TINKERINE

Tinkerine Suite

BY TINKERINE

USER MANUAL

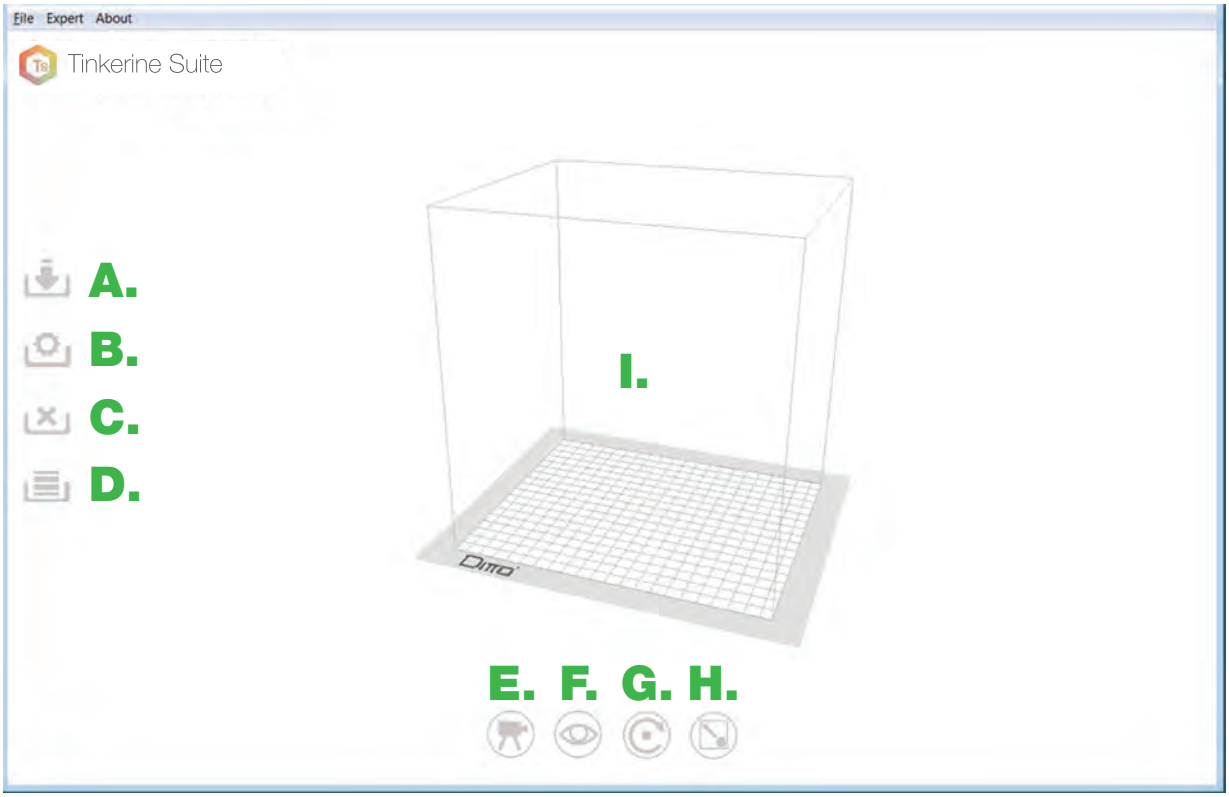
version 1.0

TINKERINE

WELCOME

Meet the Tinkerine Suite slicing software. Designed for the Ditto and Litto personal 3D printers, Tinkerine Suite provides users with a fresh new interface and all new functions that makes slicing your prints easier than ever.

TINKERINE SUITE OVERVIEW



Out with the old and in with the new. The new Tinkerine Suite interface will streamline all its function on one convenient screen while de-cluttering the main screen by removing buttons that are not commonly used. From importing your 3D file to exporting it for your 3D printer, Tinkerine Suite allow you to have complete control of each file, allowing for multiple item printing, rotation, and scaling of each individual component.

A. Import model

B. Slicing settings

C. Delete model

D. Begin slice

E. Camera view

F. Model view

G. Rotate model

H. Scale model

I. Traying Area

INSTALLING TINKERINE SUITE

Download the Tinkerine Suite Installer from the software section of the Tinkerine website. Always download the latest version of Tinkerine Suite for your operating system.

www.tinkerine.com/tinkerine-suite

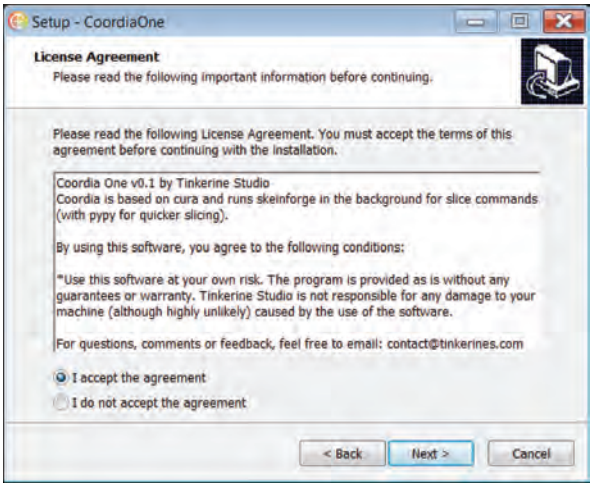
Follow the instructions listed on the software page to download the latest version of Tinkerine Suite and double click on the installer once the download has finished.

Upon opening the installer, you may be prompted by Window's User Account Control to give access to Tinkerine Suite, if so please click Yes to move on to the next step.

1.

Welcome to Tinkerine Suite's installation wizard, click "Next" to get started.

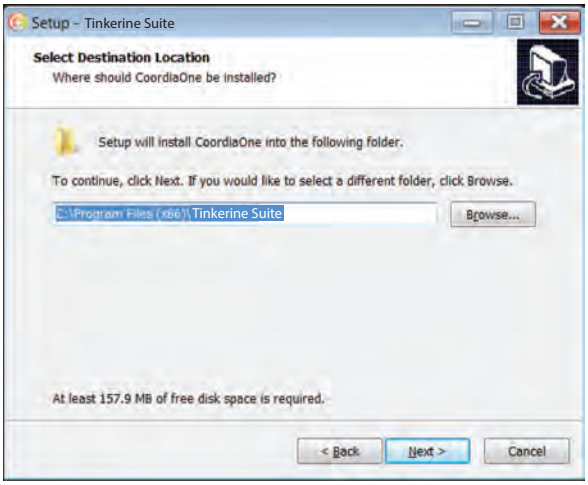
2.



Read the License Agreement, and you will need to check the "I accept the agreement" radio box before you can click "Next" and proceed to the next step of the installation.

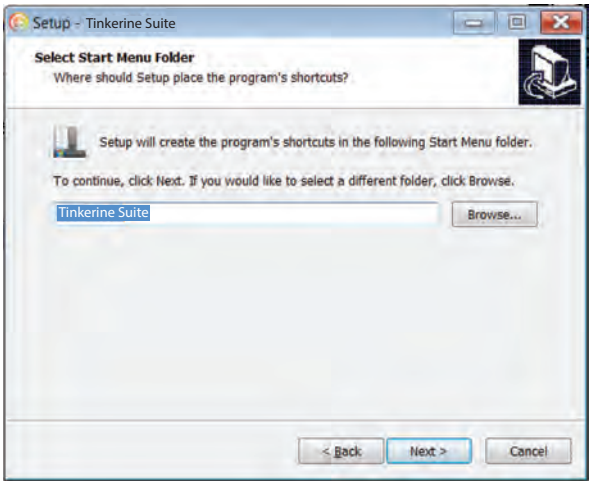
INSTALLATION CONT.

3.



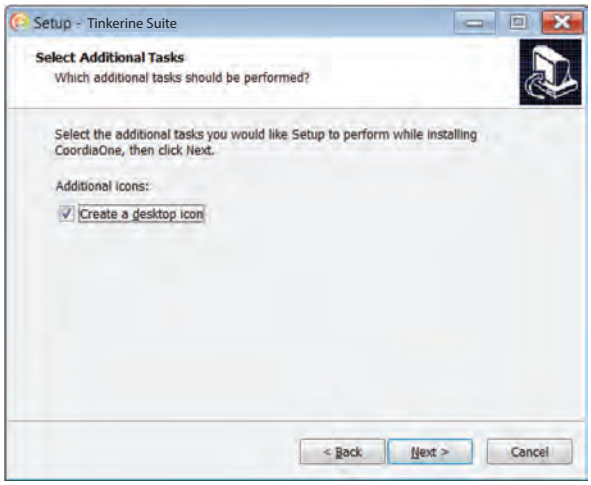
The wizard will create the program folder in your system's Program Files by default. Choose browse to select a different location.

4.



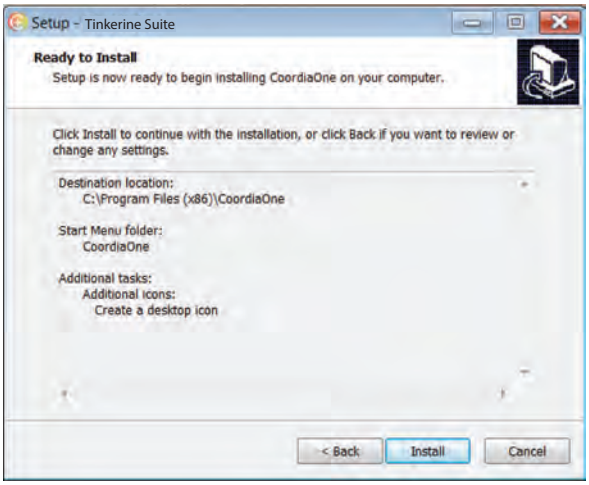
Select the default name and click "Next" to continue or define a new name for the folder in the Start Menu.

5.



Toggle the radio box to enable the creation of a Tinkerine Suite desktop icon. Click "Next" to continue.

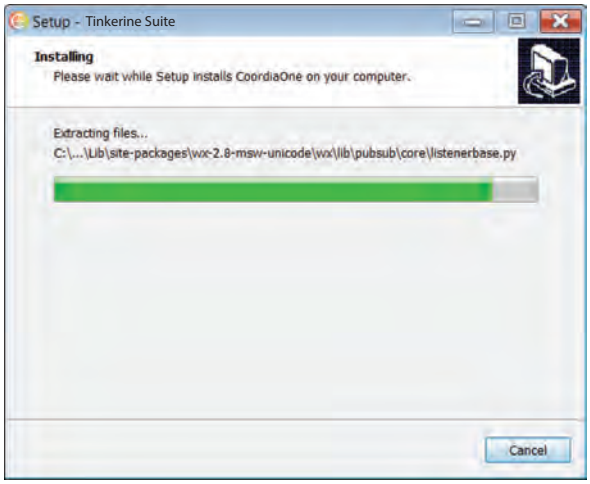
6.



Double check your selections and choose "Back" if you need to make any changes. Once ready, choose "Install" to begin the installation.

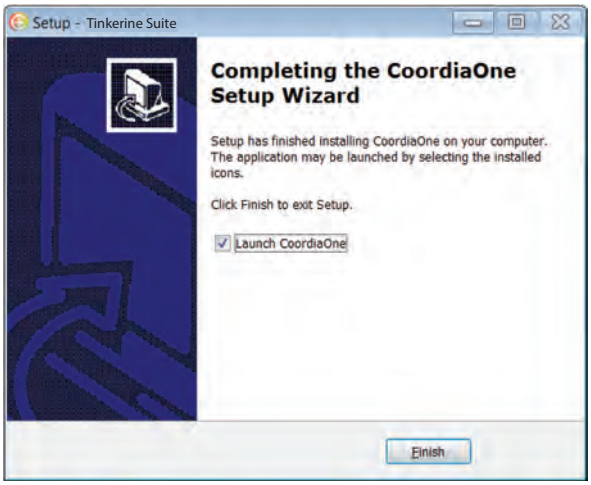
INSTALLATION CONT.

7.



Sit back or grab something to drink. Depending on your computer, the installation will take anywhere from a couple seconds to a few minutes.

8.



All done! Click finish to exit and installation wizard and launch Tinkerine Suite.

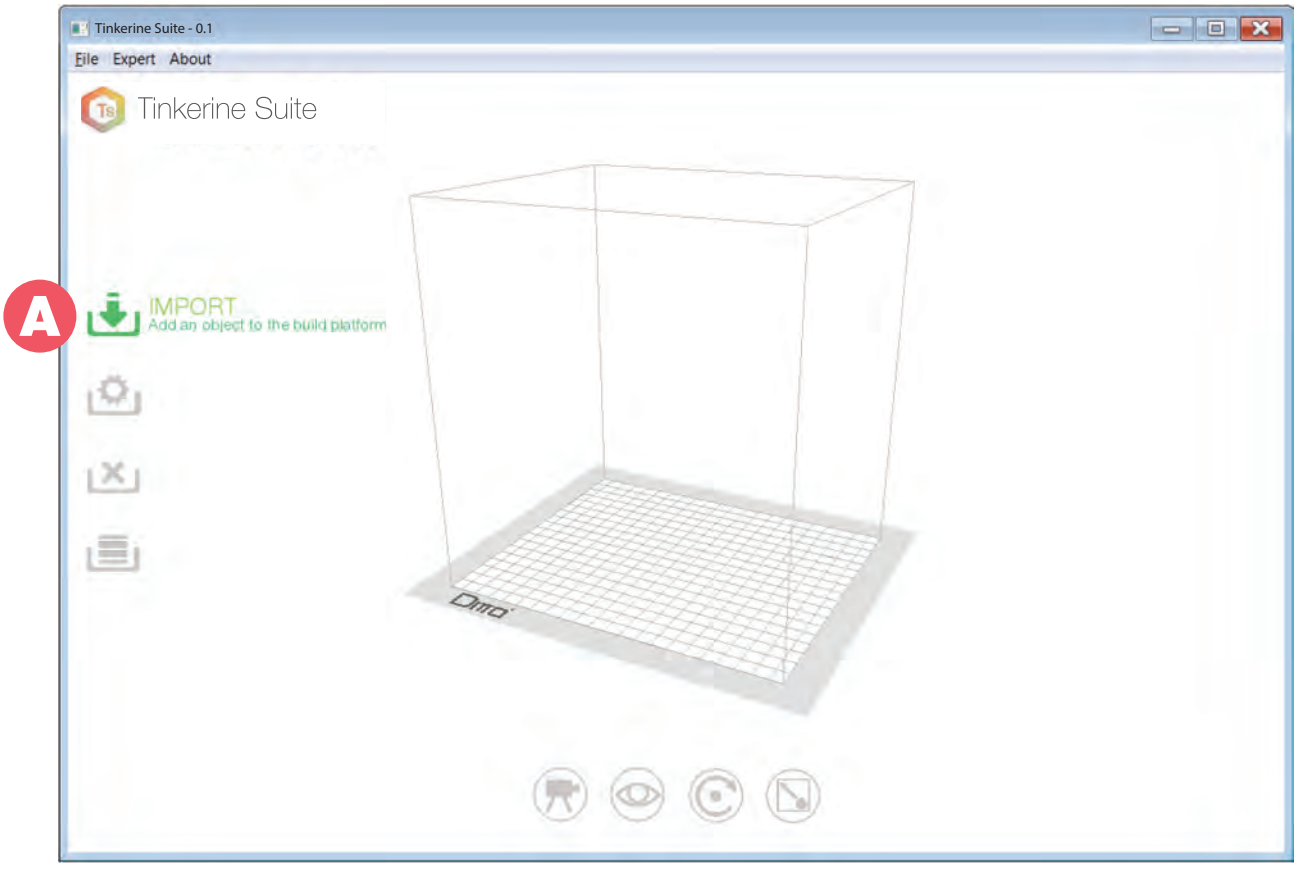
LAUNCHING TINKERINE SUITE

After installation, launch the Tinkerine Suite application from the desktop shortcut or through the Windows start menu.

SLICING YOUR FIRST PRINT

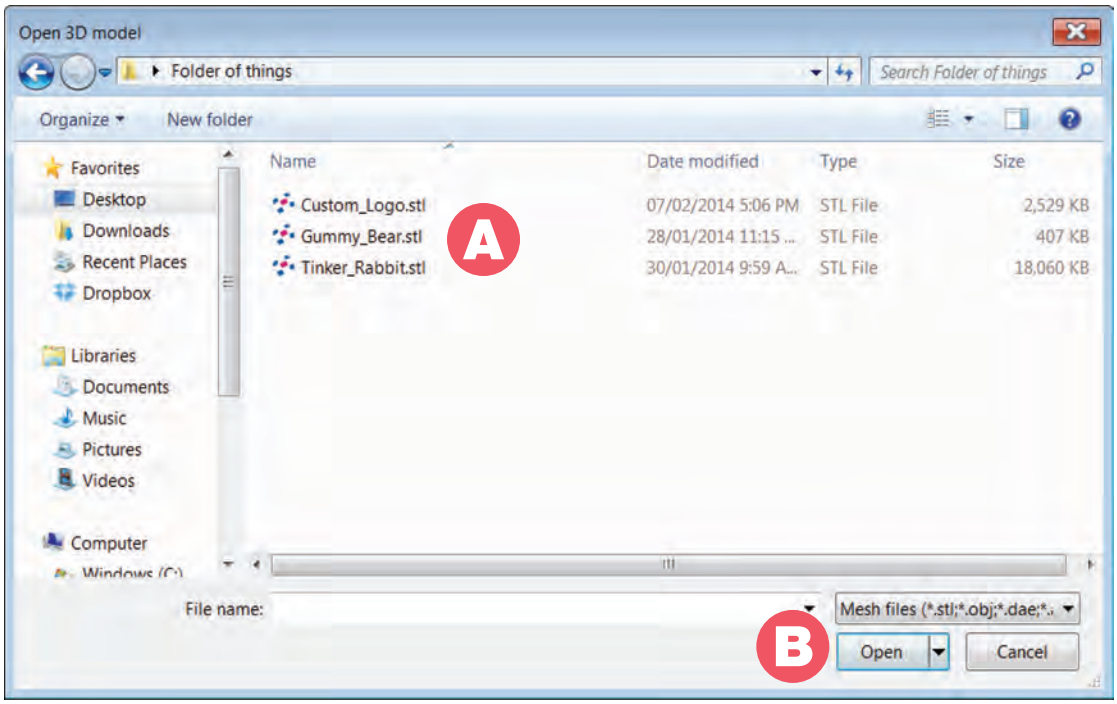
1. IMPORT

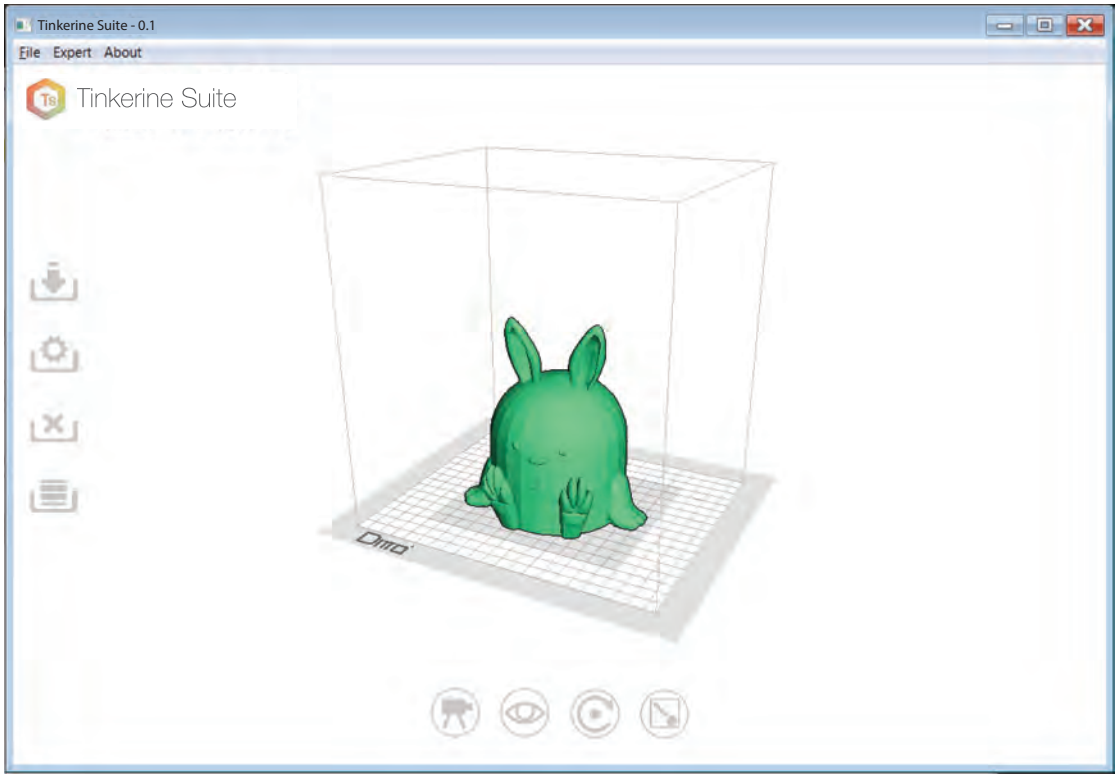
The first step is to import your 3D file into the Coordia One slicer. Navigate to the Import button (A) located on the left menu bar. Click on the Import icon to bring up the selection dialogue.



2. IMPORT cont.

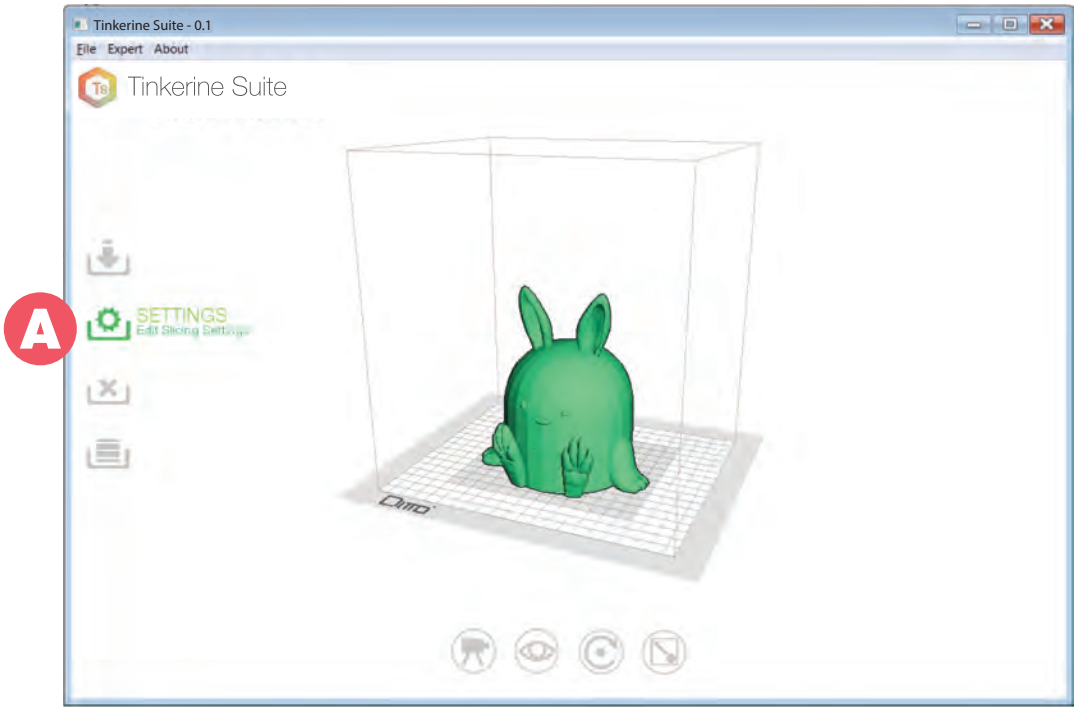
After you click on the Import button in the previous step, the dialogue box that appears that will promt you to select a file to import. You will need to navigate to the location where you downloaded your .STL or .OBJ file to, select the file (A) and press Open (B) to import the file.

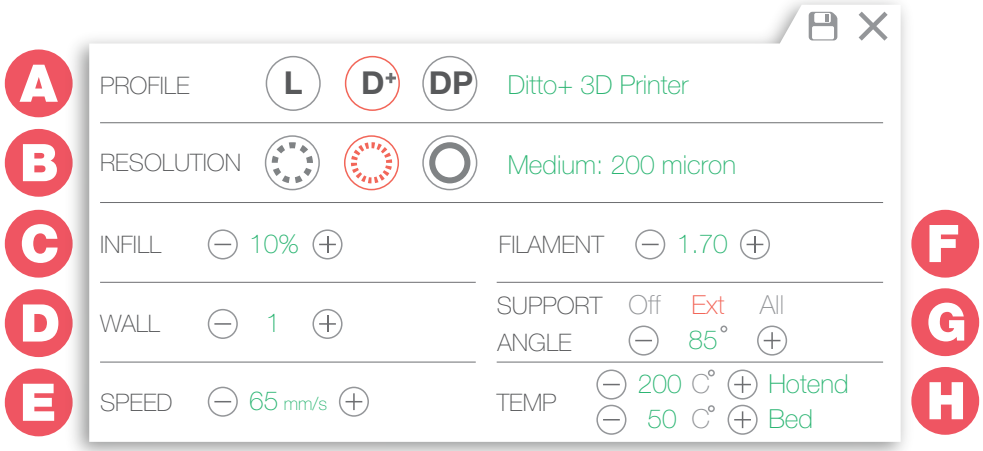




3. ADJUST SLICE SETTING

After you have imported a model you will need to adjust the slicing settings. On the left menu bar, click on the Settings button to open up the slice menu (A).





A - Change printing profiles, “L” for Litto users, “D+” Ditto+ users.

B - Change resolution settings. Choose from 300, 200, and 100 Micron. Default set to Medium - 200.

C - Change Infill percentage. Adjust object density, default set to 10%

D - Change Wall amount. Adjust the wall amount or thickness on your model. Default is set at 1.

E - Change the speed of the printer. Recommended amount: 60-70 mm/s

F - Filament Diameter. Input the diameter of your filament. Use of a digital caliper is recommended.

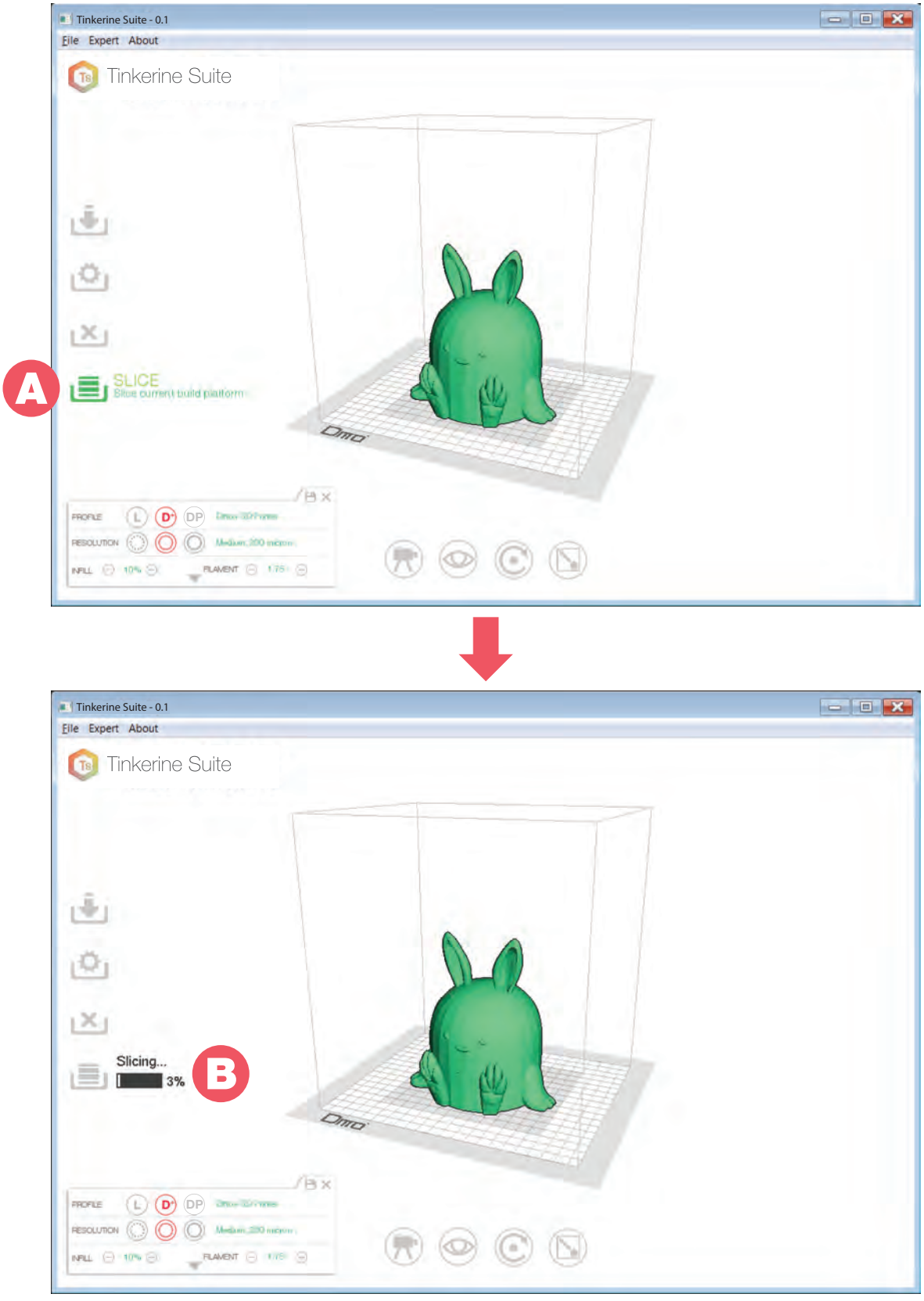
G - Toggle switches for activating Support and Support Angle setting.

H - Temperature settings for the Hotend and Heated Bed*. Recommended hotend temp - 200-230C

*Currently not supported

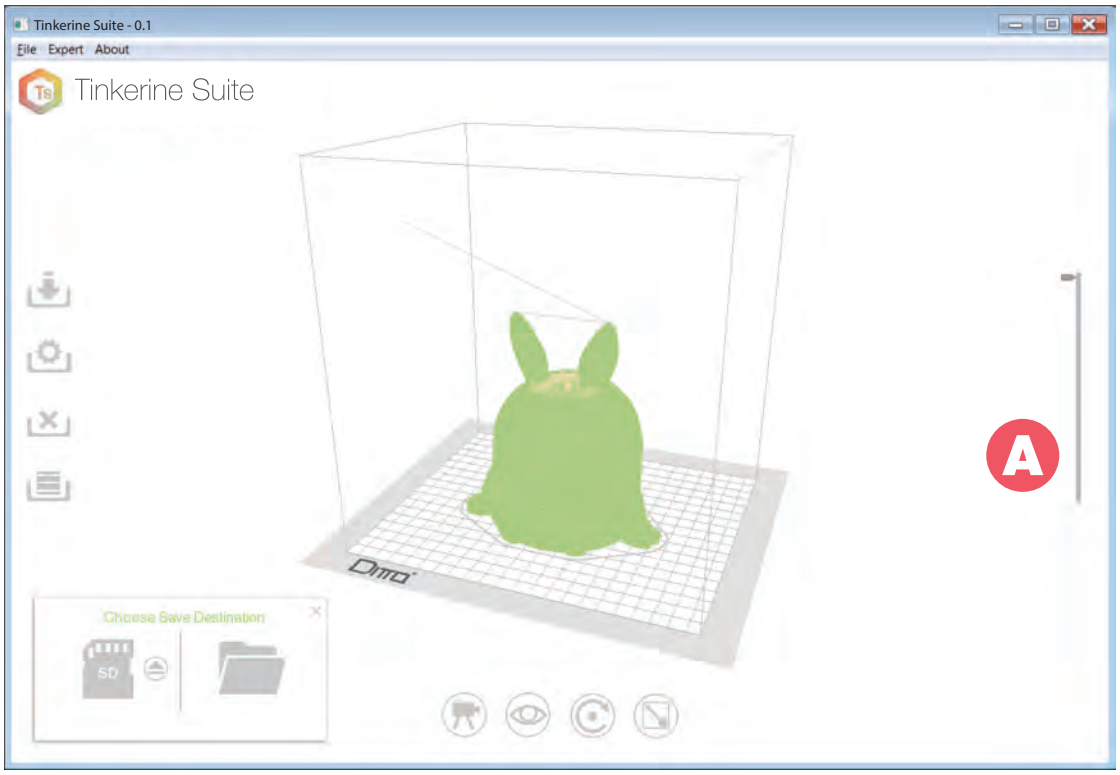
4. SLICE

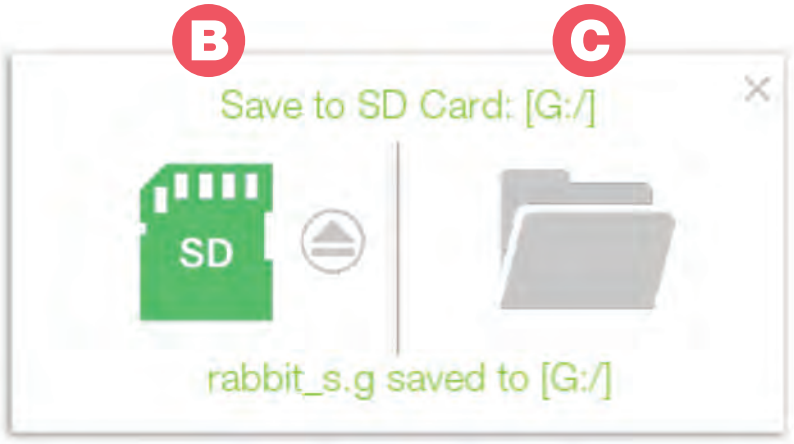
Now that you've adjusted the slice settings, you're almost ready to start printing! Select the Slice button on the left menu bar (A) to slice the file. Once the slicing process has begun, there will be a progress bar (B) notifying you the progress. Depending on the complexity of the object, the slicing process may take several minutes.



5. EXPORTING FOR PRINTING

After the progress bar reaches 100% the slicing process is completed. Using the sliders located on the right-side of the screen (A) you will be able to look through the layers of the sliced model and save them to a SD card (B) or manually choose a destination on your computer (C).





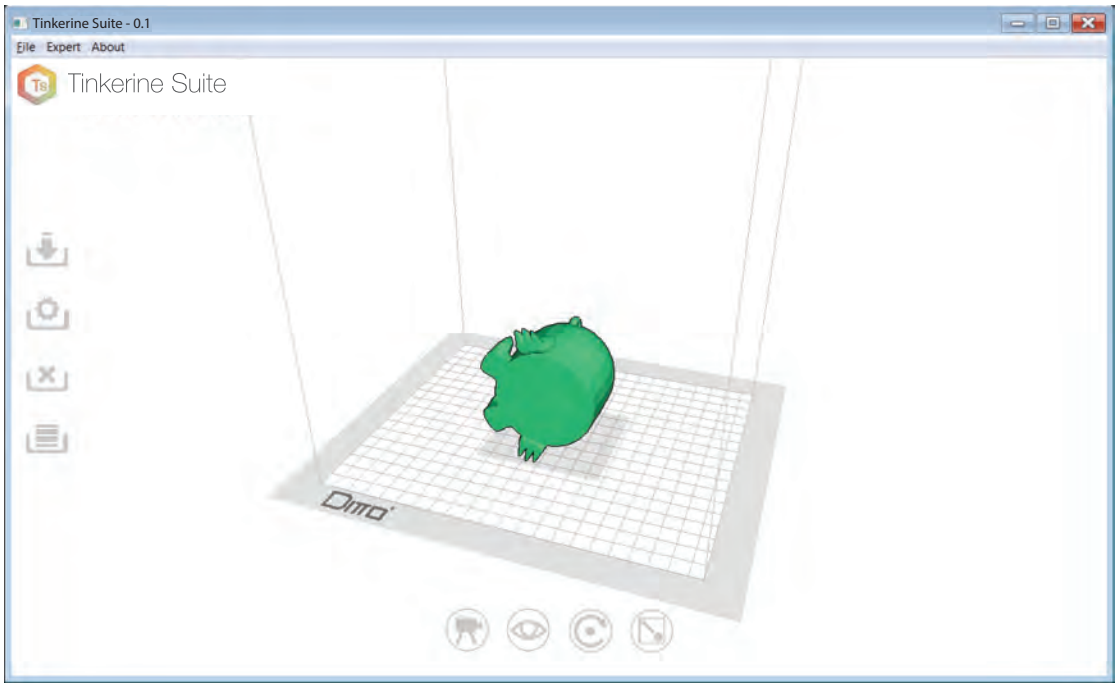
6. READY TO PRINT

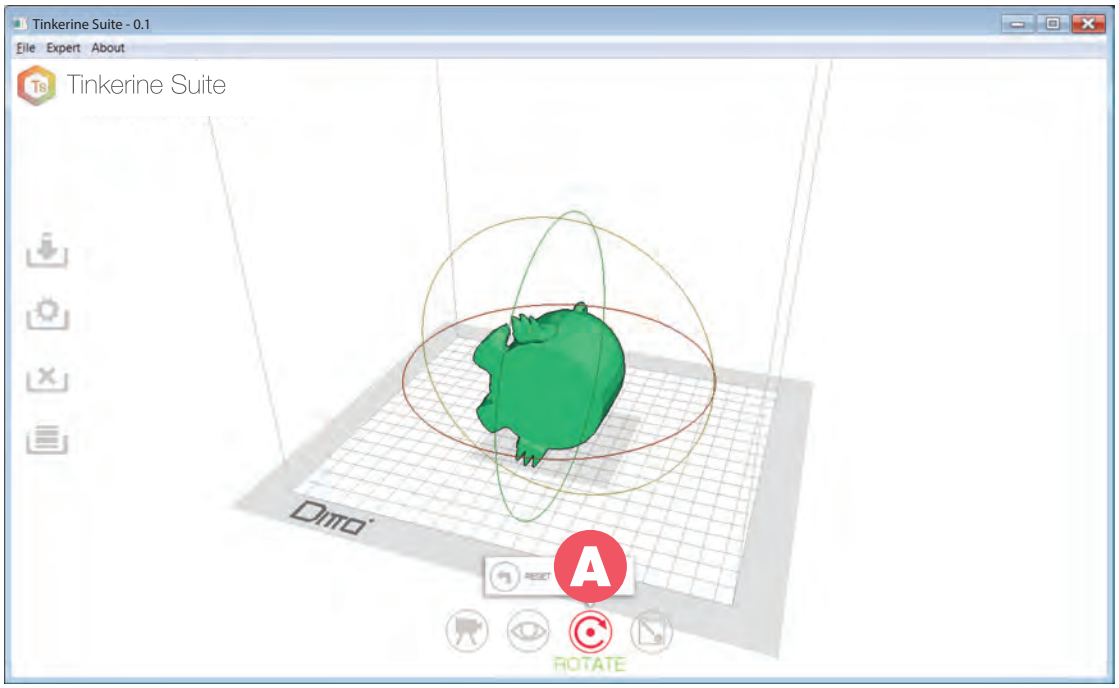
With the file exported to your SD card, simply insert the SD card into Ditto+ or Litto's LCD module and print the file you just sliced!

ADVANCED CONTROL : ROTATE

1. MODEL ROTATION

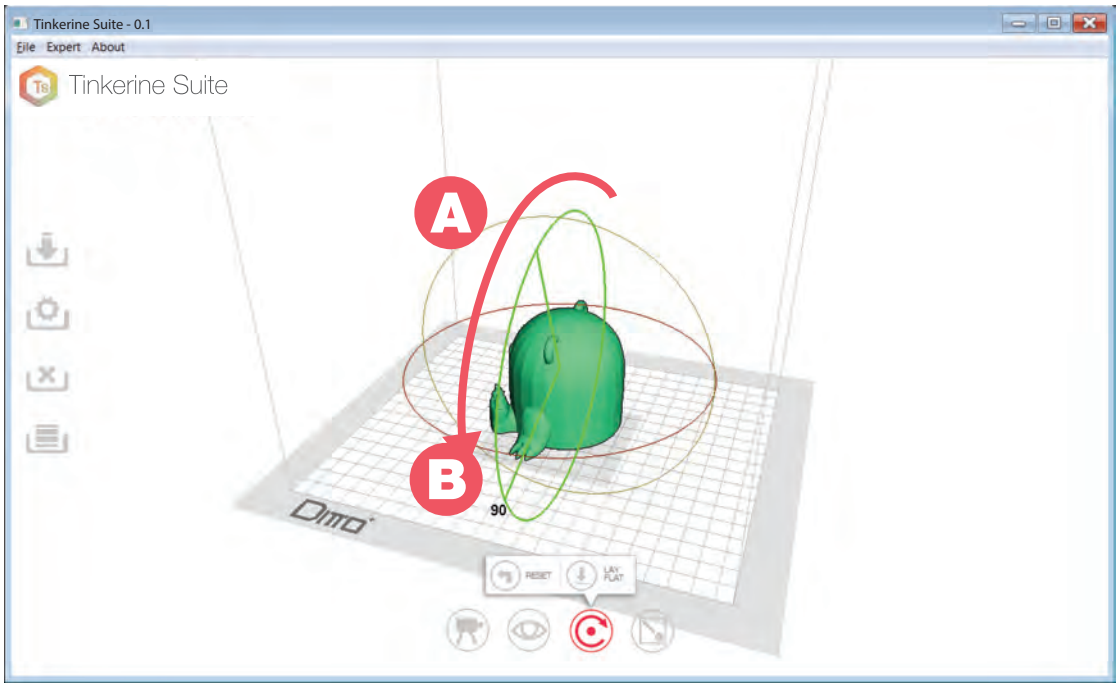
Somtimes when you import a model it may not be facing the right way, with the rotate tool, you can adjust the rotational angle on each individual axis. In the first Image you can see that the bear is lying on its side facing the left, since we want to print him sitting on his flat bottoms we'll use the rotate tool (A) to correct this.



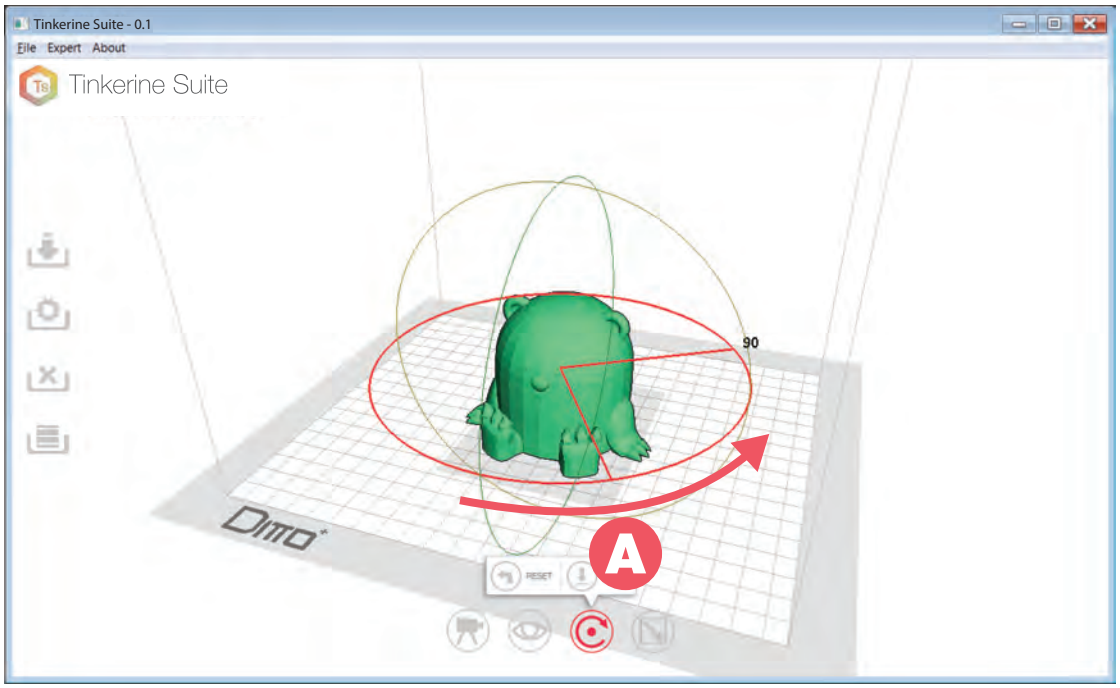


2. MODEL ROTATION cont.

Once the Rotate tool is activated, three rotational rings will envelope the 3D model, each individual ring will allow you to control one of the three rotational axis (X,Y,Z). In this example, we first rotated on the front axis to bring the bear upright. To rotate, click on the axis you wish to wish to rotate on, hold down your left mouse button and drag until you are satisfied with the angle (A). The number shown on the rational rings show the degree, in this case the bear was spun 90 degrees (B).

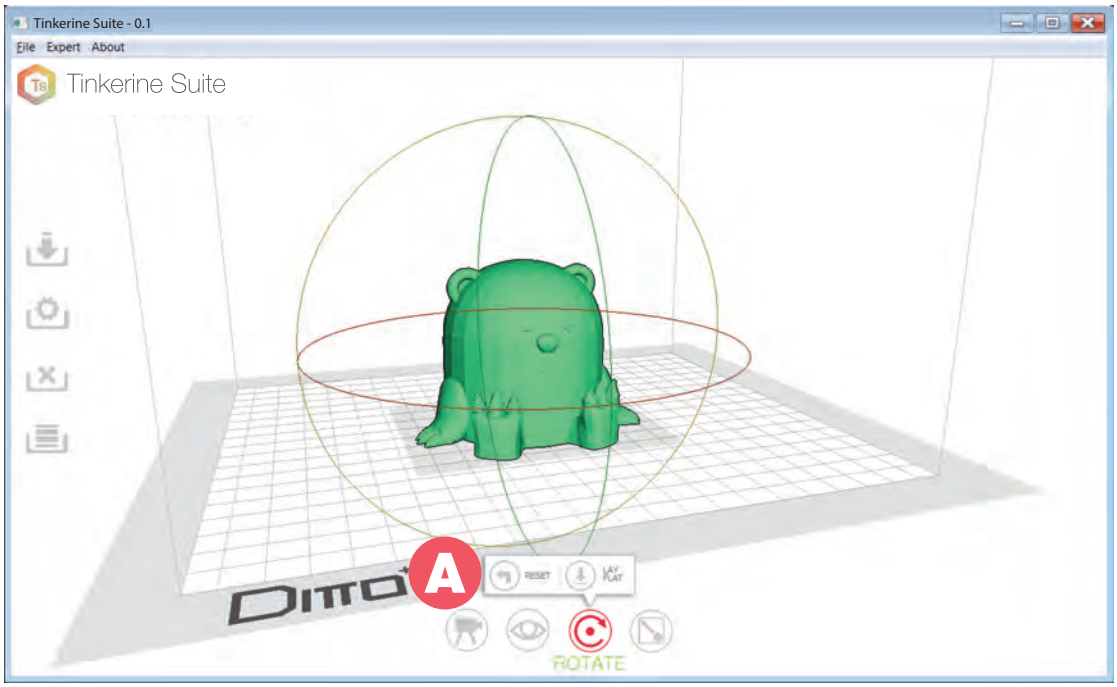


Secondly, we rotated the horizontal ring to make the bear face the front of the print bed (A).



3. MODEL ROTATION cont.

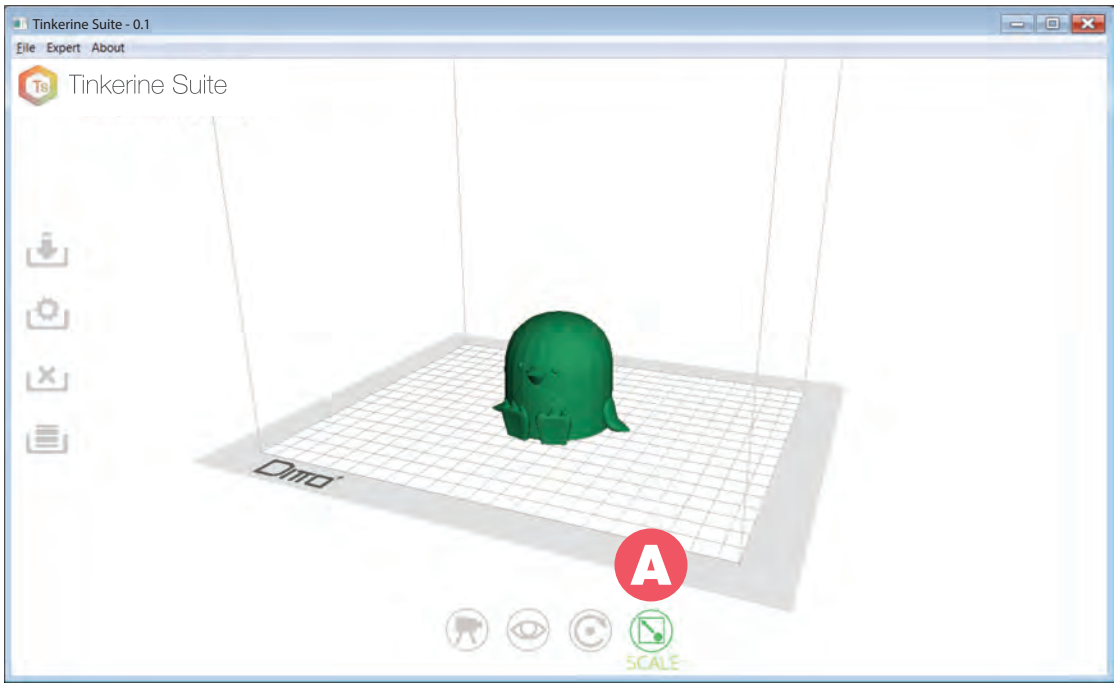
Now the bear is facing the correct side and ready for slicing. If you made a mistake along the way, select the Reset button (A) to put the orientation to its original imported state.



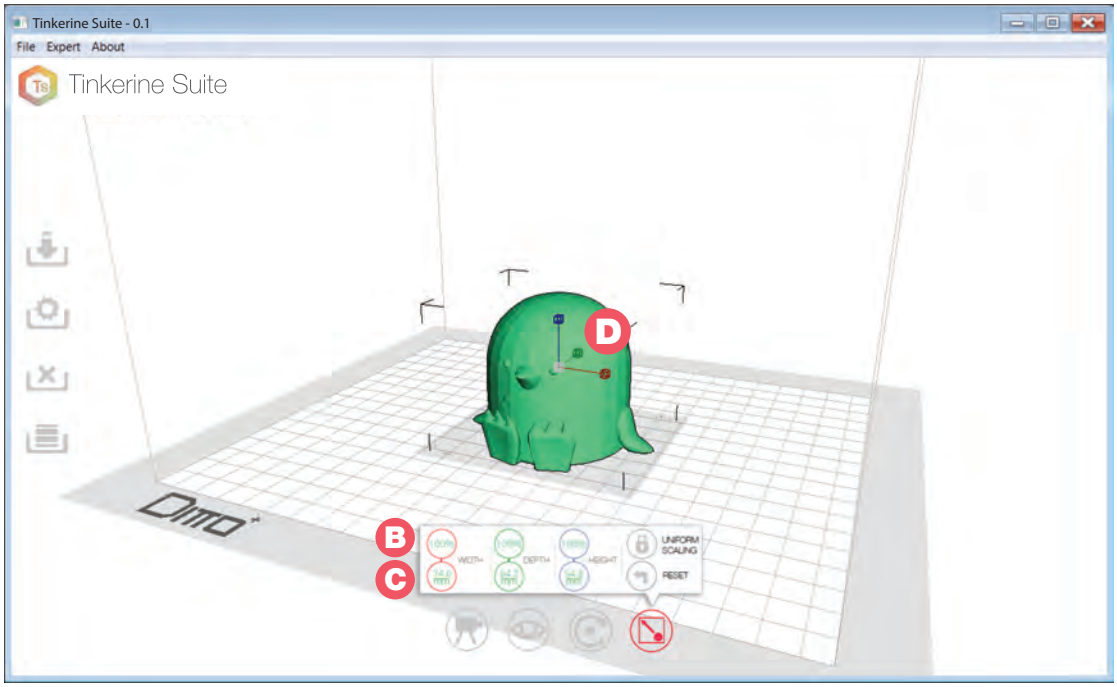
ADVANCED CONTROL : SCALE

1. MODEL SCALING

The Scale tool (A) will allow you to scale the size of the model. This is usefull when you want to scale a large object down or a small object to the full size of the print bed. In this example we'll take imported penguin model and scale it up.

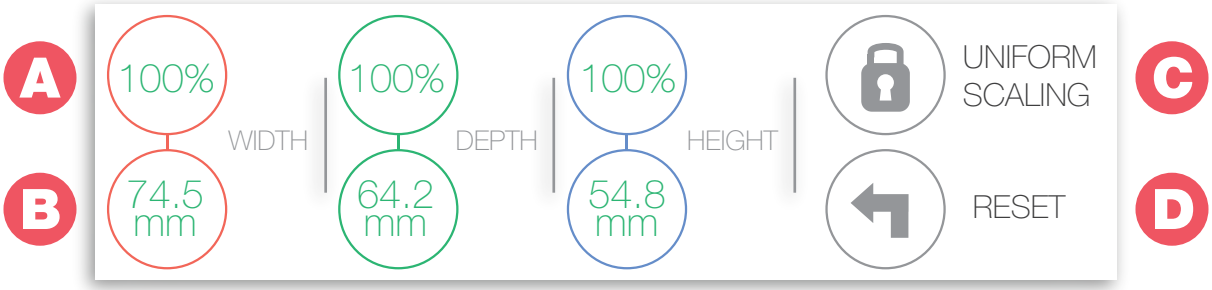


Once you activate the Scale tool and select an object, you will see the scale % (B) and all the measurement of the X, Y, and Z axis of the model (C). Additionally, a Free-Scale tool will appear in the middle of the model (D).



2. MODEL SCALING cont.

This is the main control for the Scaling tool. Control instructions are listed below:



A Percentage Control

Scale the model using % scaling. Regardless of the the orignal measurement, the model is set to 100% scale when you first import it. Double the orignal size by typing in 200% or shrink the original size by half when you change the number to 50%. With the Uniform Scaling Lock in place, changing one axis will affect all other axis, and prevent the model from being distorted.

B Measurement Control

Scale the model using precise measurement input (in MM). Select either the Width, Depth, or Height measurement control and change the numbers by typing your new measurements in. Changing the measurement while the Uniform Scaling Lock in place will scale the two measurement in relation to the first.

C Uniform Scaling Lock

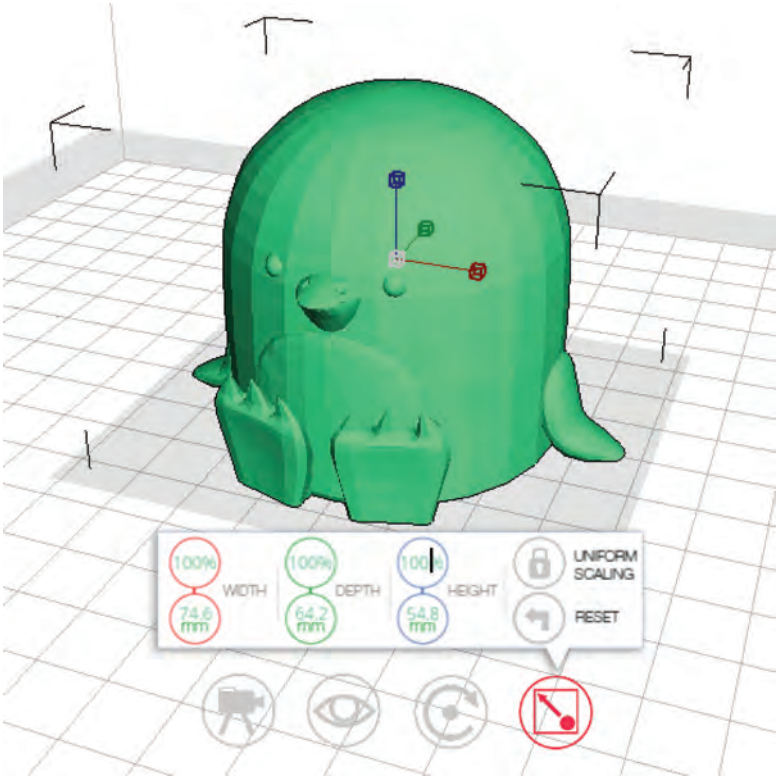
On by default, the Uniform Scaling Lock will prevent scaling of object on a single axis. So if the Width was increase by 50%, the Length and Height will also increase by 50%. You can toggle this function On or Off by clicking on the lock button.

D Reset Scaling

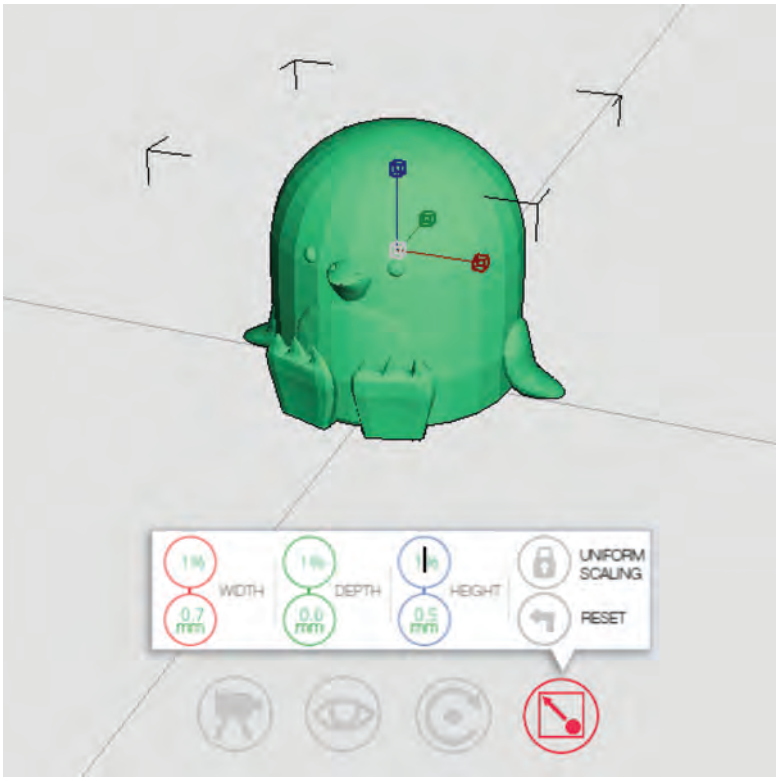
Made a mistake? No worries. Clicking on the Reset button will reset any transformation applied to the model and resize it to its orignal scale.

3. MODEL SCALING cont.

Now that you know all the controls for scaling, lets trying scaling this model. As you can see, that default size of the object is set to 100% because no modifictions have been made.



If we go ahead and change the 100% to 1%, you immediately see that the object shrinks and the measurement reflect that change.



4. MODEL SCALING cont.

Now if we scale this model to 250%, the object now fills the entire print bed, making it one giant print.

Take note that if the model is scaled to a size that is larger than the print bed, the model surface colour will turn grey. In this case you just have to bring the size back down so that model fits inside the grid area.