

DeskArtes

3Data Expert 16.0

Quick Start Guide

Second Edition

April 2026

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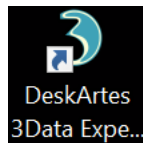
Foreword

The *3Data Expert 16.0: Quick Start Guide* document introduces the basic 3D model handling for Additive Manufacturing: model input, positioning, Z compensation, shrink compensation, supporting, slicing, slice model copying for production and bitmap output. All necessary commands are available in the *3Data Expert Easy print* ribbon tools.

It should not take more than 15 minutes to go through the example in *The first lesson*. Before that we will go through some basic software concepts, like licensing, user interface modes, various software modules and tutorial setup.

Licensing

Before starting the lessons, please make sure you have received and installed the software evaluation license from DeskArtes. If you do not have a license yet, it is very simple to request an evaluation license. First start the program from the desktop icon:



Then go to the *Program licenses* dialog through *Help > Licenses* command. There you can find the *Request evaluation license on-line* button.

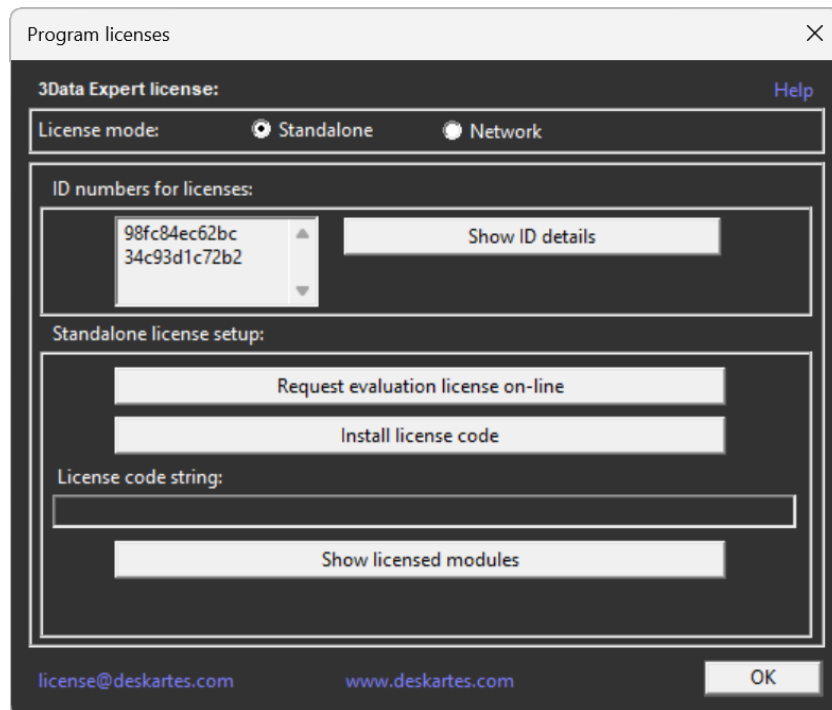


Figure 1. Licensing dialog.

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Press it and it will open the DeskArtes license request page on your favorite web browser. Fill in the required fields and press *Submit evaluation request* button to send the license request to DeskArtes.



Evaluation license request for: 3Data Expert 14.1

Please fill your email address:

Your name:	<input type="text"/>	
Your email address:	<input type="text"/>	
Verify email address:	<input type="text"/>	
Select optional input formats:	<input type="checkbox"/> Catia 4	
	<input type="checkbox"/> Catia 5	
	<input type="checkbox"/> Catia 6	
	<input type="checkbox"/> STEP	
	<input type="checkbox"/> NX Unigraphics	
	<input type="checkbox"/> SolidWorks	
	<input type="checkbox"/> Solid Edge	
	<input type="checkbox"/> Inventor	
	<input type="checkbox"/> Creo/ProE	
	<input type="checkbox"/> JT	
	<input type="checkbox"/> Catia CGR	
	<input type="checkbox"/> Parasolid	
	<input type="checkbox"/> IGES	
System ID list	Value	Description
	<input type="text"/>	(REALTEK USB GBE FAMILY CONTROLLER #2)
	<input type="text"/>	(INTEL(R) WI-FI 6 AX200 160MHZ)
Comments:	<input type="text"/>	
<input type="button" value="Submit evaluation request"/>		

Figure 2. Licensing web site.

You will receive a 15-day evaluation license within 24 hours.

When the license arrives, press *Install license code button* in the *Program licenses* dialog and *Copy/Paste the license string* into the input field that appears:

A dialog box titled 'Expert Series license' with a close button (X) in the top right corner. It contains a text input field for the license code string. Below it is a section titled 'License file save location' with three radio button options: 'Machine ProgramData folder (common for all users)', 'User AppData folder (only for the current user)', and 'User HOME folder (only for the current user)'. At the bottom are 'OK' and 'Cancel' buttons.

Expert Series license

Copy/Paste or type license code string here:

License file save location

- Machine ProgramData folder (common for all users)
- User AppData folder (only for the current user)
- User HOME folder (only for the current user)

OK Cancel

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You can choose between three locations for the license. The first one, “ProgramData” folder, is usually the best one because it allows other users to access the license, too.

Then press *OK* as requested to accept the license. Finally, *restart* the software. Now you are ready to go ahead with the lessons!

User interface modes

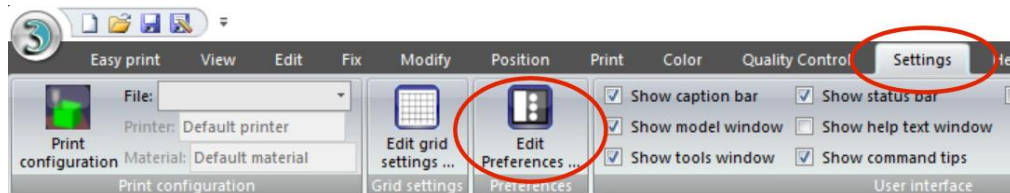
Compared to earlier versions of the software, the user interface has two modes:

- Ribbon based interface for a straightforward AM workflow
- Toolbar and menu-based interface with a more complete set of commands (and similar to earlier versions)

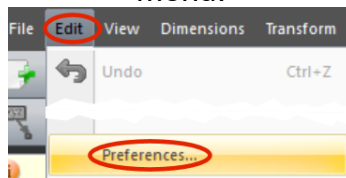
With this Quick Start Guide the new Ribbon-based interface is used so no mode changes are needed now.

In other tutorials, the traditional toolbar and menu-based interface may also be used. After installation, the default user interface is the ribbons, you may want to change the interface to menus and toolbars during your tutorial sessions. To switch between the modes, change the setting in the *Edit Preferences User Interface* tab. To enter the user interface choice:

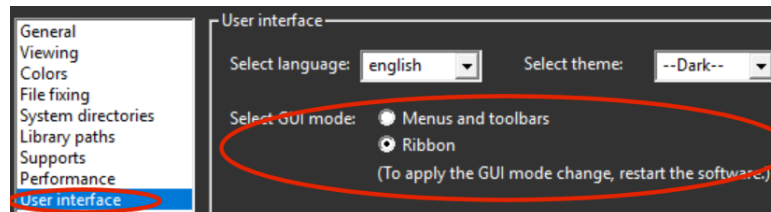
- From ribbon mode to menus and toolbars, select the *Settings* tab and click *Edit Preferences*



- From menus and toolbars to ribbon mode, select *Preferences* in the *Edit* menu:



Then choose the desired user interface mode:



3Data Expert modules

DeskArtes *3Data Expert* consists of several modules targeted from home and DIY use to education and professional Additive Manufacturing. Each module has different menu and toolbar set, and which set you see depends on your license. With an evaluation license the *Base* menu and toolbar set is shown.

- *3Data Expert Free* is an entry level tool targeted for viewing, verifying, repairing, dimensioning, and communicating 3D geometry information. It allows you to input triangle models, create consistent topology, check errors, orient normal vectors, repair gaps and self-intersections, edit triangles and output STL data for 3D printing, without any cost. In the tutorials, when information relevant to the *Free* module is handled, it is marked with **Free**.
- *3Data Expert Base* is a professional tool for preparing 3D models for Additive Manufacturing and Simulation applications. There are several commands for manipulation of both 3D surface models and 3D faceted models. These commands include Surface triangulation, STL verification and repair, STL Offsetting, Splitting, Connecting, Decimation, Smoothing, Solidify, Boolean, Part subdivision, 3D Nesting, Z Compensation, Slicing and Tool Compensation as well as STL Coloring and Texturing. Supports can be generated for DLP, metal and stereolithography (SLA) processes. Special Sand Support command creates supporting plates for delicate sand parts with a push of a button. Information relevant to Base is marked with **Base**. However, most of the tutorial contents are applicable with *Base*.
- *3Data Expert Color* (**Color**) contains a subset of *3Data Expert Base*, especially meant for handling color models. A variety of color and texture specific input formats are handled: VRML, ZPR, 3DS, OBJ, PLY. *3Data Expert Color* has previously been labeled as *DeskArtes 3DEdit Pro*.

3Data Expert tutorials

The full tutorial set for 3Data Expert contains several documents which cover different aspects of model repair, coloring and print preparation. The tutorials are available in the software distribution package through the *Help > Tutorial Documents* menu:

- *3Data Expert 16.0: Quick Start Guide* gives a short introduction to model processing for everyday 3D Printing and production with *3Data Expert* **Base** and **Color** modules. Estimated completion time 15 minutes.
- *3Data Expert 16.0: Tutorial 1 – Working with 3D Models* introduces basic viewing, measuring, automatic repair, split, connect, hollow, offset, 3D Text, Boolean, cut, reduce, 3D nesting, surface triangulation and other model manipulation functions available for STL files. Applies to all *3Data Expert* modules. Estimated completion time is 3 hours.

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- *3Data Expert 16.0: Tutorial 2 – Working with Colors* introduces basic automatic repair and coloring for 3D Color Printer users. For [Base](#), and [Color](#). Estimated completion time is 1 hour.
- *3Data Expert 16.0: Tutorial 3 – Separating Shells* describes the use of Shell Separation commands in 3Data Expert. These commands enable separating a part into several shells for different material (shore value) or color definitions in a single part. For [Base](#) only. Estimated completion time is 30 minutes.
- *3Data Expert 16.0: Tutorial 4 – Generating Supports for AM* explains the use of the Generic Supports command and Sand Supports command. The support generator can be used to generate supports for DLP, metal, stereolithography and sand-based processes. Adding extra connectors to prevent parts from warping and bending during the build is explained. Also, slicing, slice preview and slice filling is demonstrated. Estimated completion time 1 hour.
- *3Data Expert 16.0: STL and VRML repair examples* document includes more advanced model repair operations with 3Data Expert. Applies to [Base](#) and [Color](#). Estimated completion time 2 hours.

The tutorial documents and the geometry files for the tutorial examples are found in the *Tutorials* folder and its subfolders (*GeomFiles*, *Tutorial 1*, *Tutorial 2*, etc.) in the 3Data Expert installation directory.

Lesson 1 – Basic Workflow

Welcome to 3Data Expert 16.0 tutorial Lesson 1. In this lesson we will learn how to prepare an STL file for AM production using *Easy print* ribbon commands.

The default settings of 3Data Expert allow a straightforward workflow for processing STL files which are either already correct or automatically repairable for 3D printing. The workflow consists of six steps:

1. Model file input and automatic repair.
2. Model orientation and positioning.
3. Preparation for AM: Z Compensation, shrink compensation.
4. Preparation for AM: Support structure generation and slicing.
5. Preparing for large scale production with model multiplication.
6. Production data output, either as STL file, CLI slices or bitmaps generated from slices.

If you have previously worked with 3Data Expert, you will see that the process is significantly simplified, with more automation by default. However, you can still do all the operations needed with more difficult models. These operations are explained in the other Tutorial documents with hands-on examples.

Model file input and automatic repair

After starting the 3Data Expert software the first time you will see the startup screen with ribbons and empty graphical area. On the top left corner of the software window, you can immediately see which 3D printer e.g. Printit Configuration (PC) you are using currently, i.e. *SLA-demo.pcpa*.

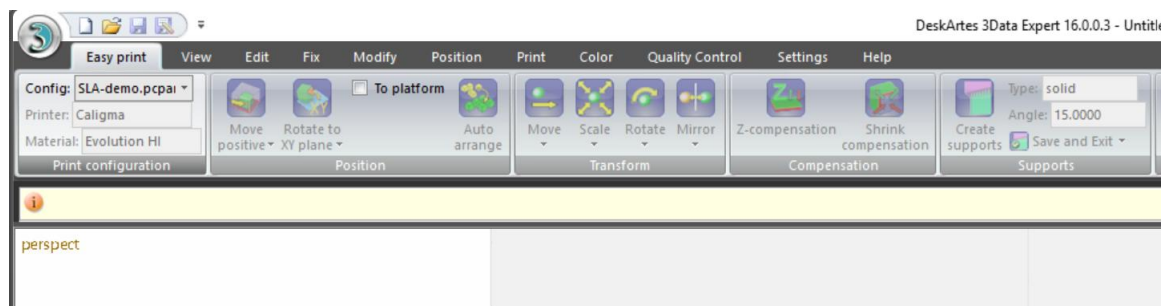
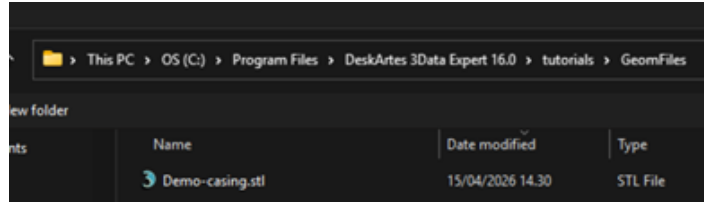
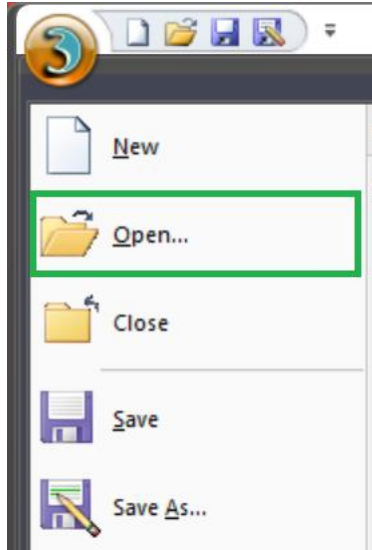


Figure 3. Start view with Easy print ribbon.

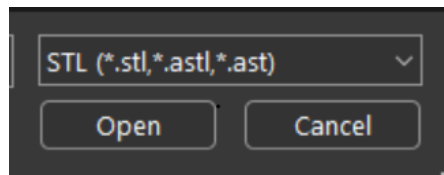
This is the parameter set we are going to use for model preparation during this lesson. Later, you can use other preconfigured Print Configuration (PC) files or create your own.

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To get started with model preparation, please continue to open the first demo file by clicking on the DeskArtes logo and browse for STL file *Demo-casing.stl* in the *C:/Program Files/DeskArtes 3Data Expert 16.0/tutorias/GeomFiles* directory:



Make sure to select STL or All file type in the File Open dialog:



When the file is opened it is automatically verified and repaired for minor errors. After the input and repair operations you will see the demo model on the screen:

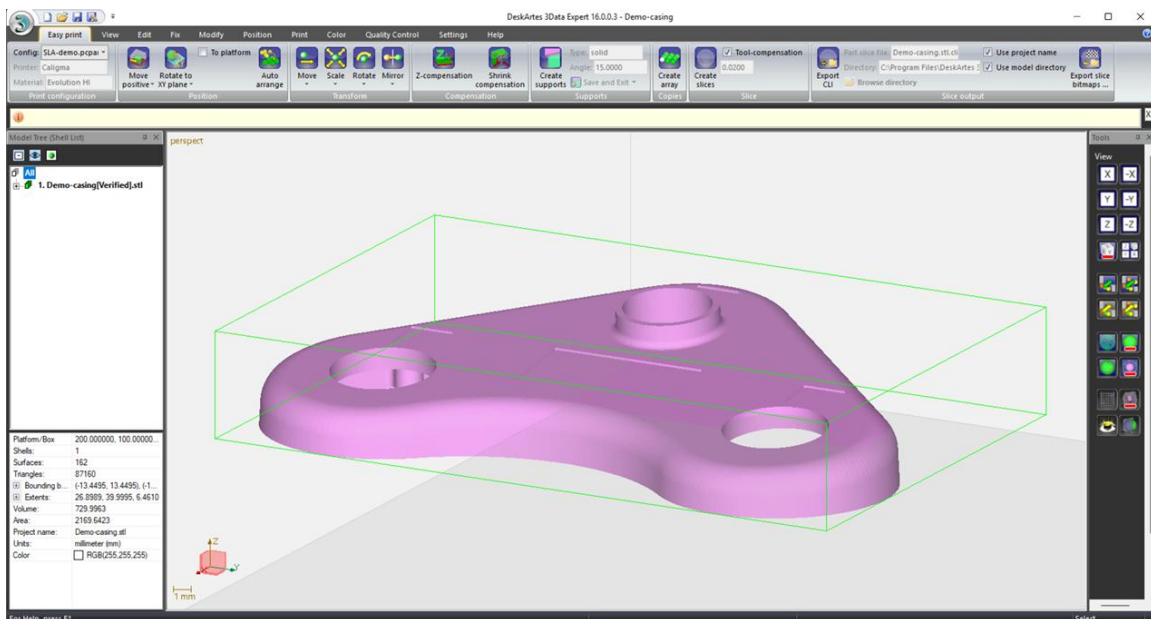


Figure 4. Model start view.

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The *Model Tree* window on the left-hand side will show the models input into the system currently. The *Tools* window on the right-hand side shows some frequently used visualization commands, like projection direction change (X, -X, Y, -Y, Z, -Z) or shading modes or clipping. You click on the icons to learn about various visualization actions via the *Tools* window.

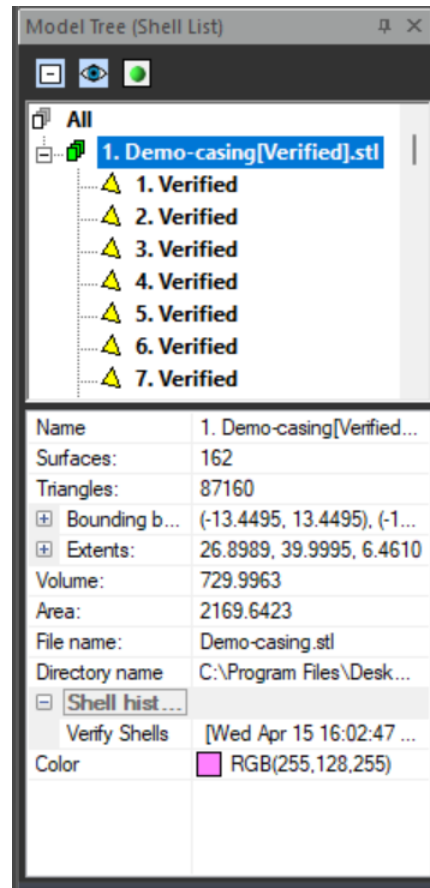
The *Model Tree* window on the left-hand side shows the model structure.

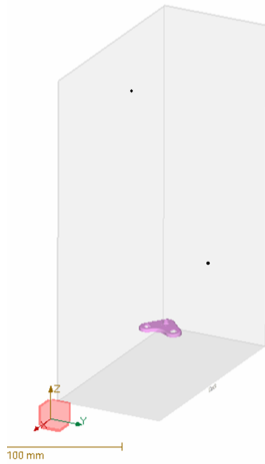
We currently have only one component aka shell, *1. Demo-casing[Verified].stl* in the system. It has been verified and has no errors or warnings, shown by the green icon in front of the shell name.

If you click on the + sign you will see how the shell is subdivided into *Verified* surfaces, each denoted with a running number and yellow triangle.

The lower part of the *Model Tree* window shows statistical information on the selected shell, like number of *triangles*, *Bounding box* and *Extents*. Also, the command history for the shell is given in *Shell history* section.

The model color can be changed by clicking the colored square at the *Color* line, if necessary.






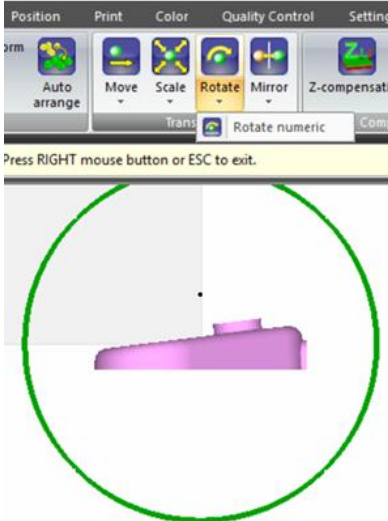
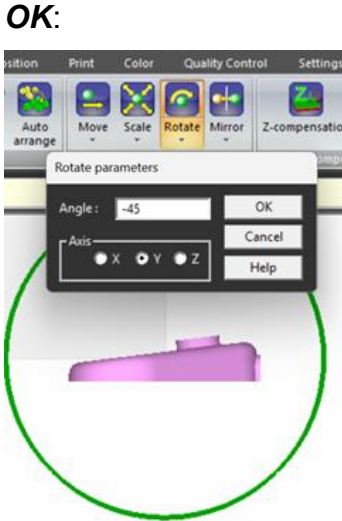
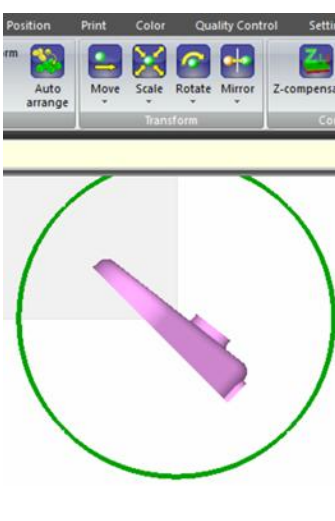
If you zoom out sufficiently with *middle mouse scroll*, you can see the current workarea in light grey (the platform, defined in Print Configuration file). Also, the red walls visible at the coordinate axis indicator in the lower left corner of the graphics area indicate that the model is not fully inside the workarea. We will fix this in the sequel.

Now double click with the *left mouse button (LMB)* on the *1. Demo-casing* shell in the Model Tree to fit the model back to the center of the screen again.

Model orientation and positioning

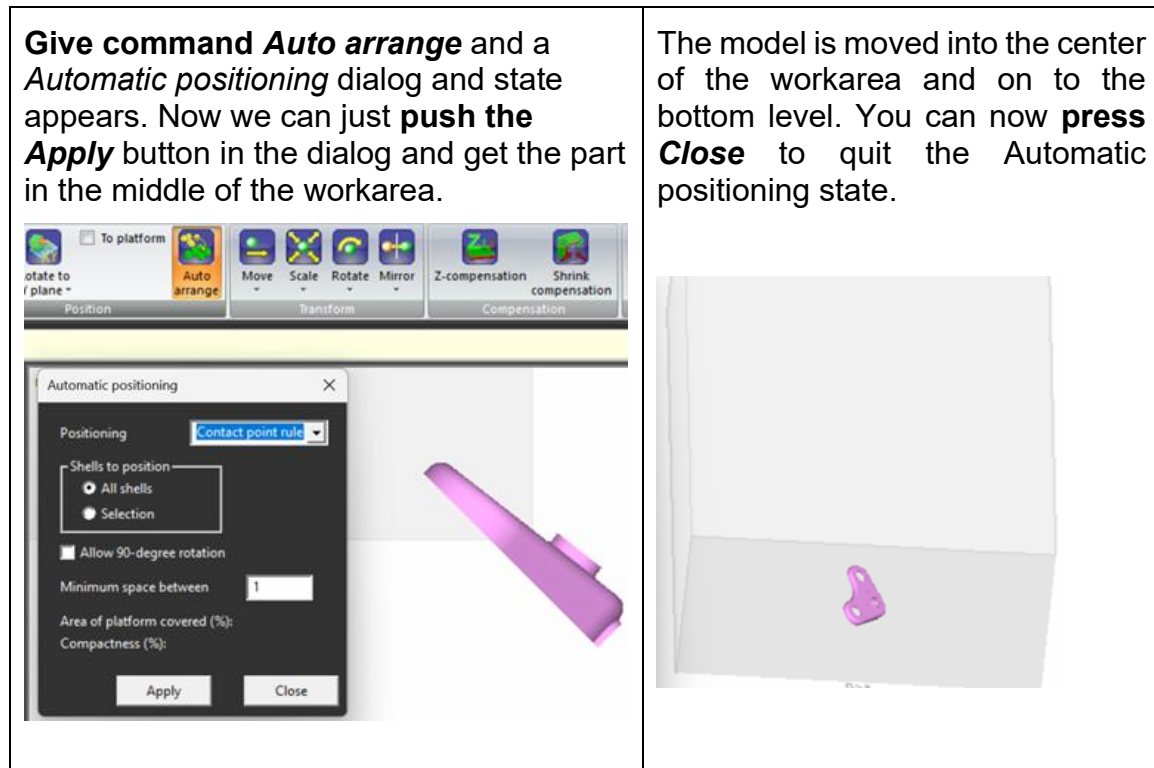
Model orientation affects the build time and surface quality of the final part. Also, the amount of support needed depends strongly on the model orientation. We will now orient the part using rotation commands for sufficient surface quality on the curved upside of the model but with fewer support structures on the downside.

You can start by selecting the Y view direction by pressing  icon in the Tool window. Then we will rotate the part 45 degrees around X axis with the following command sequence:

<p>Give command <i>Rotate numeric</i> in Easy print:</p> 	<p>Fill in <i>-45</i> degrees and select <i>Y</i> Axis and <i>press OK</i>:</p> 	<p>The part is rotate to the desired angle:</p> 
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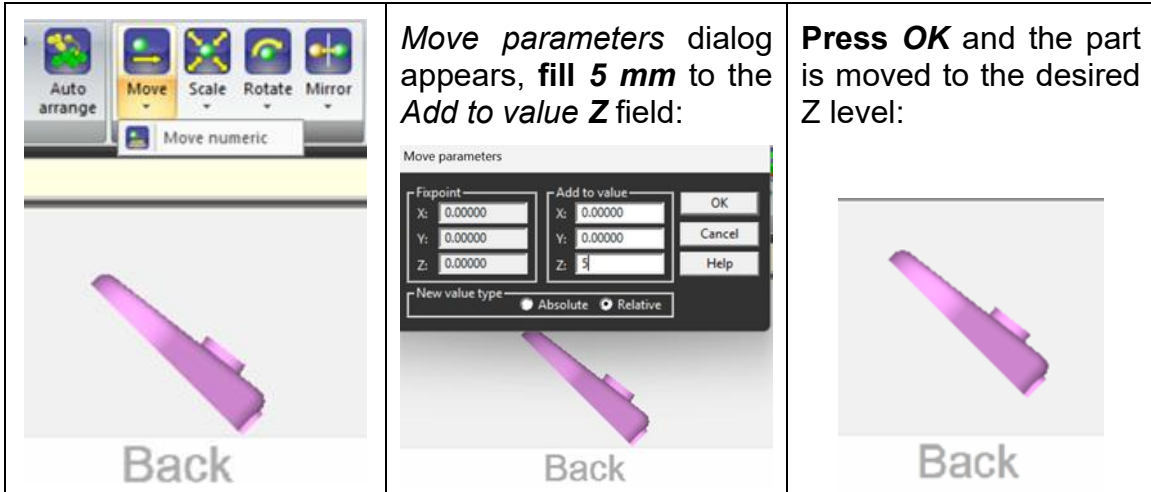
Models are typically positioned in the middle of the workarea. 3Data Expert has several commands for positioning a model into the workarea, like 2D or 3D Nesting, Bounding box based positioning and normal transformation tools.


Now we will use the automatic *Auto arrange* command which can actually be used to nest several components on the platform using 2D nesting based on component bounding boxes. It works fine with a single shell too as you can see in the next example:



We still want to separate the part from the workarea bottom to be able to make stable support at the lowest point. Let's move part 5 mm in Z direction. This is done with *Move Numeric* command.

Give *Move Numeric* command as seen in the image below:



We are now ready to start preparing the part for AM production. For a better 3D space orientation while viewing and working with the part, you may want to turn on the Grid with grid icon  in the right hand side Tools window.

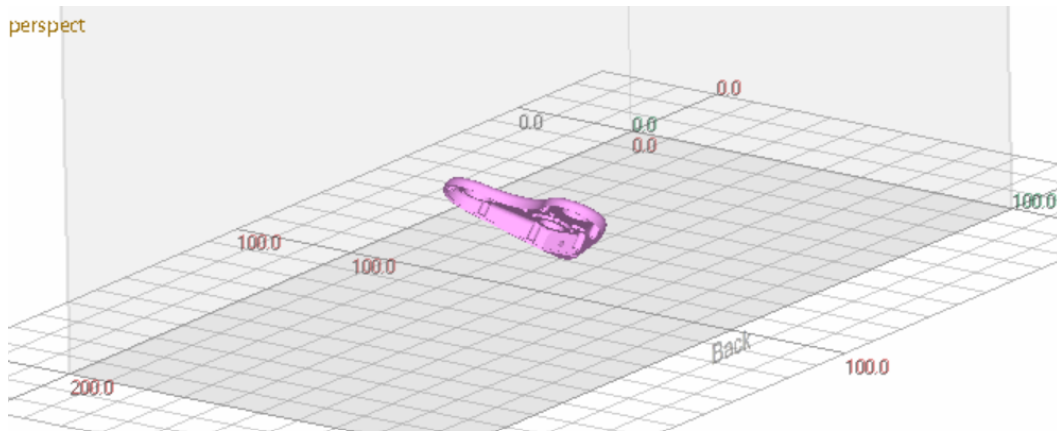


Figure 5. Positioned model with Grid view.

Model preparation for AM: Z Compensation and Shrink compensation

If you wish to produce highly accurate parts, you must consider both Z Compensation and Shrink compensation before the model is sent to the AM production. There are various factors which will affect the accuracy of the built part, having effect both during the building phase (overcuring, build direction) and postprocessing phase after the building (curing or sintering).

If these accuracy issues are not present or do not need consideration in your AM process or 3D Printing system, you can skip this chapter and go to the next *Model preparation for AM: Support generation* chapter.

We will start with Z Compensation. Z Compensation lifts the downfacing areas in 3D model upwards to compensate for overcuring during the laser hardening of SLA polymers, as an example. The Z Compensation value depends on the specific system laser and material properties.

3Data Expert has *Z-compensation* command readily available in the Easy print ribbon.



Give *Z-compensation* command and *Z-compensation parameter dialog* appears (see Figure 6. *Z-compensation command and parameters* in the next page). All the values are preset based on the selected Print Configuration file. The most important parameter is the *Distance*, here 0.05 mm, which gives the maximum up lift for downfacing areas. Also, *Protected area* parameter prevents applying Z-compensation for model areas below the given Z value, here 0.15 mm. Tuning parameters are explained in the Application Help accessible via *Help ribbon > Help Topics command*.

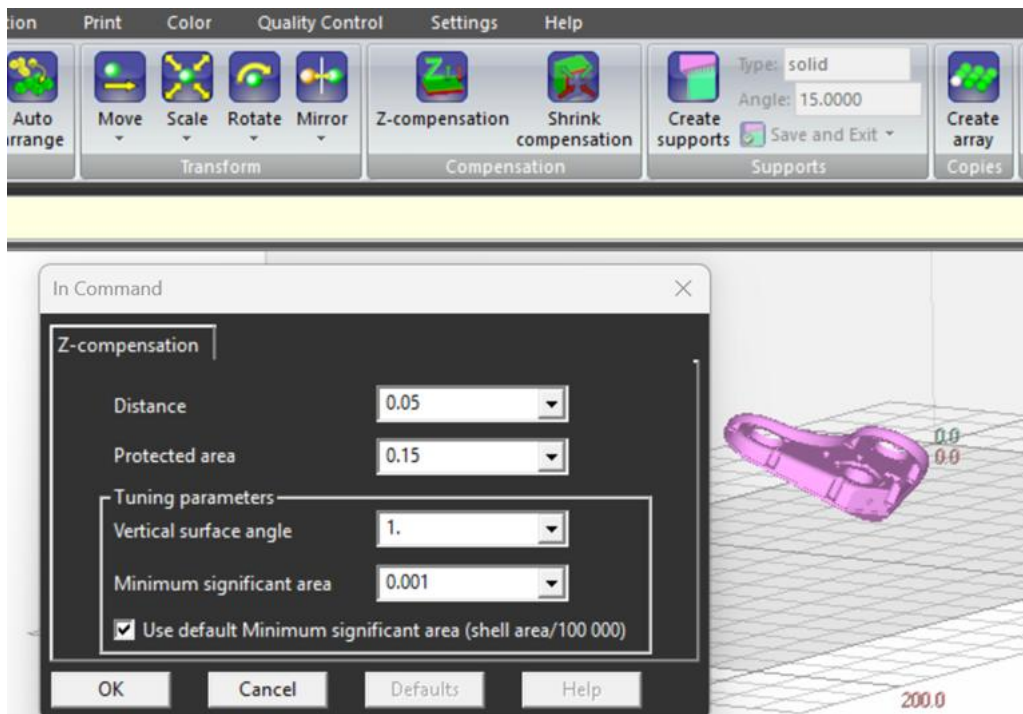


Figure 6. Z-compensation command and parameters

Press *OK* to generate Z Compensation for the part and after a while you will have the result in the Model Tree. You can always check which commands are run to the model at the bottom of the Model Tree window, in the History field:

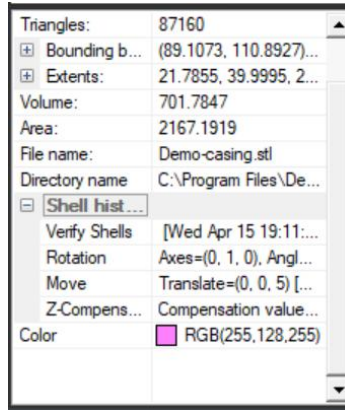


Figure 7. History with Z Compensation.

Shrink compensation is used to compensate for part shrinking appearing after the part building during curing or sintering phase. For curing, the shrinking can be around 1 % in different directions, for sintering it can be up to 20-30% of the green part size. The values can vary along different coordinate axis.

3Data Expert has *Shrink compensation* command readily available in the Easy print ribbon.



Give *Shrink compensation* command and the Shrink compensation dialog box appears. Once again, the values are preset in the currently used Print Configuration file SLA-demo.pcparr.

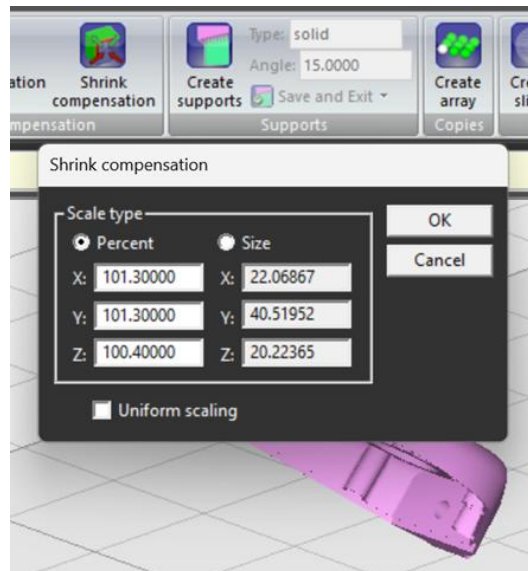


Figure 8. Shrink compensation command and parameters.

Press **OK** and the model in the Model Tree is scaled with the Shrink compensation values and the scaling factors are stored in the Model History.

Model preparation for AM: Support Generation

Most of the AM processes require separate support structures being built simultaneously with the part. For example, polymer-based processes need to keep overhang areas in place until they are connected to other areas. Powder based metal processes similarly need to keep the part in place until fully connected to other parts due to material addition with blades moving on top of the powder bed. They also may need to prevent the part from warping during excessive temperature changes. Then there are some systems which do not require supports, and you can skip this chapter if you have such system and continue with *Model Preparation for AM: Slicing* chapter.

3Data Expert Support generation command can create support structures for various processes, like SLA, DLP and metal AM processes. There is a wide variety of parameters to control the support generation: open or solid supports, teeth size and height, crisscross generation, drain holes, silhouette support, slanted support, web, chain, side support, etc. Editing support structures manually is also possible to guarantee best possible surface quality with the part.

In the following example we will generate support to the *Demo-casing.stl* model. The process includes automatic support generation according to the given Print Configuration settings as well as a small manual edit to make the part cleaning easier after the building.

Support generation command is also available in the Easy print ribbon Supports tab:

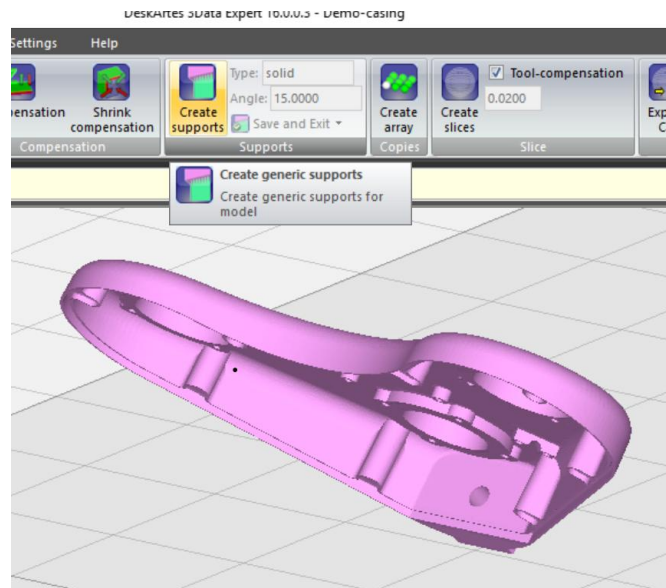


Figure 9. Support tab in Easy print.

The Type (solid) and Angle (15 degrees) parameters are given for user reference before starting the support generation. We will generate solid STL support file and the limiting angle for area requiring support is 15 degrees.

Now give the *Create supports* command. The *Interactive Support generation mode* is started and a new *Support Tools* window appears on the right-hand side of the graphics area.

Support Tools window includes three tabs: *Create*, *Display* and *Edit*.

Create tab offers general high-level commands, like *CREATE* command to generate support fully automatically. Also, when ready the results can be stored into Model Tree via *SAVE AND EXIT* button.

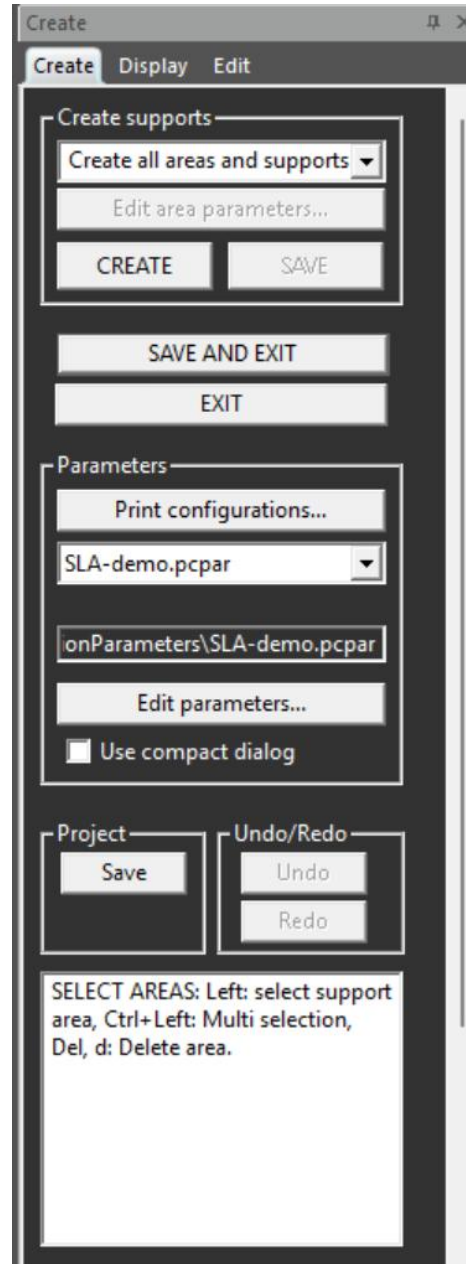
The *Create* tab also includes commands to change the Print Configuration file via *Edit parameters command*, like the surface *Angle* or *Tooth height*. The complete Support parameter dialog is explained in the Application Help.

Project Save allows to save the current support generation state at any point and to continue it with the next session. For example, you can get back to improve supports where you left if the build has failed for some reason.

Display tab includes support display generation related commands, like display *All areas* or just one *Current* area on the screen.

Edit tab includes commands for manual support editing. For example, a support structure can be bent not to hit the part below for improved surface quality.

In the sequel we will look at these command tabs in more detail when necessary. Full explanation on the tab contents can be found in the



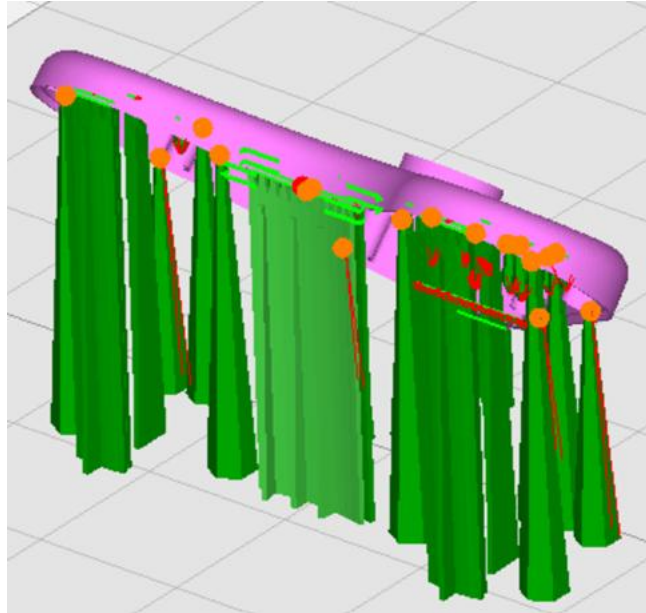
Application Help via *Help > Help topics*
> *Support Generation* command.

We will now **continue by pressing the CREATE button** in the Create tab. You may see some warning dialog appearing, but you can Continue by **pressing Yes** button in the dialog.

After a while you will see the green supports generate below the model.

In the image we can see both *Point* and *Chain* (along longer edges) support structures. The orange points show the local minima points in the model. The highlighted green supports and green bounding box shows the currently selected support area. You can click on the model with LMB to select the support area of interest freely.

Additionally, the image shows thin red lines where the support triangles are hitting the part triangles. This is an important guide for cleaning the supports manually before the supports are accepted.

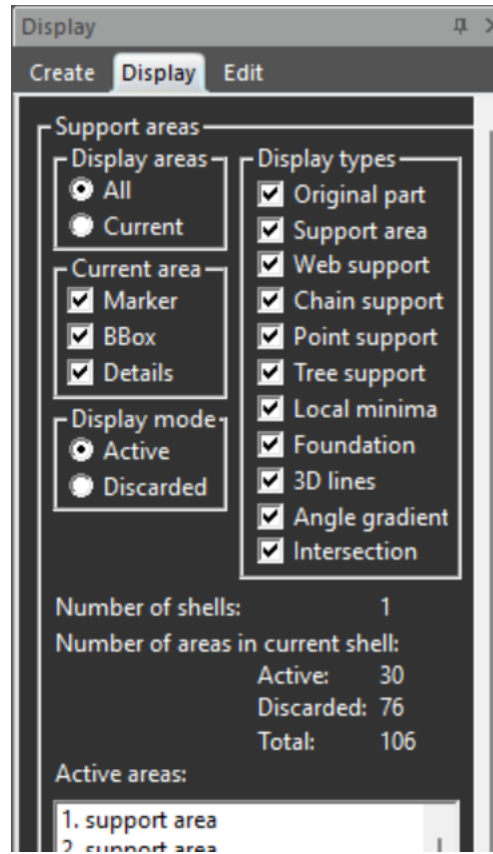


Let's now have a look at the Display tab which has some useful features, too.

The *Display tab* includes commands and settings for visual inspection of the supports. The user can either *Display areas* > *All* support areas or only the *Current* support area (selected either from the screen with LMB or from the *Active areas* list at the bottom of the dialog).

Display mode > *Active* allows to show areas which are used to produce support structures. *Discarded* selection allows us to investigate the areas which have been removed from the support generation, typically because they are very small and thin and have a supporting area besides.

Display types group can be used to filter out some objects from the screen, like the *Original part*, to see better into the support structures during support editing. Or to hide the red triangle edge *Intersection* lines if there are too many intersections cluttering the view.



If you rotate the model on the screen you can see that all relevant areas are supported and the part can be built. Now, let's look at the areas with thin red lines. In these areas the support triangles intersect the part triangles, i.e. these areas will require more part cleaning after the building of the part.

Now, let's take a look at the **support area number 23**. You can select it either with *LMB* from the graphics area or from the *Active areas* list. **Select *Current*** setting in *Display areas* group to hide non-interesting areas.

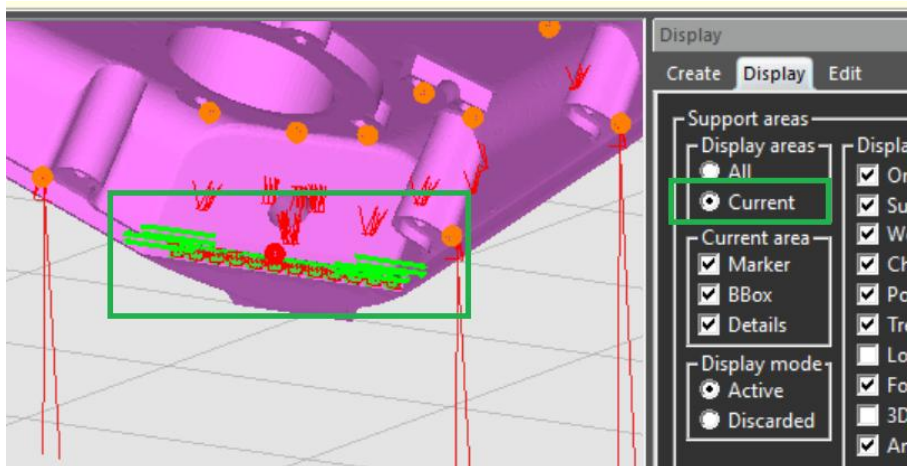
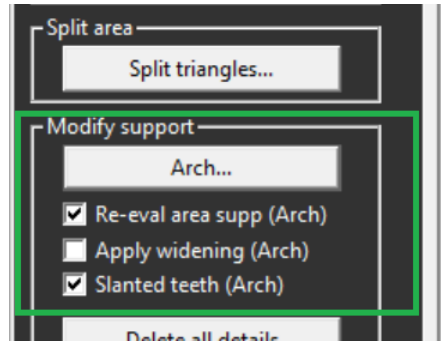


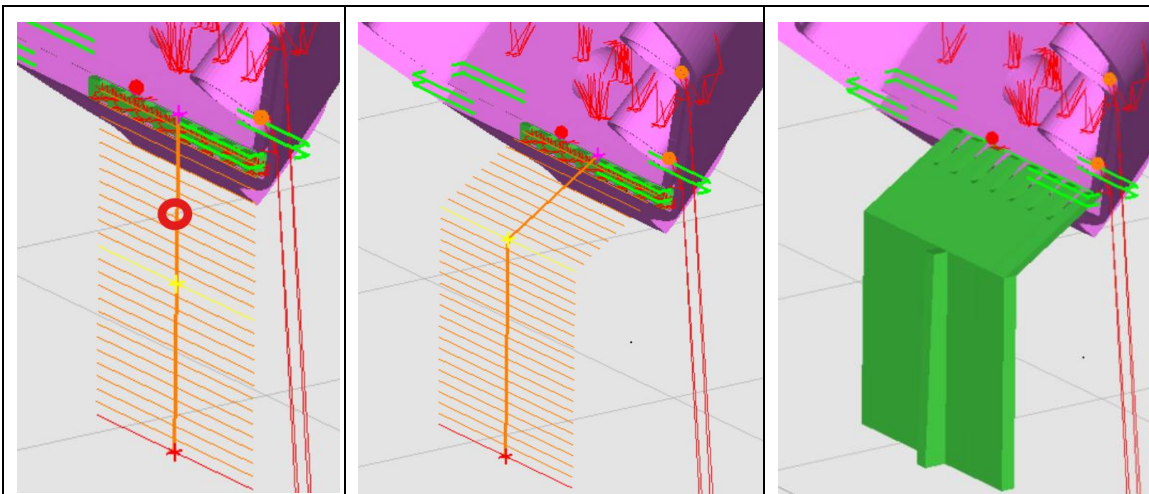
Figure 10. Selecting groove area 23.

The support in *area 23* is generated inside a very narrow groove and the supports may be difficult to remove after building. We will use *Edit tab* commands to modify the support for this area so that it does not hit the part anymore.

The Edit tab has several commands to generate support areas manually, delete areas, edit area triangles, join areas etc. This time we are interested to the *Arch* command. Before giving the command, make sure the settings are as in the image (*Re-eval area supp* and *Slanted teeth* selected).



Now press the Arch button. Arch bend point edit structure is show on the screen, as seen in the left image below. **Use LMB to select new bend point** around the red circle location. Then **use LMB again to drag the bend point right to the left**. When at a suitable distance, **press RMB to accept the point** and to generate the new support structure without intersection with the part.



If the newly generated support still has red intersection indicators along the support triangles, just restart the bend point editing again with *Arch* button and try again.

There are some other areas also which would potentially benefit from the *Arch* command, like the four tall *Point* supports at the edges of the part. Cleaning these supports are left as an exercise to the user. After a minute's editing the result would look like this:

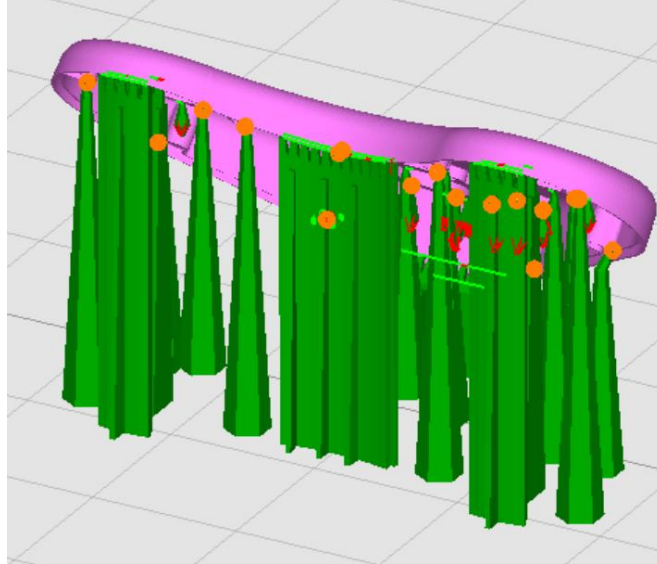
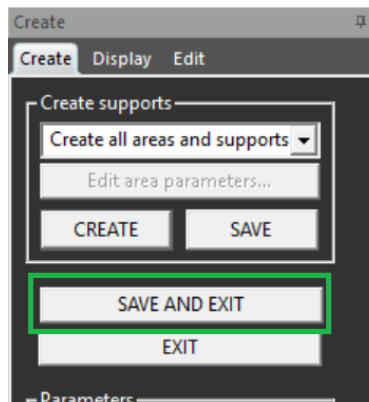


Figure n. Cleaned supports.

We will leave inner area supports as they come from the automatic support generation. Bending them might be risky due to too slanted support structures needed. We are ready to save the supports into the Model Tree. **Open the Create tab and press *SAVE AND EXIT* button.**



After a while the supports are stored in the model tree below the part shell.

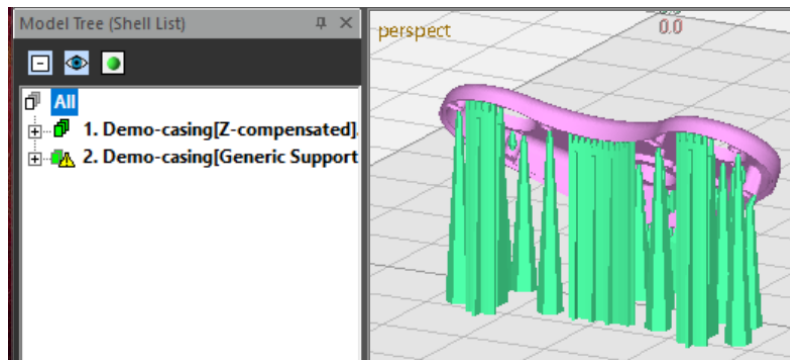


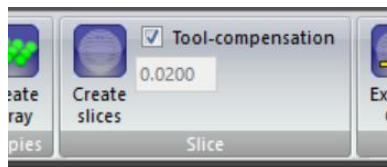
Figure 12. Ready supports.

The result at this stage is available at the *tutorial/GeomFiles/Demo-casing-supported.3de*. 3de files are a DeskArtes proprietary format and are used to save temporary results during model processing. .3de (and .3de_project) files can be used to store geometry data with full topology and model information. With STL files you can only store individual triangles which would require topology reconstruction after every File Open.

Model preparation for AM: Slicing

Our goal is to produce workarea full of the supported Demo-casing models. There are two ways to achieve that, either copy the STL models above (part and supports) to fill the workarea or first slice the single part and then copy the slice models to fill the workarea. This time we will choose to first slice a single model and then copy the slice model to fill the workarea.

Now select both the *part* and *support* shells from the Model Tree or the Model Tree root *All*. Then **press the *Create slices* command available in the Easy print ribbon:**

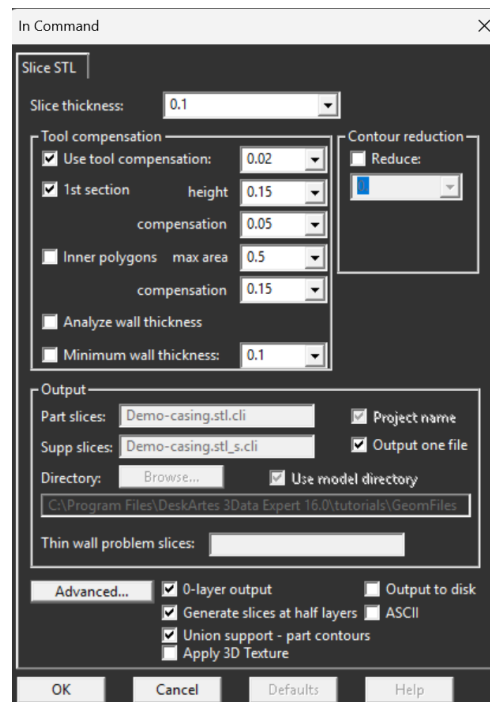


You may see some *warning* messages, but you can ignore them and continue. The Slice command parameter window becomes visible:

With slicing the most important parameter is the *Slice thickness* which is preset according to the system used and found in Print Configuration file.

To produce as accurate models as possible we may need to use *Tool compensation*. This will offset the slice curves *inside* to compensate for the laser width, for example. These values come also from the selected Print Configuration file.

Other parameters as seen in the image are set correctly for this exercise: *Output only one file* to produce one shell in the Model Tree (MT), *Union support – part contours* for continuous layer areas for hatching, and *no Output to disk file* as we want to have the result in the MT for multiplication.



Press **OK** to start the **Slice** command. When the slicing is ready, Slices are stored after the support shell and **Slice preview** toolbar is opened:

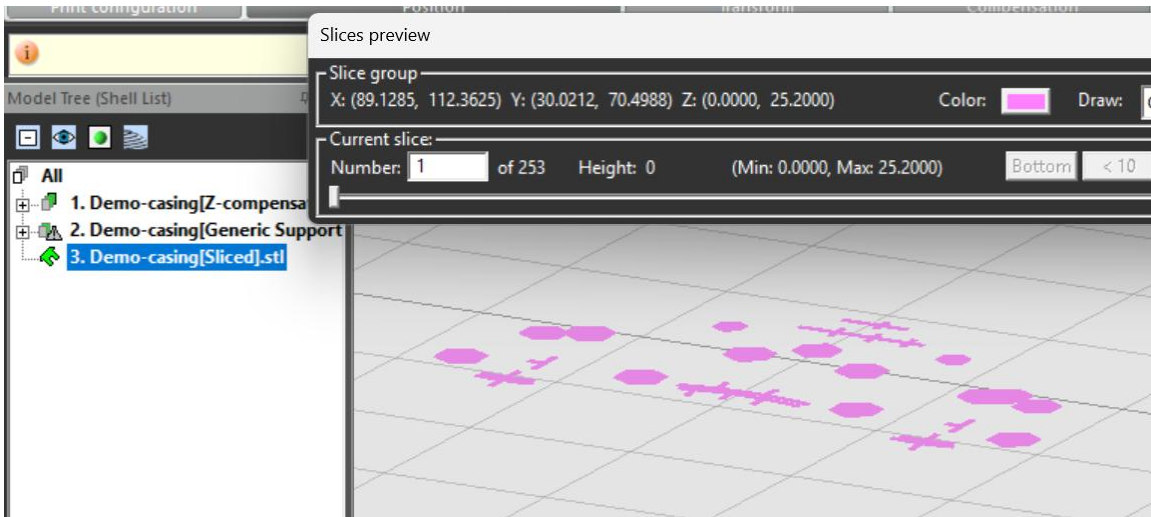


Figure 13. Slicing result.

Slice preview toolbar allows you to investigate the slicing in detail at various slice levels either using the *horizontal slider* in the *Current slice* group or *Bottom etc.* buttons available in the toolbar to browse through the slices. Below we can see the current slice and slices below the current level with *Draw: Below* and *Fill* setting:

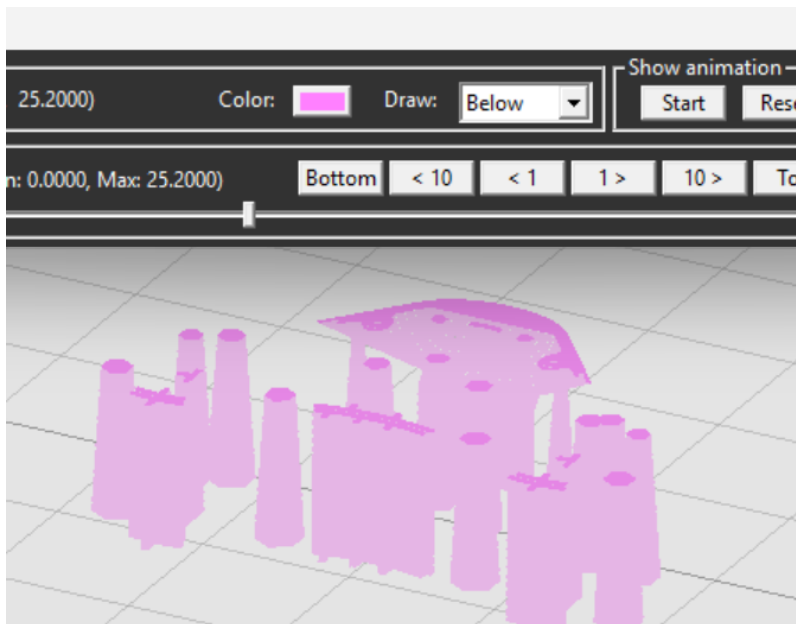


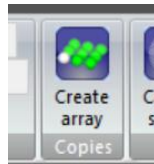
Figure 14. Slice preview toolbar use.

When ready investigating the slices, **close the toolbar**. The Slice preview toolbar is closed when you select a *non-sliced model* in the Model Tree or click the *Slice*



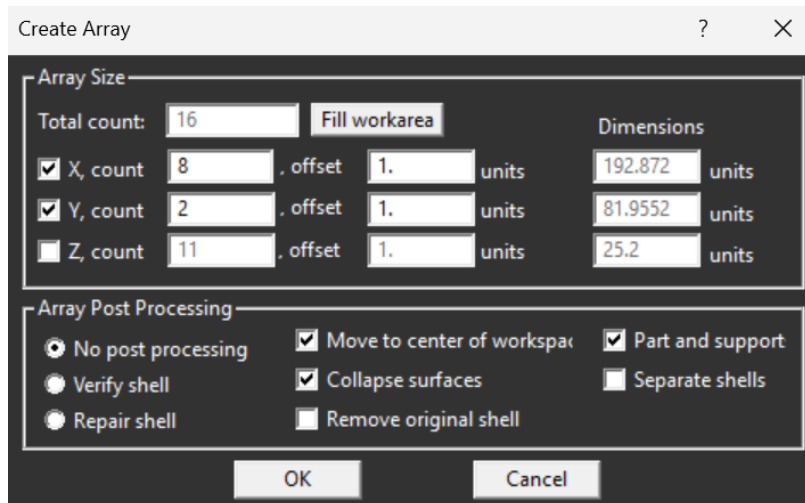
Model multiplication for large scale production

Next step is to multiply the sliced part for AM production. 3Data Expert has a command suited for filling the workarea automatically, i.e. *Create Array*. This command is also available in the Easy print ribbon:



Both STL and slice models can be copied similarly with Copy Array command.

Select the slice shell 3. *Demo-casing[Sliced].stl* in the Model Tree, close the Slice preview and **give the *Create Array* command**. A *Create Array dialog* appears:



First press *Fill workarea* button. This will calculate a full 3D fill for the whole workarea with the given *offsets* between the components, i.e. 176 components. But with current supports and setup we can only generate parts at the bottom of the plate. So, **click off the *Z, count*** and you will get the final number of 16 components at the bottom of the workarea.

When ready press *OK*. Soon you will see the copied models in in the graphics area:

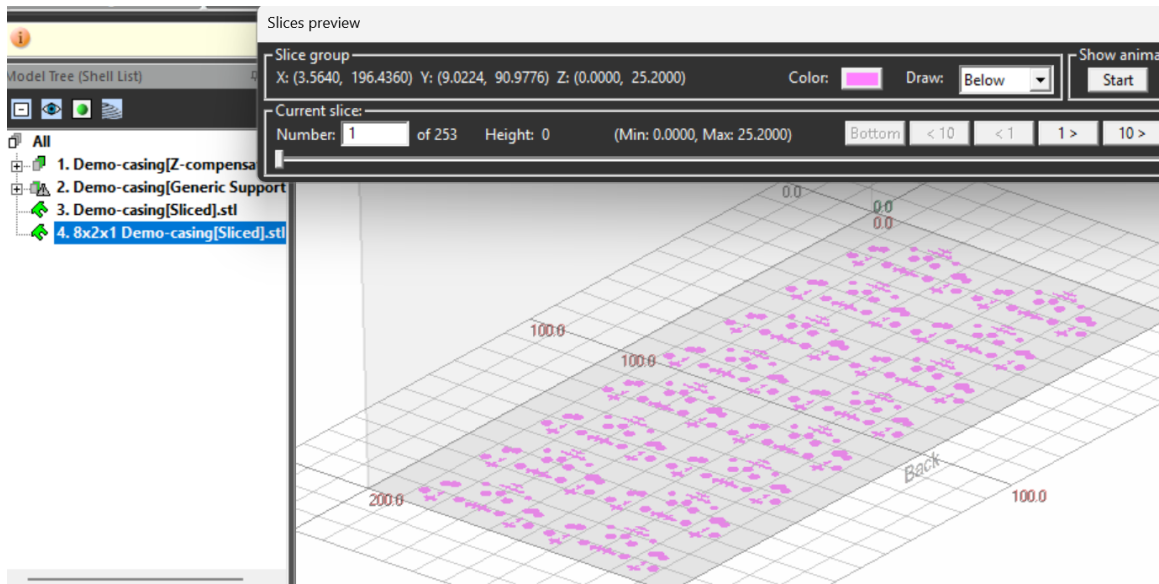
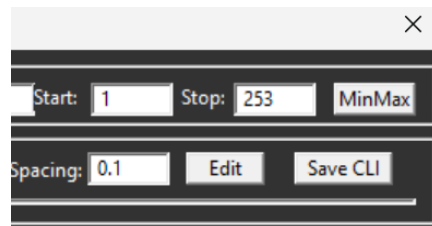


Figure 15. Copy Array result.

We are now ready to output the slices for receiving AM system for production. The slices can be outputted either as CLI slice files or Bitmap files.

Model output for AM processes

The simplest way to output the 16 components for manufacturing is to write the slice data as CLI file (Common Layer Interface). Slice preview toolbar has a *Save CLI* command which will write the slice models currently selected in the Model Tree into a single CLI file.

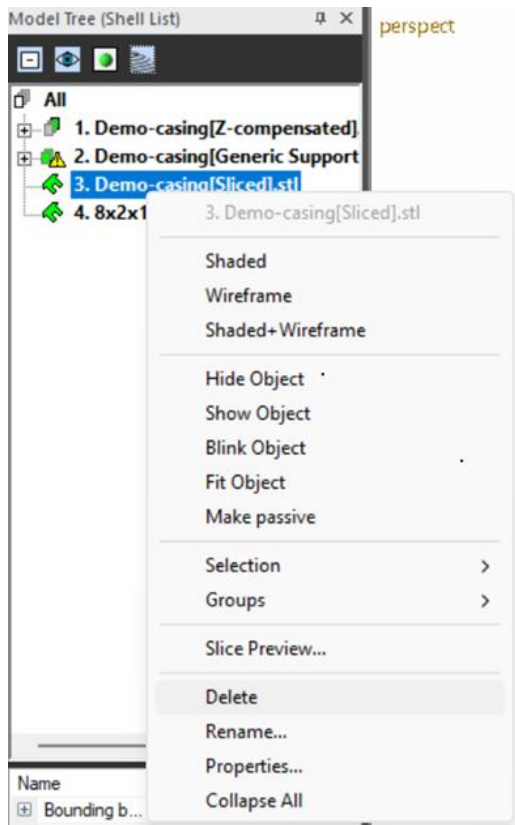


There are also two commands in the Easy print ribbon for slice output, *Export CLI* and *Export slice bitmaps*:

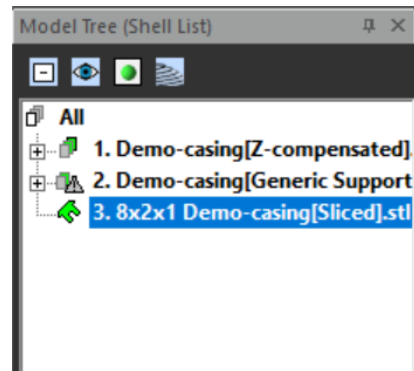


Export CLI will export all slice shells from the Model Tree into the given output file. You can also change the output file directory with *Browse* button but the name

comes from the original input file. Before using the Export CLI command we must delete the original single slice shell from the Model Tree:



Use **RMB** menu **Delete** command to remove the Demo-casing[Sliced].stl shell from the Model Tree. After the Delete command you should have only the Copy Array slice result in the Model Tree.



You can now give the **Export CLI** command. The output slice data is first displayed on the screen and a message to confirm the output file is displayed. Press **OK** to confirm the file save or possible file overwrite.

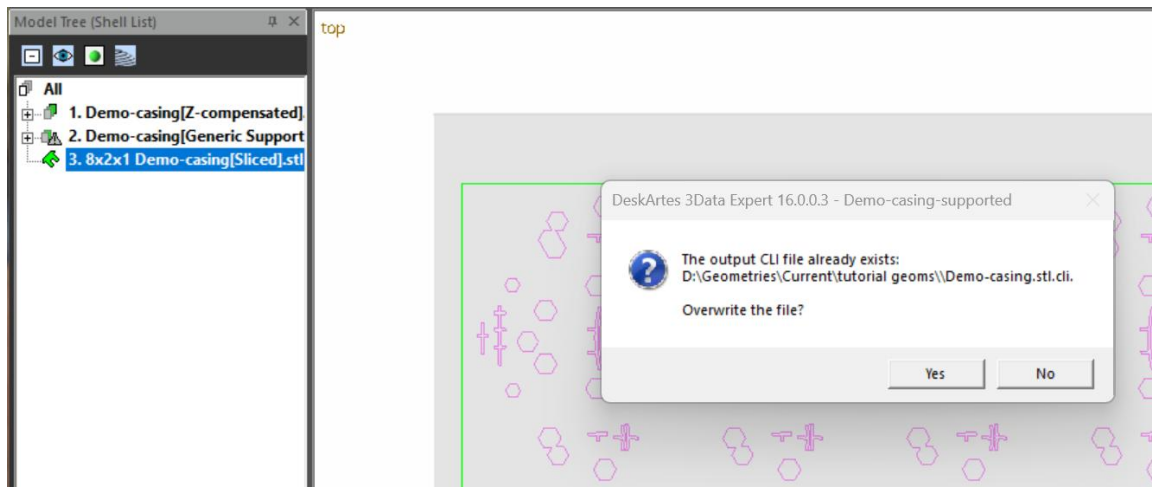


Figure 16. Export CLI result.

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The final CLI file is now stored into the hard disk and can be passed to receiving AM system software for building the parts. The filling or hatching of the slice data is supposed to be done in the receiving AM system software during the build operation with the machine specific hatching and laser parameters.

If you are sending the data into Digital Light Processing (DLP) type AM systems, either ceramic, metal or polymer based, you can use *Export slice bitmaps* command to generate bitmaps suitable for all DLP based AM systems. **Select the single sliced group** in the Model Tree and **give the *Export slice bitmaps* command**. A parameter dialog appears:

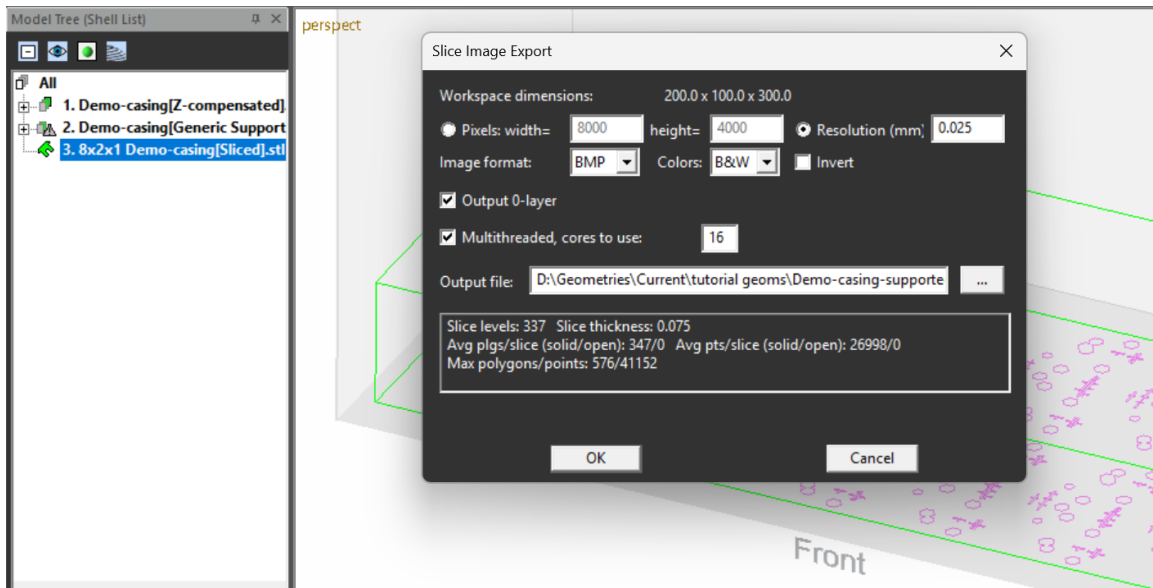


Figure 17. Slice Image Export dialog.

The parameter dialog allows you to define the resolution and image format of the slice data freely, allowing to output bitmaps to wide variety DLP based systems directly. Now **press *OK to generate*** the bitmaps in the selected *Output file*. After a while the slices are stored into a .zip file and can be sent to the AM system.

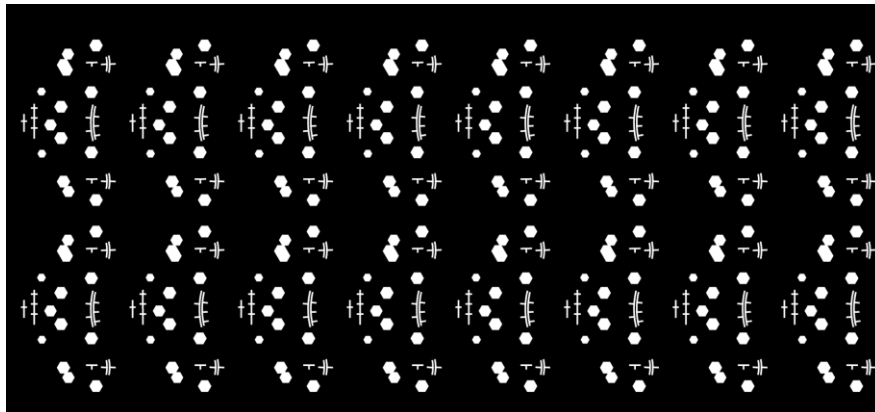
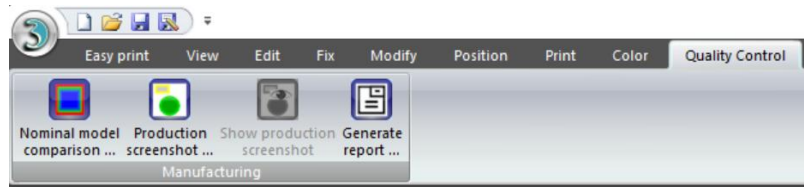


Figure 18. BMP slices read for DLP system.

Generally, during the workflow, you can save the intermediate results as a DeskArtes proprietary *.3de* format, or its compressed *.3dez* version. In addition, mainly for iterative work with support structures, you can use the *.3de_project* file format. These formats maintain, among other features, the topology of the entire model.

Production report generation

The final step of the process is to store the production data for later Quality Control operations. Now we need to change to another ribbon, *Quality Control*:



Production screenshot command will generate an image of the workarea with user defined product information. The image can be stored as a separate disk file for archiving, and the image is also stored into the *.3de* file for later investigation.

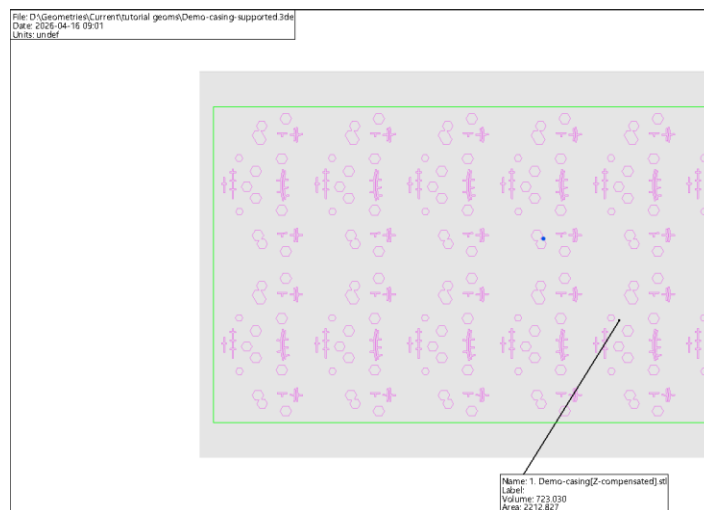


Figure 19. Production screenshot.

Further Reading

This *Quick Start Guide* has given you the skills to

- To prepare, support and slice 3D models for output to AM systems.
- To send slice data to further processing.
- To generate report for quality control.

Each 3Data Expert software comes with a set of useful tutorials available through *Help > Tutorial Documents* menu. Please have a look!