



3DXpert™ for SOLIDWORKS®

Lattice Design

Surface Lattice - Evaluation

14,0200,1599,1024(SP2)

Introduction

3DXpert for SOLIDWORKS includes tools for creating optimized structures, using Lattices and Infills.

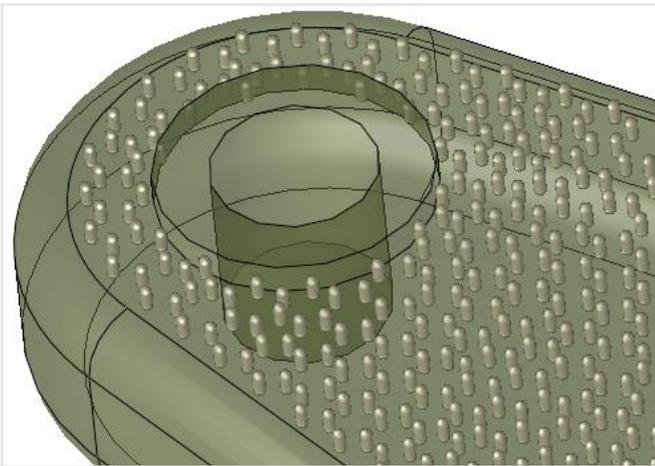
In addition, you can add textures to the top of an object's outer faces. This is called **Surface Lattice**.

For example, in medical application, such texture makes it easier for organic tissues (namely bones) to attach to it. Surface Lattice is typically used in medical applications.

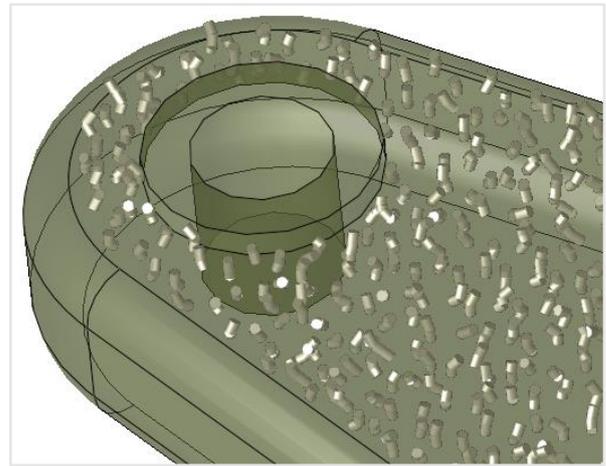
In this document, we will describe the various Surface Lattice types and the 3DXpert for SOLIDWORKS lattice Evaluation mode.

3DXpert for SOLIDWORKS offers various shapes of Surface Lattice. They are called Sprouts, Rough Sprouts, Tetrahedron, Truncated Tetrahedron, Connected Quads, Spikes and Solidify.

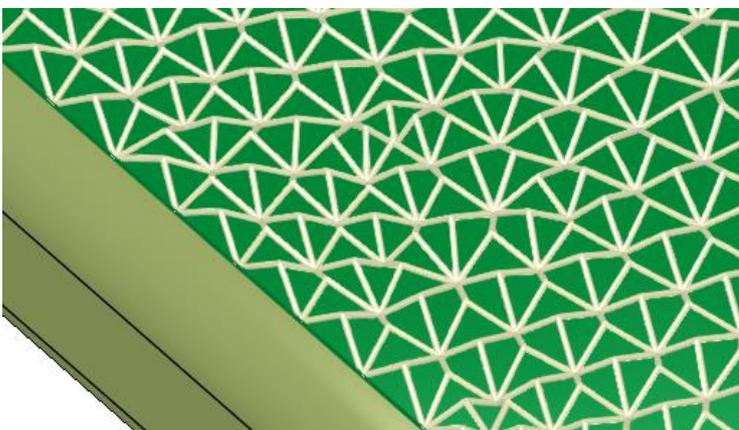
The Surface Lattice Types Available in 3DXpert for SOLIDWORKS



Sprouts Lattice



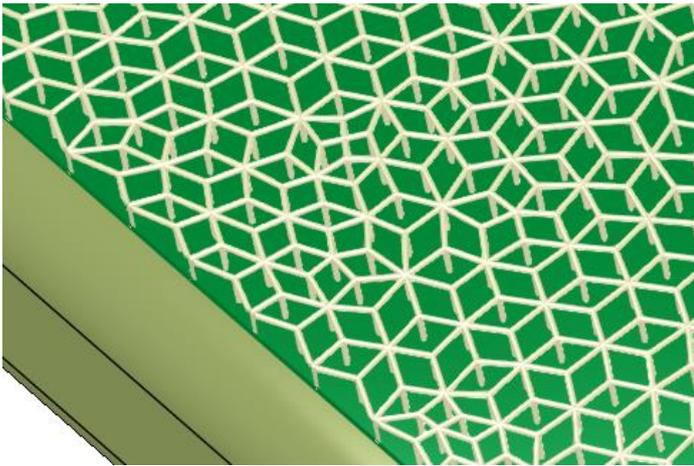
Rough Sprouts Lattice



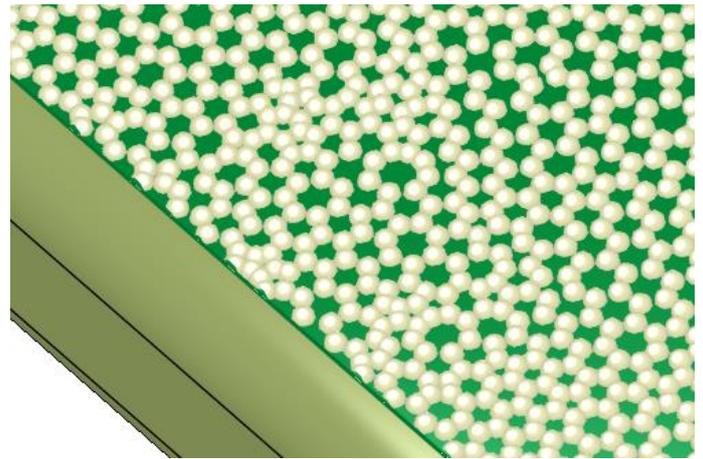
Tetrahedron Lattice



Truncated Tetrahedron



Connected Squads



Spikes



Solidify

Working in Evaluation Mode

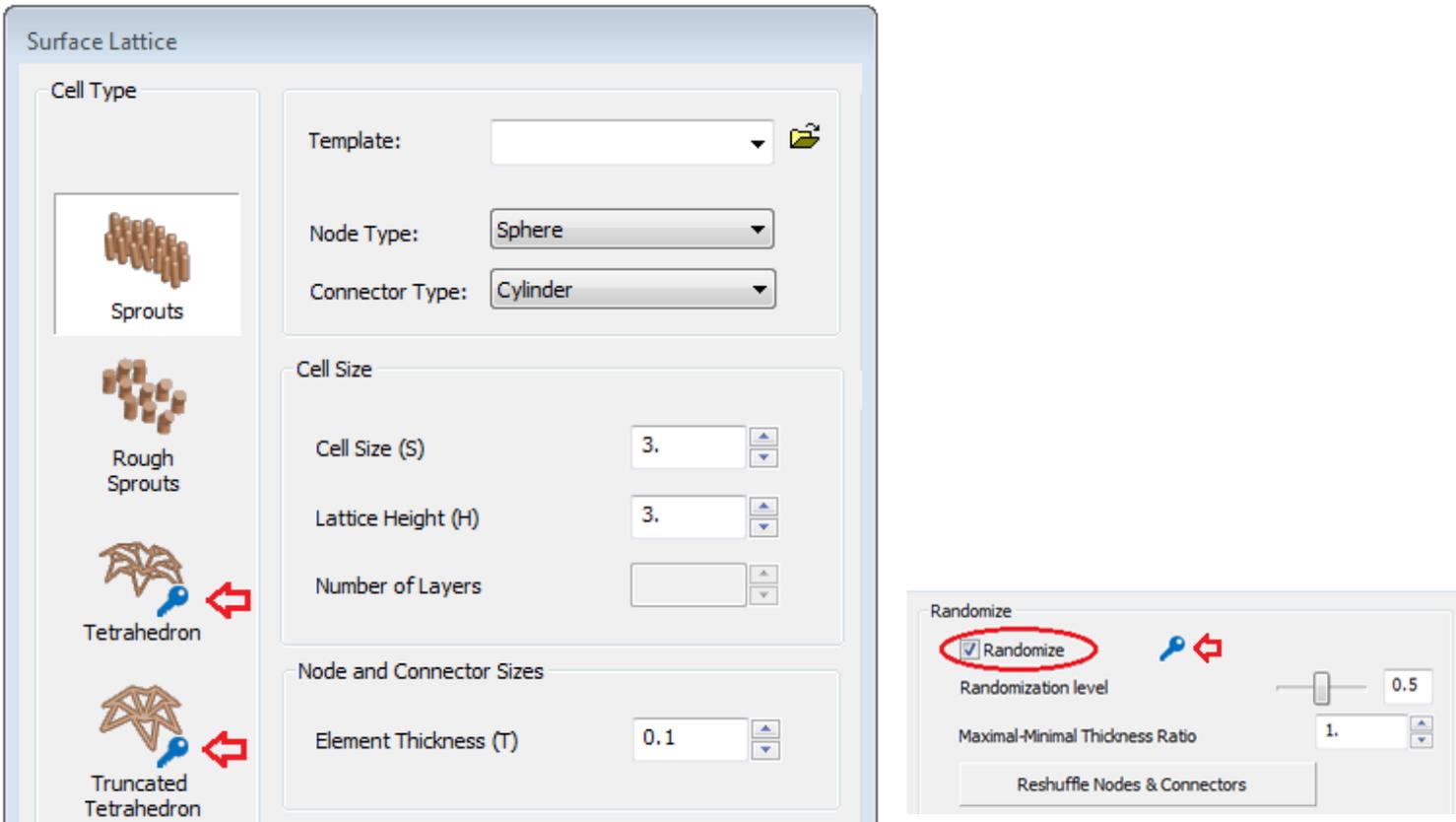
When working with a Standard license, you can create a Sprouts and Rough Sprouts Surface Lattice, which you are able to slice and export to other software.

You can create additional Surface Lattice types (Tetrahedron, Spikes etc...). However, in the Standard package, the additional Surface Lattice types are available in Evaluation mode.

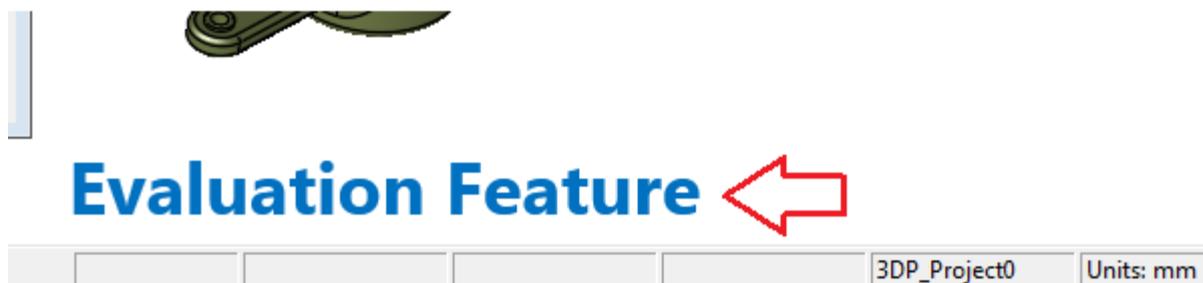
In Evaluation mode, you can create, save, edit and view the additional Surface Lattice types. However, you cannot slice or export them.

To enable slicing and exporting of the additional Surface Lattice types, upgrade your 3DXpert for SOLIDWORKS to either the Professional Lattice Design ADD ON or the 3DXpert for SOLIDWORKS Professional package.

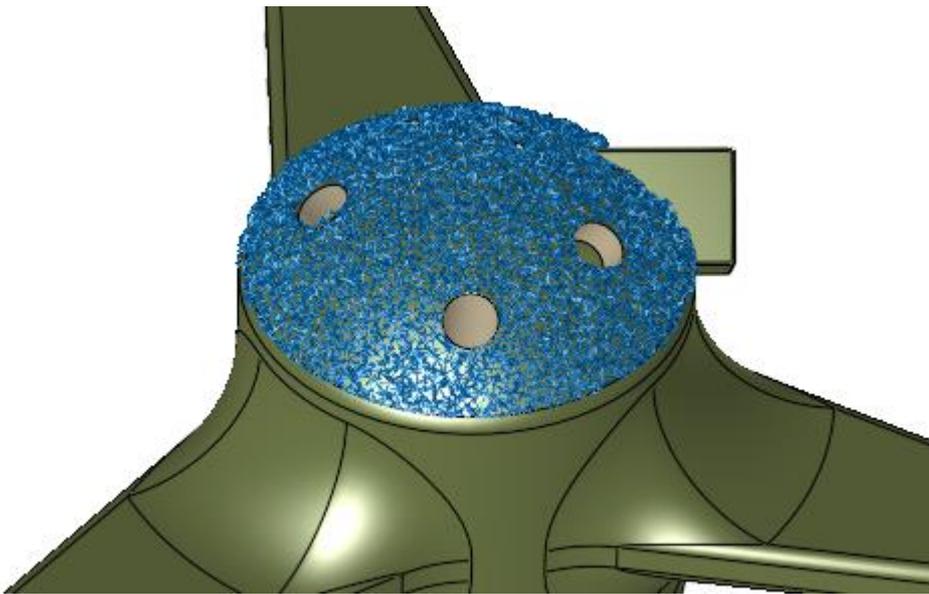
When invoking the Surface Lattice tool with the Standard license, a blue Lock sign  appears next to all the options that are in Evaluation mode, which means that you can create, save, edit and view them, but you cannot slice or export:



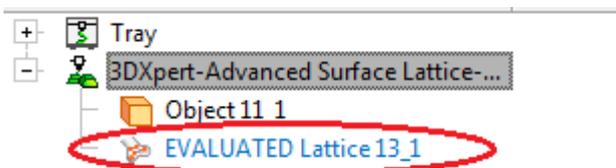
Whenever using an Evaluation feature, an “Evaluation Feature” note will appear at the bottom of the screen:



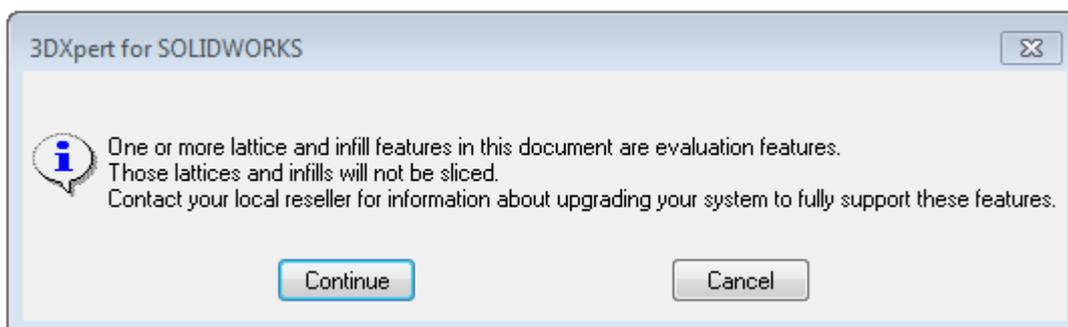
The Surface Lattice that you create with Evaluation features is colored in blue, which indicates that the Lattice cannot be sliced or exported.



The Surface Lattice feature is also colored in blue and the word EVALUATED is added in the prefix.



Attempting to slice Surface Lattice that is in Evaluation mode, 3DXpert for SOLIDWORKS will show the following message:



End of Exercise.