



Release Note

Release Date: January, 2024

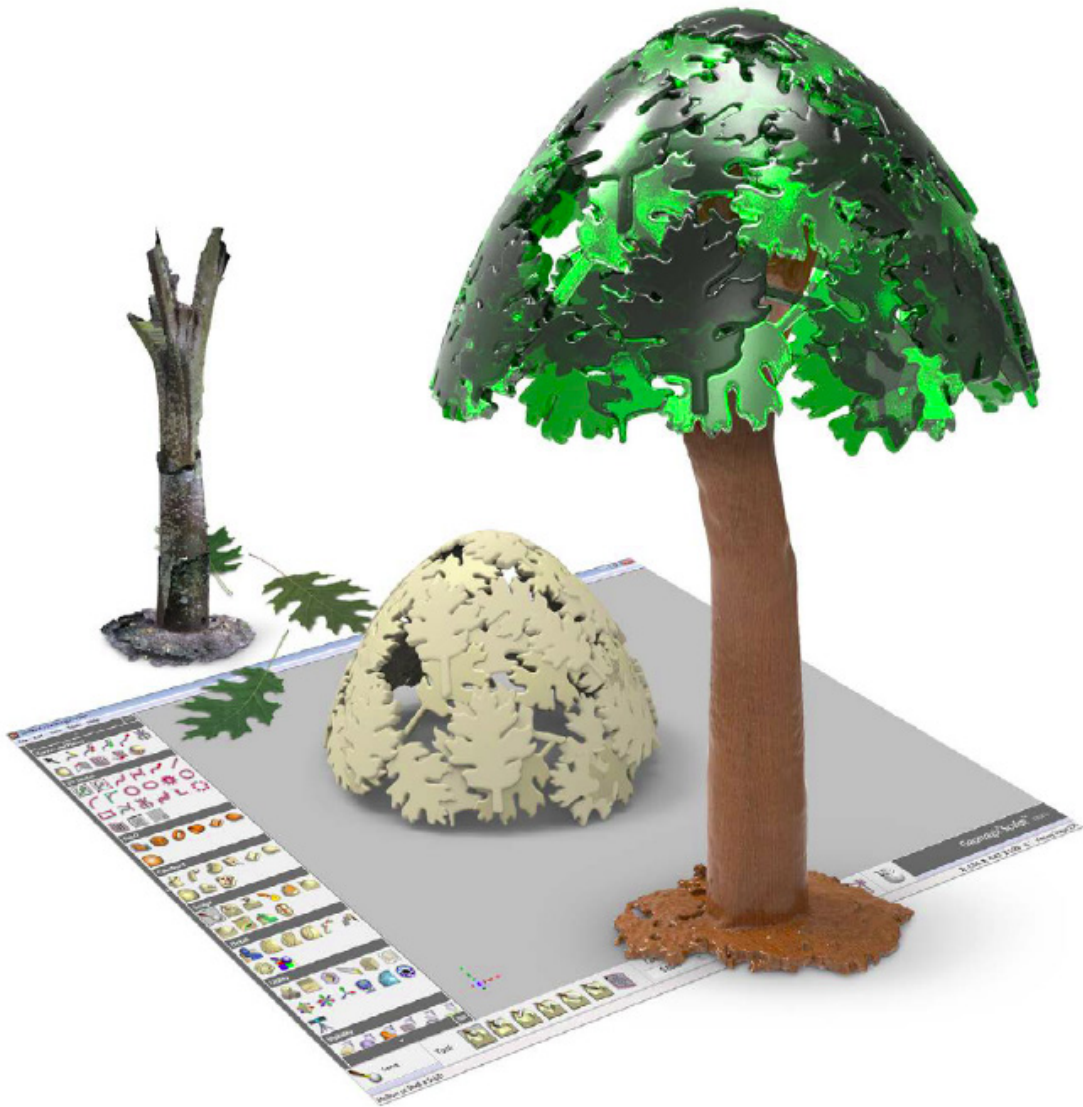


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1 INTRODUCTION

INTRODUCING SCULPT™

Version 2024.0



Touch. Sculpt. Realize.

Sculpt™ is a simple, fast, yet sophisticated precision voxel modeling software solution. Create organic designs, edit, and transform existing 3D data with sculpting, shaping and detailing tools not found in traditional CAD software. Get the sensation of clay modeling with the benefits of digital design.

Virtual Clay Modeling

Create exactly what you want. With Sculpt you can harness the power of virtual clay to easily create exquisitely complex and organic forms. Use real world sculpting concepts in a digital environment with the power of tug, ridge, emboss and deform just like real clay modeling. Sculpt is incredibly intuitive; you can use a traditional mouse or feel your design when you use a Geomagic Touch™ haptic stylus.

Add Structure to Your Design

Sculpt's brand new StructureFX™ capability is a powerful toolset for reducing time spent in complex workflows. Select from a palette of existing effects to rapidly create complex lightweight structures and cages in designs. The StructureFX tools work alongside the 3D print analysis tools for perfect and successful 3D printing of impressive designs.

Incredible Detailing Tools

Fine tune the smallest elements and make products stand out. Sculpt lets you create textures of any complexity in virtual clay. Use embossing tools to create design flourishes, which are often impossible in CAD. Simply import any image and go. The texture you see is the texture you get when 3D printing the model.

Photorealistic Rendering

Make renderings that impress clients and astound colleagues with the high definition KeyShot for 3D Systems. Show clients what they are getting before it's made and win more bids. A wide range of preset materials, lights and cameras let you quickly create stunning renderings.

Seamlessly Enhance Your CAD Models

Sculpt works alongside your current CAD software to provide that elusive, beautiful industrial design in combination with CAD's functional models. Sculpt is fast and very easy to use offering a huge step forward from notoriously complex surface modeling packages.

2 INSTALLATION

System Requirements

For the Freeform Family of products, the system requirements, can be found on the support website: [Freeform Family System Requirements](#). Note that some users have had success running system configurations that deviate from the supported list. In such cases, these configurations are not officially supported by Oqton, Inc.

Additionally, we test a variety of hardware platforms in combination with the graphics subsystems. While we make every attempt to be as thorough as possible, hardware manufacturers change their products frequently and may be shipping newer products or have discontinued active support for others. Check the support section of the Web site for the latest system requirement information and specific qualified systems.

Supported Graphics Cards

For the Freeform Family of products, the system requirements, including a list of qualified graphics cards, can be found on the support website: [Freeform Family System Requirements](#).

Download and Install Software

You can download and install the software from [Getting Started](#), select the Sculpt product, select to download Sculpt. In addition, automatic software updates are available if you selected **Check for updated versions of the software** in the **Tools>Options>General>Updates dialog**, a valid maintenance code is activated, and your computer is connected to the Internet. The application will check if a newer version is available and will download it automatically for installation. If you have a Touch device attached and the Touch Device Driver (TDD) is installed, this option will also prompt you if there is an updated TDD available to download. Deselect this option if you do not want to be informed that updated versions of the software are available.

Activate License

Sculpt product requires license activation to run the application on your PC. You can choose to use an evaluation license for a 15-day period or activate a permanent license by using a virtual or physical dongle. After you start your application, the License Utility window opens. The License Utility allows you to activate and use the Sculpt software.

NOTE: When you launch the License Utility, you can click the Help button to read the Licensing Guide.

You should have received an email from Oqton with your activation code. If you have not received an email contact Oqton at [Contact Us](#).

If you are an existing user and have already activated the license on your PC with the previous version of the application, you can run the newer version of the application without re-activating the license.

For more information, go to [Getting Started](#), and scroll to the Licensing section.

Licensing Agreement

Please see the End User License Agreement (EULA) located in the <Installation Directory>\Documentation\License.rtf folder for complete terms and conditions of the license.

Touch Device Drivers (TDD)

This software is optimized to run with the latest version of the Touch Device Driver. As this version of Freeform is released, the current Touch Device Driver is v2023.10.11, which includes the new Touch Smart Setup Application*, as well as support for the new TouchX USB device. To download and install the latest TDD go to [Getting Started](#), select to download Sculpt and then select the most up-to-date device driver that is compatible with your device.

***NOTE: The Installation Guide on the [haptics support page](#) contains additional information on installing the Touch Device Driver, as well as usage information on the new Touch Smart Setup application. The advanced Setup and Diagnostic applications are still available by way of the Touch Device Driver's application directory should the optional desktop shortcuts not have been chosen during the TDD installation process.**

NOTE: As of v2019.0, the legacy Firewire Omni devices are no longer supported within the Freeform family of products. Please contact your local sales representative for information regarding newer devices and upgrade options, or visit our website: [Haptic Device Product Lineup](#).

Required Hardware

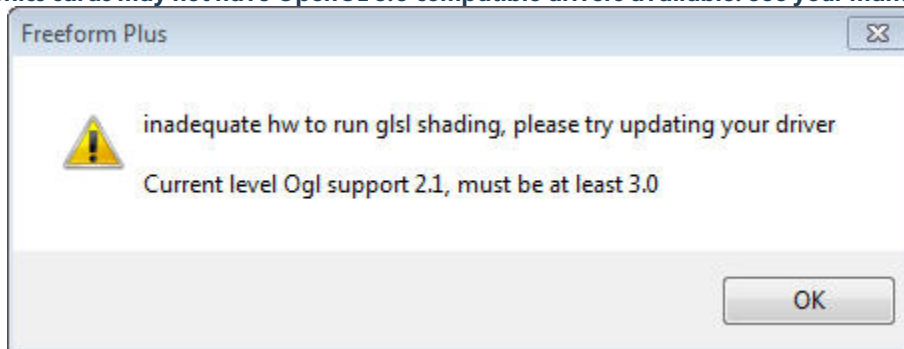
Sculpt v2024 requires a minimum display resolution of 1920 x 1080. As of this release, Sculpt will support large screen monitors with high resolution display.

NOTE: Using custom desktop display settings which apply font and icon scaling may cause menu and dynabar contents to not fit properly.

Sculpt v2024 also minimally requires a graphics card with OpenGL 3.0 support, and OpenGL 4.3 enables the software to provide additional performance enhancements.

NOTE: You may receive a warning when you launch the product should either your card or driver not support OpenGL 3.0 as required. If you receive the following warning, go to the manufacturer's website and download the most recent driver.

NOTE: Some older graphics cards may not have OpenGL 3.0 compatible drivers available. See your manufacturer's options.



When using cards and drivers that support OpenGL 4.3 you will be able to take advantage of the newer high resolution transparency options and improved framerate added in v2017.0. While the product may still run without this graphics capability, you will not experience the new capabilities.

For the Freeform Family of products, the system requirements, including a list of qualified graphics cards, can be found on the support website: [Freeform Family System Requirements](#).

Operating System

A 64-bit version of Windows 10 or 11 is required to run this version of the software. 32-bit is not supported.

Version Compatibility

Old Files - This version will open models that were created in older versions of Sculpt, however, models created in this version may not be compatible with previous versions.

When a file is opened in Sculpt, it is automatically converted to the current format. Once converted and saved, the model may lose compatibility with older versions. We strongly recommend that you save backup copies of all Sculpt files from previous versions before opening them in a newer version.

Installing Multiple Copies of Sculpt Software

The Sculpt installer now allows for side-by-side installations of different versions of Sculpt. However, only one version can be run at a time.

3 NEW FEATURES AND ENHANCEMENTS

The following is a summary of new features and enhancements in Sculpt v2024. For a more comprehensive look at the new features and enhancements in the v2024 release see the online Help topic titled “What’s New?” You can access the help from within the Sculpt application by pressing F1 or from the Help Menu.

Select Clay

2D Selection Mode

A new “**2D Selection**” mode has been introduced, automatically selecting the depth based on the screen normal. This enhances user productivity when selecting through a clay piece.

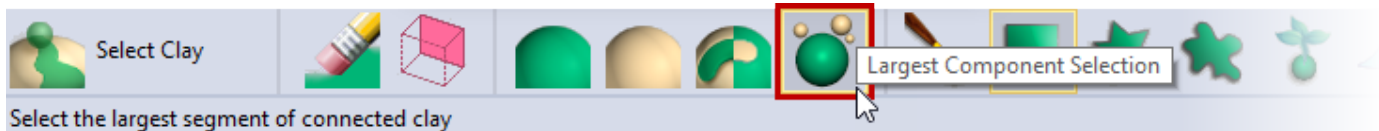


This mode is available when using the following tools:

- Box Select
- Polygon Select
- Lasso Select
- Seed Select

Select Largest Piece

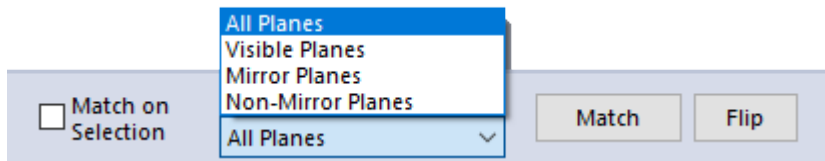
A new operation, “**Select Largest Piece**” has been added. This operation automatically selects the largest connected lump of clay within the Active Piece.



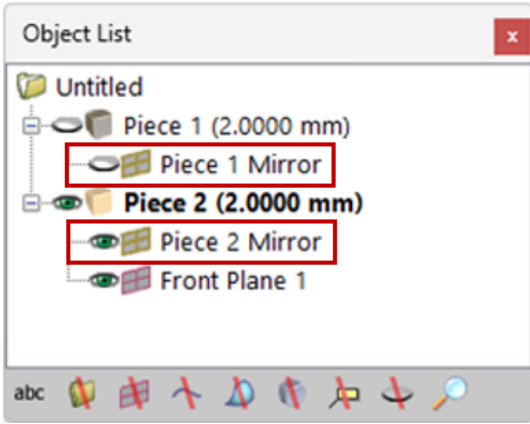
Mirror Clay

Enhancements to the **Mirror Clay** tool improve usability, particularly for large models with numerous pieces.

- New filtering modes in the Match list simplify the selection of existing planes, reducing the number of displayed planes for matching in large projects.



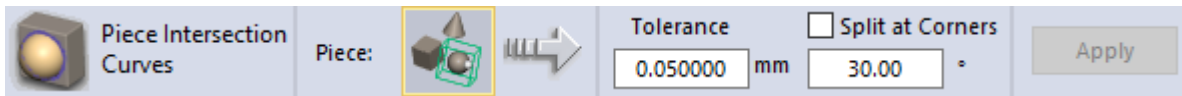
- Mirror planes are now visible within the Object List, offering various benefits:



- The ability to choose the plane to use for the mirror operation from the Object List.
- The ability to delete a Mirror Plane.
- The ability to control the visibility of Mirror Planes, e.g., to hide the Plane when using interactive mirroring tools.

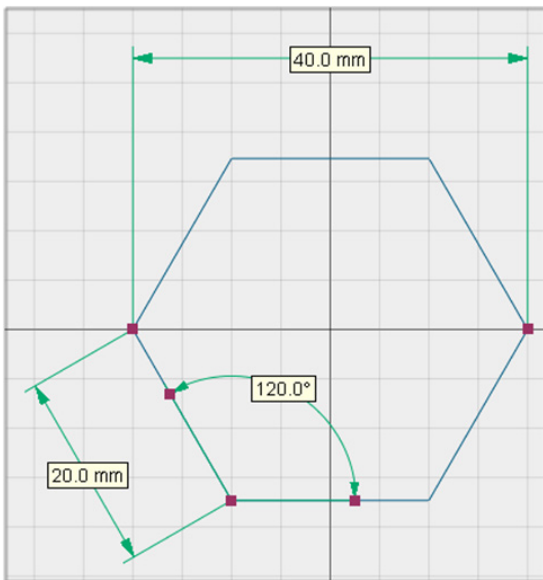
Piece to Piece Intersection Curve

Introducing the new “**Piece Intersection Curves**” tool, supporting all geometry types for generating 3D curves at the intersection of two Pieces.



2D Sketch Measurements

Introducing new **Measure Length**  and **Measure Angle**  tools added in the 2D Sketcher. These tools enable annotation and documentation of 2D sketch objects for reference purposes.



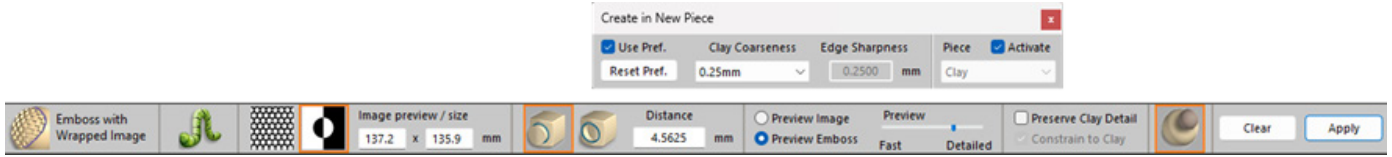
NOTE: These dimensions are for reference only and do not affect the sketches.


Additionally, the 2D tools seamlessly integrate with the style customization features shared with 3D measurements, ensuring a consistent experience and results across both tool sets.

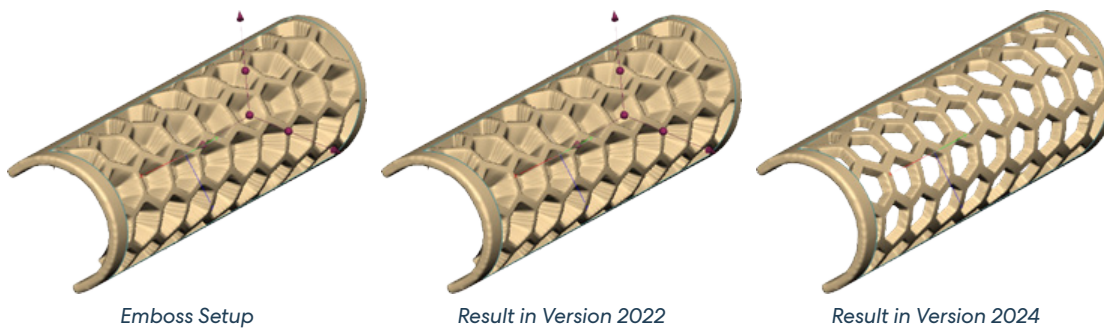
Emboss with Wrapped Image

The **Emboss with Wrapped Image** tool has been improved with addition of the following options:

- **Create in New Piece** - You now have the flexibility to create the emboss as a new piece.



- **Invert Image** - This option allows the inversion of lighter and darker parts of the emboss. This feature is also available in the Emboss Area and Emboss Along Curve tools.
- **Constrain to Clay** - A new "**Constrain to Clay**" option has been introduced. Previously, when using the **Lower**  mode in combination with a distance greater than the surrounding clay thickness, the result could be ragged, requiring additional modeling steps to clean the result. This new mode automatically removes any clay created beyond the back side of the emboss, effectively creating a perforation.



Miscellaneous Enhancements

- **Windows 11 Compatibility** - Sculpt is now compatible with Windows 11.
- **Improved Memory Management with Custom Thresholds** - Memory management has been enhanced, allowing users to set custom warning thresholds and limits.
- **Unified Unit Selection for Multiple STL Files** - You can now choose a single unit (e.g. mm or inches) to apply to all files when dragging and dropping multiple STL files onto the Sculpt window simultaneously.

4 FIXED BUGS

NOTE: Customer-reported issues that have been resolved are noted with an *.

The following is a list of issues that have been resolved since the last version of Sculpt:

Common

- ***GF-11791:** Performing a Boolean on an open manifold mesh would result in the mesh being closed.
- ***GF-11301:** Duplicating a piece in the Object List did not copy child objects.
- ***GF-11283:** The Preference for background was not saved when choosing the Color from the Tools > Options > General > Save View as Image.
- ***GF-11187:** The "Reuse knots for curve edit" option in the Tools > Options > Objects > Curves did not persist across sessions.

File I/O

- ***GF-11351:** When importing files, there was not an option to set their original piece type as the default import type.
- ***GF-10986:** Upon importing a STEP file into Rhino after exporting a solid to STEP or IGES in inches, a message appeared indicating that the imported file unit was in millimeters (mm).
- ***GF-9874:** Color information was excluded when exporting a color model to an OBJ file.
- **GF-9290:** The DXF files generated in Sculpt were unable to open in AutoCAD 2020.

Curve and Plane Tools

- ***GF-10999:** There was no tool to generate multiple intersection curves simultaneously from a selected set of planes.
- ***GF-10994:** The cross-session persistence of the tolerance setting was not maintained for the split curve (3D), causing the value to be continuously reset per session.
- ***GF-10992:** When using a locked curve in the Project Curve to Plane tool, users faced a limitation as they were unable to use the modes that project copies without altering the source curve.

2D Sketch Tools

- ***GF-11026:** There was no option to fine-tune the angle value for the sketch object to a small increment of 1 decimal place or less.
- ***GF-11022:** When editing the endpoint of a sketch curve in the Select Sketch Object tool, it occasionally selected the tangency handle when points were in close proximity.
- ***GF-9824:** The precision level of 2D Sketch tools was inconsistent with other tools.

Sculpt Tools

- ***GF-11595,**
***GF-11099:** The Select Clay tool lacked a 2D Selection mode to remove view depth and select objects matching the cursor and the user's current camera view.
- ***GF-11005:** Even after defining a selection set of objects, whether in the Object List or the Select tool, the selections cleared upon exiting the working tool, requiring users to make the selections again.
- ***GF-11002:** When defining a large selection set, whether zoomed in or not, inadvertent small drags over the process resulted in unintended changes.



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