3DXpert™ for SOLIDWORKS®

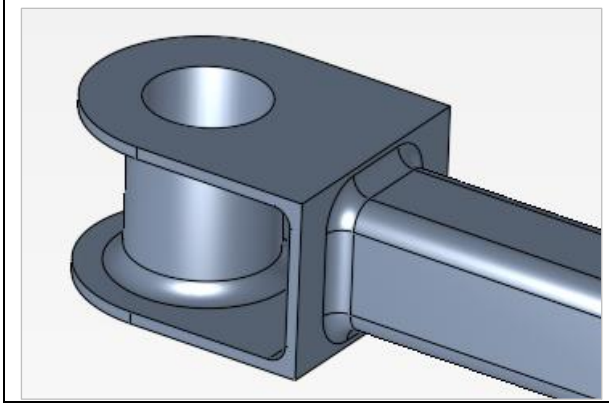
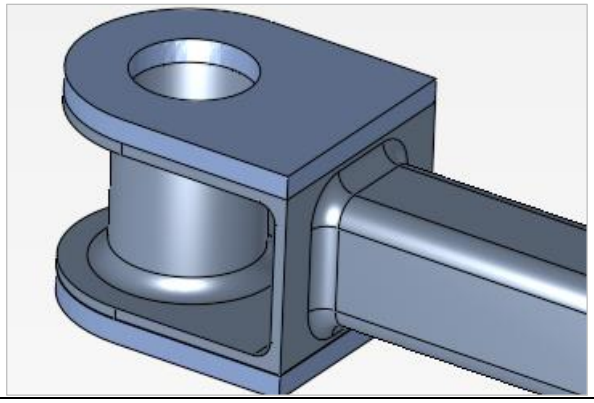
Adjust Model for 3D Printing

Machining Offset

14,0200,1599,1024(SP2)

3D SYSTEMS

In this exercise, we will learn how to add **Machining Offset** to a part placed on the tray.
In some cases, we may need to add some material on certain areas. This adds local thickness on the model. After the printing, these areas are machined (on a CNC machine). These are 'Machining Offsets'.

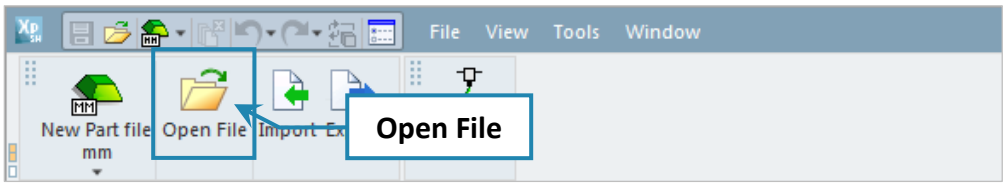
Part before **Machining Offset**	Part after **Machining Offset**
	

To use this command we need to follow few steps (guided):

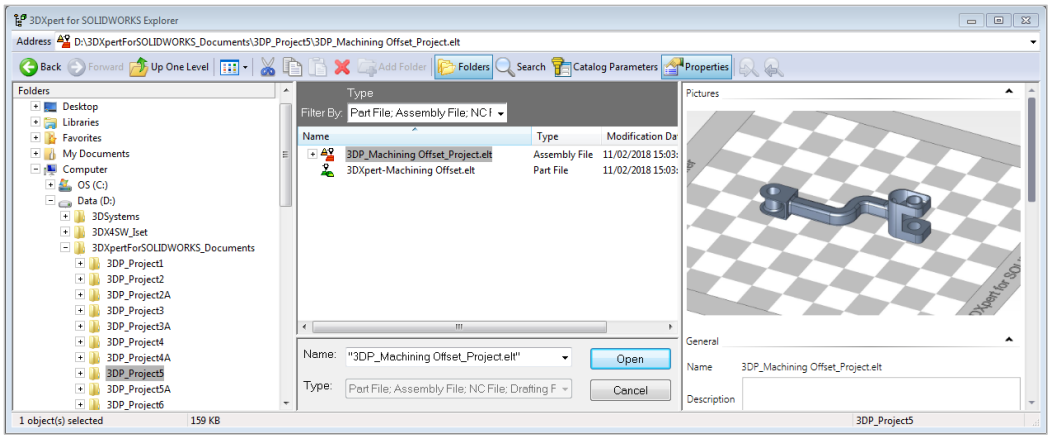
- Open downloaded **3D Printing Project** from the Initial screen.
- Use **Machining Offset** to add some material to part on tray.

Notice/ Remember		Left mouse button name is ***"pick"***
		Middle mouse button name is ***"Exit"***
		Right mouse button name is ***"Click"***

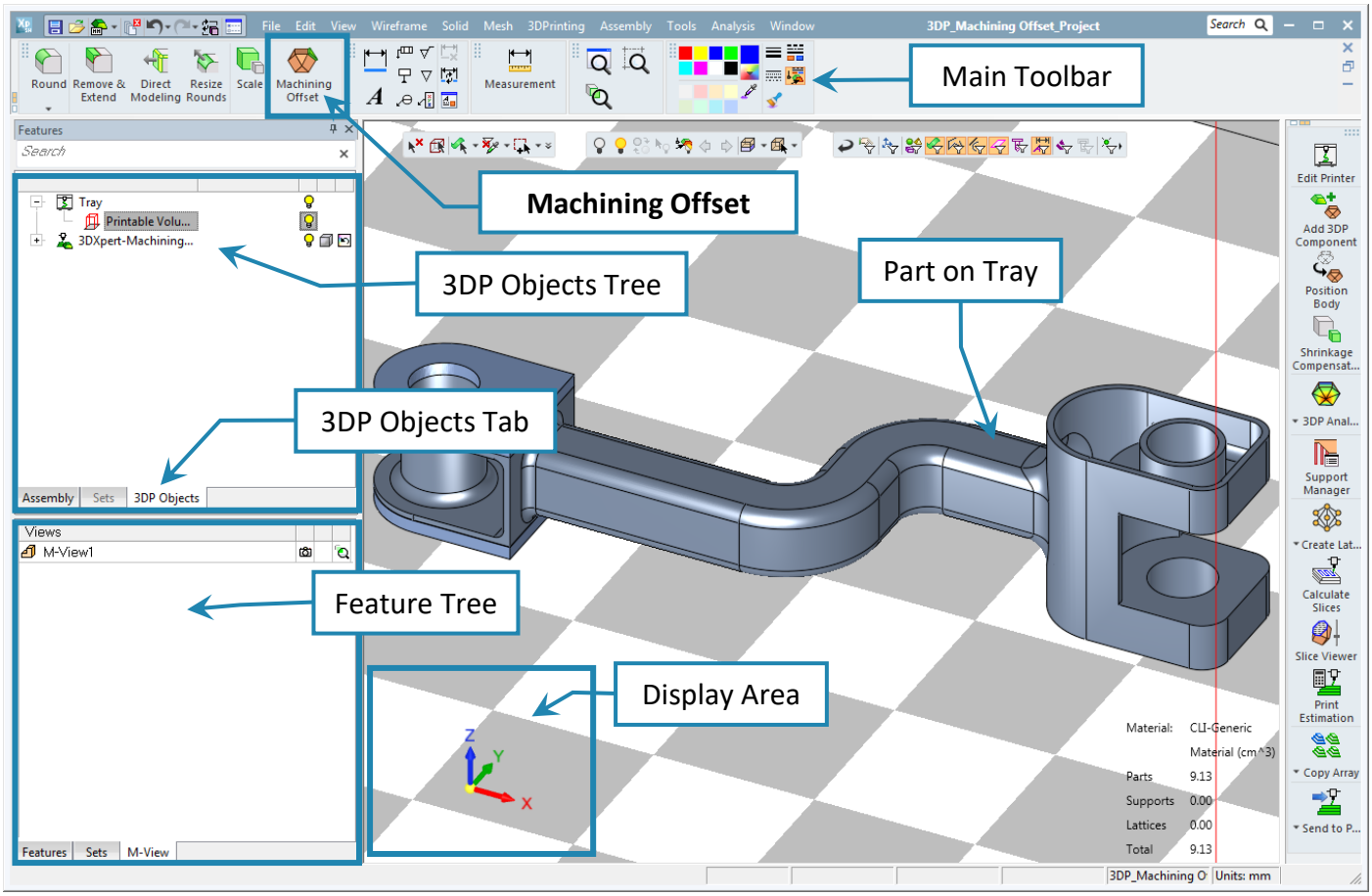
1. From the Initial screen ***pick*** **Open File**.



2. This command will open the **3DXpert for SOLIDWORKS Explorer**.
   Load project file **3DP_Machining Offset_Project.elt** from the same folder where you have located the downloaded files.

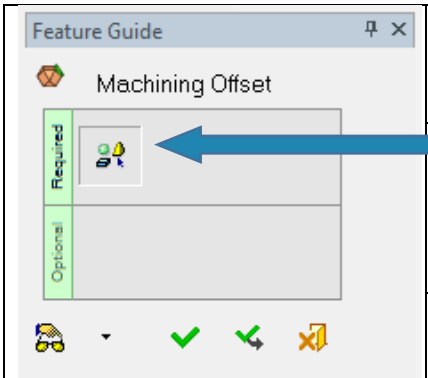


Once the file is open, the screen will look like this:



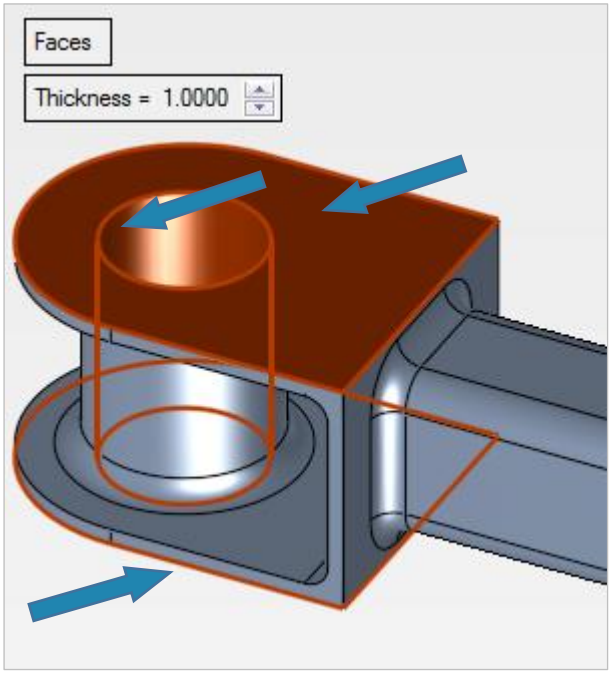
On the **3DP Objects Tree** turn **OFF** the bulb on the line of Tray to hide it.

3. From the Main Toolbar access **Machining offset**  command.



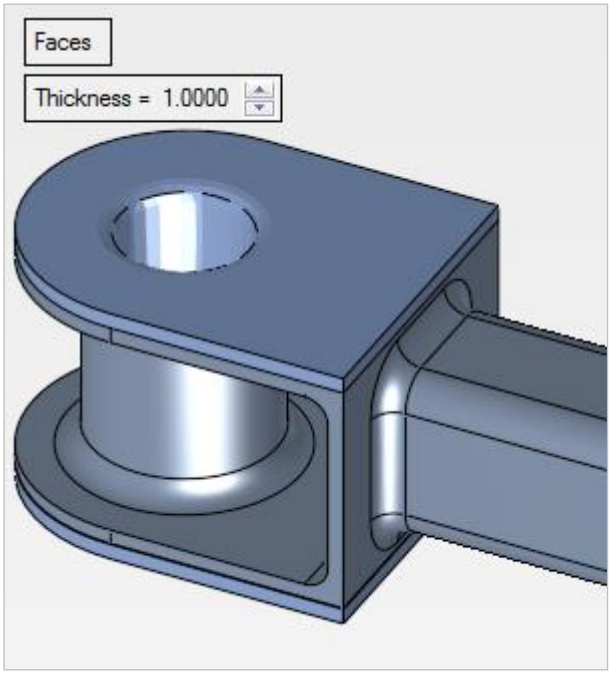
		Machining offset
		1) ***Pick*** faces (or facets) (in case of an STL model, each triangular face is a single facet)
		"Preview" the result without executing
		To approve and finish use the ***"OK"***
		To approve and continue use the ***"Apply"***.
		"Cancel" – exit the command without keep changes

4. ***Pick*** the three faces as seen in the picture and set **Thickness=1.00**

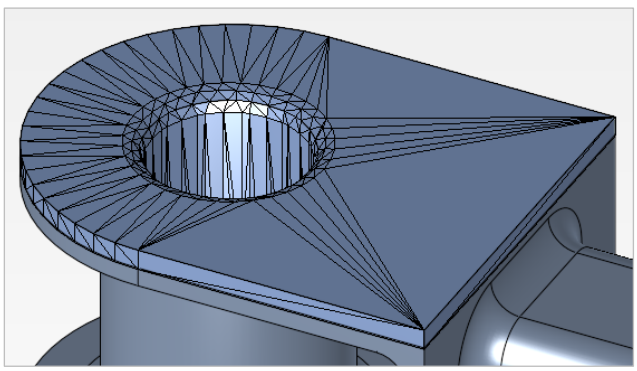


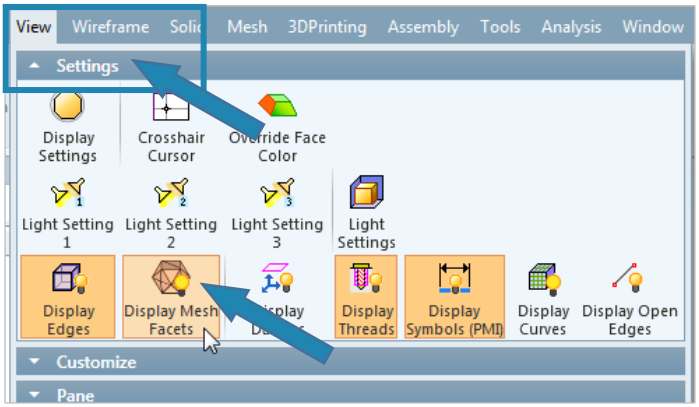
5. ***Pick*** **Apply**  in the feature Guide to approve and continue with **Machining offset**.

   Note, that the offset around sharp corners becomes rounded in the offset radius.

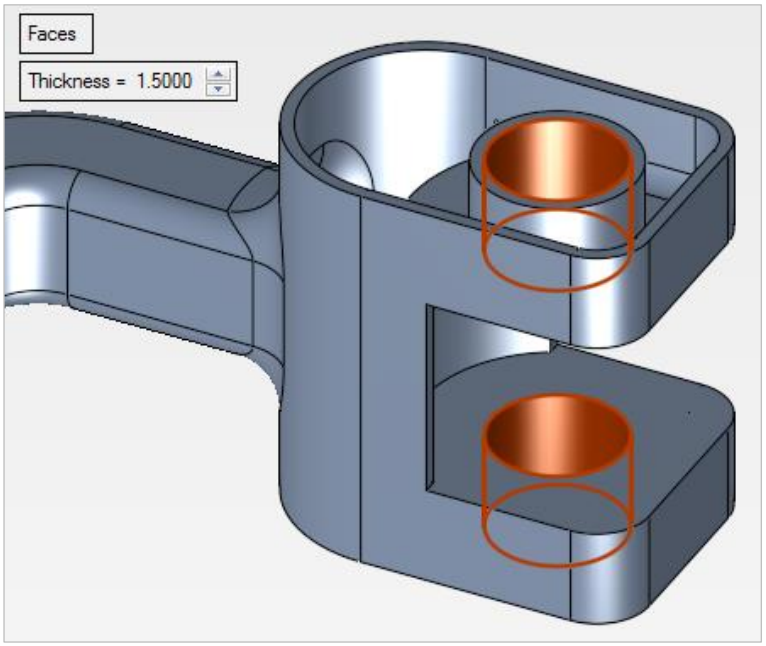


Note:
The result is a mesh (triangular faces).
To see the facets click
View->Settings->Display Mesh Facets

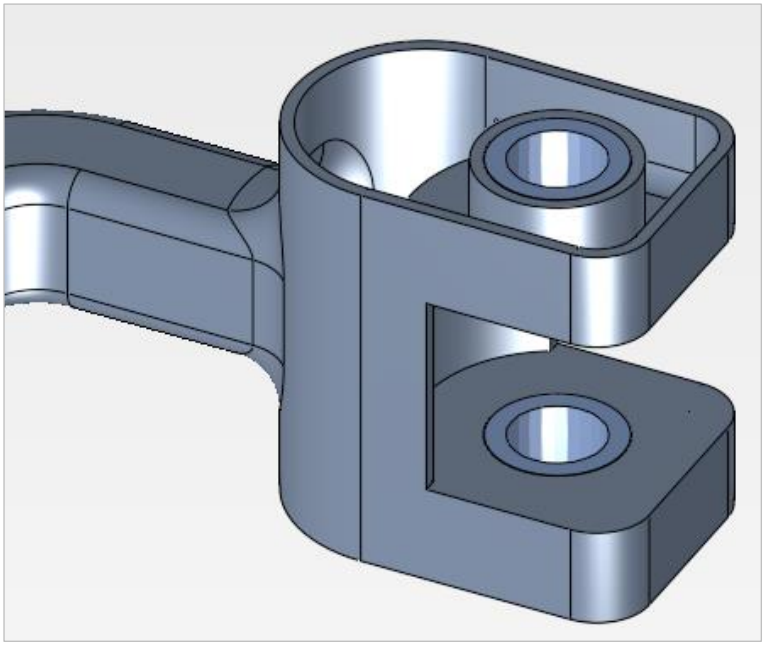




6. ***Pick*** the two Cylinder faces as shown in the picture and set **Thickness=1.50**



7. ***Pick*** **OK**  in the feature Guide to approve.



If additional Machining Offset is required, edit the features and set the offset value.

End of Exercise.