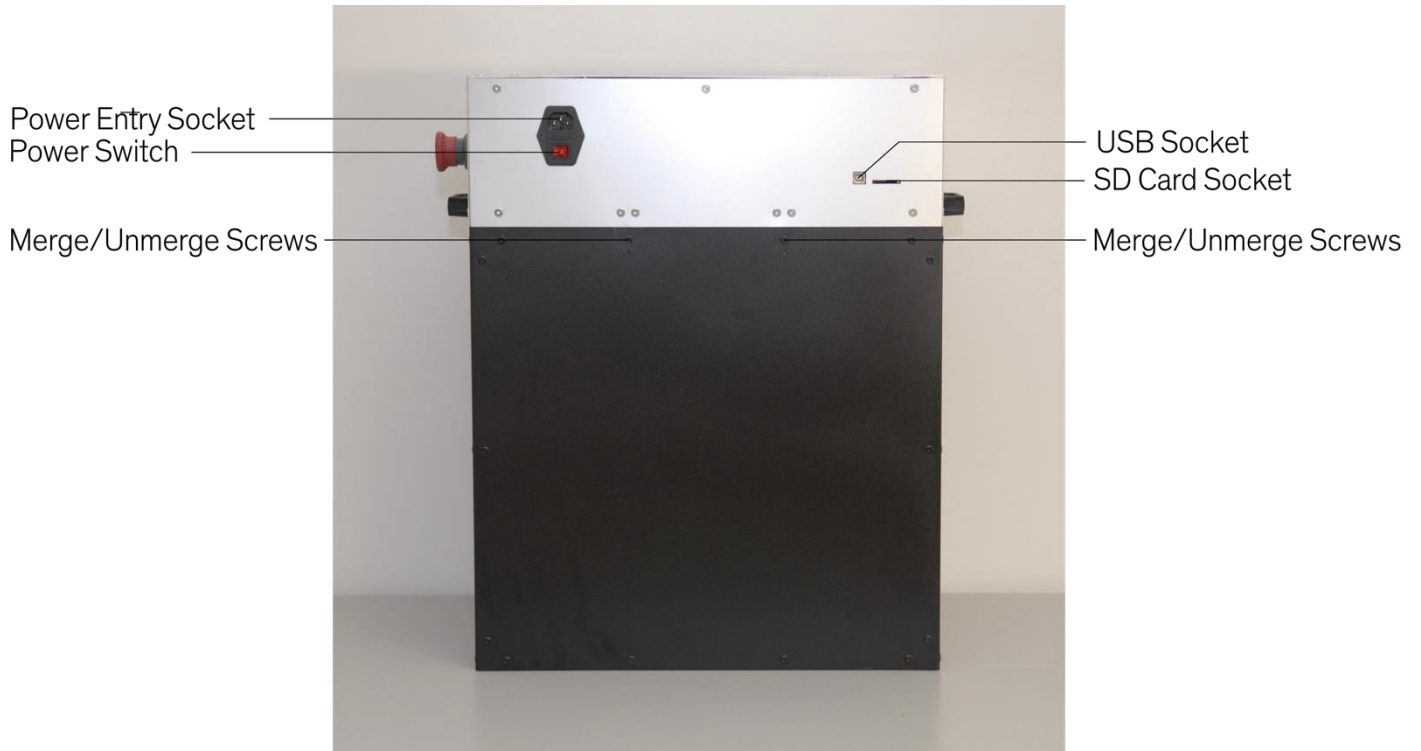
	Function
Emergency Button	Used to shut down the machine immediately.
Latches	Used to lock the door.
Merge/Unmerge Screws	Loose this screw to merge/unmerge the Hat and the Body of the Kit. Tighten again after merging/unmerging.

Left Side



	Function
Merge/Unmerge Screws	Loose this screw to merge/unmerge the Hat and the Body of the Kit. Tighten again after merging/unmerging.

Back



	Function
Power Entry Socket	C14 socket used to connect the C13 power cable to the Sintratec Kit.
Power Switch	Used to turn on/off the Sintratec Kit.
Merge/Unmerge Screws	Loose these screws to merge/unmerge the Hat and the Body of the Kit. Tighten again after merging/unmerging.
USB Socket	Used to connect the USB cable to the Sintratec Kit.
SD Card Socket	Used to connect the provided SD Card to the Sintratec Kit.

Hardware Detail

The Sintratec Kit has two main parts; the Core and the Casing. The Core contains all main components of the Kit and is inserted into the Casing. The Casing provides heat insulation and acts as thermal barrier between the Core and the user. Both parts can easily be separated to for maintenance.

The Core

The Core consists of the Body and the Hat. While the Body contains most of the mechanical parts, the Hat contains the electrical components, the optical components and the actuators. Both Body and Hat are thermally separated by a heat insulation.



The Core Body

The laser sintering process takes place in the Core Body. There is a blade coater moving horizontally on two linear rails, actuated by a wire and constrained by two limit switches on either side. There are two powder platforms moving vertically on one linear rail each, both actuated by a leadscrew and constrained by two limit switches on either side. The 3D parts get printed on the left platform whereas the reservoir of new powder is on the right platform. On the left side of the left platform there is a container for excess powder. For each layer to be sintered, the right

platform moves one layer up, the left platform moves one layer down and the coater applies the new powder layer from the right platform to the left platform, dropping the excess powder into the excess powder container. At the bottom of the excess powder container, there is a door for extracting the excess powder. The three IR lamps at the top of the Core Body heat up the powder surface on the right platform.

On the back side there is a heating coil for heating up the Core Body and the inside of the Casing before and while printing. Two thermistors read out the temperature of the Core Body.

Laser Safety Switch: Door triggers laser safety switch when closed to activate laser.
IR Heating Elements: IR Lamps to heat the powder surface.
Sled: Used to apply new powder layer.
Print Container: Here, the part will be printed.
New Powder Container: Loose powder.
Excess Powder Container: Powder not needed for printing is dropped here.
Excess Powder Extraction Door: Used to extract the excess powder from the



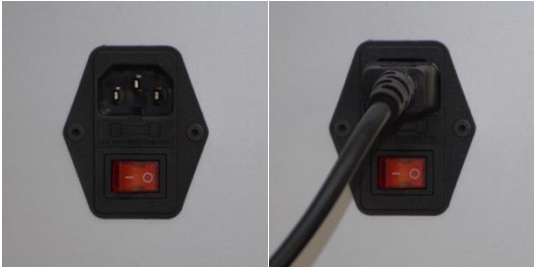
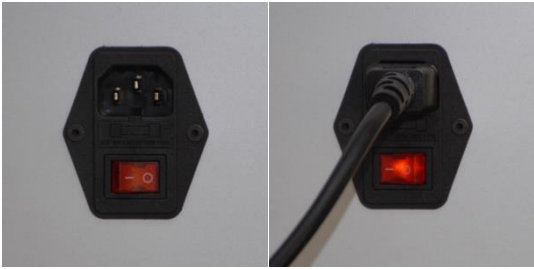
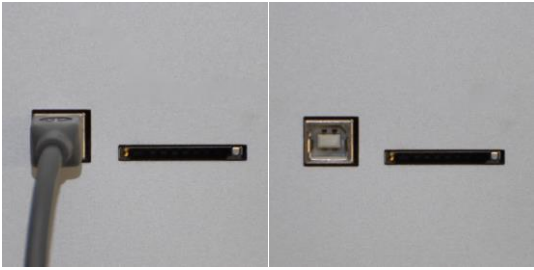

The Core Hat




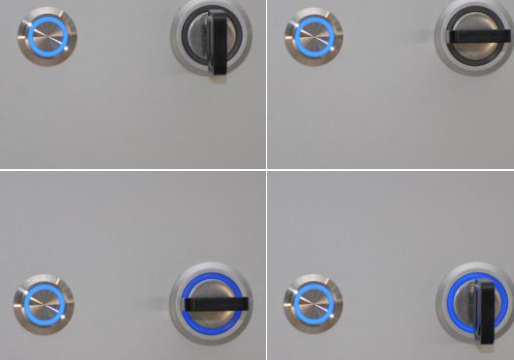

The controlling of the printer is happening in the Core Hat. There is the mainboard on the left side with two dedicated galvo drivers at its bottom side. Two power supplies provide the printer with DC. Three stepper motors on the top side of the Core Hat actuate the lead screws of the platforms and the wire of the coater in the Core Body.

In the center of the Core Hat there is the laser system containing the laser diode, the optics and the galvo system. The laser beam gets corrected by the optics and is deflected by the two mirrors of the galvo system onto the left platform of Core Body. A laser system casing is used for safety reasons.

There are four buttons/switches on the front of the Core Hat. Two buttons on the left indicating the status of the heating elements and one reset button on the right. The key switch on the right indicates the status of the laser and turns the laser on when the key is turned.

There is a power entry socket at the back right and both a USB and a SD Card Socket on the back left side of the printer. An emergency button is on the right side of the printer.


<p>Power Entry Socket: C14 socket used to connect the C13 power cable to the Sintratec Kit.</p>	
<p>Power Switch: Used to turn on/off the Sintratec Kit.</p>	
<p>USB Socket: Used to connect the USB cable to the Sintratec Kit.</p>	
<p>SD Card Socket: Used to connect the provided SD Card to the Sintratec Kit.</p>	

<p>Lamp Button: LED ON if IR lamps ON, no function when pushed.</p> <p><i>Your button LED might be white.</i></p>	
<p>Coil Button: LED ON if coil ON, no function when pushed.</p> <p><i>Your button LED might be white.</i></p>	
<p>Reset Button</p> <p><i>Your button LED might be white.</i></p>	
<p>Laser Key Switch: LED ON if laser ON, Laser activated when key -> right.</p> <p><i>Your button LED might be white.</i></p>	
<p>Emergency Button: Used to shut down the machine immediately.</p>	



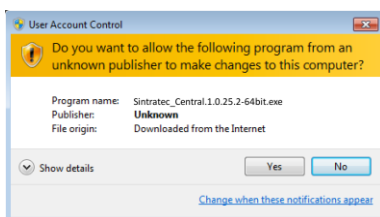
The Casing

The casing insulates the Core and acts as a thermal barrier between the Core and the user. Because a thermal equilibrium around 145°C is needed for the laser sintering process an efficient heat insulation is needed. There is a window in the door to allow the user to see inside the casing and follow the laser sintering process. The window also protects the user from the laser beam. The door can be opened and closed and can be locked with two latches at the right side of the printer. The door triggers a laser safety switch to turn the laser OFF whenever the user is opening the door. It is recommended to remove the Core from the Casing for maintenance.

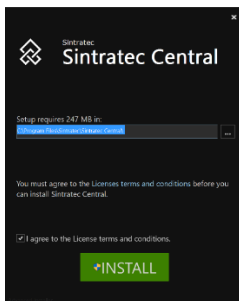
Merge/Unmerge Screw:	
Loose this screw to merge/unmerge the Hat and the Body of the Kit. Tighten again after merging/unmerging.	
Latches:	
Used to lock the door.	

Software Installation

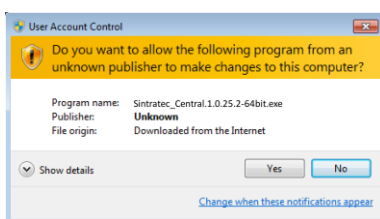
1. Download the Sintratec Central **and** the USB Driver from our [Customer Portal](#).
2. First install the USB Driver. Double click the Sintratec_ATKIT_USB_Driver_1.exe file.



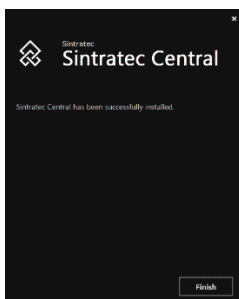
3. Confirm the installation.



4. Now install the Sintratec Central. Double click the Sintratec_Central.1.1.0-64bit_no-usb.exe file. Agree to the License terms and conditions and click install.



5. Confirm the installation.

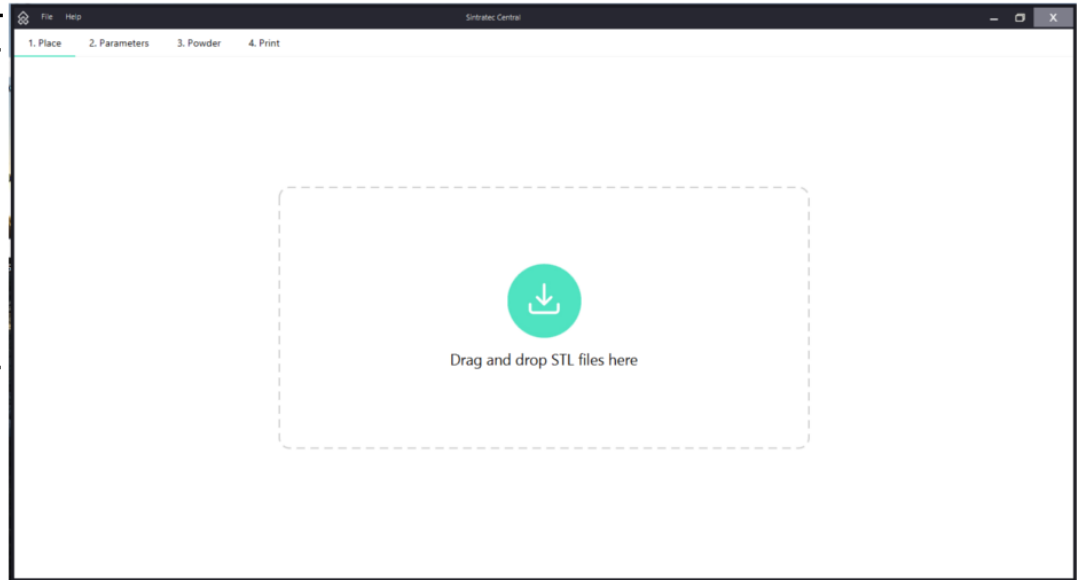


6. The installation is finished.

Interface

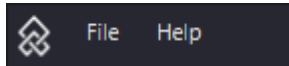
Toolbar
 Tabs for Print Workflow

Work area

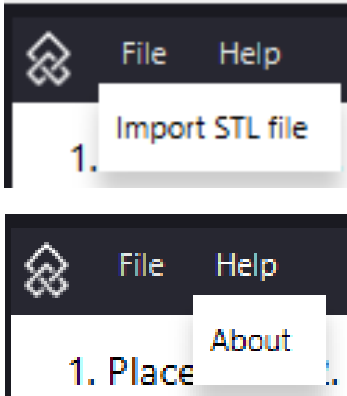


Toolbar	File
	Help
Tabs for Print Workflow	1. Place
	2. Parameters
	3. Powder
	4. Print
Work Area	

Toolbar



The toolbar is used to import/export 3D print files/jobs and to get help.



Toolbar	Menu Item	Function
File	Import STL file	Import an STL file into Sintratec Central.
Help	About	Prompts current version of the Sintratec Central Software.

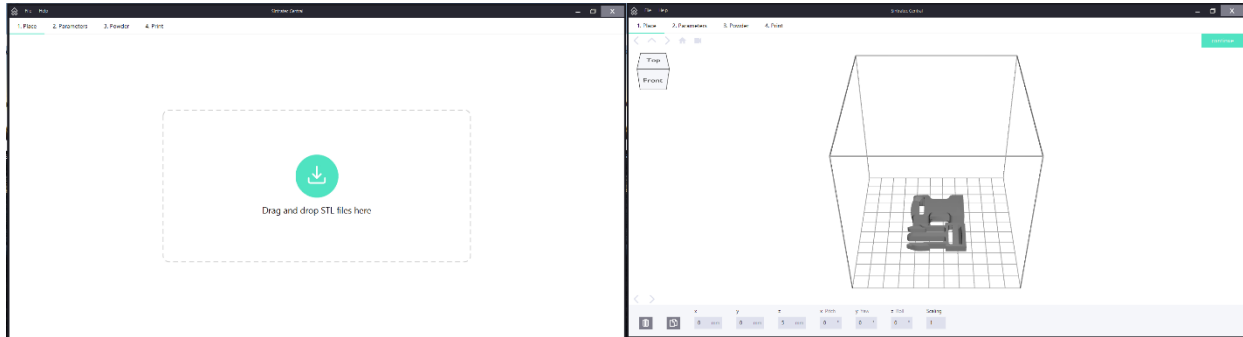
Workflow Tabs



Green bar indicates active tab.

Tab “1.Place”

In the first tab you can load 3D print files into Sintratec Central and arrange them in the print volume (position, position, rotate, and scale). Before being able to position the 3D files you need to load them into Sintratec Central. Open Sintratec Central and either click File → Add STL file or Drag & Drop the 3D files into the main user area. As soon as the first 3D files is loaded into the software the main user area changes and the build volume with its boundaries pops up.



Drag and drop or load STL file (File → Load STL File) into Sintratec Central.

3D view of 3D print file(s)



3D View

You can either use your mouse to view the build volume or you can use the arrows in the top left corner to change the view of the build volume to a side view or a top view. If you use your mouse, you can rotate the view by holding the right button, pan by holding the middle button and zoom in/out by using the mouse wheel. The “Front” label always indicates the front side of the build volume, i.e. the front side of the printer.

Commands

Place STL Files

Position/translate 3D print file.	<table><tr><td>x</td><td>y</td><td>z</td></tr><tr><td>0 mm</td><td>0 mm</td><td>5 mm</td></tr></table>	x	y	z	0 mm	0 mm	5 mm
x	y	z					
0 mm	0 mm	5 mm					
Rotate 3D print file.	<table><tr><td>x Pitch</td><td>y Yaw</td><td>z Roll</td></tr><tr><td>0 °</td><td>0 °</td><td>0 °</td></tr></table>	x Pitch	y Yaw	z Roll	0 °	0 °	0 °
x Pitch	y Yaw	z Roll					
0 °	0 °	0 °					

Scale 3D print file.	Scaling 1
Delete STL file.	
Duplicate STL file.	

Other Commands

Move camera	< ^ >
Move camera to default view	🏠
Switch between perspective and orthographic view	📺
Select a STL-File	< > buckle

Mouse Commands



left click and hold an object

Move the object
You can simultaneously hold x, y or z to move the object along the corresponding axis.



right click and hold

Change the camera angle



Press and hold scroll wheel

Move the camera



Spinning scroll wheel

Zoom in or zoom out

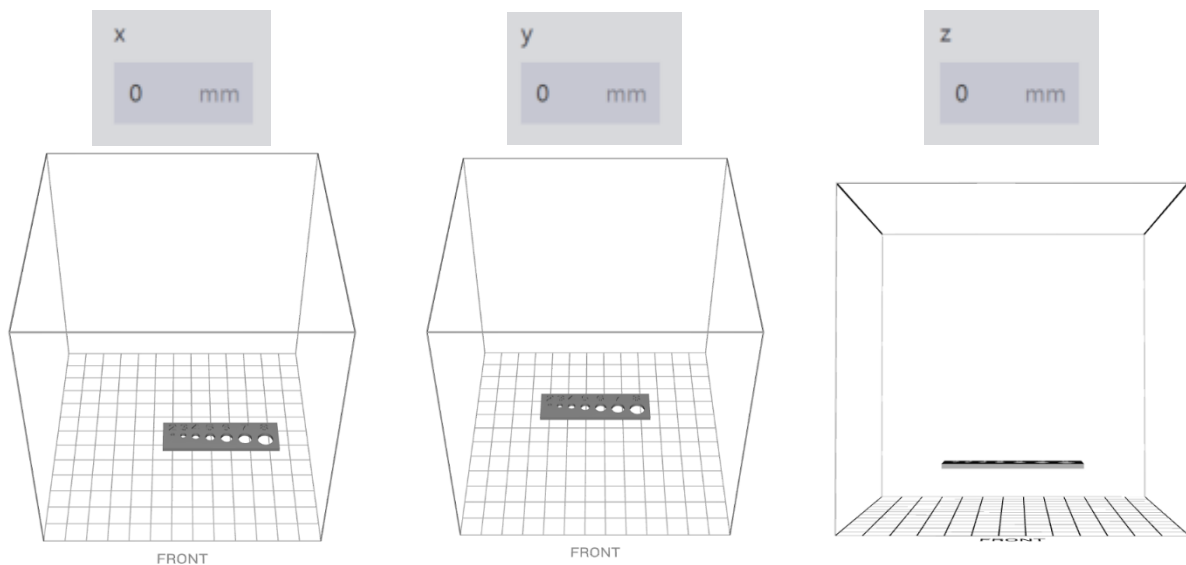
Positioning

There are three main positioning operations which can be applied to each 3D file; translation, rotation and scaling.

Translation

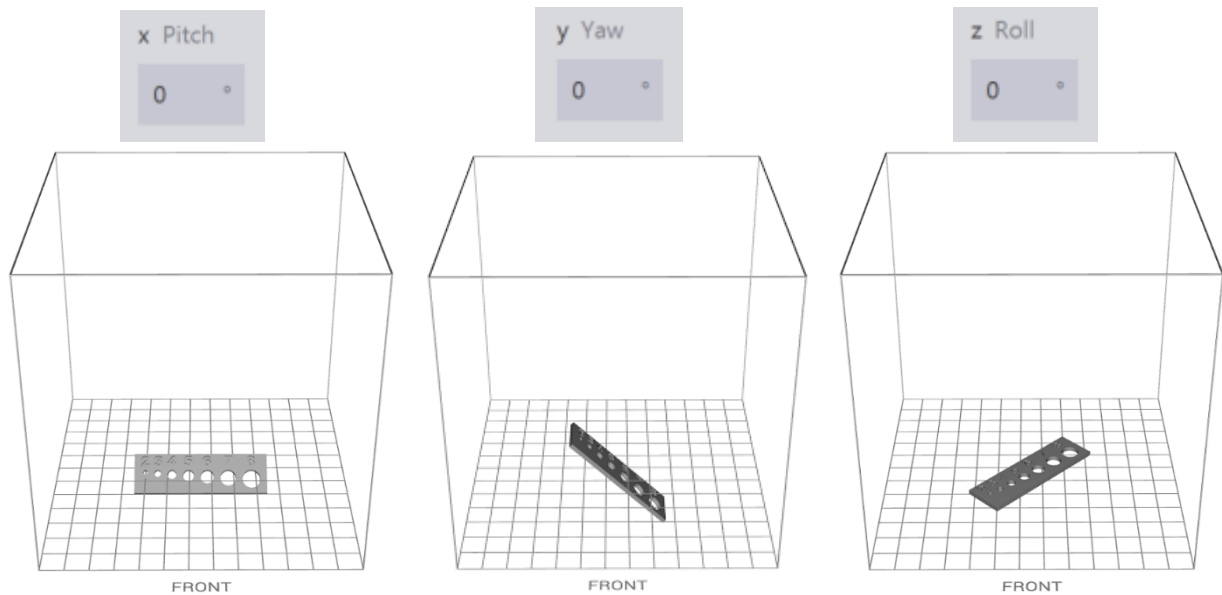
You can translate a 3D file in all three dimensions either manually with your mouse or by entering the values directly in the according fields. To translate the 3D file manually you can click and hold the left mouse button on the 3D file and move the mouse in the X or Y dimension. You additionally can press and hold the X, Y or Z key on your keyboard while moving your mouse to restrict translation in the according dimension. If you press and hold CTRL while manually translating the 3D file, the speed of the movement is reduced allowing to position the 3D file more accurately.

You can enter values in the translation fields to translate the 3D file more accurately.



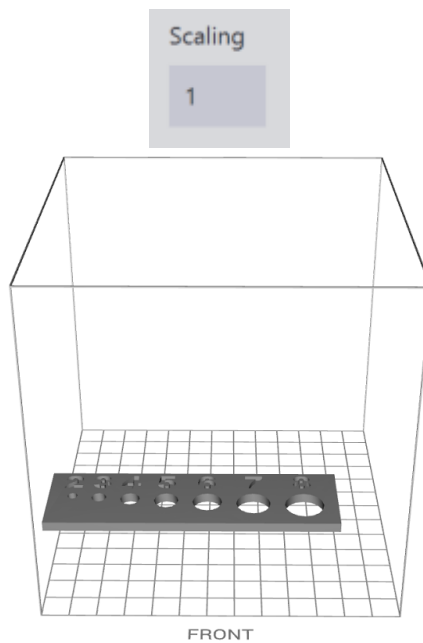
Rotation

You can rotate a 3D file in all three dimensions by entering the values directly into the according fields.



Scaling

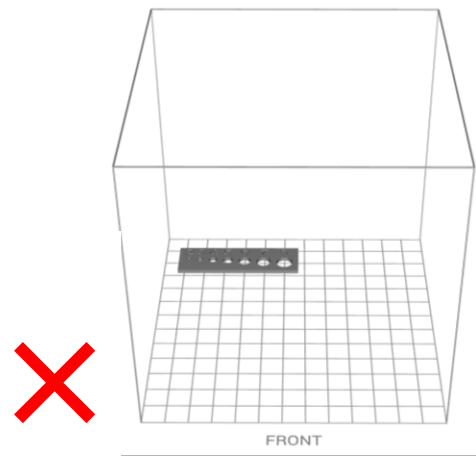
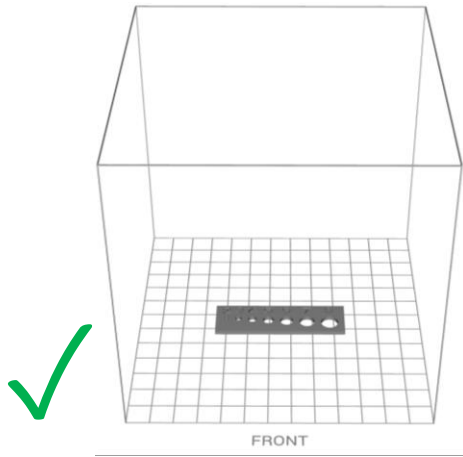
You can scale a 3D file in all three dimensions with the aspect ratio either locked or unlocked.



Best Positioning Practice

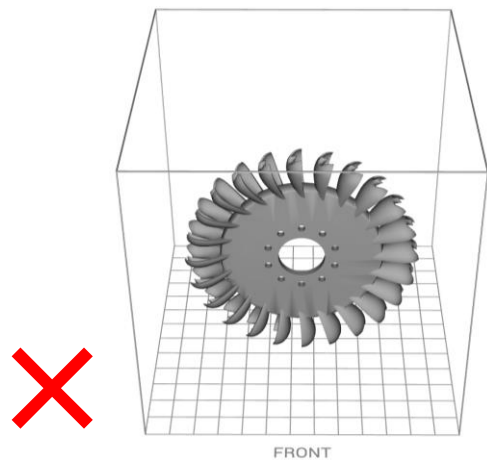
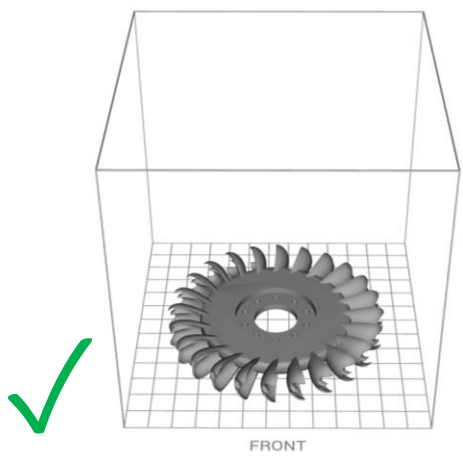
Avoid border and corner regions

The 3D part properties are best when printed in the centre of the print area. The closer you position your 3D file to the border and corners of the print area the weaker the 3D parts. Also the risk of curling will increase when printing too close to the borders and corners of the print area.



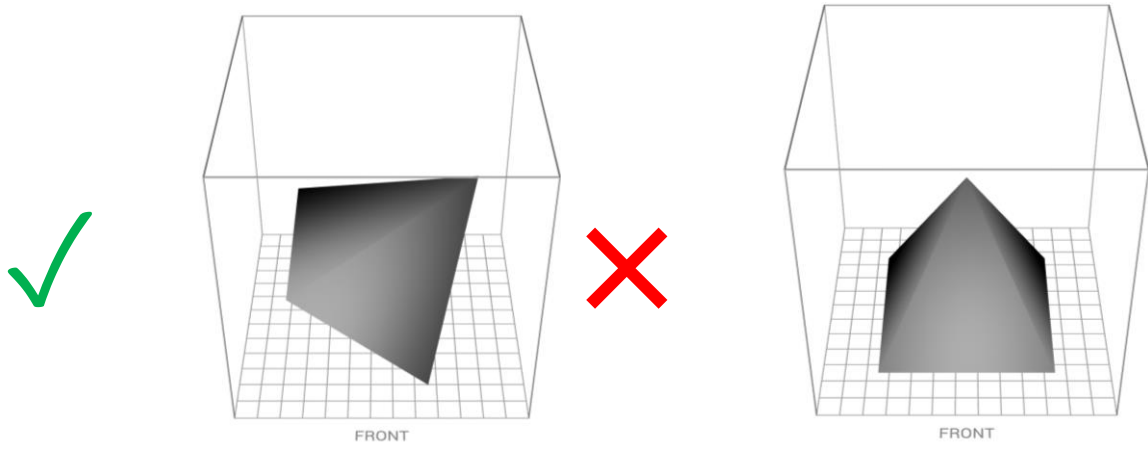
Reduce total height of print job

If you want to print fast, you should keep the height of the print job as small as possible. Because the layer change takes most time, your print job will be printed more quickly with few layers.



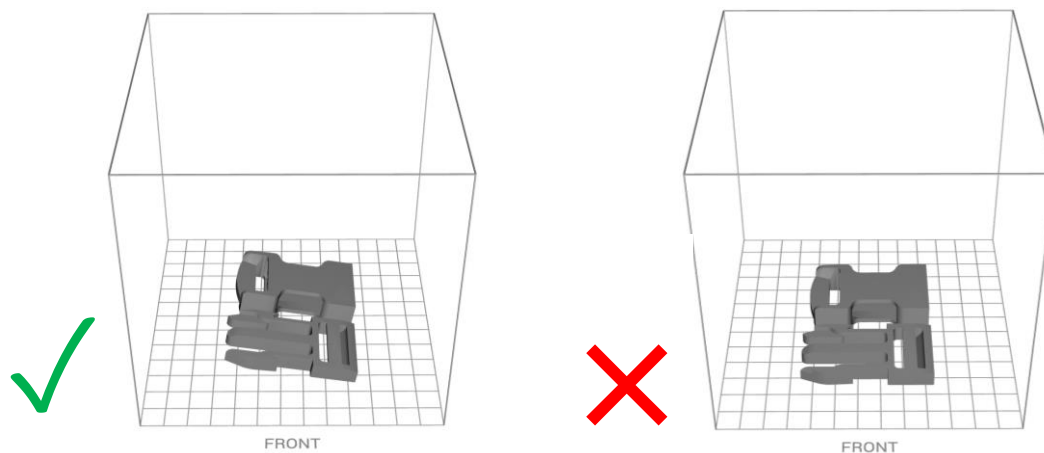
Equally Distribute Thermal Mass

Every layer that is already sintered has influence on the powder surface because of its stored thermal energy. Large fully sintered areas carry significantly more thermal energy than loose powder. Therefore, you should try to distribute large solid parts of your 3D files equally in the build volume to get more constant layer properties.



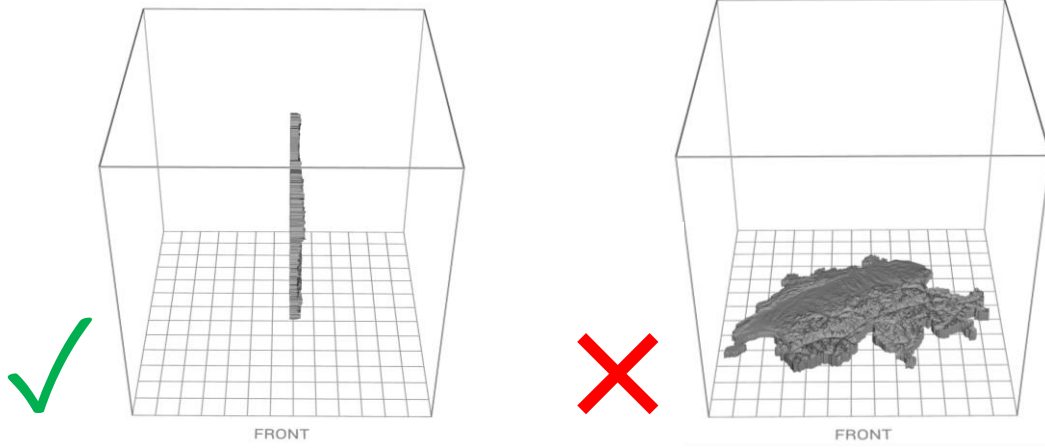
Avoid Large Sintered Cross Sections

Large continuously sintered cross sections are prone to warping and curling. You should therefore try to have as small cross sections as possible on the individual layers. You can slightly rotate a 3D file to reduce large cross sections with the drawback of decreased surface quality of the 3D part. A frequent solution to avoid large cross sections is to put the large area into the z-dimension to keep surface finish but with the drawback of increased printing times.



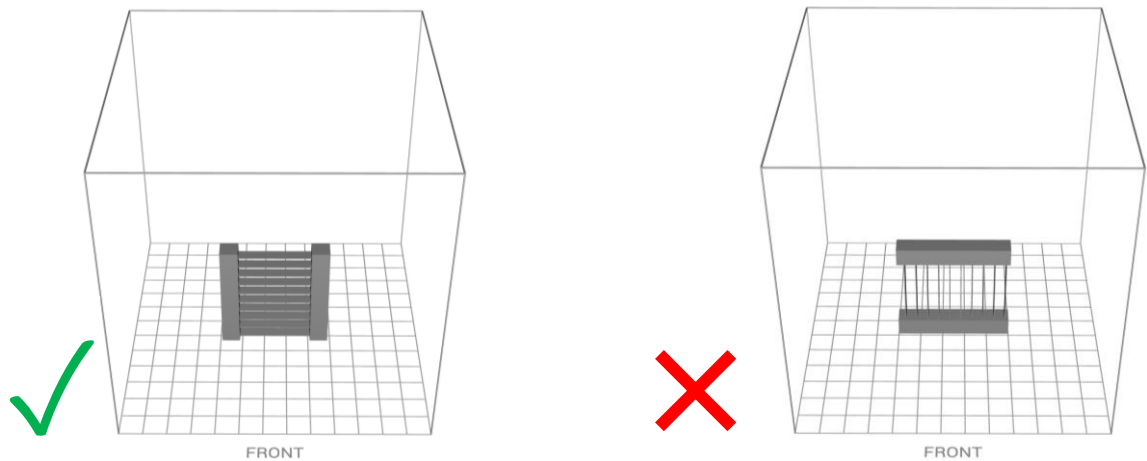
Put Large Flat Parts in Z-Dimension

If a large continuously sintered cross section belongs to a flat part, it is even more prone to curling and warping. Best practice is to put the large area flat into the z-dimension to keep surface finish but with the drawback of increased printing times.



Minimum wall thickness is best in z-dimension

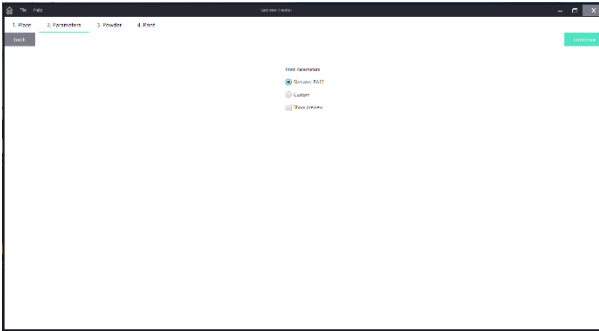
To get the best possible minimum wall thickness, put the wall thickness in the z-dimension.



Tab “2. Parameters”

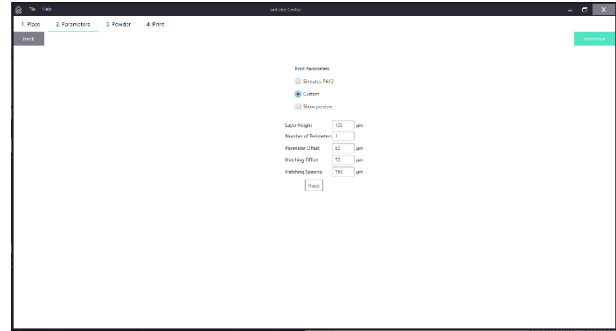
In the second tab you can set the parameters and prepare the 3D print file(s) for printing (i.e. the 3D print file(s) get sliced into individual print layers).

Overview of “2. Parameters” tab.



Sintratec PA12

Use predefined slicing settings.



Custom

Set your custom slicing parameters.

Show preview

Choose show preview to see the slicing and the individual layers in a “preview” tab.

Custom Parameters

The Sintratec Kit allows you to set some custom print job parameters. Those are as follows:

Layer Height:

Set height of each layer. The 3D print file(s) will be sliced accordingly. 100-150um is recommended.

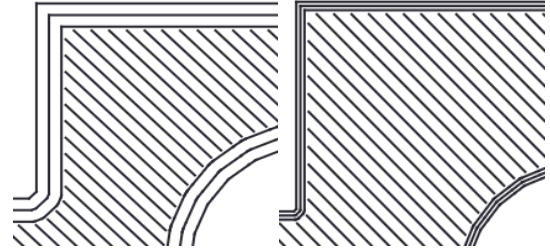
Number of perimeters:

Set number of perimeters. See pictures bellow (1 perimeter vs 3 perimeter).



Perimeter Offset:

Set spacing between perimeters. See pictures bellow (150um vs 50um perimeter offset).



Hatching Offset:

Set offset between Hatching and innermost Perimeter. See picture bellow (50um vs 150um hatching offset).



Hatching Spacing:

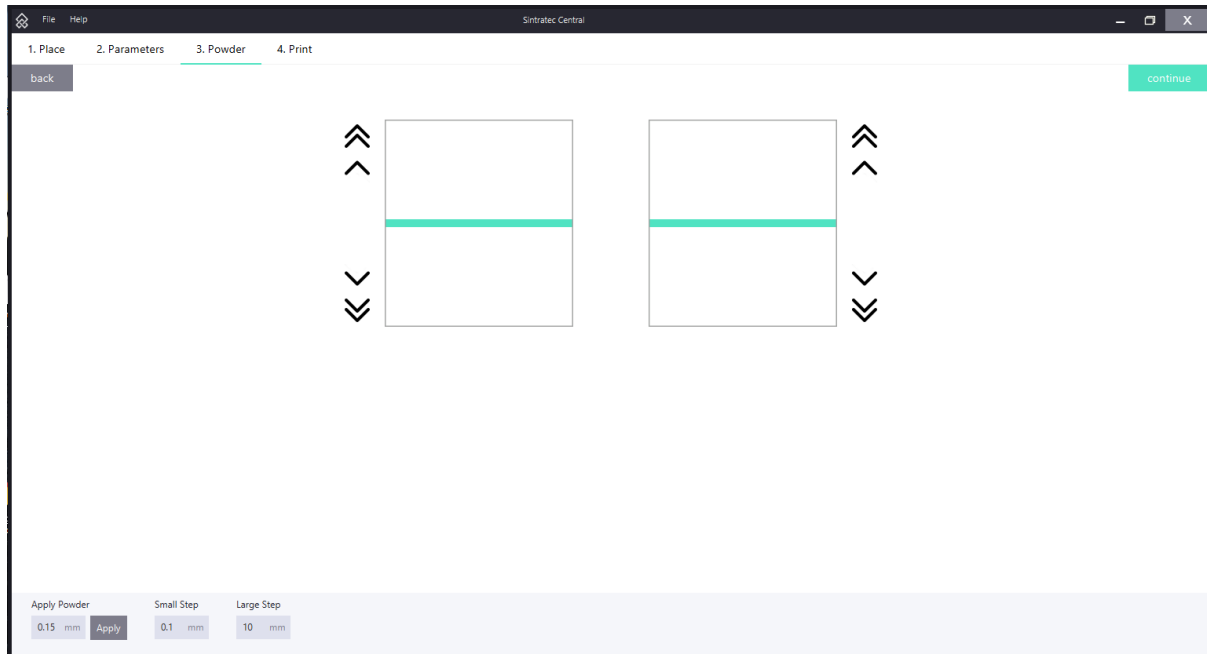
Set spacing between Hatching lines. See picture bellow (150um vs 250um hatching spacing).



Tab “3. Powder”

In the third tab you can control the left and right platform and the coater. You can set the distances the platforms will travel when controlled and apply powder layers of custom height.

Overview of “3. Powder” tab

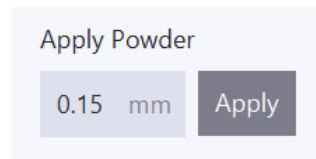


Move Platform

Move the two platforms up or down with the arrows. You can move with small or large steps

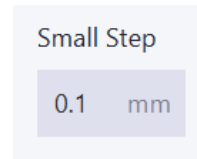


Apply Powder



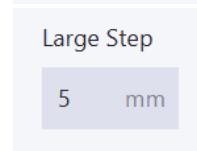
Small Step

Set the small step (^)



Large Step

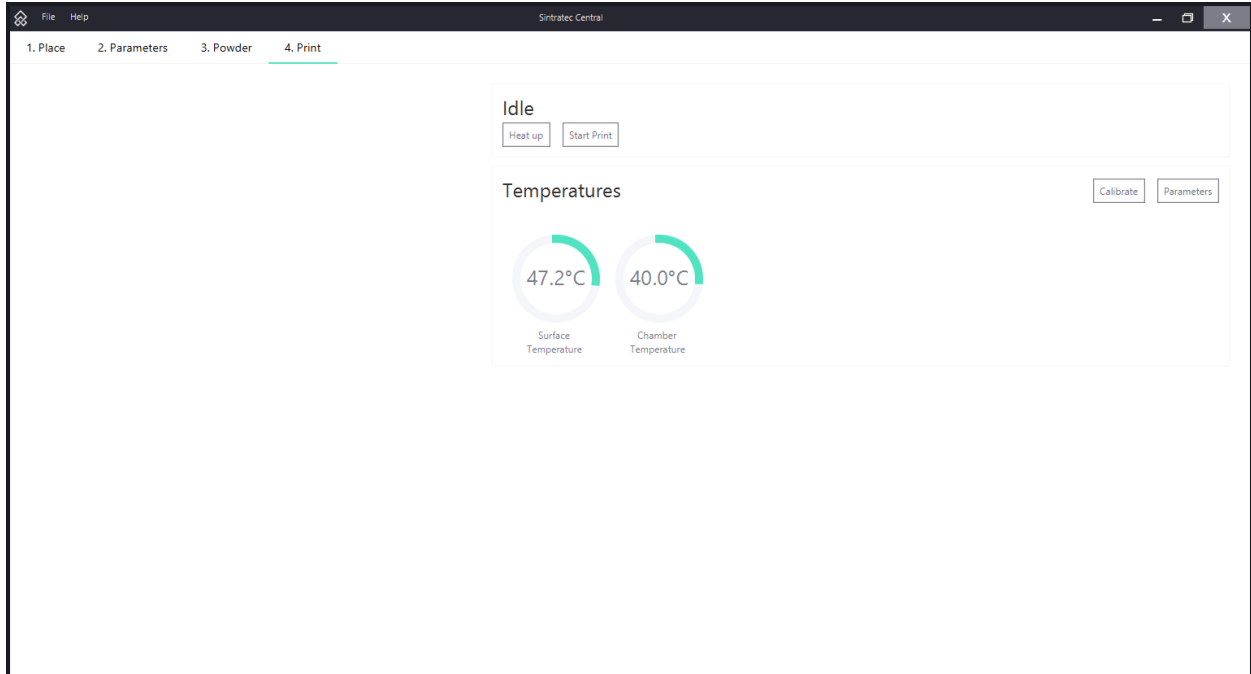
Set the large step (^^)

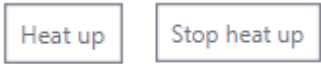

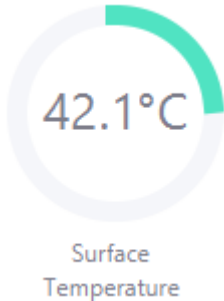


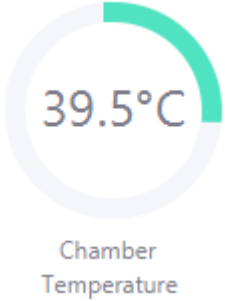
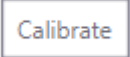

Tab “4. Print”

In the fourth tab you can control the printing process.

Overview of “4. Print” tab



<p>Heat Up Heats up your Sintratec Kit. Click “Stop heat up” to stop the heating.</p>	
<p>Start Print Starts the printing process of your Sintratec Kit.</p>	
<p>Surface Temperature The “Surface Temperature” Graph shows the current temperature on the powder surface of your Sintratec Kit.</p>	

<p>Chamber Temperature The “Chamber Temperature” Graph shows the current temperature on the inside of your Sintratec Kit.</p>	 <p>39.5°C Chamber Temperature</p>
<p>Calibrate Opens the Submenu to calibrate the laser</p>	
<p>Parameters Opens the submenu to change the parameters</p>	

Printing Process

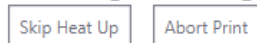
When you start the printing process, the print file will be transferred to your Sintratec Kit.

Uploading Print Job 74%



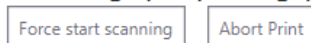
After the print file is transferred, the Sintratec Kit will start/continue heating up. Heat-up your printer by pressing the “Heat Up” button. Heating-up usually takes about 1-2 hours. To get the best quality 3D parts the printer needs to have a homogeneous temperature distribution inside which takes time. You can skip the heating up with “Skip Heat Up”. We don't recommend to skip the heating up.

Printing, heating up 1h 45min



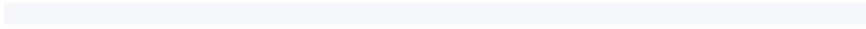
When your Sintratec Kit is successfully heated up, the printer will prepare the powder bed. You can also skip this step by clicking “Force start scanning”. We don't recommend to skip the powder preparation.

Printing, preparing powder



The print will now start. You can follow the printing process. If you like to end the print early you can click on “Skip to cooldown”.

Printing 0%



Skip to cooldown

Abort Print

Printing

Printing 0%

Skip to cooldown Abort Print

Temperatures

Parameters

78.6°C 67.2°C

Surface Temperature Chamber Temperature

Layer 1

Printing Progress

Skip to Cooldown

Abort Print

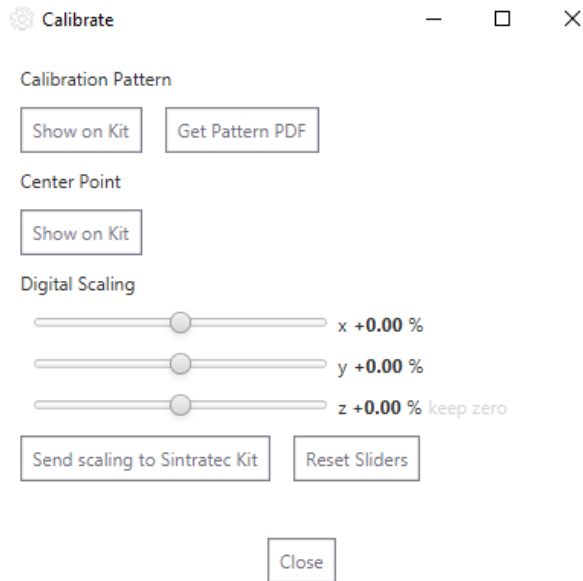
Properties

Temperature

Current Layer

Layer

Calibrate

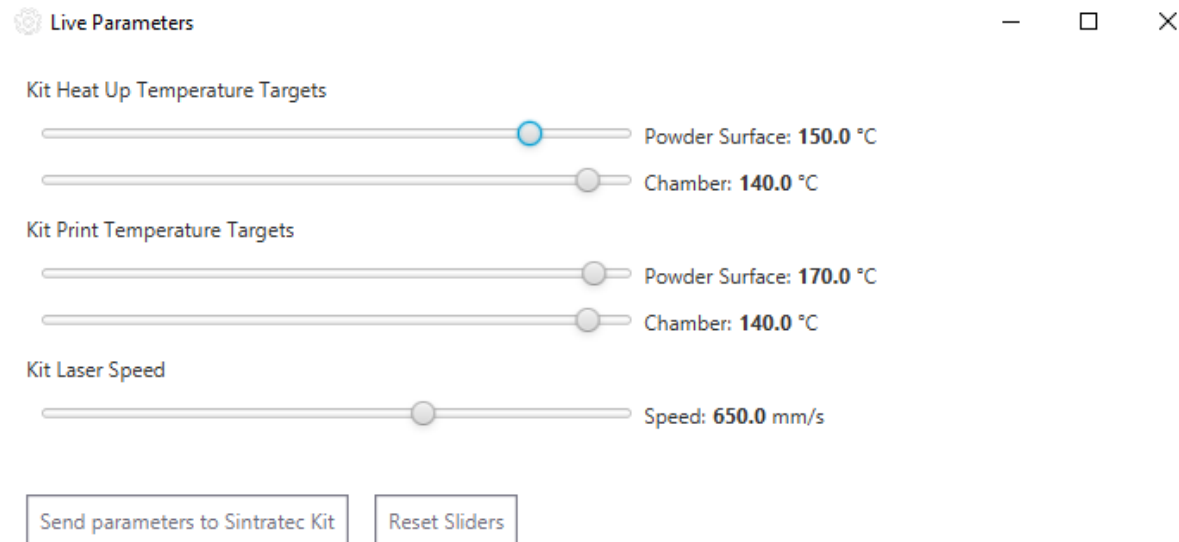


In the calibrate menu you can calibrate your laser. To calibrate your laser, you need the Calibration Pattern printed with your 2D printer. You can get a PDF with the calibration pattern by clicking on "Get Pattern PDF". Please read the guide "Initial Commissioning" for details about the calibration.

The Pattern is just for rough calibration. You can tweak up to 5% in the Software with the function "Digital Scaling". You can do the fine-tuning without calibrating the Kit again.

Parameters

In the Parameters menu you can change the heat up temperature, print temperature and the laser speed of your Sintratec Kit.



3D Files

Each printed 3D part is based on digital data, i.e. a 3D file. The first step of 3D printing on a Sintratec 3D Printer is therefore providing a 3D file. To get a 3D file you can either “draw” one yourself with a CAD software of your choice or get one through third parties (usually the Internet or contract designers).

Commonly used CAD software:

- [Autodesk Inventor](#)
- [Solidworks](#)
- [Solidedge](#)
- [123D](#) (free)
- [Blender](#) (free)

Typical sources on the Internet for 3D files are the following:

- [Thingiverse.com](#)
- [Grabcad.com](#)
- [3DaGoGo](#)
- [3DShare](#)
- [Bld3r](#)
- [CGTrader](#)
- [Cubify](#)
- [Cults](#)
- [MyMinifactory](#)
- [Sketchfab](#)
- [YouMagine](#)
- [Instructables](#)

STL File Format

To be able to print your 3D files on a Sintratec Printer they have to be in the correct file format, i.e. yourfile.stl. STL is the 3D printing standard file format. All commonly used CAD software provide a STL exporter.

Commonly used CAD software:

- [Autodesk Inventor](#)

- [Solidworks](#)
- [Solidedge](#)
- [123D](#) (free)
- [Blender](#) (free)
- [SketchUp Make \(free\)/ SketchUp Pro](#)
- [FreeCAD](#) (free)

Online conversion tools to convert a 3D model into STL:

- [Meshconvert.com](#) (free)
- [Greentoken.de](#) (free)

STL Repairing

Many STL files do have errors which have to be repaired before you are able to 3D print it. Especially if you get 3D files from the Internet or designers who are new to 3D printing, STL repairing is frequently needed. If you draw your 3D files by yourself you usually can fix the errors easily after finding them. Especially for objects coming from 3D scans STL-fixing is necessary. If you use third party STL files you can find and repair STL errors by using dedicated third party STL software.

Frequently used STL software for STL file fixing:

- [Netfabb](#) (free basic version)
- [Meshmixer](#) (free)
- [3D Builder](#) (free)

Online repairing tool:

- [3D Model Repair Service](#) (free)

Printing Process

1. Powder Loading



1. Move the powder reservoir platform (right platform) down to be able to fill the powder reservoir.
2. Move the printing platform (left platform) to the top.
3. Fill the powder reservoir with fresh powder and make sure the powder is distributed evenly.
4. Move the right platform one step up (0.1-1 mm) and apply a new layer of powder with a value of 0.0mm. Repeat this until the surface of both the powder reservoir and the print area is evenly distributed.
5. Apply 2-3 layers (0.1mm) to check if the new powder layers are spread evenly.
6. Close the door of the Sintratec Kit. Connect your Kit to power, switch the power switch to on and check if the emergency button is not pressed.

2. Positioning

1. Start the Sintratec Central on your Computer and connect the USB cable to your Kit.
2. Drag and drop your STL-files into the Sintratec Central and arrange them. Please read Tab "1.Place".
3. Click "Continue" to start the slicing.

3. Start Print

1. Go to the Workflow Tab “4. Print” and click “Start Print”. The Printer will heat up, prepare the powder bed and then start printing. After the print is done, the printer will cool down.

4. Depowdering

1. Extract Part from Powder Cake

Use a spoon or a similar tool to extract the powder cake from the print chamber and put the powder cake into a bowl.

Use a brush or similar tool to remove the “loose” powder from the powder cake until you have separated your printed part(s) from the powder cake. The more powder you remove the more powder you can recycle for further usage.

You can now clean your printed part(s). We recommend to use compressed air or even better a sandblaster to clean your part(s). Alternatively you can use a wire brush and tweezers.

2. Clean 3D Printer

Use an ash vacuum cleaner to vacuum the remaining powder out of your 3D printer. Make sure you only vacuum the same powder to not decontaminate your recyclable powder. You can leave the remaining powder in the powder reservoir to directly use it for your next prints.

3. Recycle Powder

Use a sieve (we recommend a 100-150um sieve) to recycle the remaining powder for further usage.

We recommend to mix recycled powder with new powder as the powder degrades every time it is recycled.

Powder



Material Fact Sheet

Trade name: Sintratec Powder Use of the substance: Laser sintering

Supplier: Sintratec AG
Badenerstrasse 13
5200 Brugg
Schweiz
+41 56 552 00 22
info@sintratec.com

Chemical Characterization: Polylaurinlactam (Polyamid 12)

First aid measures: After inhalation, remove the affected person from the immediate area and ensure supply of fresh air. After skin contact, clean with soap and water and cool quickly with cold water (after contact with molten product). Do not pull solidified product from skin. After eye contact, separate eyelids and wash the eyes thoroughly with water for 15 minutes. After ingestion, seek medical advice immediately. Rinse mouth thoroughly with water.

Suitable extinguishing media for firefighting measures: Foam; Carbon dioxide; extinguishing powder, Water spray jet

Accidental release measures: Ensure adequate ventilation. Avoid dust formation. Keep away sources of ignition. Do not discharge into the drains/surface waters/groundwater.

Handling and storage: No special measures necessary if stored and handled as prescribed. Keep containers dry, tightly closed, at temperatures between 5 and 35° C. Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages.

Physical and chemical properties

Form & Color:	Powder & Dark Grey	Odor:	odorless
Melting point / melting range:			185° C
Decomposition point / decomposition range:			> 300° C
Ignition temperature:			> 350° C
Density (20° C):			1,0 – 1,1 g/cm ³
Tensile strength:			40 +/- 3 MPa
Elongation at break:			5 +/- 3 %

Disposal considerations

Material: Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company. If located in the US, dispose in accordance with federal, state and local regulations.

Packaging: Residuals must be removed from packaging and when emptied completely disposed of in accordance with the regulations of waste removal. As a company with high sustainability standards we highly recommend and kindly ask users to recycle the packaging.

Troubleshooting

Sintratec Central does not seem to find my Sintratec Kit

1. Verify the USB cable is plugged in both to your Computer and your Sintratec Kit. Make sure your Sintratec Kit is turned on.
2. Make sure you have installed the latest USB driver you can find on Sintratec's Customers Portal's Home page. On Windows you can check if your Kit is correctly identified if it is listed in Windows Device Manager as "Sintratec Kit" under "Universal Serial Bus Devices".

Where can I download the latest Sintratec Central Software?

Go to Sintratec's Customer Portal Home page to find a link

Printing

My prints are very brittle, what can I do?

You are printing too fast or the temperature of your print bed is too low.

When I print, the surface is very pale and afterwards the print is very brittle.

You are printing too fast or your print bed is too cold. Also check if your laser is calibrated correctly. Last but not least check if the laser glass is clean. clean it if necessary.

My edges of the print are always separating from the print bed.

Your print bed is too cold. Pre-heat your printer for a longer period of time or raise your bed temperature.

The print bed gets black

The print bed is too hot.

The sled touches the print and moves it in x-direction

The print bed is slightly too hot the building platform does not move enough. raise your z scaling factor.

The print gets skewed in x direction

Your Z-scaling is too low or layer thickness is too small.

There are bright spots on my print surface

Your laser glass is polluted. Please clean it.

My prints are XX% bigger/smaller than they should be. but my calibration pattern fits perfectly!

The Pattern is just for rough calibration. You can tweak up 5% in the Software. It's located in the 4th tab under Calibrate.

Hardware

My lamps don't work

Your IR sensor is probably damaged. contact the Sintratec support via ticket system.

Powder leaks out of the building chamber

The printer is not sealed properly. this may have two reasons:

1. The lift seal fabric is worn out or is not assembled correctly
2. The gaps in between the chambers were not sealed properly. Seal them with high temperature glue.

I printing with really high temperatures, but the print still curls from the print surface

Your temperature reading is probably wrong. this may have the following reasons.

- The laser Glass is in front of the IR sensor.
- The IR sensor is not all the way down the sensor tube
- The lid with the fans is removed, causing the sensor to overheat
- The laser box is removed, causing the sensor to overheat

My printer encounters an error and the surface temperature shows only 20°C

Your IR sensor is probably broken. Contact the support via ticket system.

A part is broken / missing

Contact the support via ticket system. We will provide spare parts

My software is not connecting to the printer

Make sure the USB driver is installed. If it still not working contact the support via ticket system.

My laser is not firing

Check the position of the door endstop. If this does not solve the problem open a support ticket in our support system

The lamps do not work

there is probably a problem with the IR sensor. Check if its plugged in. If this does not solve the problem open a ticket in our support system.

How do I maintain my printer?

There are a few things to watch out for:

- You should clean the laser glass regularly, best after every print job
- Keep the guides free from powder. clean the wheels with a toothbrush when needed
- Empty your powder bin after every print, don't let it overflow
- From time to time take the hat out of the base and remove the powder from the base

Powder

Can I use used powder again?

Yes, you can sieve the used powder and use it again. Keep in mind that recycled powder needs to be printed a bit hotter. As for the sieve we recommend a mesh width of 150 microns or 100 mesh

Can I use white powder?

Any other powder than our own PA12 powder is not supported yet. Feel free to try it out though we are always glad about feedback.

Does the powder bear any health risk?

No, the powder does not cause any health risk, but we advise to wear a dust mask when handling the powder.

Where can I buy new powder?

You can order new powder via our [webshop](#) or contact us directly via sales@sintratec.com.

How do I get the powder out of my printer?

We recommend buying an ash vacuum cleaner.

General

I found an error in the guide where can I report it?

Please open a ticket and describe the error as accurate as you can

I found a bug in the software

Please report the bug via ticket system. describe as accurate as you can what you have done, so we can reproduce it.

I found a typo

Open a ticket on our support website, so we can fix it