

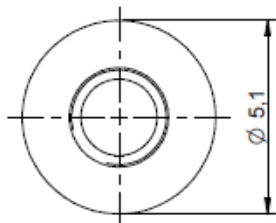
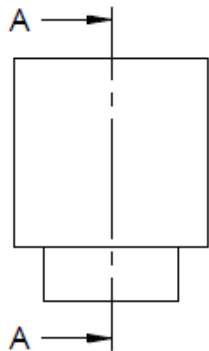
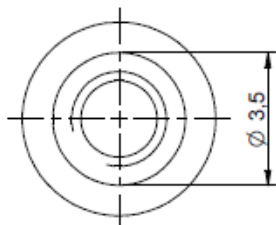


How to create a Padstack including a flash based symbol

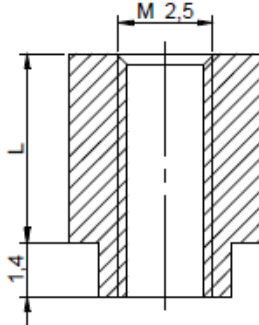
How to create a Padstack including a flash based symbol

This app note will describe the best process to create a padstack for the mechanical fixing shown below. This requires a padstack using a non-plated hole, design layers for top, internal and bottom, soldermask layers and a flash based symbol for the stencil suggestion (Pastemask_Top). We will also include a keepout area for the copper layers. This can all be achieved from within Padstack Editor.

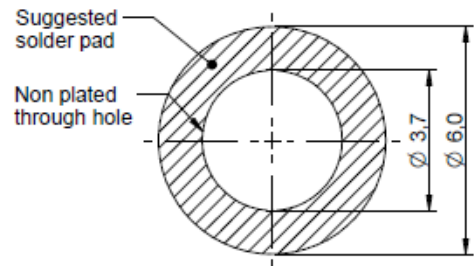
Dimensions: [mm]



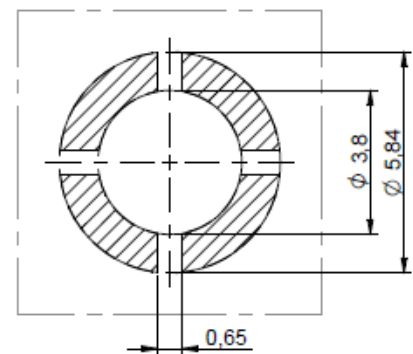
sectional drawing A-A



Recommended Land Pattern: [mm]

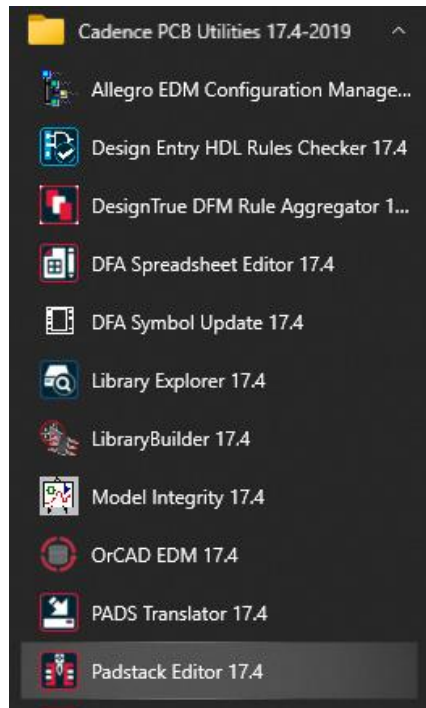


Stencil Suggestion:

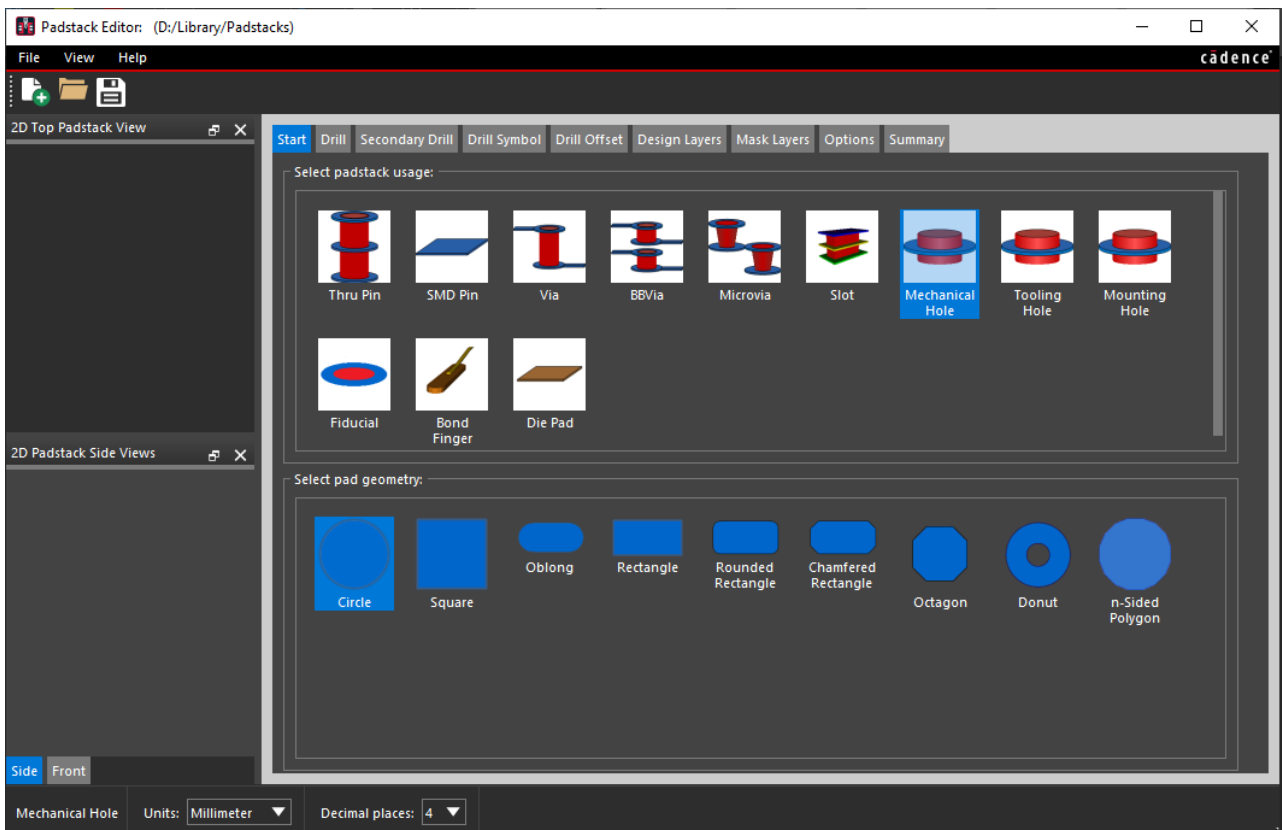


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To start launch Padstack Editor using Windows button – Cadence PCB Utilities 17.4-2019 – Padstack Editor 17.4

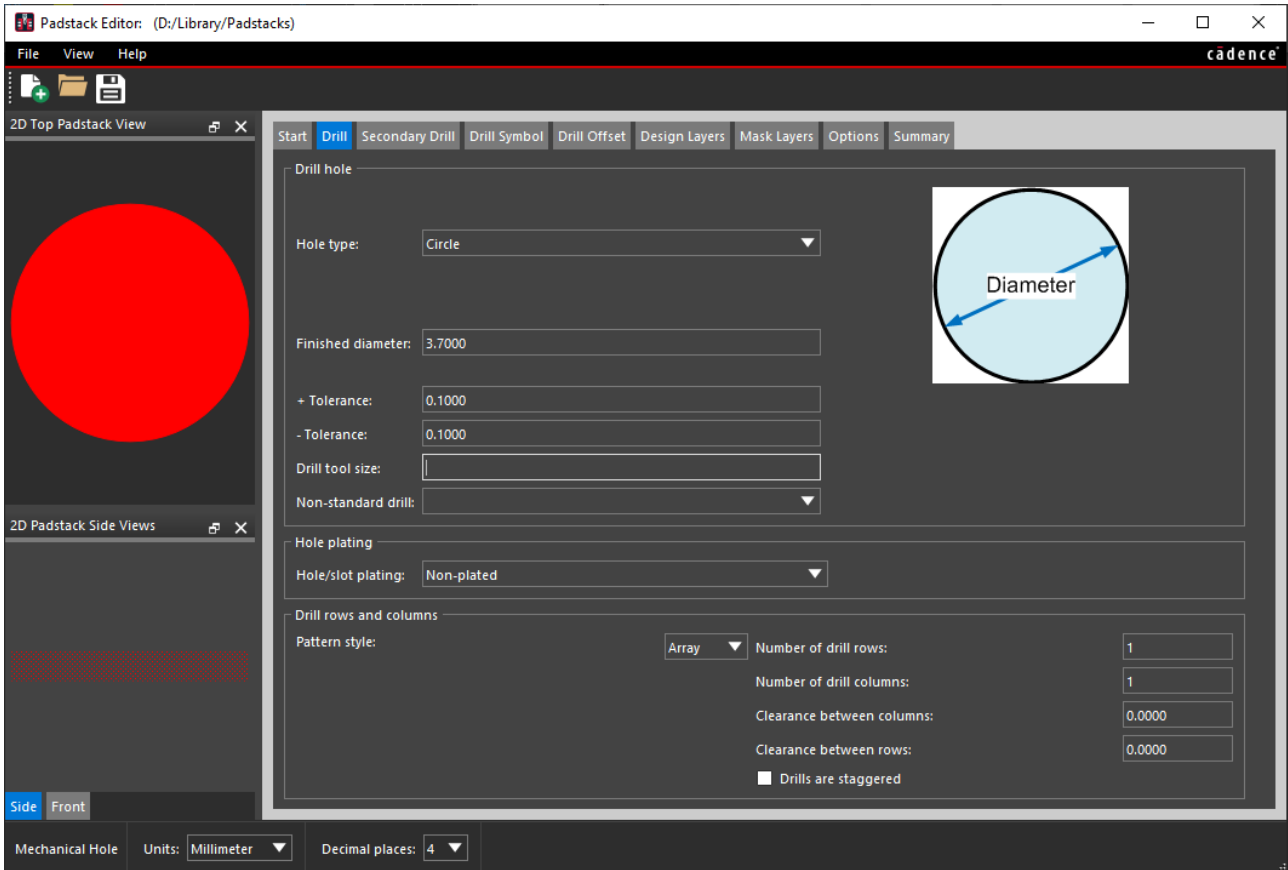


We require a non-plated hole so in this example we will choose a Mechanical Hole with a Circle pad geometry on the Start tab. You should also set the Units and decimal places to the required values (millimeter and 4 in this example).

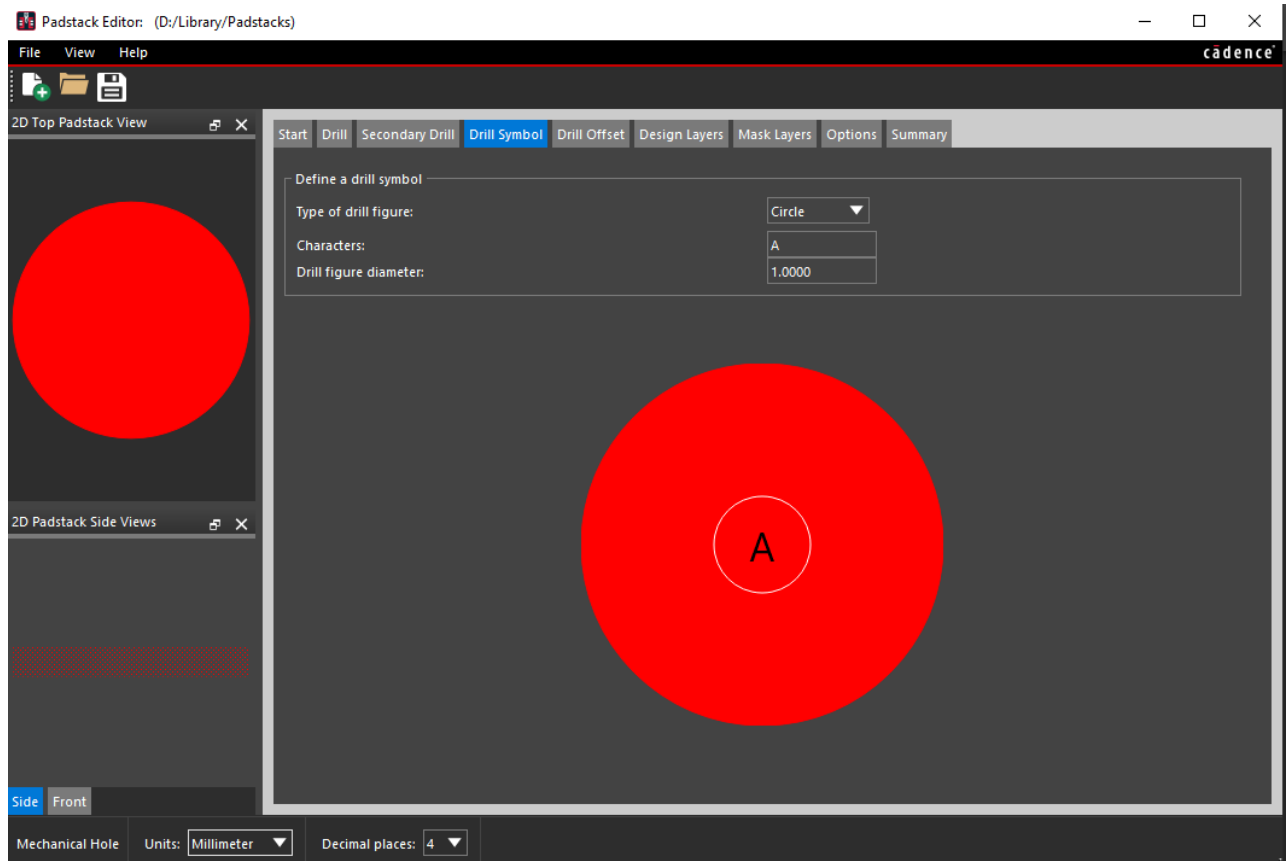


On the Drill tab specify the finished drill diameter, tolerance and plating type (3.7, 0.1 and non-plated in this example).

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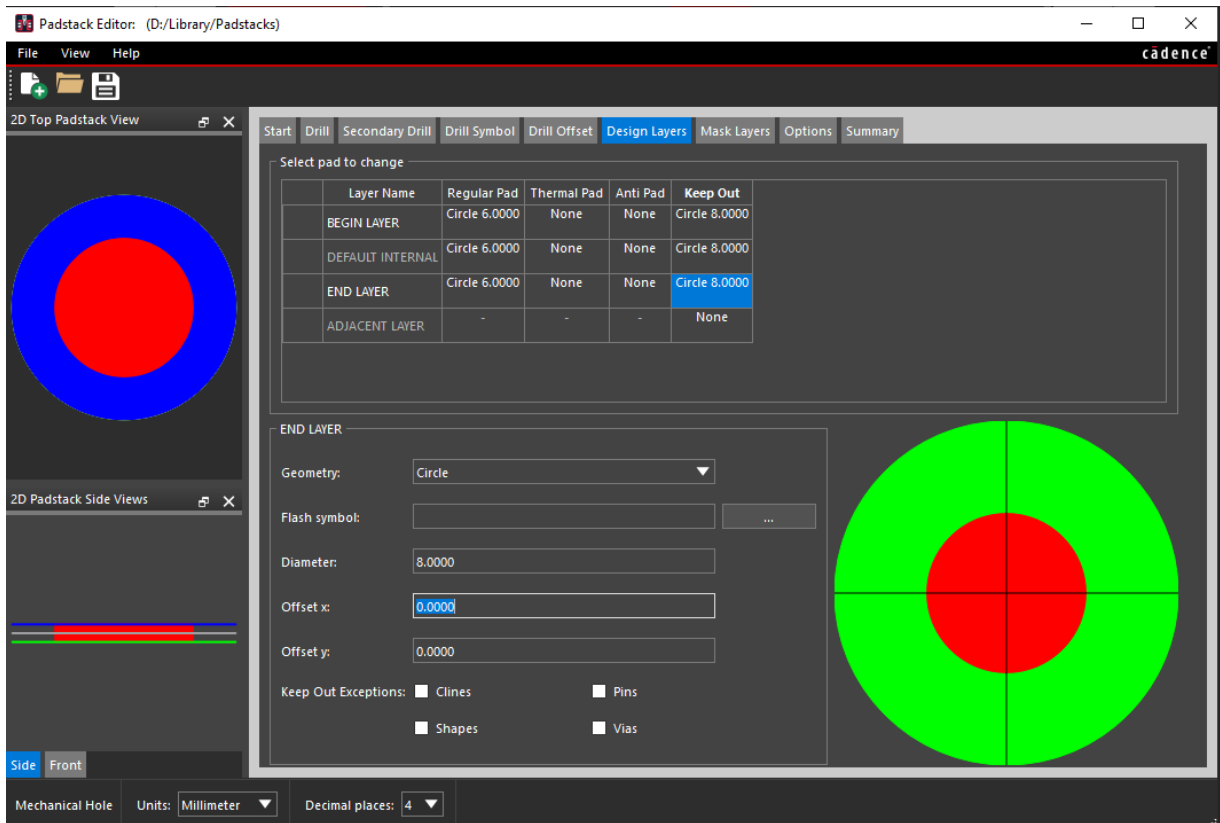


On the Drill Symbol tab, specify a Type of drill figure, character and drill figure diameter (Circle, A and 1 mm).

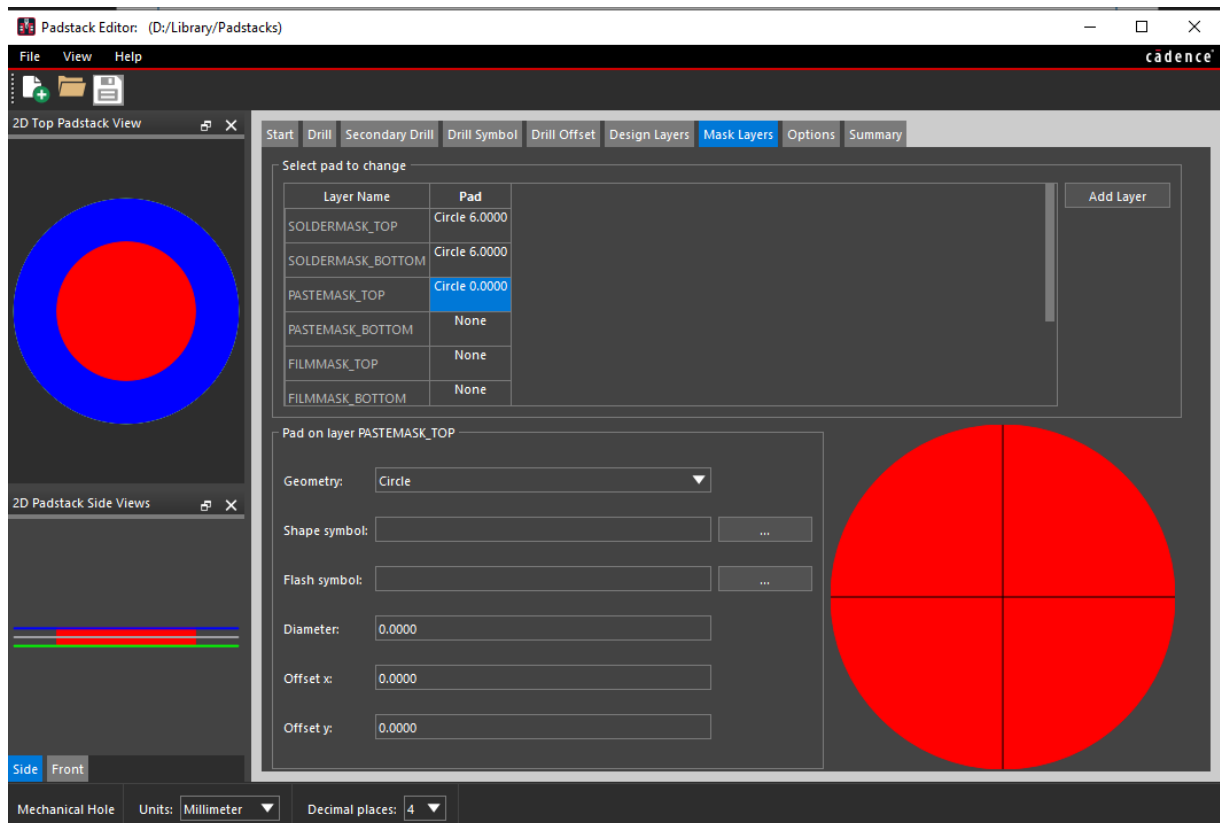


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On the Design Layers tab, specify a Regular Pad as Circle with a diameter of 6 mm to match the datasheet. We will also include a Keepout circle of 8 mm. You can add exceptions to this keepout area if required at the bottom of the form. Once set for the BEGIN LAYER, copy and paste to the DEFAULT INTERNAL and END LAYER.

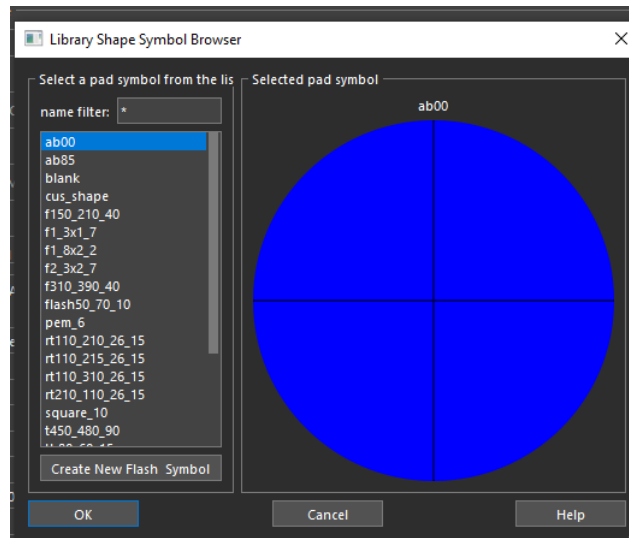


On the Mask Layers tab specify a Circle diameter 6 mm for the SOLDERMASK_TOP and _BOTTOM.

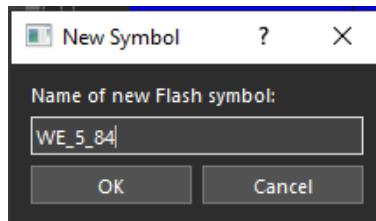


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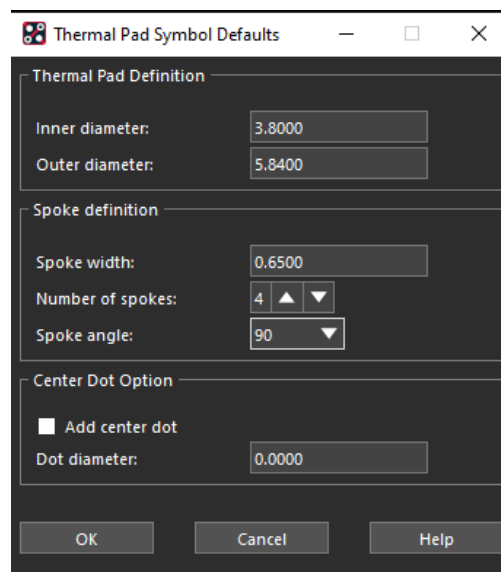
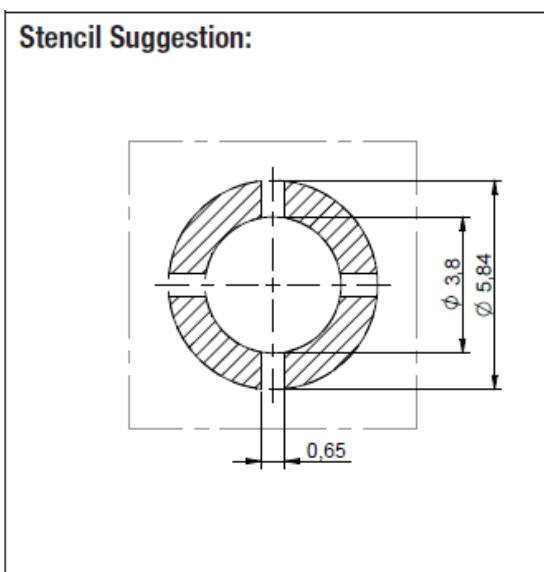
The Final part is to define the Stencil suggestion. Choose the PASTEMASK_TOP entry and then at the bottom of the form choose the ... button to browse for a Flash Symbol. (Your view could be different due to your available flash symbols).



In this example we need to create a new flash symbol so choose that option on the form. Specify a name and click OK.

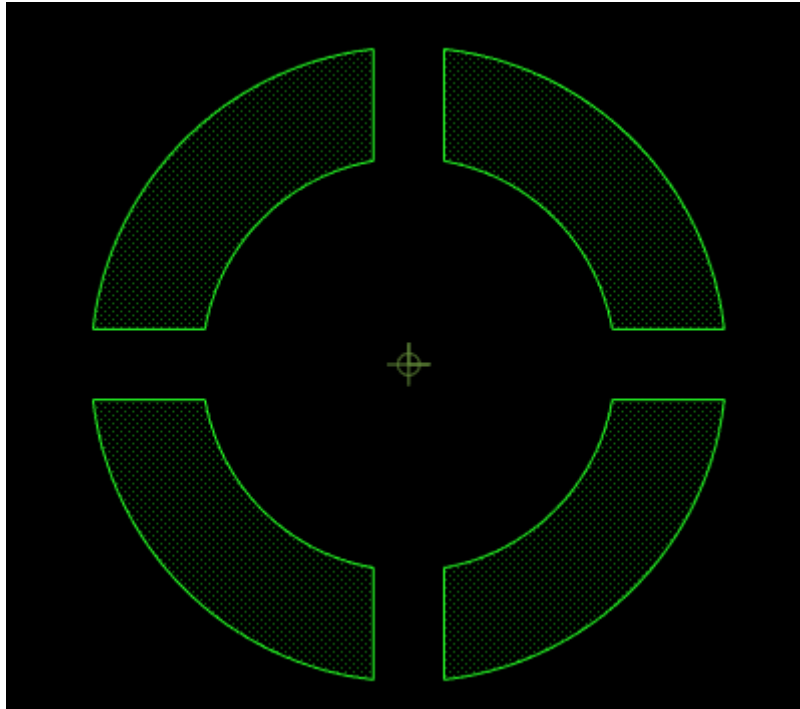


PCB Editor is launched with a new flash symbol of the name specified. WE_5_84 in this example. To create the flash symbol choose Add – Flash then populate the required values in the form. This is specified by the datasheet



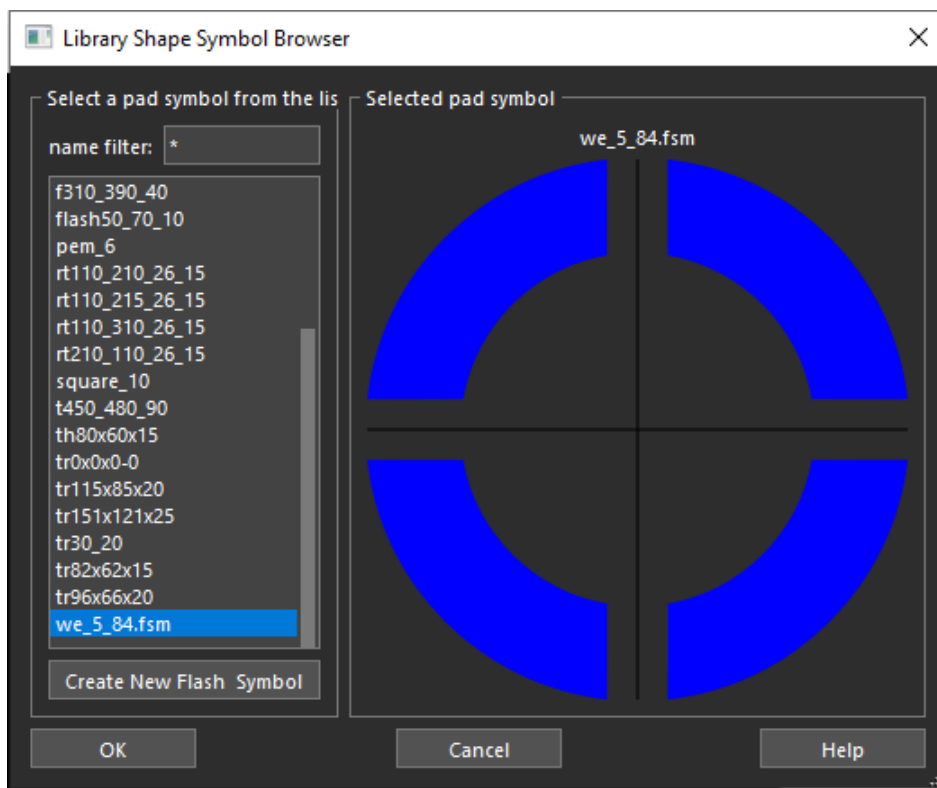
Click OK and the Flash Symbol is generated and displayed. The centre of the flash is the origin which is set as 0,0.

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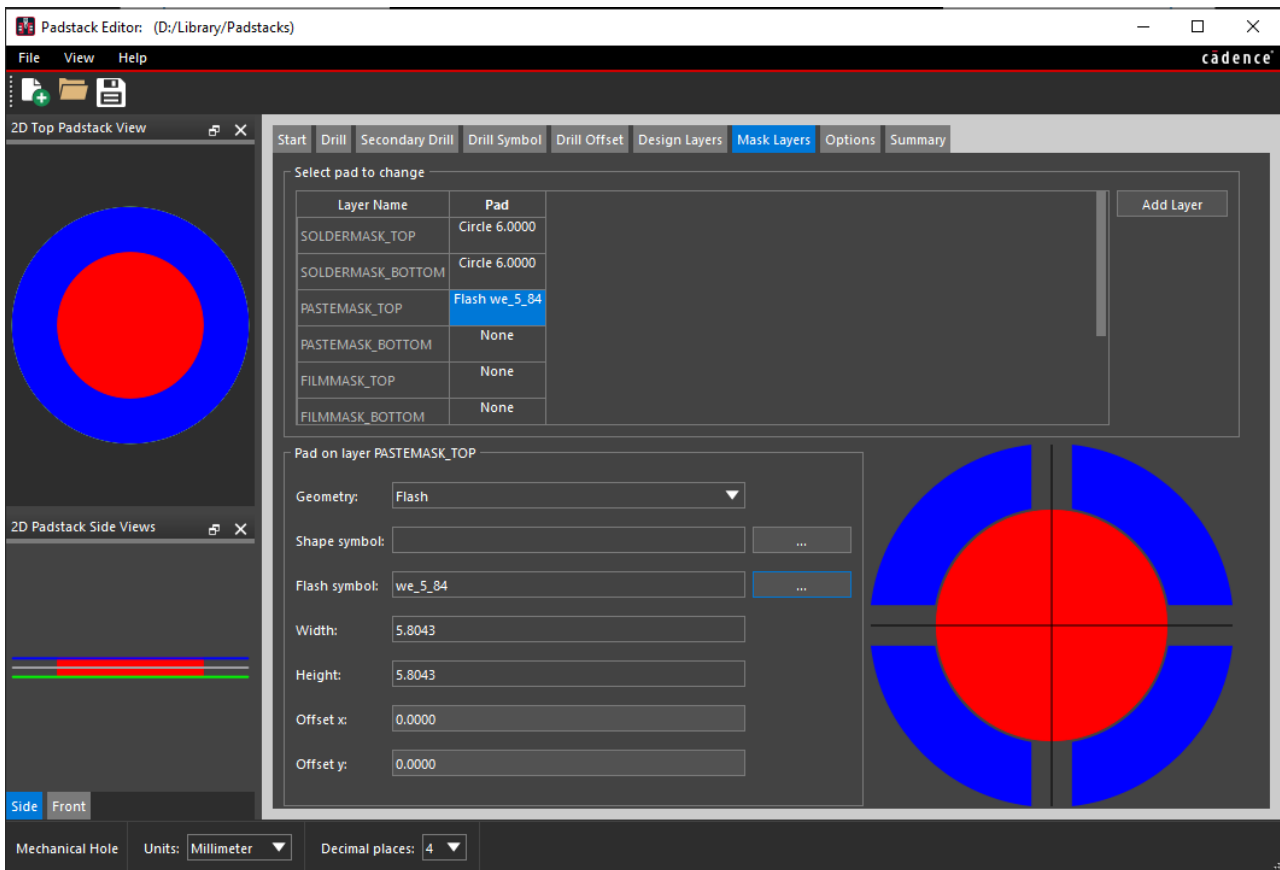
Save the Flash Symbol and close PCB Editor. **Important – make sure that the Flash Symbol (filename.dra and filename.fsm) are stored in your psmath library location.**

Choose the newly created flash symbol from the list in the form below and click OK.



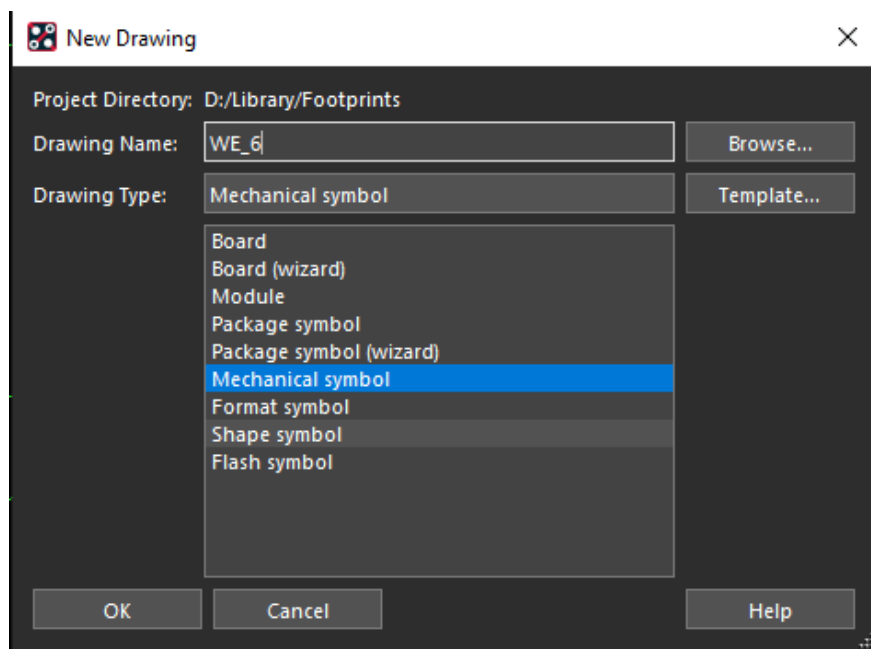
The flash symbol is now listed as the entry for the PASTEMASK_TOP definition as shown below.

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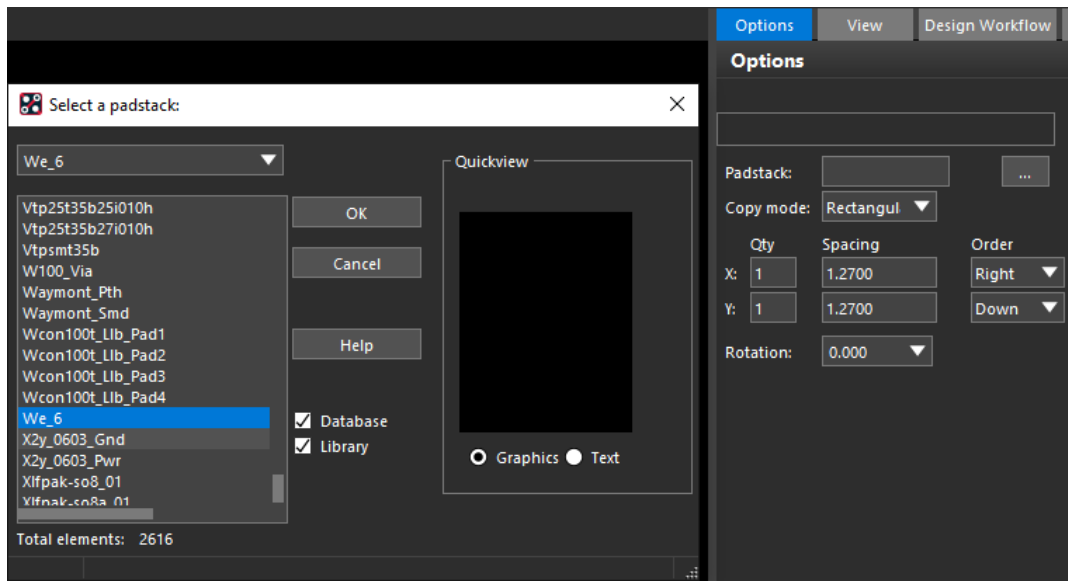
Save the Padstack. **Important – make sure that the Padstack (filename.pad) is stored in your padpath library location.** Close Padstack Editor and launch PCB Editor to build the Mechanical Symbol.

Choose File – New and populate the form as required ensuring that Mechanical Symbol is selected as the Drawing Type. **The directory location should also be your psmppath location.**

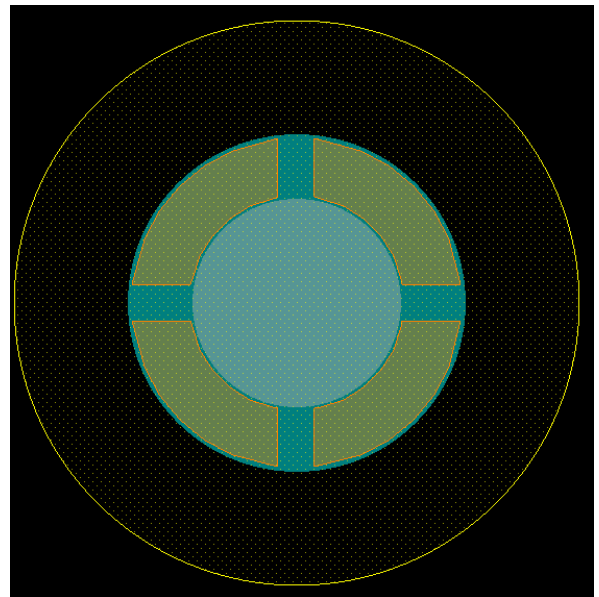
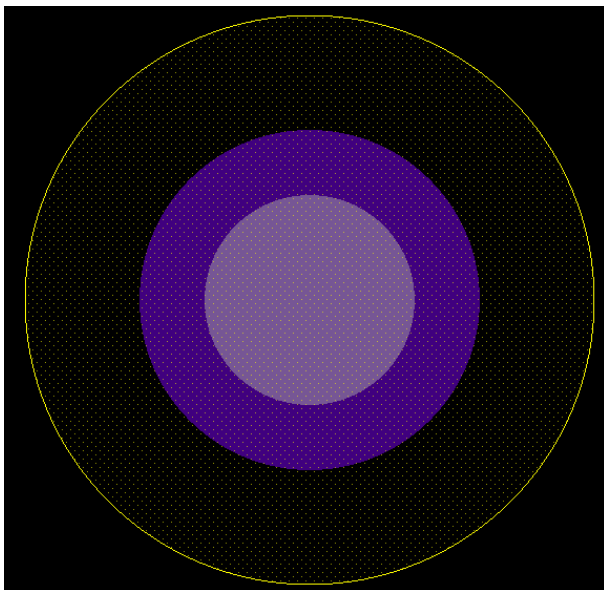


Use the command Layout – Pins and then in the Options pane use the ... button to browse for the padstack you generated above.

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Once selected, the pad is attached to your mouse ready to place, Position at the symbol origin or 0,0 (This can be changed later using the Setup – Change Drawing Origin command if preferred). The views below show the top / bottom copper layers and the soldermask_top / pastemask_top where you can see the flash symbol.



You should also add a circle on the Package Geometry / Placebound_Top layer which will stop components being placed too close to the mounting hole. In this example the Placebound circle added is a 10 mm diameter.

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