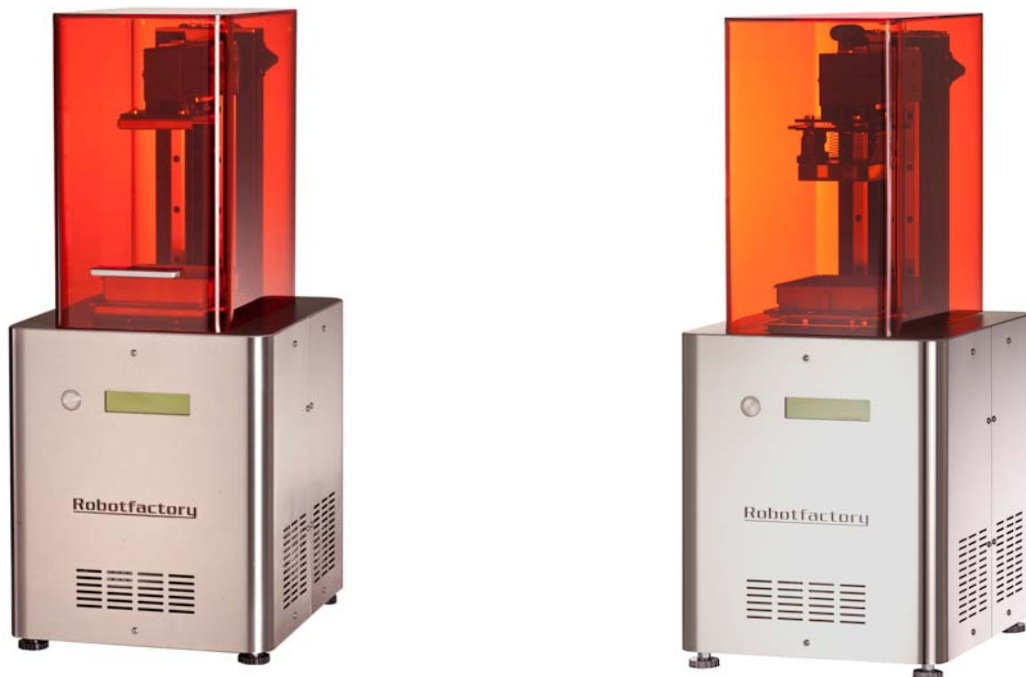


3DLPrinter-HD

3DLPrinter-HD 2.0

3DLPrinter-HD 2.0+



Technical Note 10/16

**Advices for a good adhesion
of the printing piece on the construction base**

Introduction

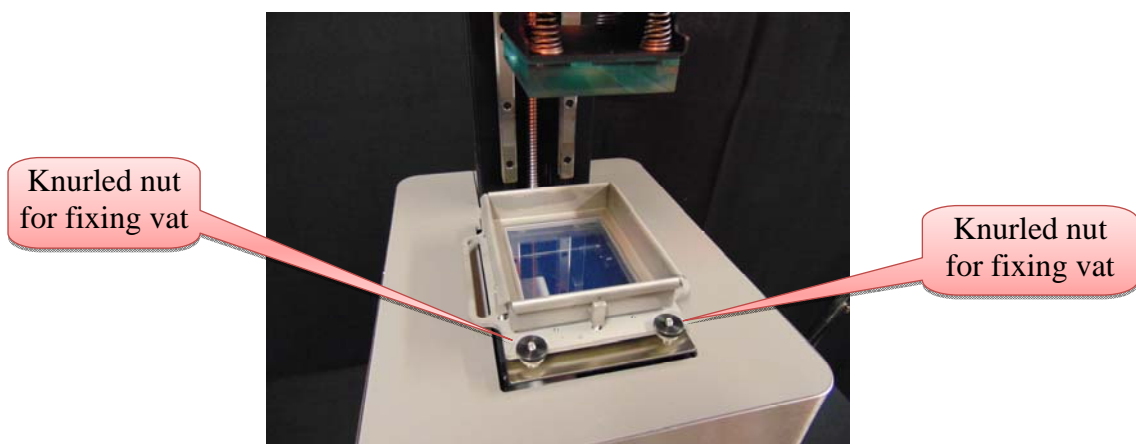
Sometimes it happen that the **base of printing object** does not stick properly to the construction base, so the printing job cannot build completely the object.

In the most of the times this is due to a problem of exposure times. For the exposure times, it be taken into account that these may differ according to several factors (including environmental), please refer to the document "Technical-Note_07-15" present on DVD.

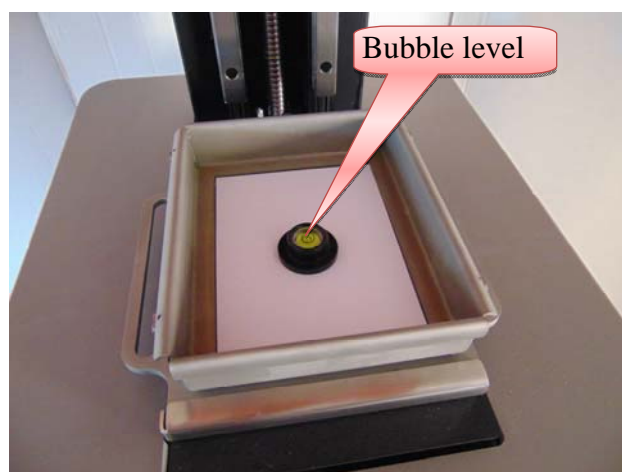
Some Tips

Once excluded the issue of exposure times, you should consider the following:

- 1- **Verify the projector lens cleaning:** for remove dust from projector lens, gently clean the lens with one of the wipes supplied with the printer, making sure it is slightly moist (otherwise don't use this one for wipe, because you risk to crawl the lens). For more details refer to chapter "**LENS CLEANING**" on manual "**Instructions for installation, use and maintenance**".
- 2- **Resin Vat cleaning:** check carefully that the glass used as support of Siligel is not dirty (that is, it has neither dust nor fingerprints).
- 3- Properly fastened the **knurled nuts for fixing the Resin Vat:** to screw very well the four knurled nuts with which the Vat is fixed, so that all they exert the same pressure.

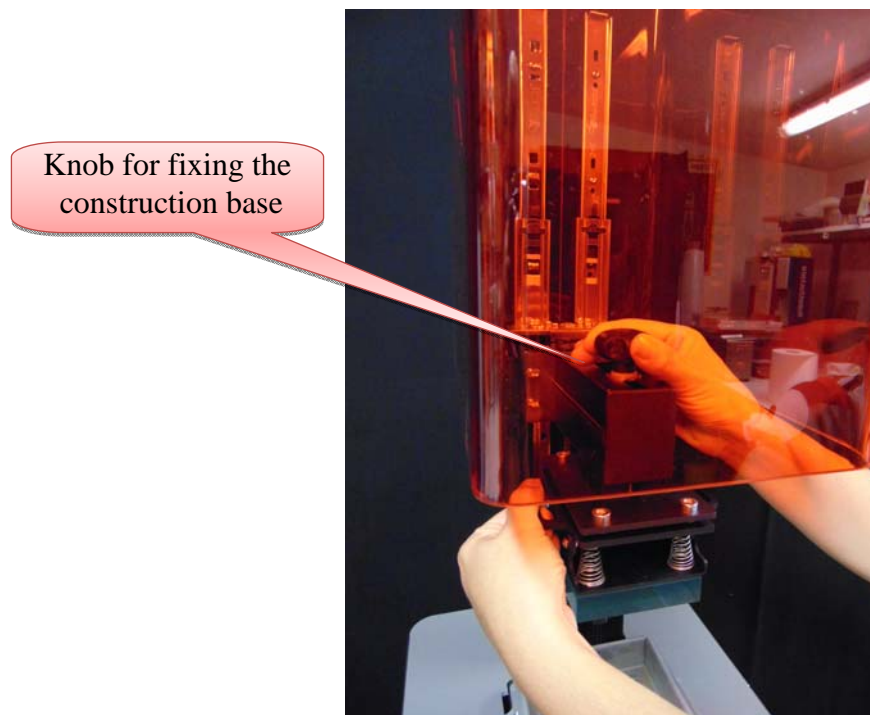


4- Resin Vat leveling



For resin vat leveling, place a sheet of special paper, supplied with your printer, in the resin vat and place the spirit level on it, then **adapt the four adjustable feet**, until the bubble is centered. **Use a spanner -13 mm - to tighten the nuts of adjustable feet.**

- 5- Properly fastened the **Construction Base**: Well screw the fixing knob.



Verify integrity of **Siligel (into Vat)**: If the Siligel, that is the bottom of Vat, it is opaque, torn or damaged in any way, replace it with a new one. As well as the vat cleaning, you have to check carefully the integrity of **Siligel**, putting attention that not is damaged (that could happen in printing phase). There must not be any bubbles, fingerprints or breaking points. If it been damaged, you need to replace it, you can refer at document "**Kit-refill-Siligel**" that is on DVD supplied with printer.

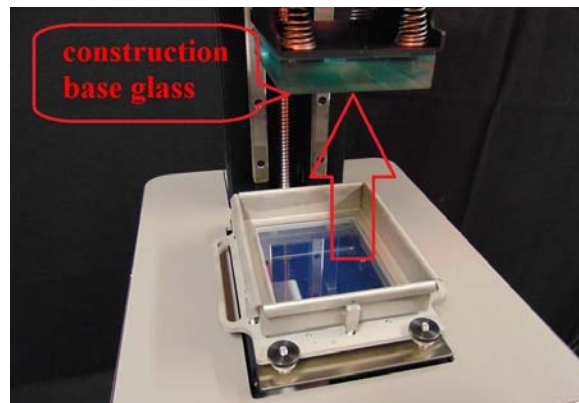
- 6- **Verify the focus through grid projection**: One of the most important things, it is the correct focusing of projector. For more details refer to chapter "**ADJUSTING THE FOCUS**" on manual "**Instructions for installation, use and maintenance**". For focusing, you have to put into vat the paper with **Calibration Grid**, refer to folder "**Griglia_Taratura**" contained in DVD supplied with printer. For print the grid on paper, you can refer to instructions wrote in the "**3DLPrinter-HD 2.0+_Readme**" file, also this contained in the same folder "**Griglia_Taratura**".
- 7- **Zero Setting**: every time you replace the **Siligel**, or you remove the **Construction Base** or **Vat**, or you **adjust the focus**, then you have to repeat the **zero setting** of machine. To proceed to zeroing, the Vat must be clean, dry and properly positioned. After you 'turned on' the printer and started the management program, you have to select folder "**Service**" and press the "**Zero Setting**" button (remember to put the white paper of referring in vat), then execute carefully all three steps of procedure. Make sure that the Zero Setting has been done perfectly, because sometimes, tightening the screws, it tends to move the **Construction Base** out of alignment.

The procedure is explained in details in chapter "**HOW TO INITIALIZE THE PRINTER**" contained in manual "**Printer3DLP - Setup and use of the program**".

It can happen that you need to repeat the zero setting when, for a job gone bad, the construction base did stick on Siligel so, if the four screws were not well fixed, the suction effect tends to misalign the positioning of the **Construction Base**.

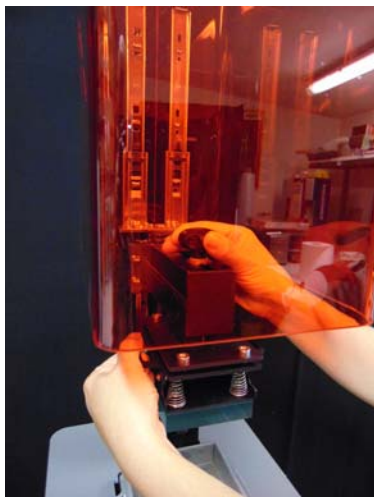
Construction base glass surface

If still there is the problem of the lack of adhesion between the base of printing piece and the construction base, then: **Make rough the construction base glass.**

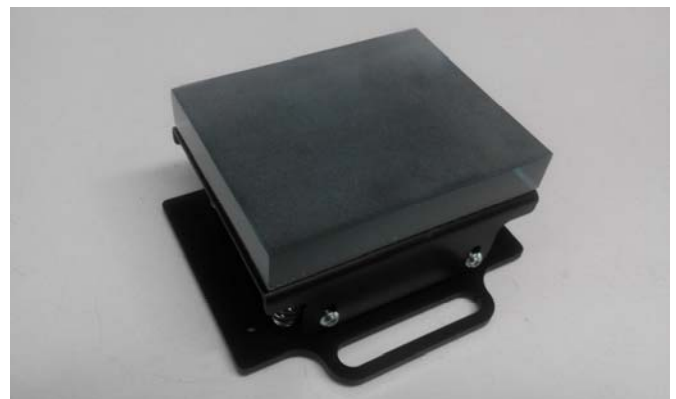


Follow these steps CAREFULLY

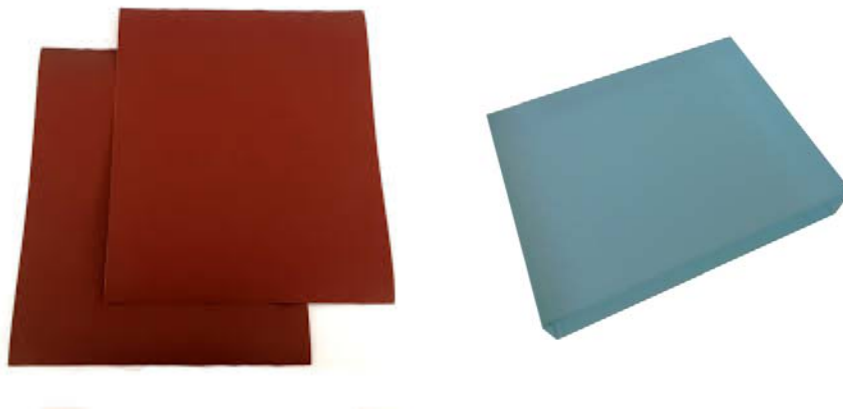
- 1- To remove the construction base from Z-Axis, proceed as explained in chapter "**CONSTRUCTION BASE EXTRACTION**" on manual "**Instructions for installation, use and maintenance**".



Remove the contruction base



Place the construction base upon a stable work plan



- 2- Use a sheet of sandpaper 600 grit (texture thin but not too much) for make more rough the glass.
- 3- Cut half the **sheet** and **fold it on itself two times**.
- 4- Use this **piece of sandpaper** to rub with slight and **homogeneous rotational movements** on the whole surface of the glass (in order to eliminate any impurities from the glass surface).
- 5- **Clean carefully** (using a paper towel soaked with a little isopropyl alcohol) the construction base glass.

Check the support of the Vat

If still there is the problem of the lack of adhesion between the base of printing piece and the construction base, then: Check Vat Support

We found that in some cases, due to lack of attention in the transportation of the printer, or due to an incorrect '**Zero Setting**', made by the user, it is possible that the Vat support can be crooked.

The damage is evidenced by the fact that **the vat is no longer parallel to the plane**, but inclined.

To check if the vat support is crooked

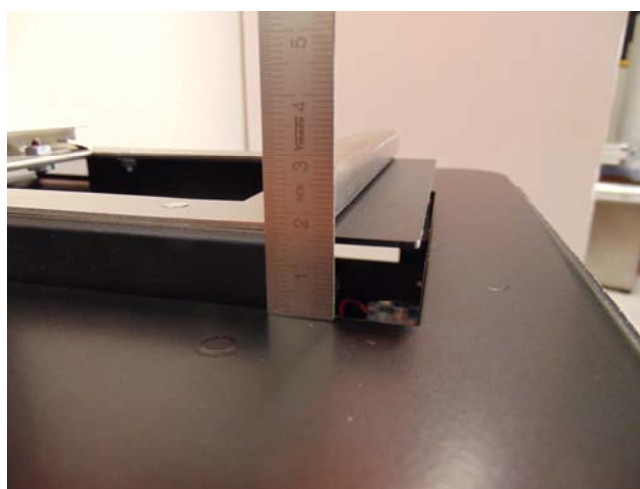
- 1- Pull out the vat and remove the front panel of the printer (refer to chapter "FRONT PANEL REMOVAL" on manual "Instructions for installation, use and maintenance").
- 2- Turn on the printer, activate it, launch the management program. Select the "Service" folder in the main window. Press the "VAT DOWN" button.



- 3- Pick up the stoneware plane at the rear, pull it out and put it safe from bumps.



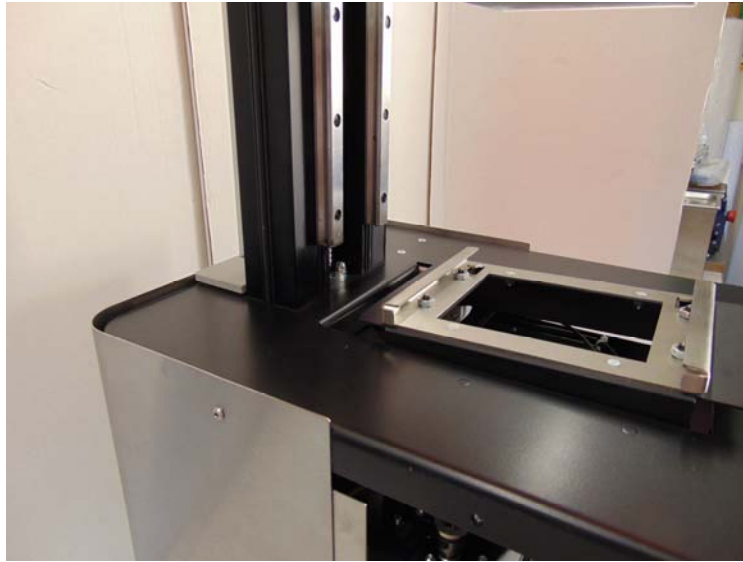
- 4- From management program, select the "Service" folder in the main window. Press the **"VAT UP"** button.
- 5- **Verify that the support of the vat (inox base) is perfectly aligned with the plane, that is, by measuring with a caliper (or a ruler), you will have the same height in the front and in the back of the support itself (see the two photos below).**



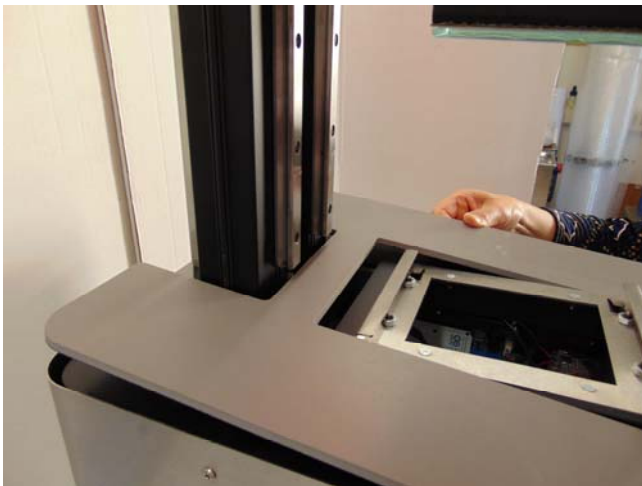
Attention: if the support of the vat is not perfectly aligned with the plane, please inform about this issue the seller of your printer!

Do not do anything before you have received instructions on how to make!

- 6- As in Step 2, from management program, select the "**Service**" folder in the main window. Press the **"VAT DOWN"** button.



- 7- Insert the stoneware plane, raising the rear, and then place it in the original position (see photo below).



- 8- From management program, select the "**Service**" folder in the main window and press the "**VAT UP**" button.
- 9- Close the management program, turn off the printer and refit the front panel.

Mask function

If the problem is on layers of printing piece (normally not on base), then: Use the Mask Function

The DLP projector used in 3D Printers series, presents the drawback of lack of homogeneity of luminous intensity. For this reason, some parts of the projected layers may have different light intensities depending on their location. Using the **Mask function** we can obtain a balancing of exposure light for every point into printing area and, consequently, a dimensional homogeneity for all objects printed in the different zones of printing area.

Remember that, to optimize the use of this function, may be necessary the **calibration (one off)** of **Threshold_Mask** and of **image** used as 'mask', different some times by the default supplied with feature. This adjustment must be done by the user, because it is different from printer to printer, but it is a calibration (one off).

Attention: For the Mask function setting, please refer to **Technical Note 09/16 (Mask function)**.

You have to take into account that with the use of the Mask function, the **exposure times** required for printing (both of the base of the piece, that the successive layers) **should be increased** (compared to when it is not used the Mask function for the same print job).



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