

Creating a Keychain Hole on a Model with the Boolean Tool

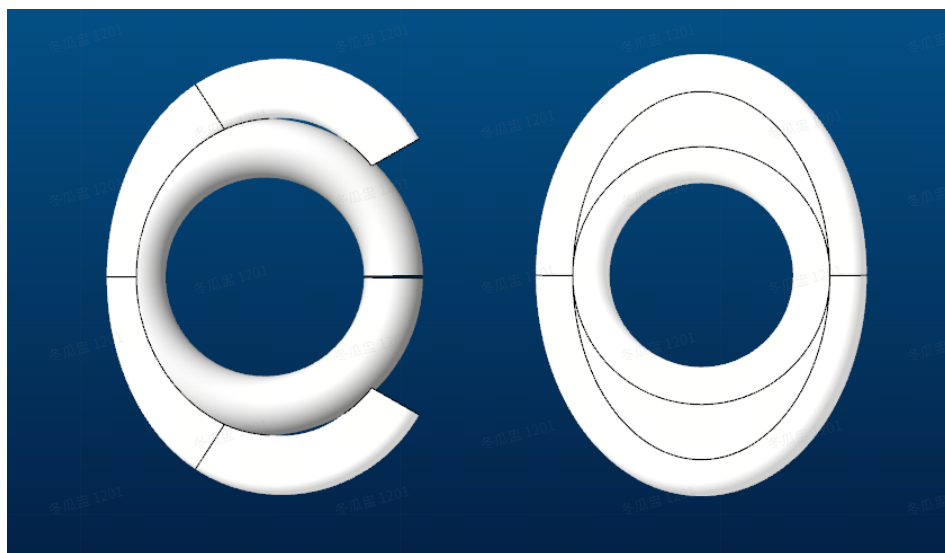
If you find a cute model and want to make it into a hanging decoration but without a hole to match the keychain? Following the steps below will help you generate the hole on your model that will fit the keychain you have.

1. Creating a suitable keychain hole boolean tool

To allow the ring of the keychain to pass through the model, the ring must be opened, threaded through the hole, and then closed. To accommodate the space required for the ring's movement within the hole, we can roughly categorize it into three parts:

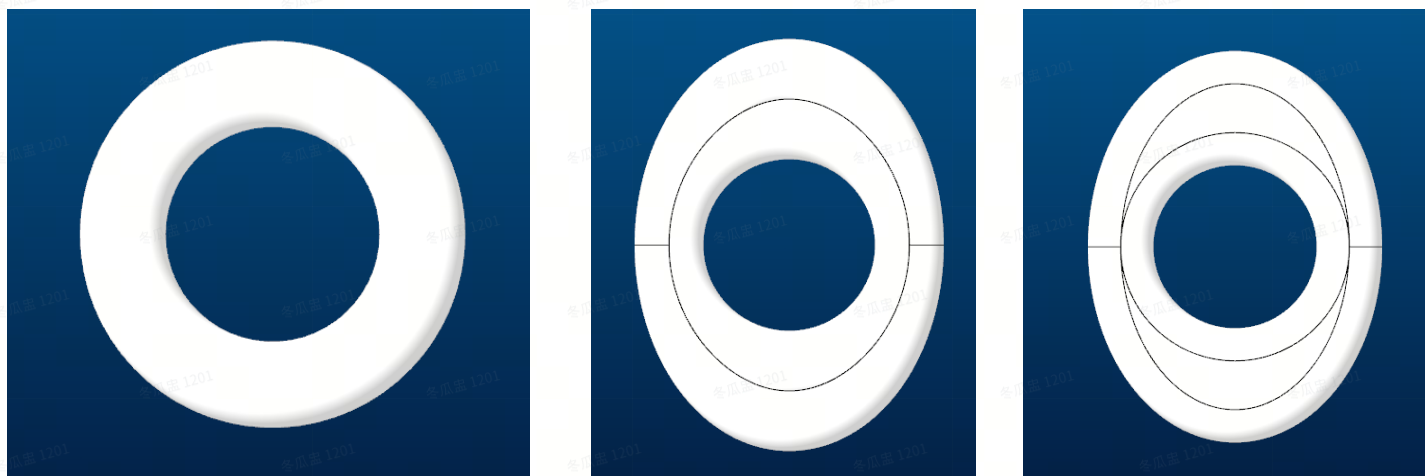
- an oval for the open state,
- a circle for the closed state,
- an additional tube diameter for angled placing and removal.

On the left side, there are rings depicting the open and closed states, while on the right side, corresponding spatial entities are displayed.



Using the keychain MA001 as a reference, begin by measuring and illustrating the diameter in its closed state. Subsequently, sketch the ring with a diameter expanded by roughly 25%. Then, employ a tool to open the ring, ensuring that the aperture size aligns closely with the inner disk's diameter in its closed configuration. Measure the open ring's height, sketch the corresponding short axis to match the closed ring's diameter, creating an elliptical ring structure

along its lengthier side. Lastly, smoothen the end face between the two rings. If measuring the opened ring's dimensions isn't feasible presently, consider setting the ellipse's long axis to 1.5 times the short axis.

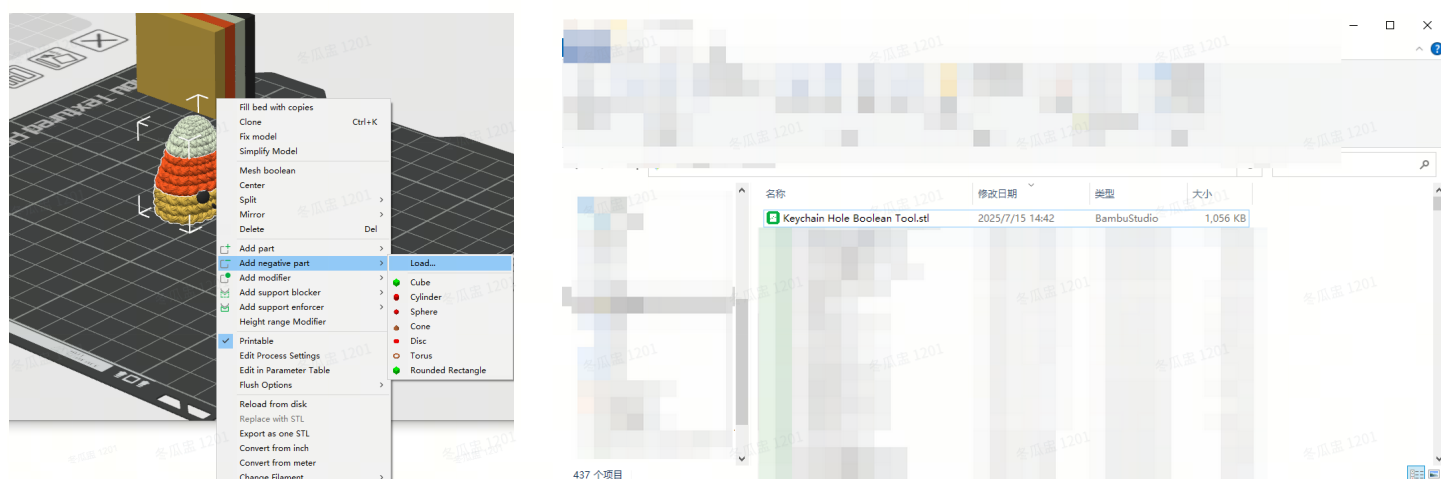


The Keychain Hole boolean tool for the keychain MA001 can be downloaded in the *3D model* of the page.

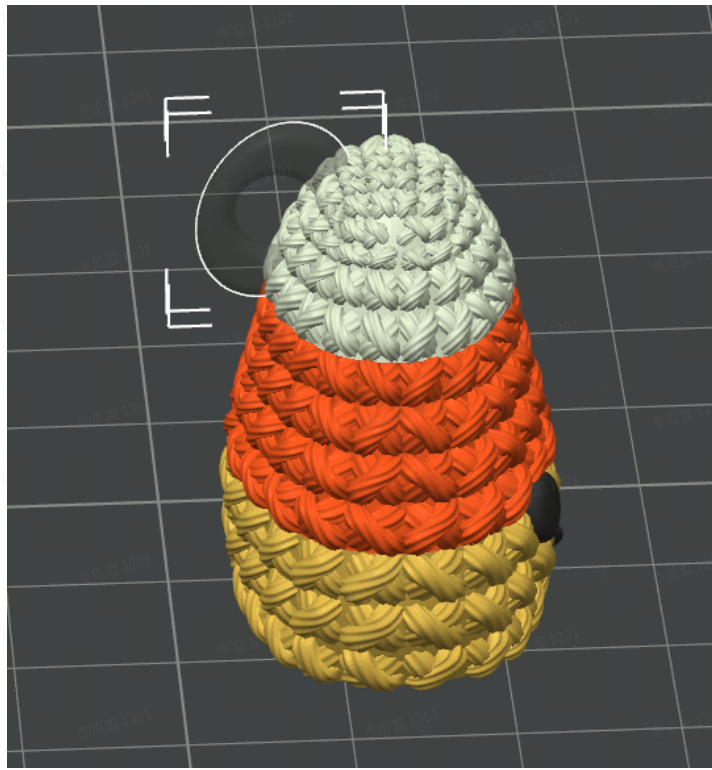
2. Use the negative part feature to generate holes in the model.

Opening the model you want to turn into a hanging decoration at Bambu Studio, here is an example of @IDMyron's [knitted halloween keychains](#).

Select the model to which you want to add a hole, right-click to open the menu, choose 'Add negative part -> Load', and then select the 'Keychain Hole Generator' file.

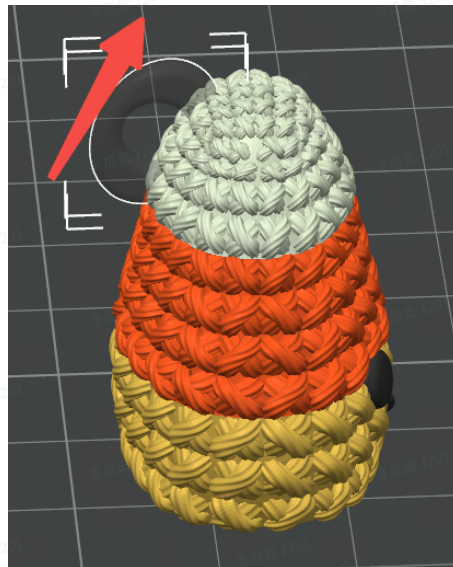


Drag the ring to the location where you want to generate the keychain hole.

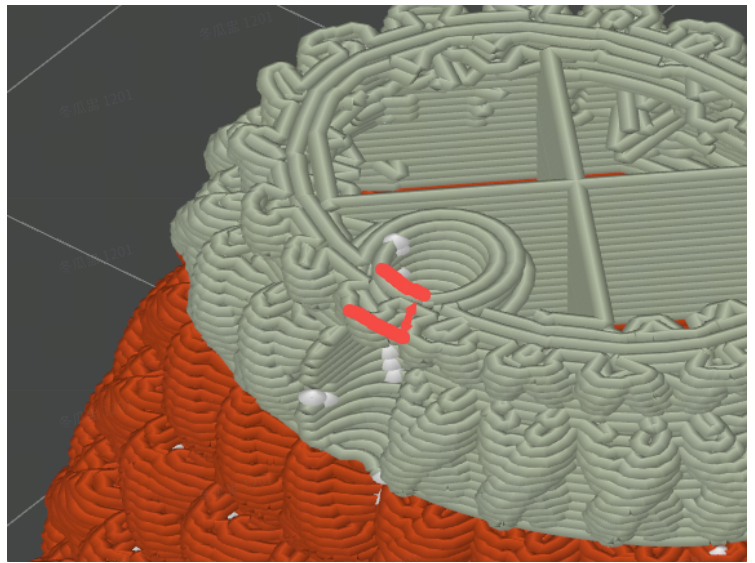
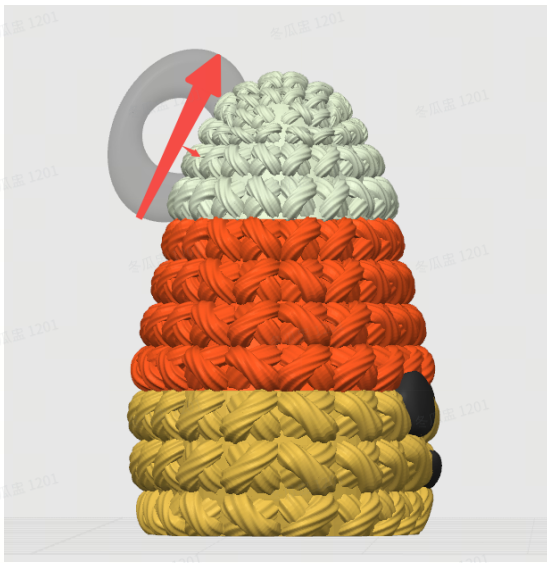


Please note the following points when you place the ring.

1. The longer end of the ring needs to be almost tangent to the outside of the model.



2. The depth within the ring should be slightly less than the centerline. Excessive depth may result in the need for a very small hanging angle, necessitating support and complicating the installation of the keychain. The depth should only guarantee a thickness comparable to that of 2-3 layers of walls to avoid damage during pulling. You can monitor the hole creation process in preview.



Print and install the keychain to get your unique keychain hanging!