

MeshBoolean



Version 1.0 - October 2017

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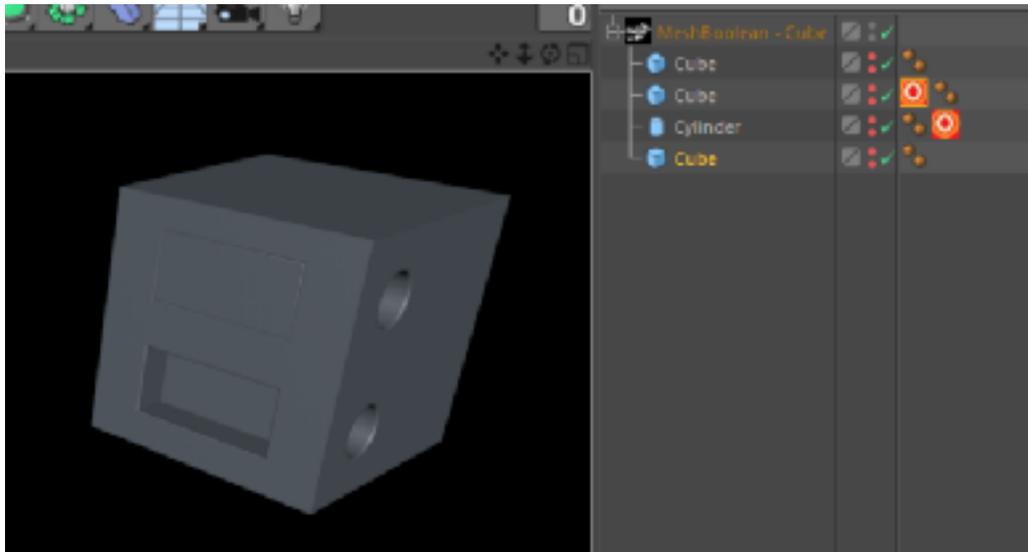
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1. Introduction

“MeshBoolean” is a Cinema 4D plugin that will speed up your solid modelling process. Basically it has a well thought user interface, together with an easy workflow, that will speed up your solid modelling process. No need to use Null, Connect or Symmetry Objects! And the good thing - it is all is parametric!

Here a typical example:

Only 4 objects and two tags will generates this beautiful result.



Using tags you can define Boolean Type, Bevel parameters, Symmetry options and much more. Imagine doing this with standard Cinema4D tools and objects!

To add objects to the MeshBoolean quickly (using short cuts and/or Icons), we added 4 Command plugins. For each MeshBoolean tag (see below), we added a Command

For more information, tutorials and FAQ, please visit our website at www.thegreatsummit.com.

Note: Internally the plugin uses Cinema 4D’s Booleans and thus has the same Boolean limitations.

2. Installation

When you buy the plugin from our website, you will receive an email with a zip file containing the plugin and one year support.

Just unzip the zip file in the Maxon Cinema 4D plugins folder and you are ready to go.

Compatibility

- CINEMA 4D R17 or later (latest build for each version).
- Studio, Visualize, Broadcast and Prime, Student.
- Both Mac & PC builds are included.
- 64 bit only.

Note: For this plugin, license and support policy has been changed!
This plugin does not require a license file based on your Cinema 4d license.
So, when you buy the plugin, you do not need to enter your Cinema 4d.

3. Using MeshBoolean

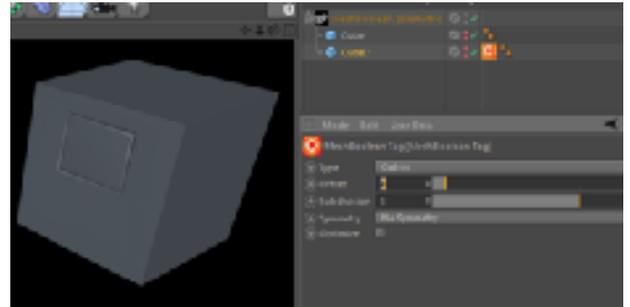
Using MeshBoolean is very easy.

We put a lot of effort in making this plugin easy and with minimal mouse clicks to use.

Basically you add as much child objects to the plugin and define per child the type of Boolean, Bevel options and Symmetry options.

Let's build our example from above.

- Start the MeshBoolean plugin
- Add two cubes, one smaller than the other and place the 2nd cube where you want it
- Set the visibility of the two child's to Off.
- Add a MeshBoolean Tag to the 2nd child.
- Set Type to Cut-In and set the Bevel options.

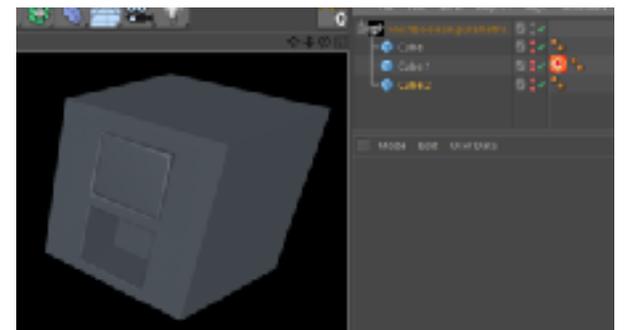


On the right the first result.

- Now add a 3rd cube to MeshBoolean, scale it and place.
- Set the visibility Off

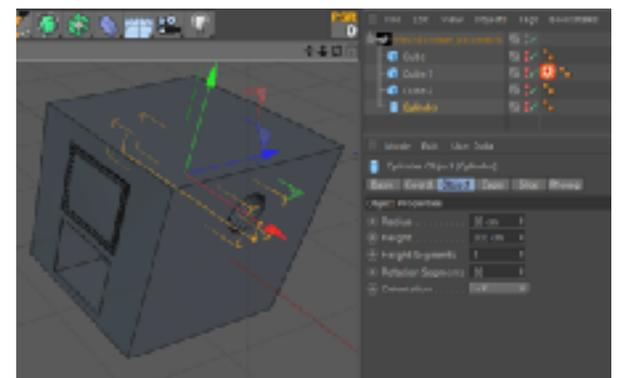
Because there is no tag added, the default values now apply: Type = A Subtract B, Bevel Offset = 1 and Bevel Subdivision = 0.

On the right the second result.



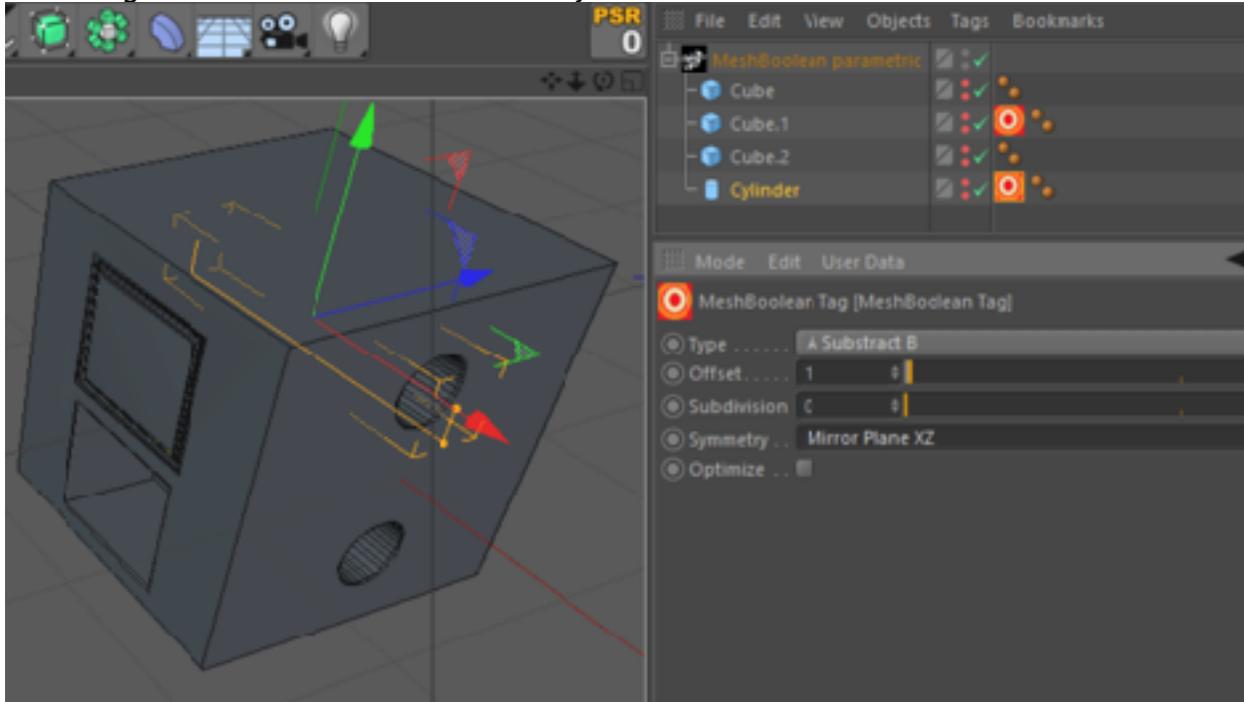
- Now add a Cylinder to the MeshBoolean with Orientation +X, scale it and place it.
- Set the visibility to Off.

Again, because there is no tag, the default values now apply: Type = A Subtract B, Bevel Offset = 1 and Bevel Subdivision = 0. So, let's add a MeshBoolean tag and set Symmetry.



- Add a MeshBoolean tag and set Symmetry to Mirror Plane XZ

This will give us our final result. Isn't it easy!



3.1 MeshBoolean Tag

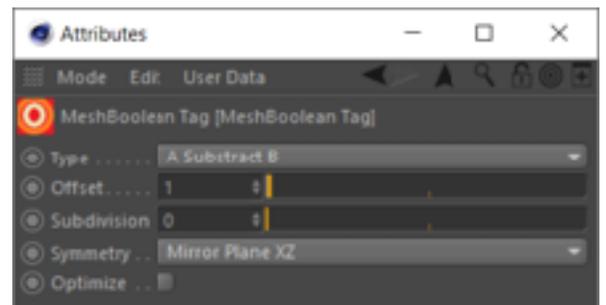
With the MeshBoolean tag you define per child the Boolean Type, Bevel options and Symmetry Options.

Following types are defined:

- A Subtract B
- Cut-In
- Union Melt
- A Intersect B

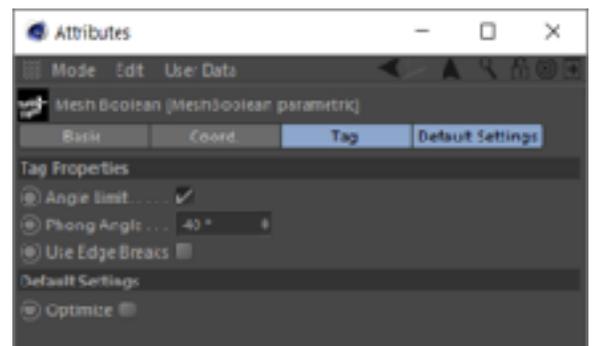
Note: If there is no tag, the default values apply: Type = A Subtract B, Bevel Offset = 1 and Bevel Subdivision = 0.

Note: The first child object of the MeshBoolean is considered the master, the A object. Adding a MeshBoolean tag to this master will have no effect.



3.1 MeshBoolean Phong tag

On the final resulting object, a Phong tag is added. You can change the settings for this bevel, using the MeshBoolean parameters.



4. MeshBoolean Command

To add objects to the MeshBoolean quickly (using short cuts and/or Icons), we added 4 Command plugins. For each MeshBoolean tag we added a Command:

- MeshBoolean Command Subtract
- MeshBoolean Command Cut-In
- MeshBoolean Command Intersect
- MeshBoolean Command UnionMelt

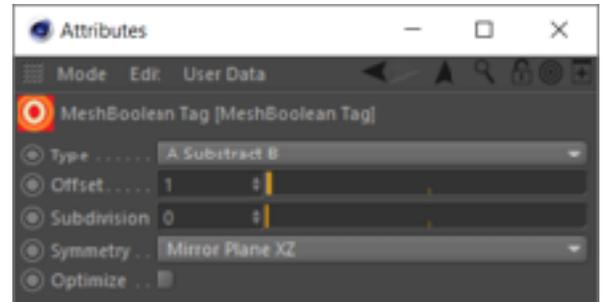
You can define your own short cuts and icons to each of the above Commands.

Before you run the command you must select two objects:

- If none of the two selected objects is a MeshBoolean object, a new MeshBoolean object is inserted and the two selected objects are inserted as children of the MeshBoolean object.
The visibility of the children is set to off and the corresponding tag is added with the corresponding type set to the second child.

Note The objects are inserted according to the sequence you selected the objects.

- If one of the objects selected is a MeshBoolean object, the other selected object is inserted as the last child of the MeshBoolean.
The visibility of the child is set to off and the corresponding tag is added with the corresponding type set.



5. Optimize – Doen we dit nog?

MeshBoolean Optimize	MeshBoolean Tag Optimize	Result
False	False	No optimize fort his child
False	True	Child is optimized
True	Don't care	All is optimized

6. Recommendations

Internally the plugin uses Cinema 4D's Booleans and thus has the same Boolean limitations.

Adding or moving objects will sometimes screw up the mesh.

Moving objects slightly or changing the sequence of the objects will, in that case, often give a better result. Common "Boolean" sense is your best option.