How to Work with Geometries

This section contains links to Geometry objects and tools in V-Ray for Revit.

Overview

V-Ray for Revit adds a number of geometry objects and tools for use.

Geometry objects and tools are available from a number of places in the user interface. Each of the V-Ray geometry types has their respective icon.

Creation of geometry is available from two places in the Asset Editor: the **Create Asset** button and the Geometry category icon (top). If the Geometry category is empty, left-clicking the icon prompts you to create a new asset. Otherwise, it selects the category in which case, right-click opens the creation menu.

The Asset creation dropdown lists remain active when the **Ctrl** key is held, allowing the creation of multiple assets in quick succession. The Asset creation dropdown lists can be activated via the Create Asset button or the Asset Category icons.

Geometries are assigned n the Material and Families tabs of the Appearance Manager.

UI Paths

Creating a geometry:

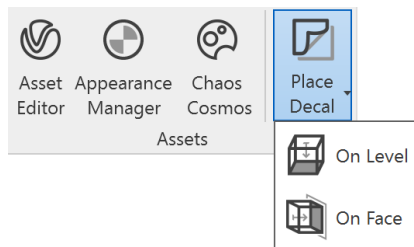||Asset Editor|| > **Geometries** (right click)

||Asset Editor|| > **Create Asset** > **Geometries**

Assigning a geometry:

||Appearance Manager|| > **Materials** Tab > click on V-Ray icon menu

||Appearance Manager|| > **Families** Tab > click on V-Ray icon menu

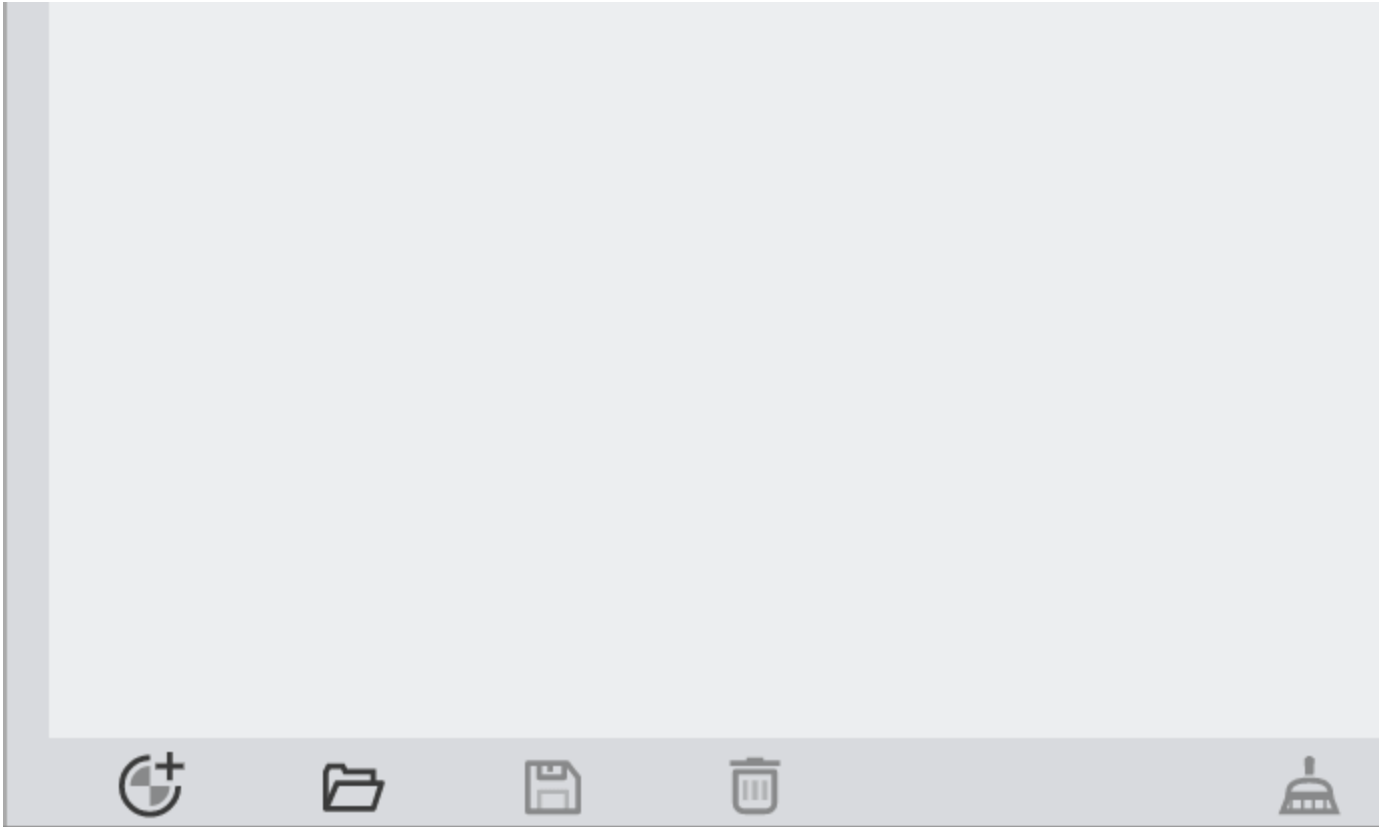||Revit Ribbon|| > **V-Ray** tab > **Assets** panel > **Place Decal** button > **On Level** / **On Face**

V-Ray Asset Editor

Search Scene

Workflow

- Create a geometry in the Asset Editor from the Geometry drop-down menu or from Create Asset > Geometries. Currently, the geometry is not assigned to any object in the scene and it is not visible during render.
- In the Appearance Manager, navigate to the material/object that should have a geometry assigned to it.

Fur and Displacement geometries are assigned in the Materials Tab, while Proxy Mesh and Proxy Scene are assigned in the Families Tab.

- From the V-Ray logo drop-down menu, select the geometry type you want to assign. All objects that have the material assigned to them also acquire the geometry.

In the Appearance Manager, materials that have geometry assignments are indicated with a grey dot in the list.

After an item is selected from the list, at the bottom of the Appearance Manager panel there is an icon indicator which serves to enable/disable that particular assignment. Hovering over it, displays the asset name in a tooltip.
You can also drag-and-drop a V-Ray asset onto an asset in the Appearance manager panel.

Virtual Geometry

V-Ray provides a number of tools that create geometry loaded only at render time, that does not weigh to the project.

Displacement

Displacement mapping is a technique for adding detail to geometric objects without having to model it first.

Fur

The Fur option creates a simple procedural fur at render time. It is commonly used for simulating grass cover or textile fibers.

Proxy Mesh

The Proxy Mesh imports geometry from an external mesh, which only loads the full details at render time. The geometry is not present in the model and does not take any resources.

Proxy Scene

The Proxy Scene imports a .vrscene file as a proxy. Containing geometry, materials and lights, these files are render-ready and are fully loaded only at render time too.

Scatter

The V-Ray Scatter creates instances of objects using the surface of another objects to generate points.

Decal

The V-Ray Scatter creates instances of objects using the surface of another objects to generate points.