

Large parts can curl up from the foundation sheet while building, which can cause machine problems as well affect part quality. A large mass of material retains a lot of heat in the middle of the part, and the edges cool faster than the middle. This differential of cooling causes the edges to pull up off of the build sheet because there isn't enough holding power to hold the part down flat to the build sheet.

PROCESS

STEP 1

Orient your STL file and slice it as you normally would.

STEP 2

Before generating Supports, open the Support Parameters dialog (from the Main Menu, select Support > Setup, then click on the Access Advanced Support Settings icon) and increase the Base Oversize setting (figure 1). This parameter can be set at up to .500", and will provide a larger base area to bond to the build sheet. As a result, when the part is being built and the large base layers of the part are shrinking, there will be more area contacting the build sheet to hold it flat.

Another way to achieve this, if an even larger base is desired, is to use the Offset command. Once you have generated the standard supports and base, select Edit > Offset from the main menu (figure 2).

- Make sure the "Offset Direction" box is set to Outside Closed Curve.
- Enter a measurement in the "Offset Distance" field.
- Make sure the "Destination Group" is set to Same as Selected.
- Important: Select No in the "Keep Original" field! Otherwise, the offset curves will form a new inner / outer relationship with the existing base curves, and no base will be created under the part!
- Select all the light blue (base) and dark blue (base top) curves at the bottom of the part and click OK. A new larger base has now been created.

STEP 3

Continue to process the part as normal, creating toolpaths and saving the job. The larger base layers will have more holding power and hold the part flat while building.

An alternative method, for Vantage and Titan systems running ABS or ABSi materials only, is to use the 'Brick Mode' function in Insight. To turn this option on, you must access the Modeler Configuration (the icon that resembles your machine) and click on the "Special Modeler Options" dialog box. Once in there, put a check mark next to Brick Mode (Figure 3), then make sure to click on the green check mark to save this setting. You may now process your part normally; brick mode applies special parameters to your part to help overcome curling.



Note: You cannot mix non-Brick Mode parts with Brick Mode parts. Status will not allow this.



Figure 1: Base Oversize Setting increase



Figure 2: "Offset Direction" box



Figure 3: "Special Modeler Options"

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