PROCEDURE FOR INSERTING THE GLASS ON RESIN VAT

(3DLPRINTER AND 3DLPRINTER-HD MODELS)

THOSE WHO FOLLOW ARE THE STEPS TO BE MADE FOR REPLACE THE GLASS (INSTEAD OF SUPPORT PMMA-UV) ON A RESIN VAT OF 3DLPRINTER AND 3DLPRINTER-HD PRINTERS.

FOR THE PROCEDURE FOR THE PREPARATION OF SILIGEL WE REFER TO VIDEO "SILIGEL-PREPARATION_EN", DOWNLOADABLE FROM THE FOLLOWING LINK:

http://www.robotfactory.it/3DLPrinterService/Video-Kit-Siligel_EN.zip

CAREFULLY follow the following steps

1.1 DIMA FOR THICKNESS OF MAXIMUM CURVATURE

To get an exact reference of the curvature that the Base of the Resin Vat (model 3DLPrinter and 3DLPrinter-HD) has to be in case you decide to use as the basis for Siligel, no longer the PMMA-UV, but the "Glass", we create a dima using a common object (a paper clip of small type):

and we 'unroll' the upper end of it (see Fig. 1). The thickness of the metal wire with which the paper clip is made is about 0.85 mm. (Caution: Before use, check using a gauge thickness of your paper clip).

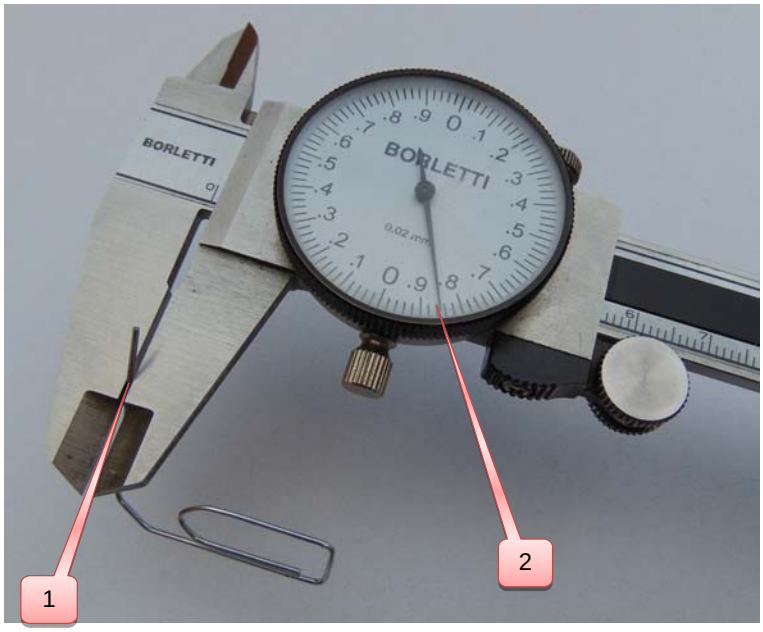

Fig. 1 – REFERENCE THICKNESS MAXIMUM CURVATURE

1. Dima for control of curvature
2. Thickness Dima

1.2 CURVATURE ON BASE OF RESIN VAT – 3DLPRINTER AND 3DLPRINTER-HD MODELS

By placing a ruler (or just a straight metal rod) on the short side of the vat base (see Fig. 2), we see that there is a space due to the curvature with which it was built the same base to allow the maximum adherence to PMMA- UV (the curvature is present on both short sides of the base).

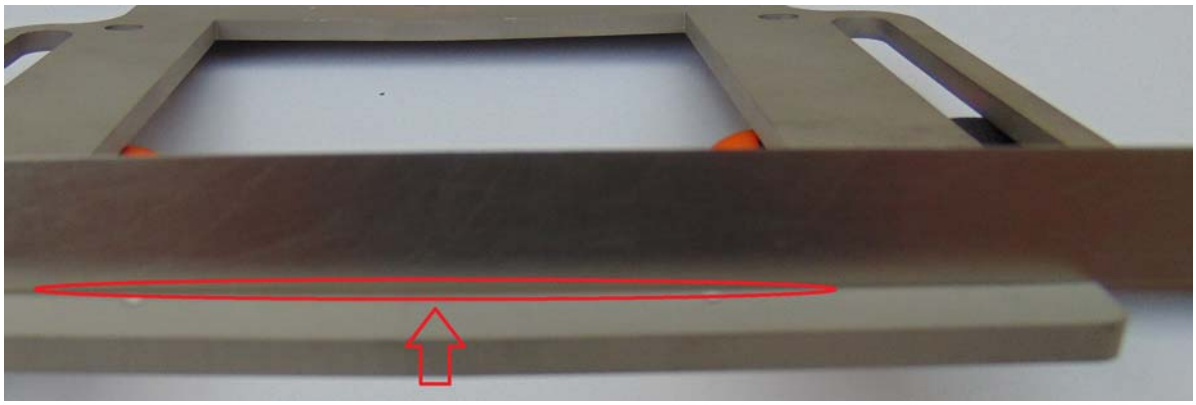

Fig. 2 – Curvature on the short side of the vat base (upside down)

The space between the ruler and the curvature is greater than the "Maximum Thickness" bending "measurable with our dima", this is evident in Fig. 3 where we see that, by placing the dima in the center of the short side of the base of the vat this, for effect of the slack, tends to fall down.

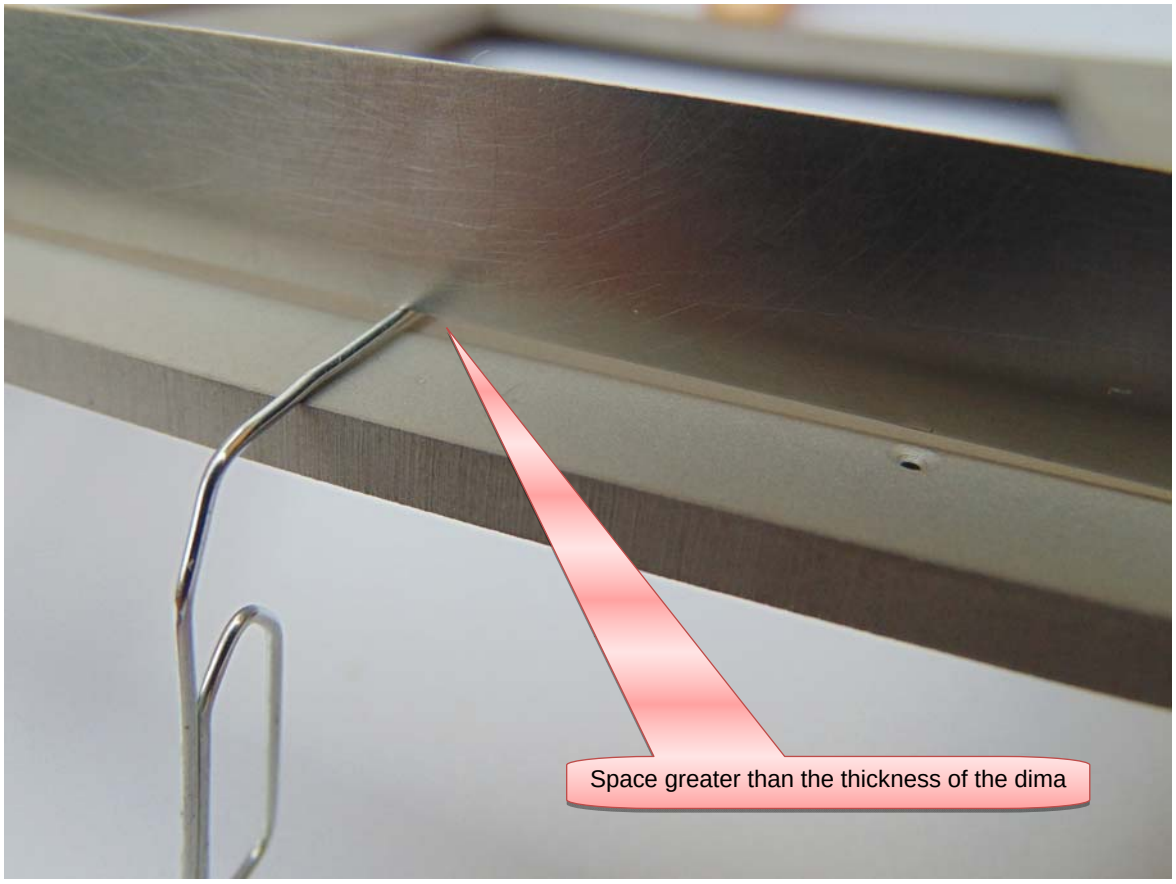

Fig. 3 – Measurement of Curvature on the short side of the vat base

1.3 STRAIGHTENING THE BENDING ON THE BASE OF VAT

Using a hammer in "fiber" or "rubber" (note: not metal) give a blow dry, but light, on the short side of the base of the vat (see Fig. 4). To effect of this operation, the space, due to the curvature of the vat base, would be reduced.

Do this operation on both short sides of the base.

Fig. 4 – Straightening the bending on the base of vat

WARNING: This is very IMPORTANT, because if the curvature of the base of the vat remains highly accentuated, then when you go to mount the glass on the vat, tightening the screws you could break the glass!

On the contrary, if the curvature of the base is too little, the vat, that you will get mounting this base, HAS NOT WATERTIGHT INTEGRITY. In this case, during printing, you are likely to spill resin in the main body of the printer!

1.4 VERIFY THE REDUCTION OF CURVATURE

Placing again the ruler on the short side of the base of the vat, the space between the curvature and the ruler must be equal to the "maximum thickness" of curvature, measurable with our dima, this is highlighted in Fig. 5 where we see that, placing the dima in the center of the short side of the base of the vat, it locks into place, that is does not tend to fall more downward.

Do this operation on both short sides of the base.

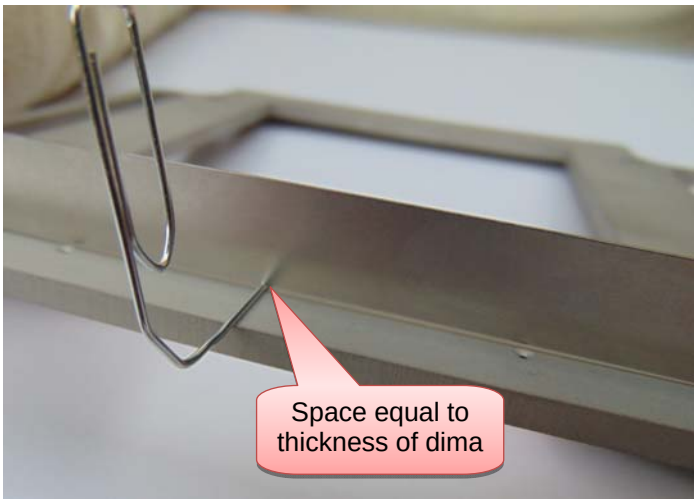

Fig. 5 – Reduction of Curvature

1.5 ASSEMBLY OF GLASS IN THE RESIN VAT

1) After applying the Siligel on the base of glass (note: **first clean the glass very well**), **following the usual procedure**, place the glass (Siligel side) on the bottom of the vat (see Fig. 6). For details, please refer to the “Kit-refill-Siligel” manual.

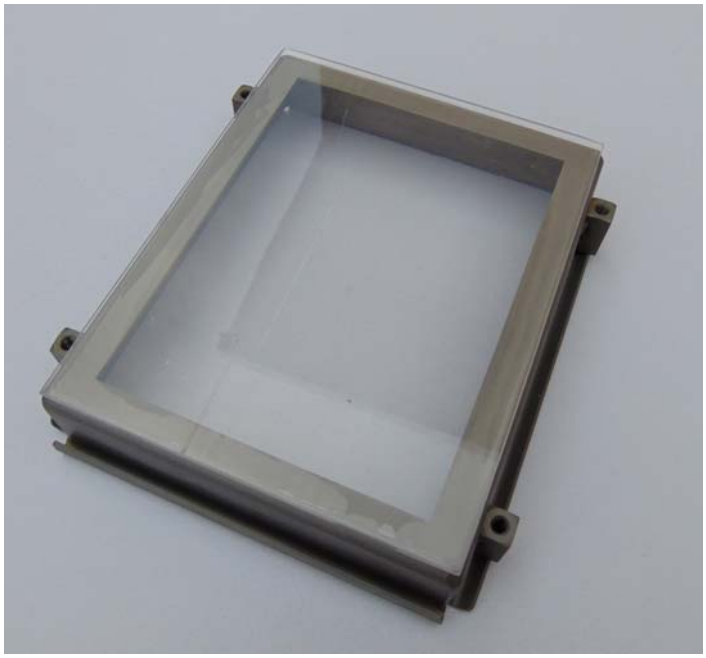

Fig. 6 – Step 1: Place Glass with Siligel on the bottom edge of the vat

2) **Lay the gasket of polyethylene on the base of Glass**, doing so to center it relative to the base (see Fig. 7)

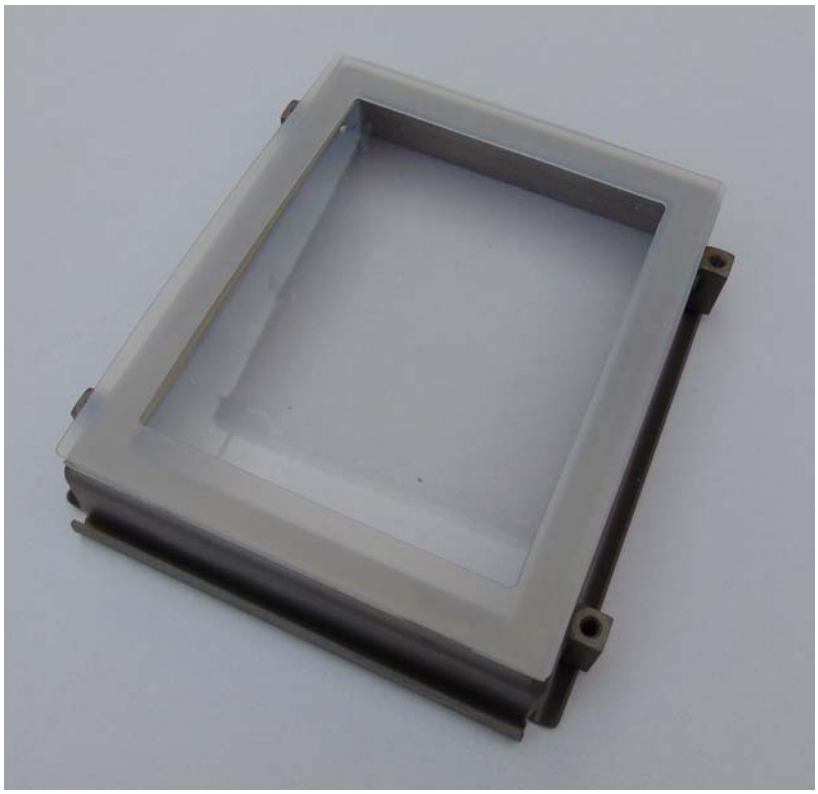

Fig. 7 – Step 2: Overlap gasket

WARNING: IF YOU DON'T INSERT THE GASKET BETWEEN THE GLASS AND METAL BASE VAT, YOU BREAK THE GLASS.

3) **Overlap the base of the vat to the gasket of polyethylene**, **so that the curvature of the base is in contact with the gasket** (see Fig. 8)

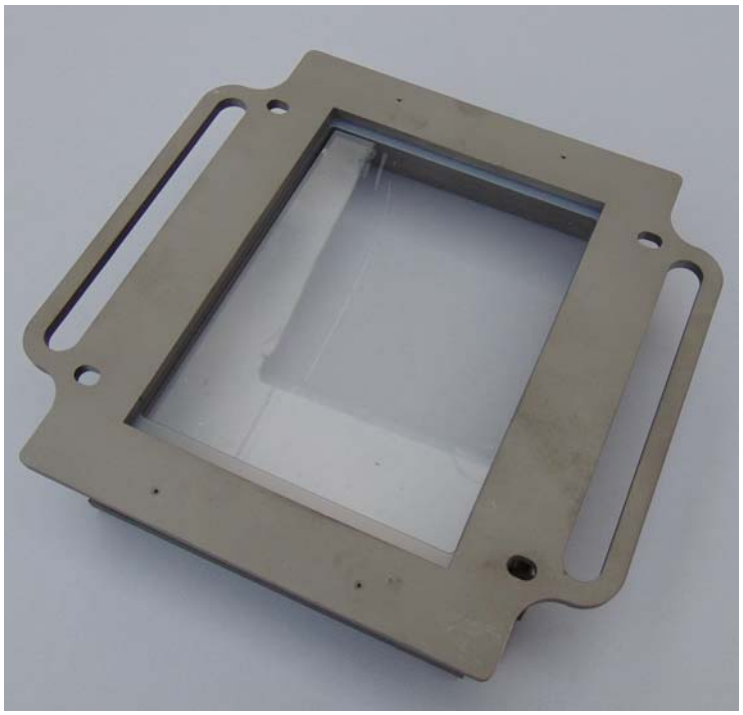

Fig. 8 – Step 3: Overlap vat base to the gasket

4) **Insert the screws of vat base** and tighten not too (see Fig. 9), proceeding clockwise in small screwings at a time.

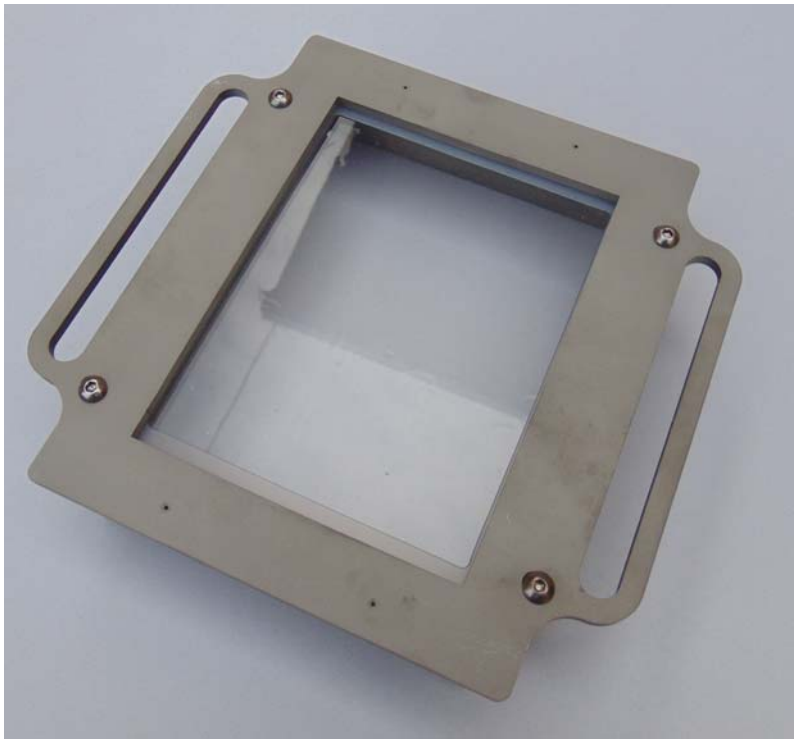

Fig. 9 – Step 4: Screws of vat base

5) **Gently tighten the screws.** In Fig. 10 we emphasize the curvature of the vat base, tighten the screws to straighten the curvature (see Fig. 11)

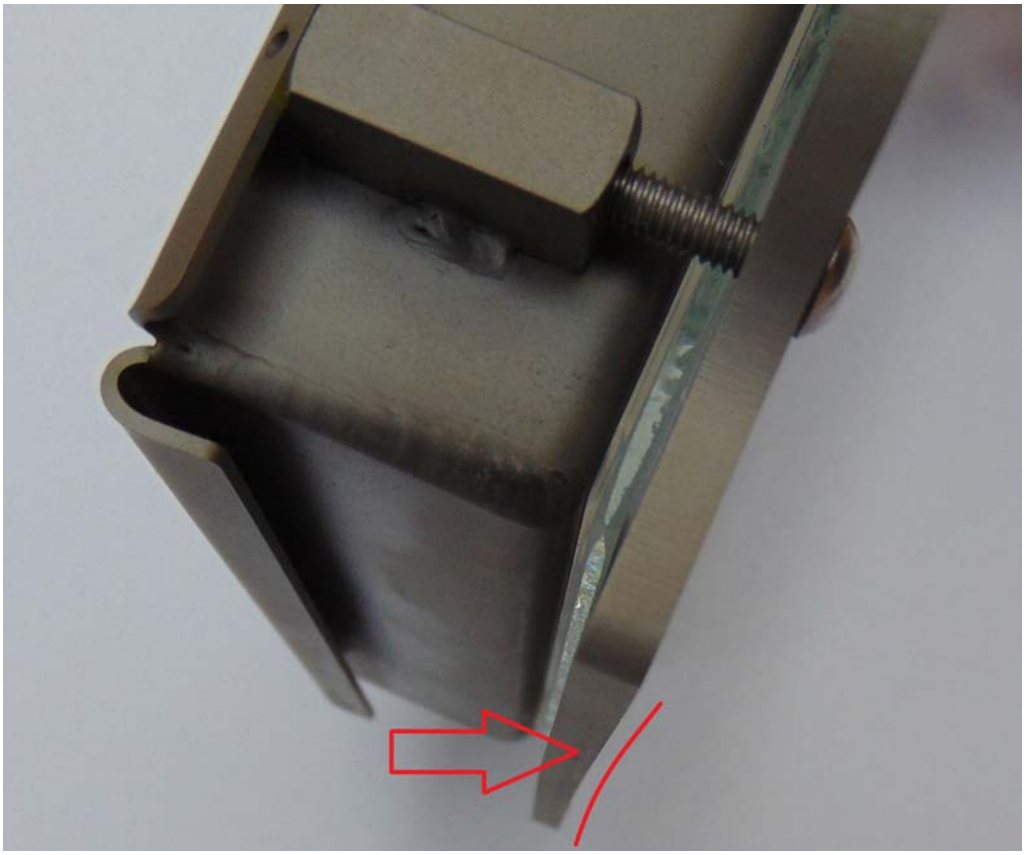

Fig. 10 – Step 5: Vat Base Curvature

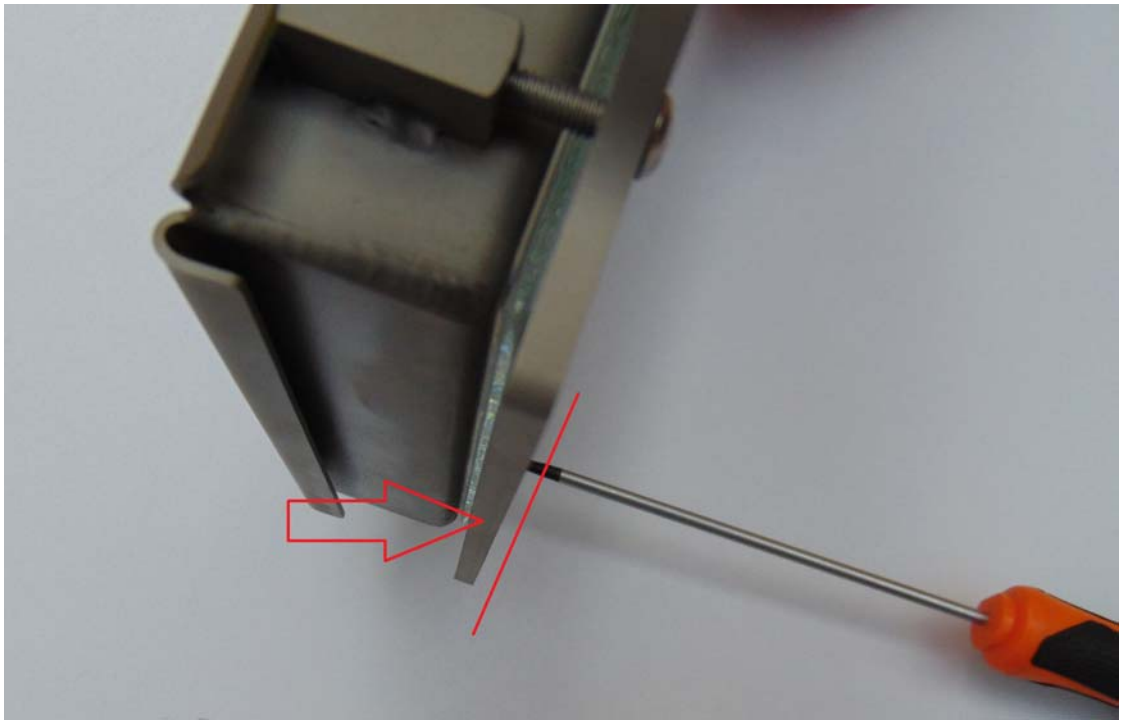

Fig. 11 – Step 5: Straightening of Vat Base Curvature (after tightening the screws)

Before using the vat, check perfect sealing.