

GO2cam

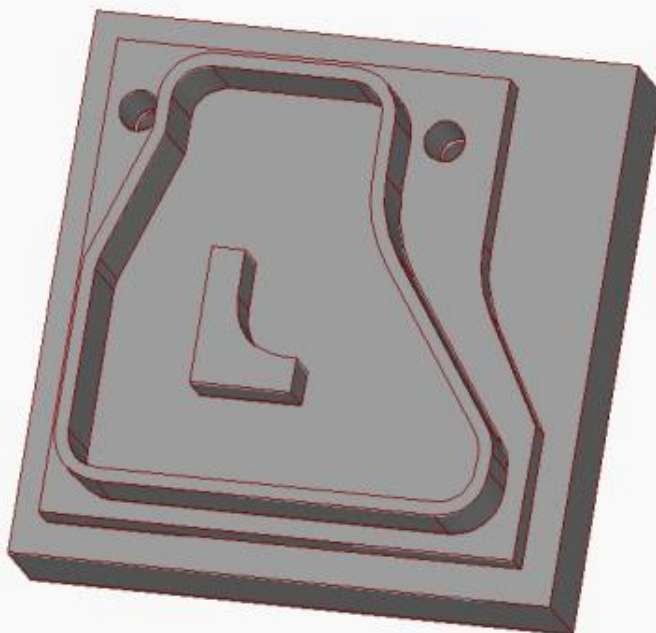
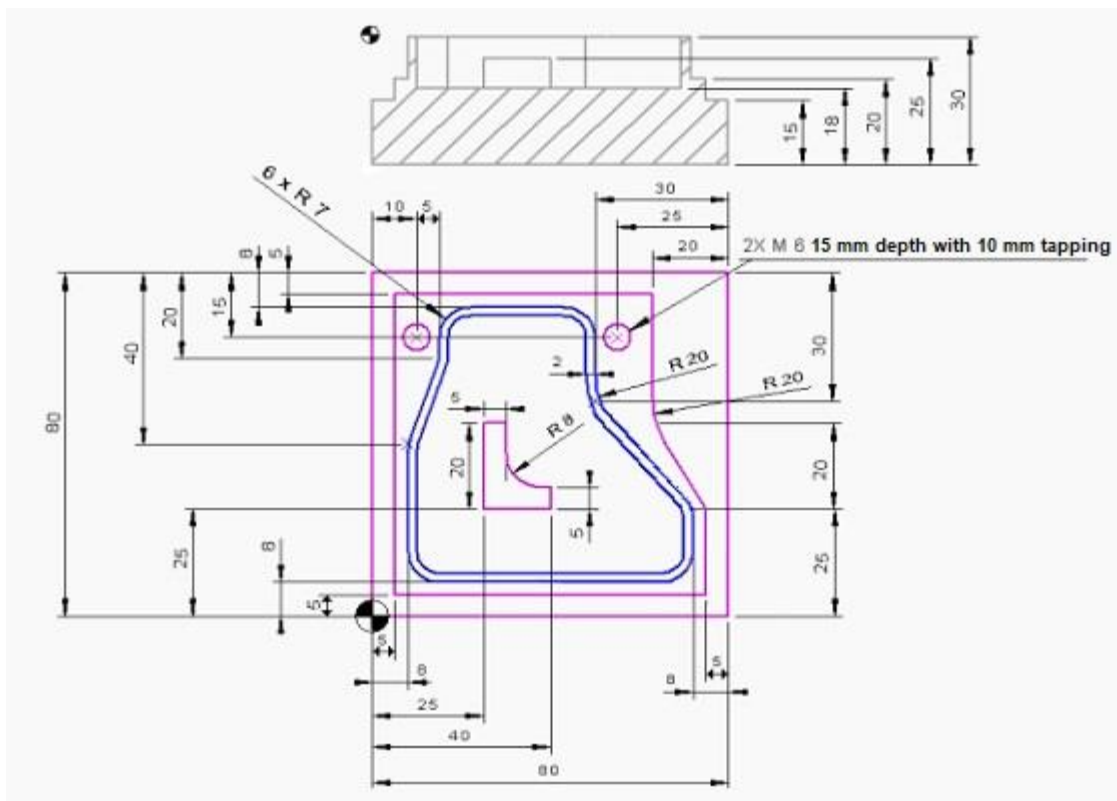
GO2cam V6.09

Tutoriel

M05 – Lid

I. Open the part

You will open the file PCE : *M05_Lid.PCE*



Quantity : 150
Material : XC38

II. Process for Machining

Targets :

- Apply Facing, spotting drill, drilling, tapping, rework and contour cycle
- Select the surface to be machined
- Parameter setting of cycle
- Tool selection

1. Import 3D part :



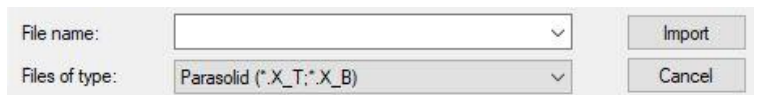
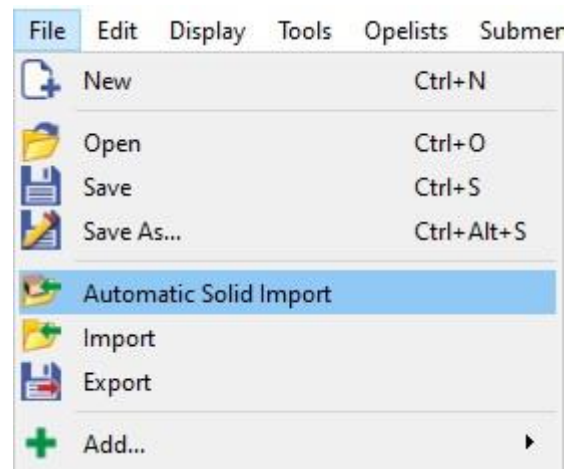
Do not quit this function until all the 3 steps are completed. Otherwise you cannot go back to completed the missing step.

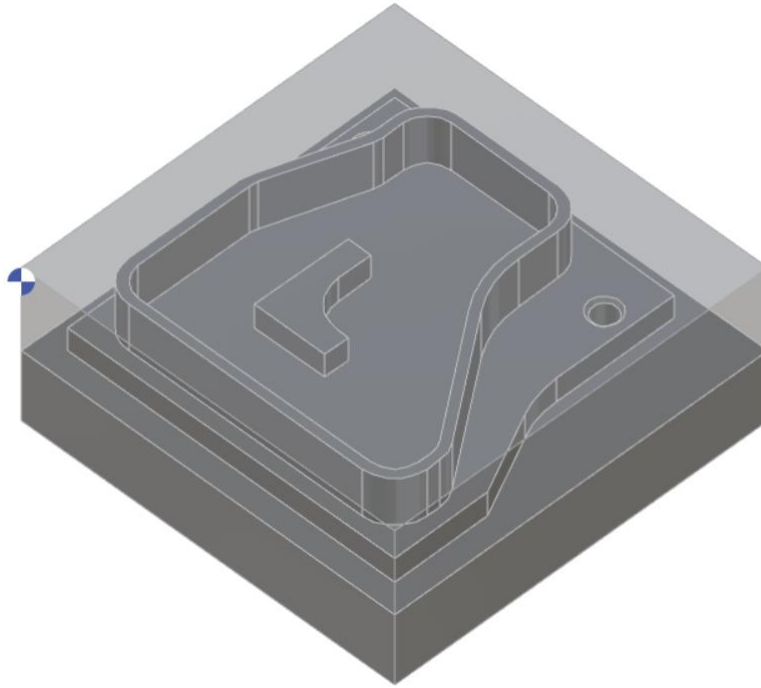
- Left click on File
- Left click on automatic solid import

Select the file 'M05_Lid', if it is not visible check "File Type"

Import this part with the following parameters :


- Positioning : Bottom offset,
- Height 38 mm, bottom offset 5mm, overflow 0mm.
- Origin at the bottom left corner of the part

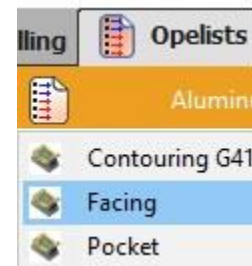




Ope 10 Face Mill

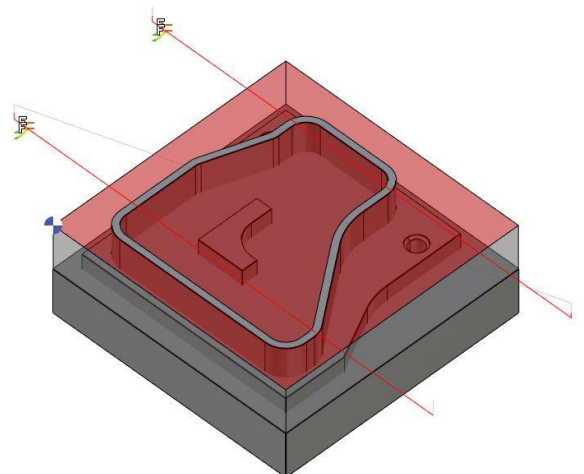
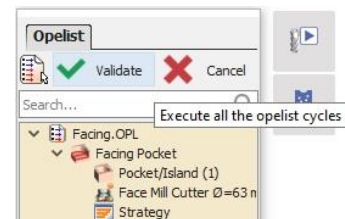
2. Start :

- Click to open Opelist
- Select Facing Opelist in the aluminum folder created on part M04
- Left click on 



3. Calculation of tool path :


- Left click on 

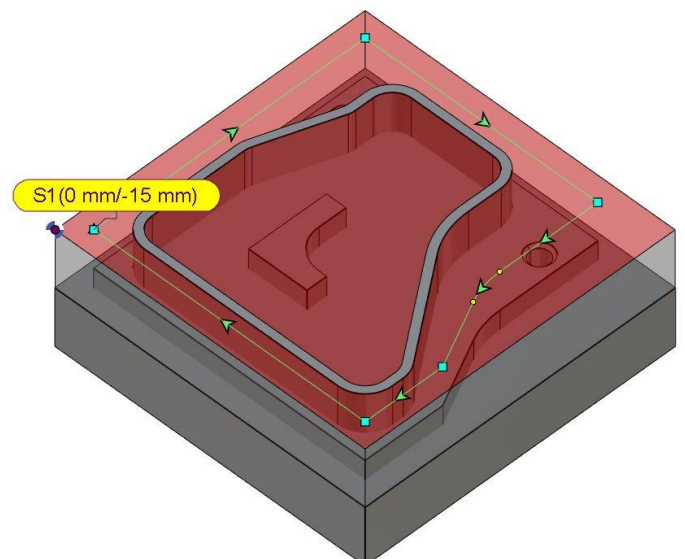
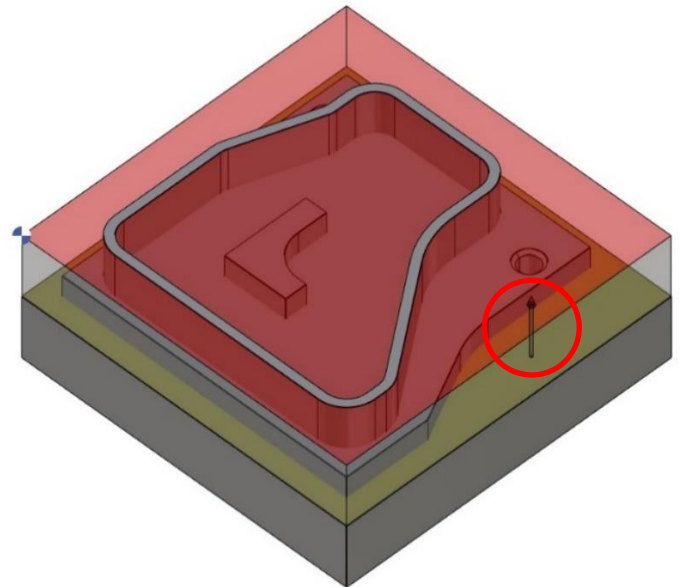
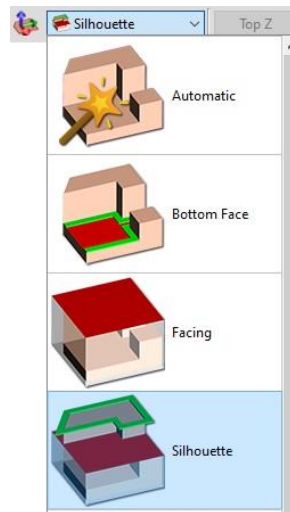


Ope 20 millyuGO pocket

1. Geometry selection:

Click on  Standard

- Left click on 
- In the drop-down menu of profile creation mode, select 'Silhouette'
- Left click on the outside plane at a height of -15mm
- Left click on the same plane to give a bottom.



2. Tool Selection



- Left click on
- Left click on Flat End Mill.
- Select tool « Flat End Mill D10 »



Tool name	Diameter	Useful length
Flat End Mill - D10.F05	10.00 mm	28.00 mm

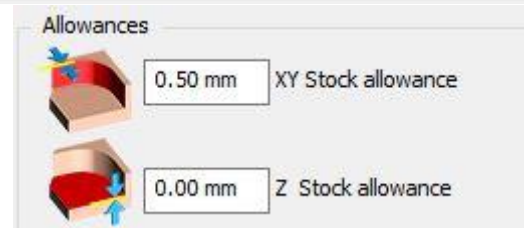
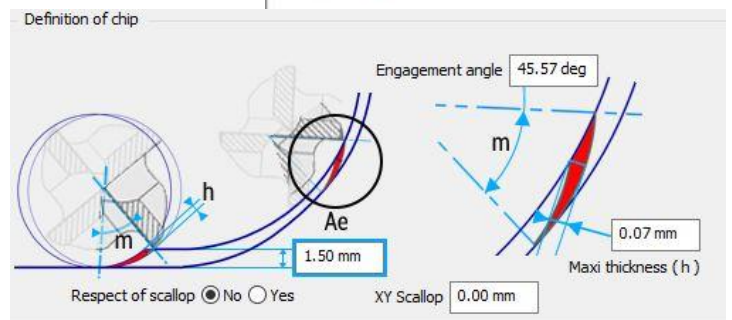
4. Machining cycle selection



- Left click on
- Left click on millyuGO pocket
- Double click to access the strategy
- Change the Ae Value to 1.5 mm
- Change the XY Stock Allowance to 0.5mm

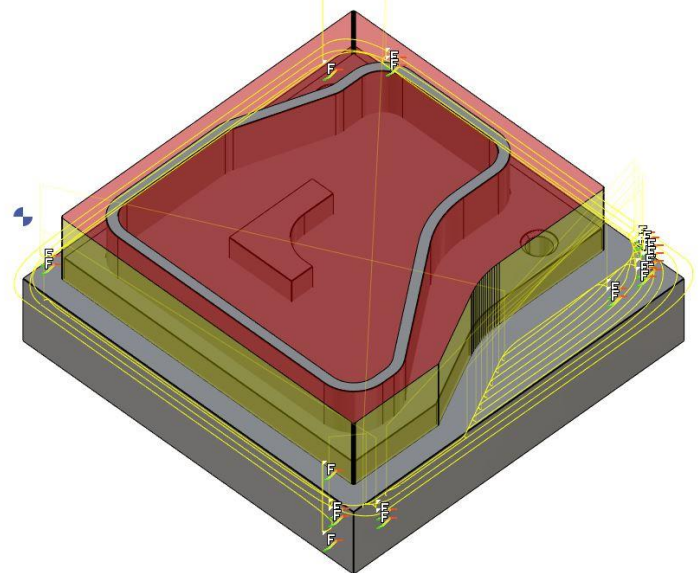


millyuGO pocket





5. Calculation of tool path

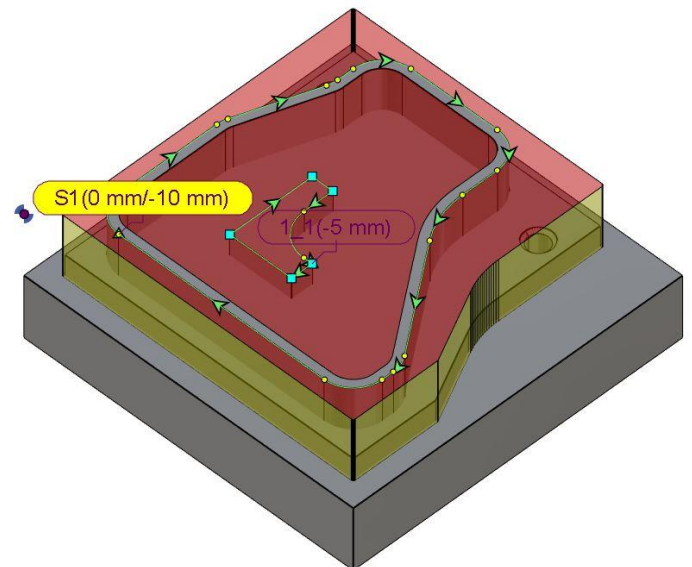
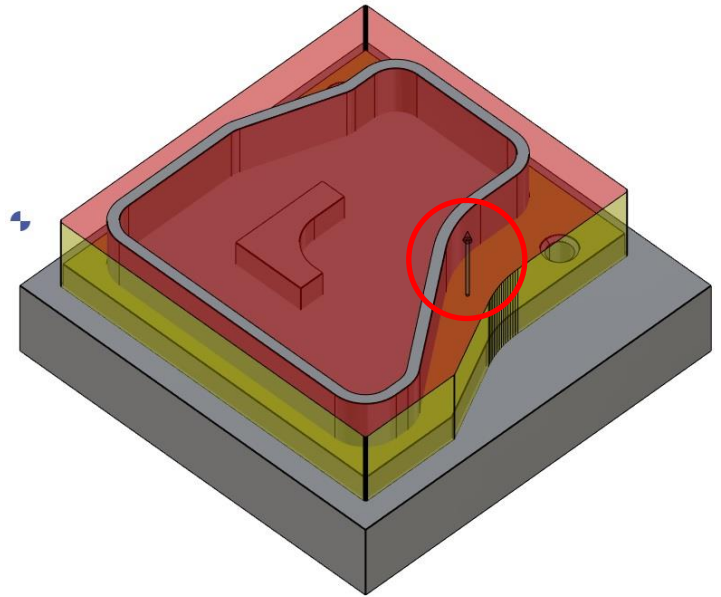
- Left click on Cycle Calculation




1. Geometry selection:

The mode  Standard is still active.

- Left mouse click on 
- In the drop-down menu of profile creation mode, Silhouette mode is still active
- Left click on the outside with a height of -10 mm
- Left click on the same plane to define the bottom Z value



2. Tool selection:


- Left click on 
- Left click on Flat End Mill.
- Select tool «Flat End Mill - D10»



Flat End Mill

Tool name	Diameter	Useful length
Flat End Mill - D10.F05	10.00 mm	28.00 mm

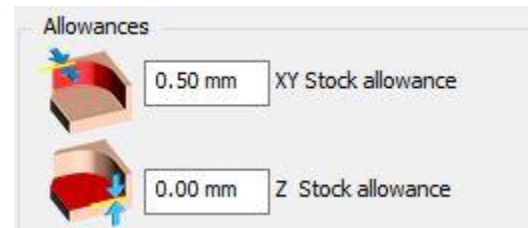
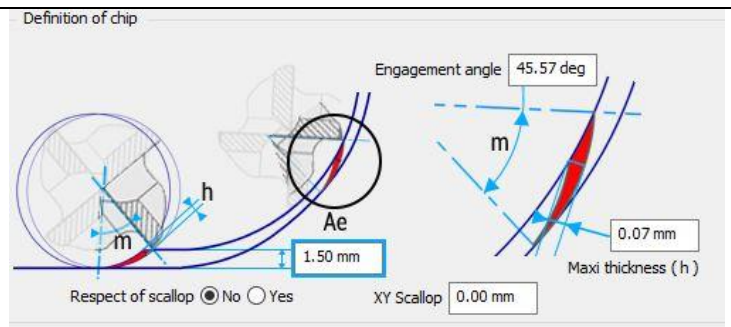
3. Machining cycle selection:

- Left click on 
- Left click on millyuGO pocket



millyuGO pocket

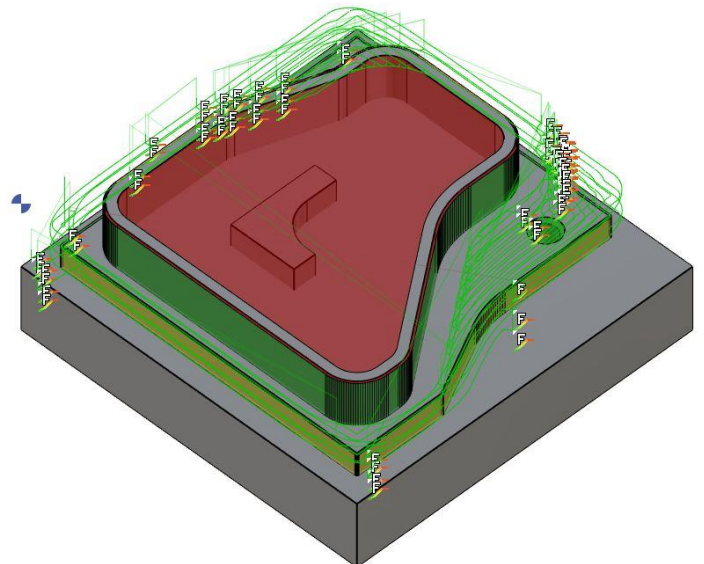
- Access the strategy by double clicking.
- Change the Ae value to 1.5mm
- Change the XY allowance to 0.5mm



0

4. Calculation of tool path :

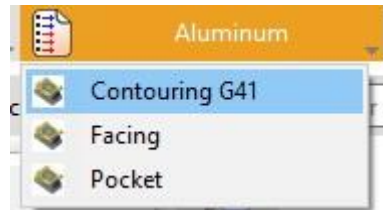
- Left click on Cycle Calculation



Ope 40 Contouring

1. Opelist Selection.

- Left click on Opelist menu
- Select Contouring G41 Opelist in the Aluminum folder created on part M04.




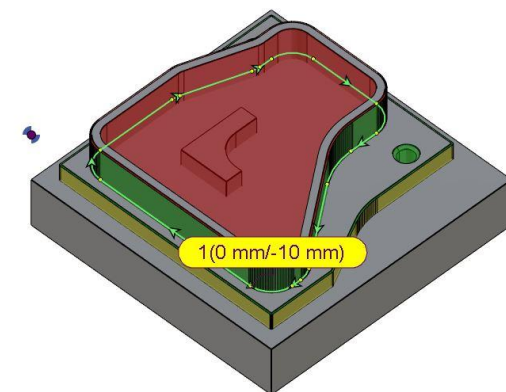
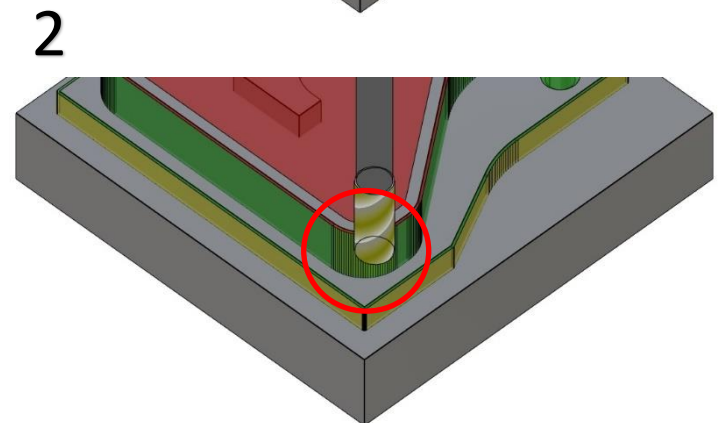
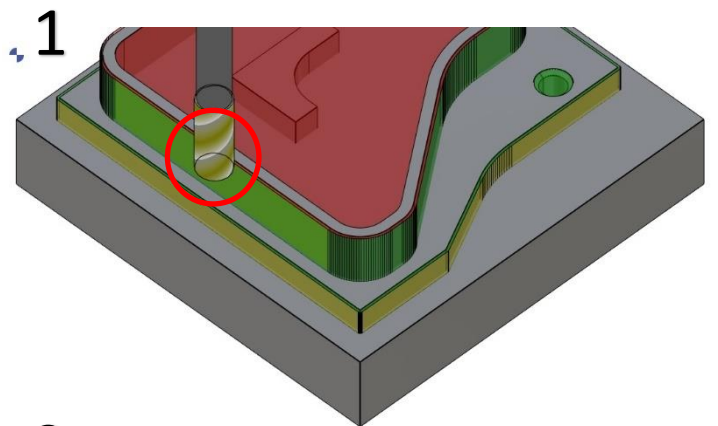
- Left click on  Validate

2. Geometry Selection.

Geometry selection will be already selected. 

For the first profile selection.

- Left click on the lateral face (1).
- Left click on the last lateral face to close the profile.(2)
- Left click profile OK. 




For the second profile selection.


- Left click on the lateral face (3)
Zoom closer to select the lateral face
- Left click on the lateral face (4)
Zoom closer to select the lateral face

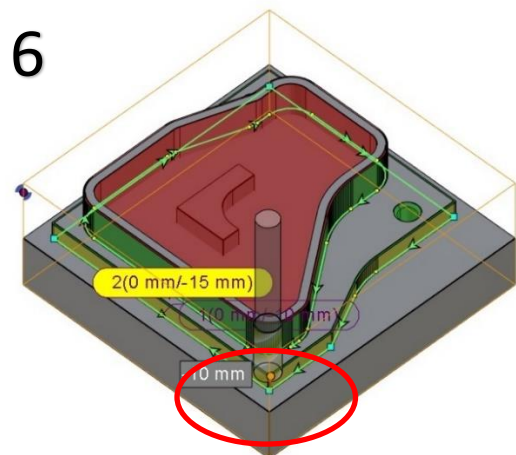
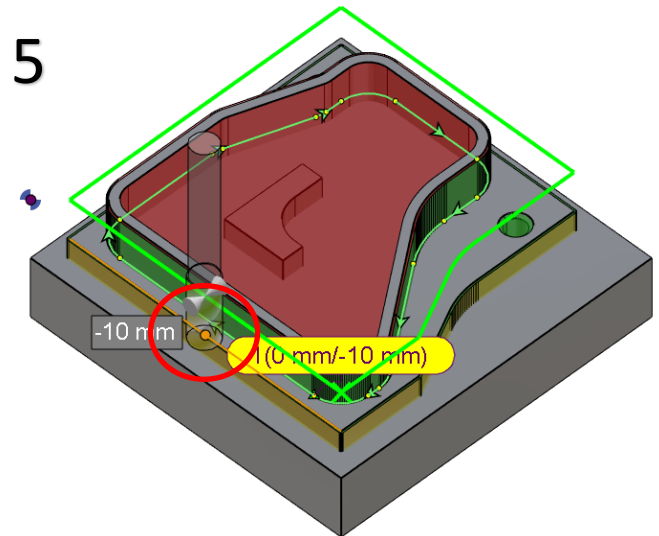
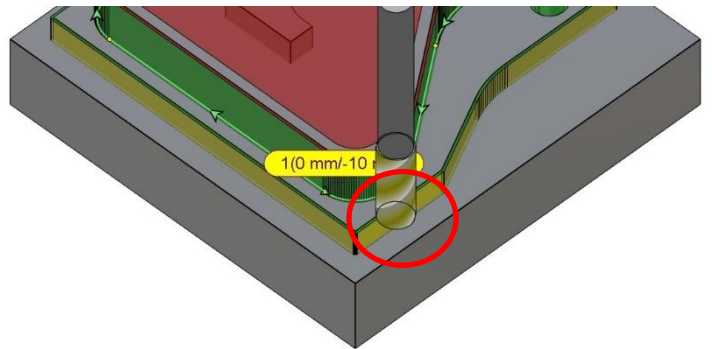
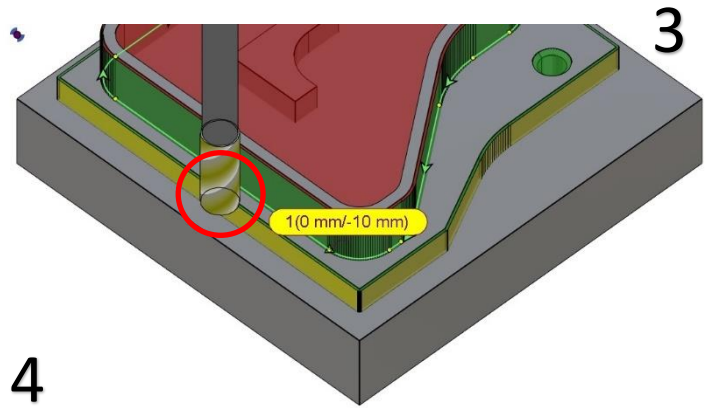
- Left click on Start/End Point.

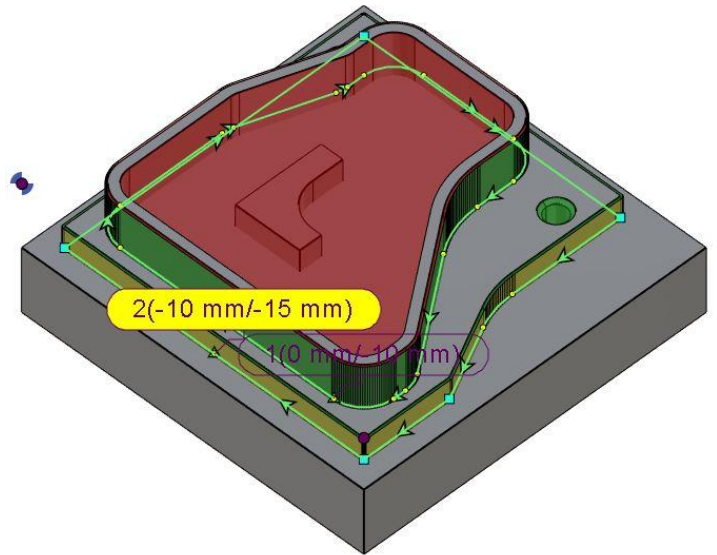


- Left click on the middle point on this lateral face (5)
- Left click on profile OK 



Change the top Z for the second profile.

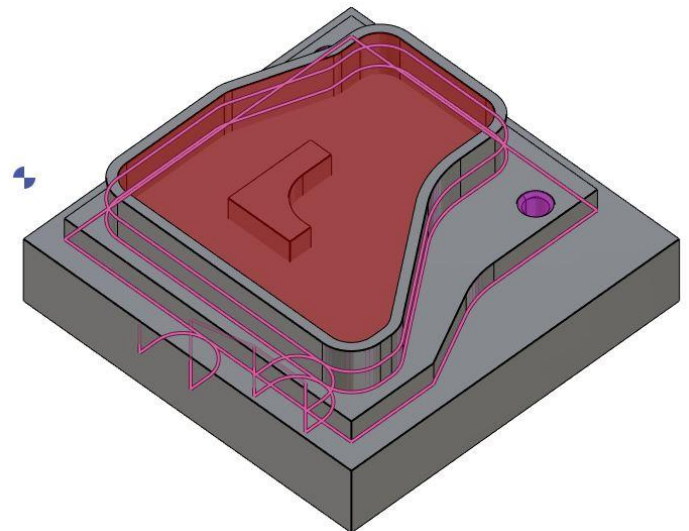
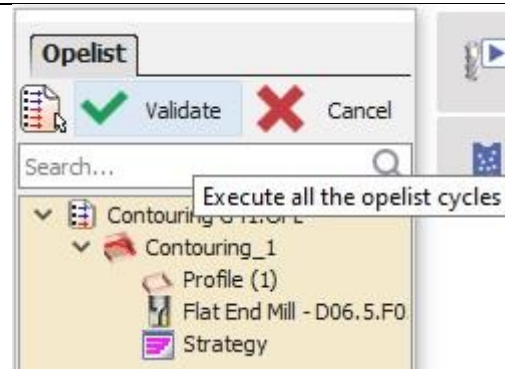
- Left click on the Top Z Button 
- Left click on the edge with -10 mm height (6)





3. Calculation of tool path :


- Left click on Cycle Calculation 
- Left click on  Validate



Ope 50 Features

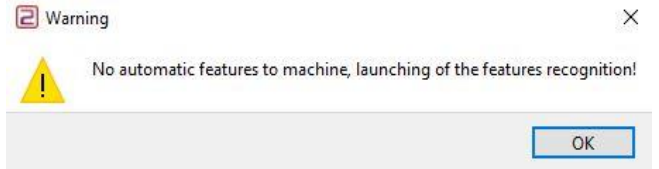
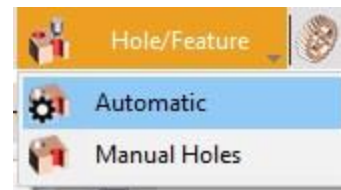
1. Start :

Switch to milling environment

- Left click on  Hole/Feature
- Select Automatic


A warning window will appear.

- Left click on OK.



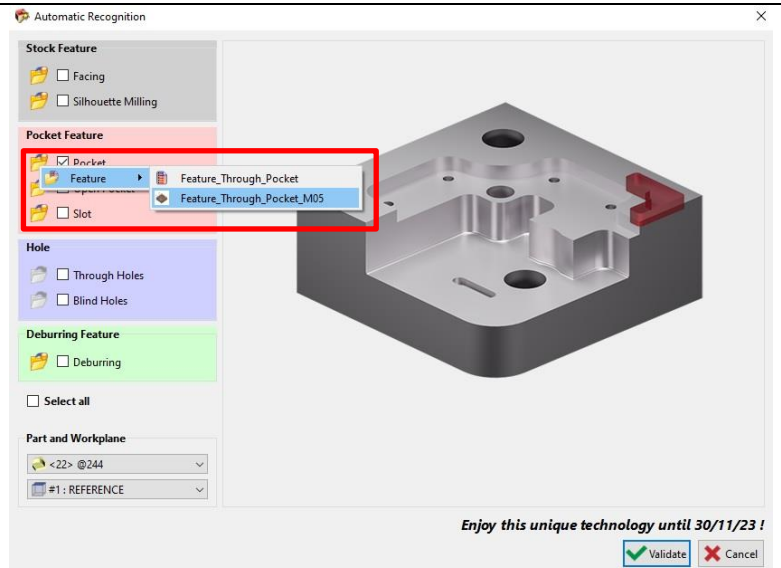
2. Automatic Recognition.

The Automatic Recognition window will appear.

- In « Pocket Feature » tick the box for pocket.
- Left click on 
- Select the « Feature_Through_Pocket_M05 »

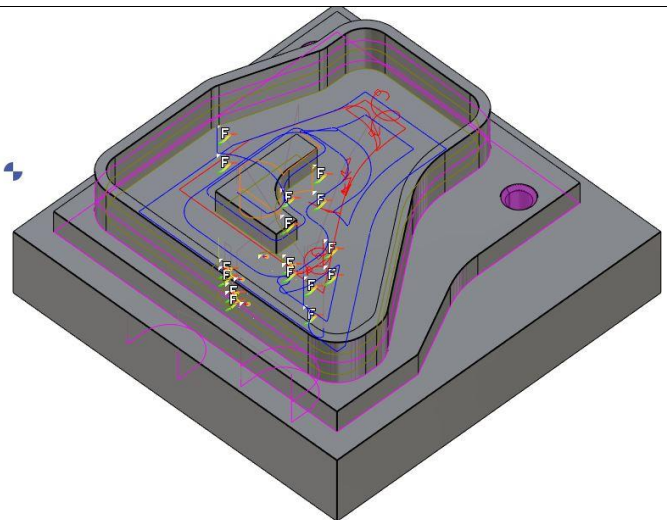
The icon status will be changed to 

- Left click on 






3. Calculation of tool path.

- Left click on Cycle Calculation 



Ope 60 Spotting drill of hole Ø5

1. Geometry selection:

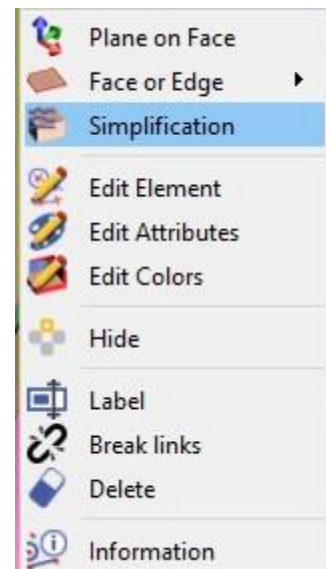
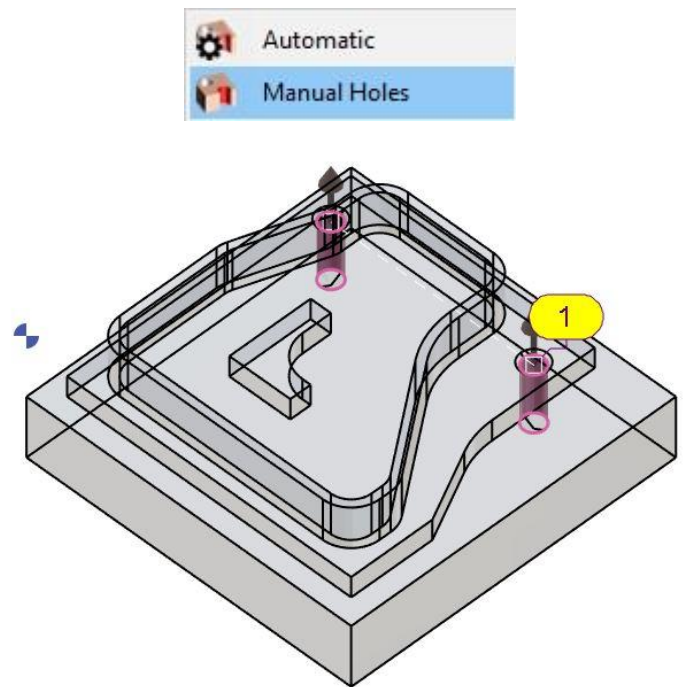
- Left click on the  Hole/Feature and select manual
- Left click on 
- Left click on  to activate multiple selection
- Left click on one holes of Ø5 mm.

The second hole will be automatically selected.


If you cannot select the holes. Escape from the operation and d

o a simplification.

- Right-click on solid
- Left click on « simplification »
- Repeat the process above to select the holes.






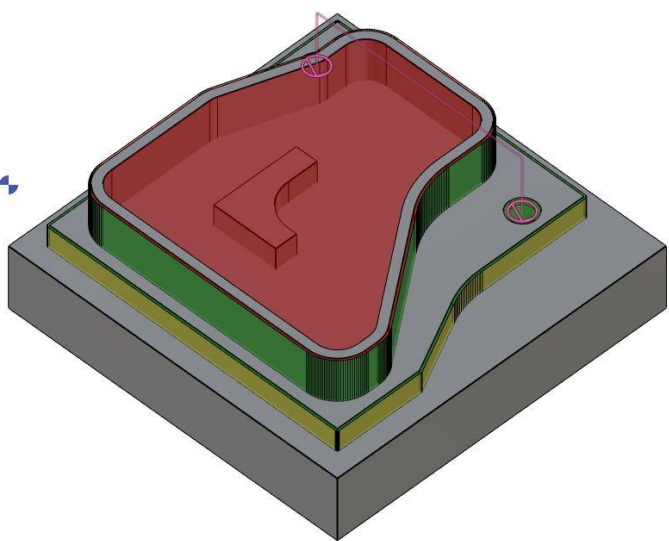
2. Tool selection:

- Left click on 
- Left click on **Spotting Drill**
- From the list of downloaded standards, select Tools of Ø 8



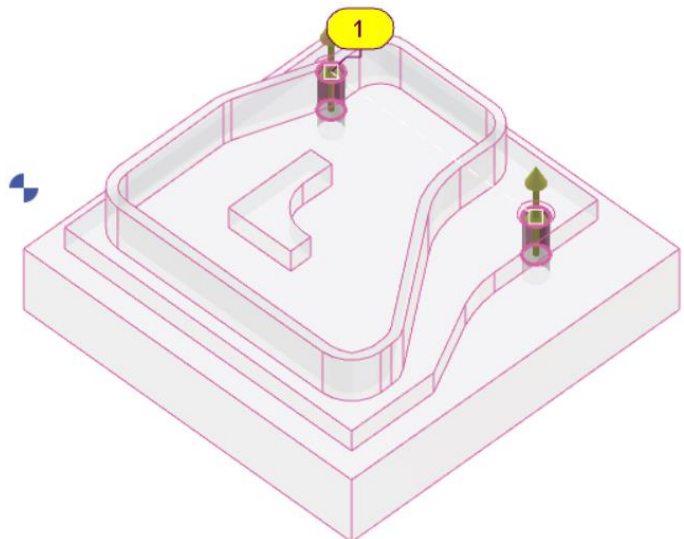



Tool name	Diameter	Point angle	Useful length
Spotting Drill - D08.F20	8.00 mm	90.00 deg	25.00 mm


3. Machining cycle selection:

<ul style="list-style-type: none"> Left click on  Left click on Jig boring 	<div style="text-align: center;">  Jig Boring </div> <table border="1" style="width: 100%;"> <tr> <td>Techno. name</td> <td>Depth</td> <td>diameter centering</td> </tr> <tr> <td></td> <td>3.00 mm</td> <td>0.00 mm</td> </tr> </table>	Techno. name	Depth	diameter centering		3.00 mm	0.00 mm
Techno. name	Depth	diameter centering					
	3.00 mm	0.00 mm					
<p>4. Calculation of tool path :</p> <ul style="list-style-type: none"> Left click on Cycle Calculation  							

Ope 70 Drill 2 holes Ø 5

<p>1. Geometry selection:</p> <p>The function is still active</p> <ul style="list-style-type: none"> Left click on  In the machining tree, left click on the arrow in front of the cycle name  Click and drag the Hole icon of the operation to the window of part. <p>The geometry selection of the previous operation will be copied to the new operation</p>	
<p>2. Tool selection:</p>	


- Left click on 
- Left click on **Drill**




Drill

Tool name	Diameter	Point angle	Useful length
	5.00 mm	120.00 deg	55.00 mm

3. Machining cycle selection:


- Left click on 
- Left click on **Drilling**
- Access the startegy.
- In depth calculation, select "diameter"
- In the Depth field, enter a value of 14.25mm




Drilling

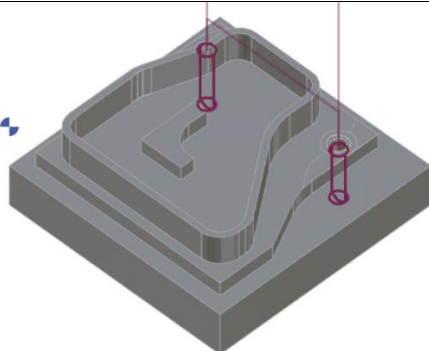
Depth

Depth calculation ☐ Tool end ☒ Diameter



4. Calculation of tool path :



- Left click on Cycle Calculation 



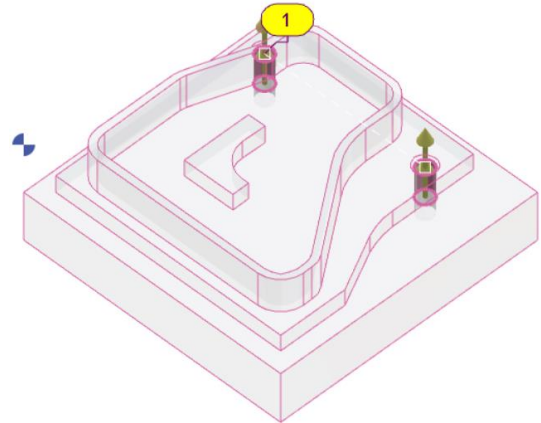
Ope 80 Tapping 2 holes M6

1. Geometry selection:


The function is always active

- Left click on 
-  Click and drag the "hole" icon of the drilling operation to the window of part.

The geometry of drilling operation will be copied to the new operation.



2. Tool selection:

- Left click on 
 - Left click on **Tapping**
- In the list, select tool «M06-14 600 060-»

Close Filter if you can not see a list.


- Close filtering options if needed



Tap

Tool name	Diameter
M06-14 600 060.F04	6.00 mm

3. Machining cycle selection:

- Left click on 
- Left click on **Tapping**

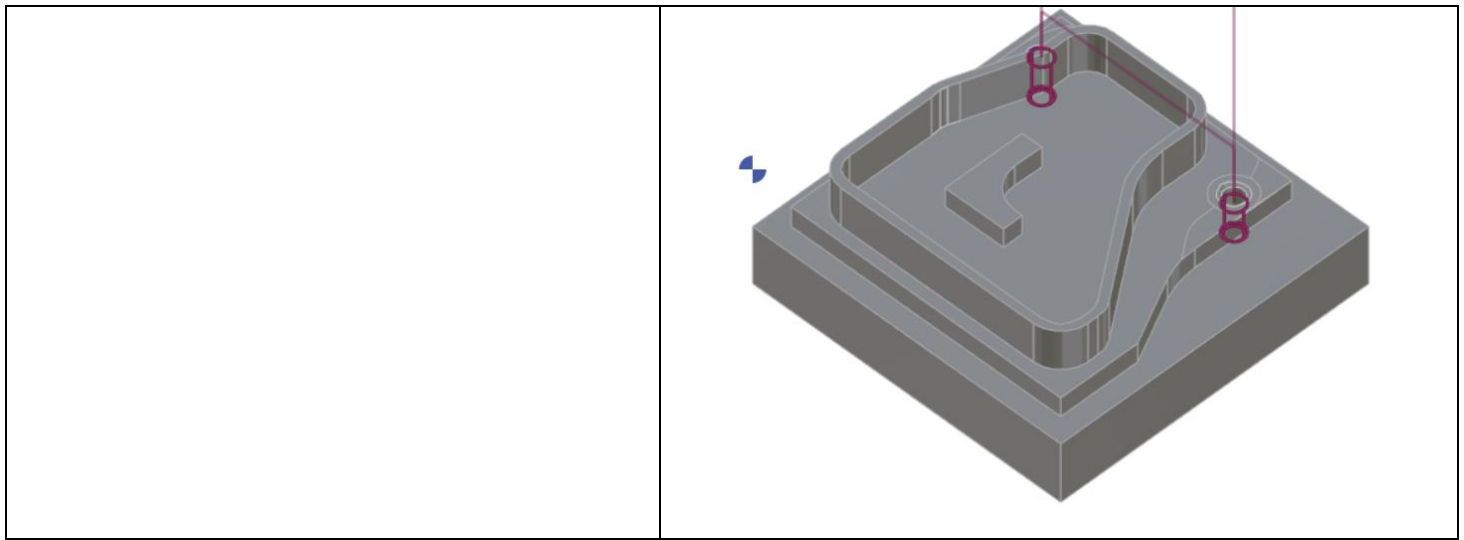


Tapping

Techno. name	Depth
	10.00 mm





4. Calculation of tool path :

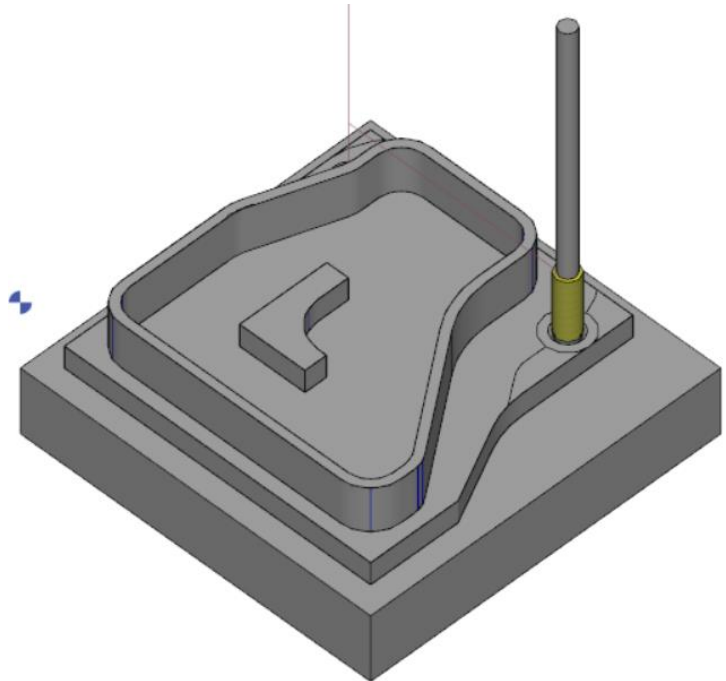
- Left click on Cycle Calculation 



Simulation and NC blocks output

1. Simulation:

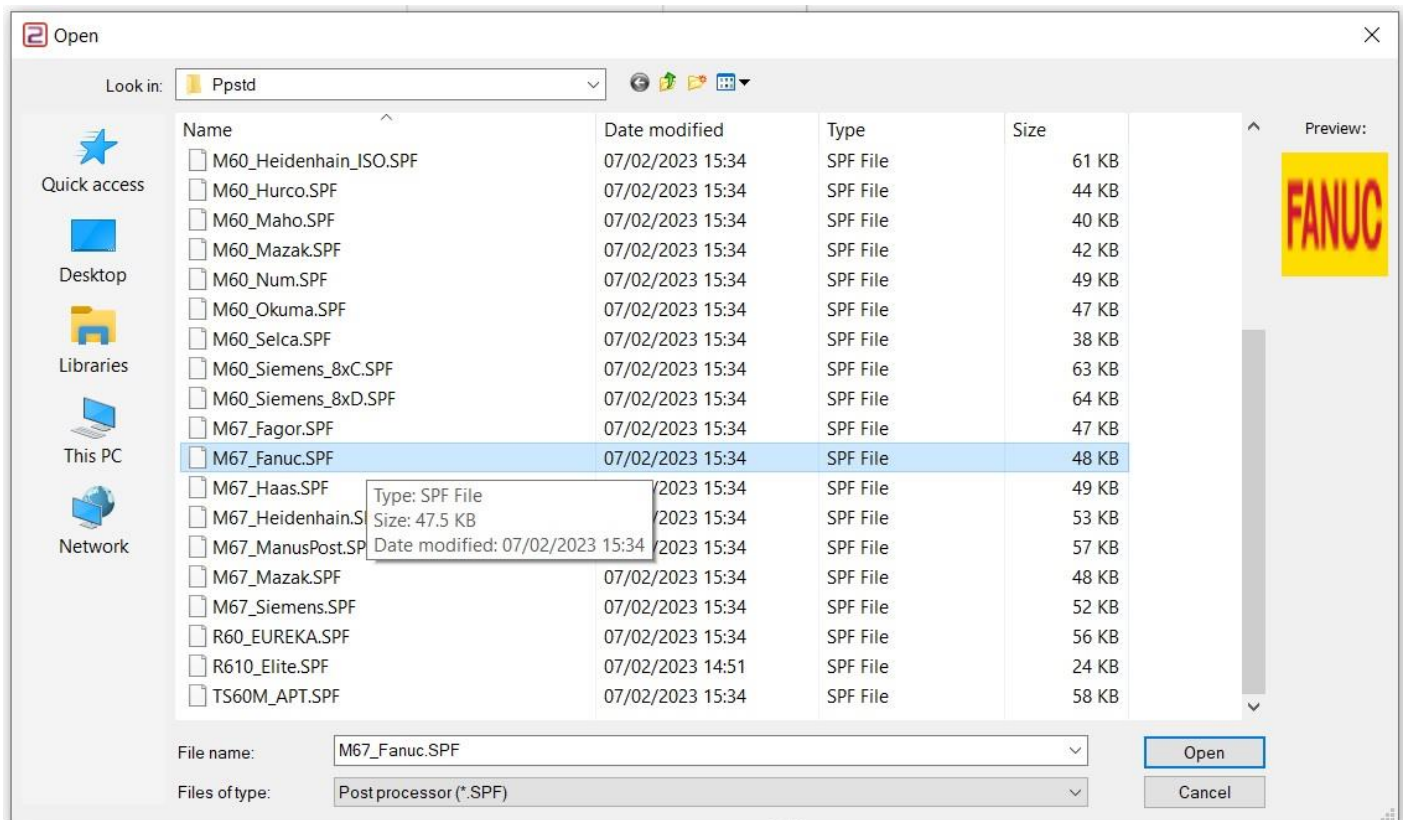
- Enter menu 
- Left click on 
- Left click on  to start simulation on all machining operations
- If you want to switch to step-by-step mode, click the space bar
- Left click on  or press the Escape key to stop the simulation



2. Generation of ISO program :

- Left click on 
- Select the post-processor M67-FANUC from the list
- Left click on Open
- Left click on Confirm

- The ISO program is generated.



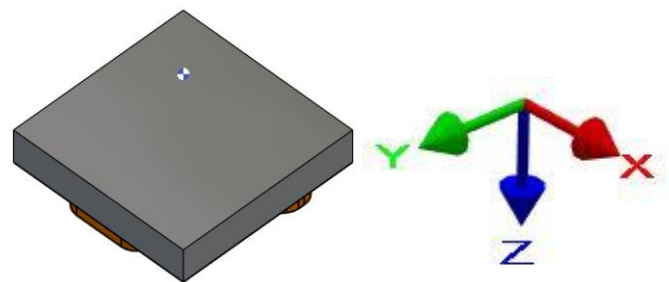
Part setting


Targets :

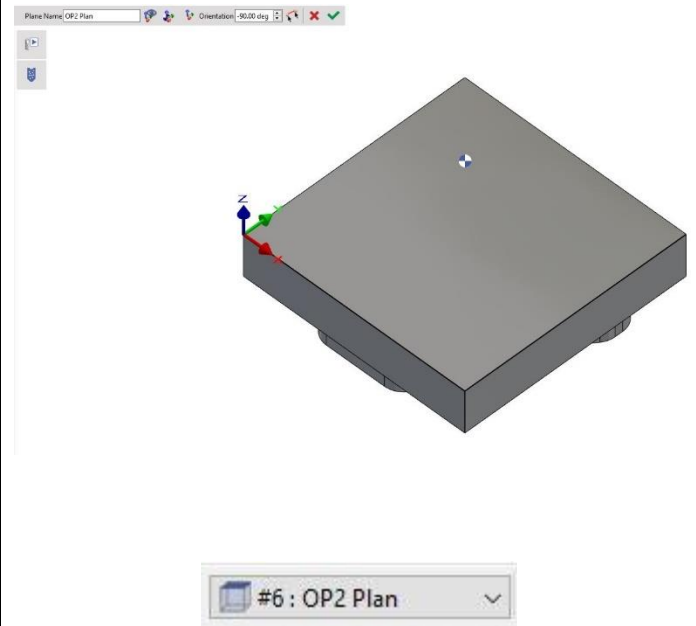
- Create working plane
- Set part setting for each operation
- Generate ISO files for each location

1. Creation of working plane :

- Manipulate your part to see the face where the floor plane will be created
- Left click and hold at the center of the axial system.

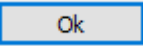



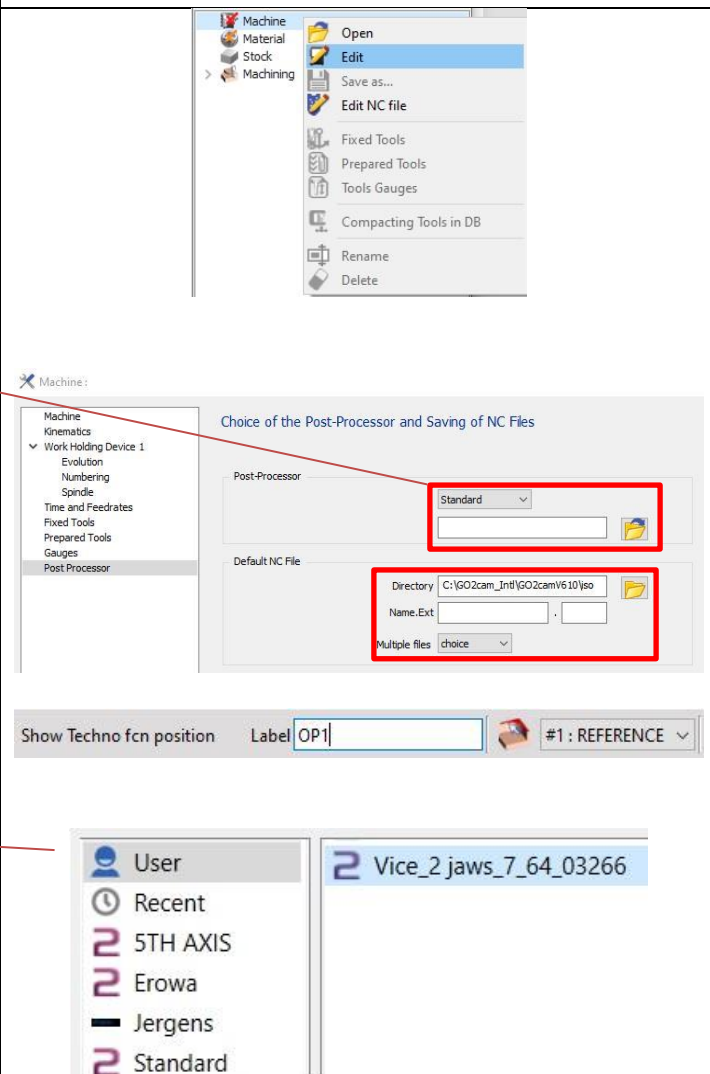
- Move the cursor to the desired face or plane for origin position.
- In this case, place the interactive axis system in the lower left corner, as shown in the figure
- Left click to the location where the axial system is correctly positioned
- Insert an angle of orientation of -90 In order to position the axial as in the picture.
- The parameter window has been opened
- Rename the name to OP2 plan and verify 
- A plane is created, and the plane name is displayed in the lower right corner of the plan list
- Use the drop-down menu to change the plane to change the view of reference plane




2. Define part setting for each operation:

To do this, you must declare the machine in go2cam.

- Open the machine in the machining tree, if no machine is defined, click the machine with the right mouse, and then edit.
- Open a window to change the standard in the post processor according to your machine tool
- Edit multiple files to choice files, and then verify 
- Right click stock, and then left click Part Setting
- Rename the tag to OP1
- Left click on  to integrate and position the previously used vice in M04



- Left click on the validate 

- Left click on each green arrow to position each jaw element relative to the workpiece.

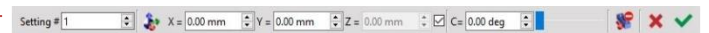
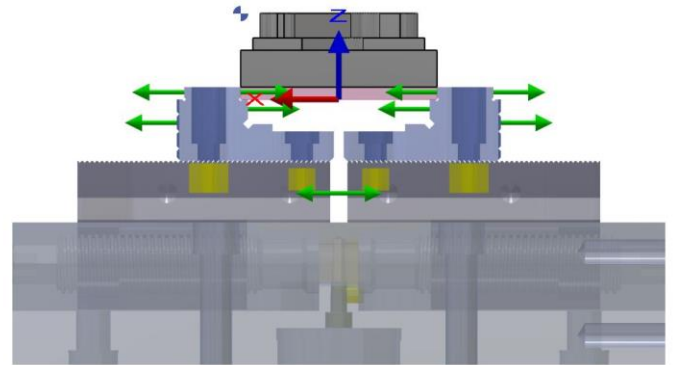
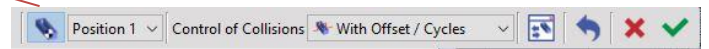
- Left click on the validate 

- Click the machining in the machining tree to generate the first part setting at the beginning of the operation.



- Left click on the validate 

Note: You have just created a part setting for OP1, and the reference plane is associated with the OP1 setting.






- **Create a part setting for operation 2:**


- Right mouse click on stock then right mouse click on part setting
- Rename tag to OP2
- Change the reference plane to plane OP2
- Switch the active working plane on the screen to plane OP2

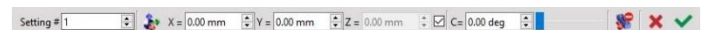
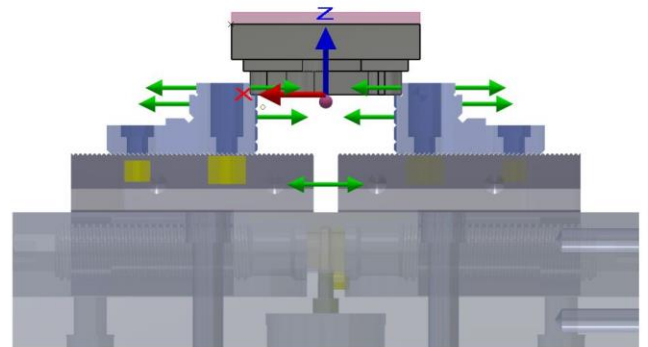
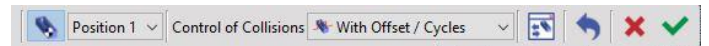
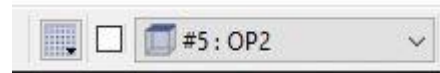


This operation is mandatory for the correct integration and positioning of the part in the related work plane.


- Left click on  to integrate and position the previously used vice
- Left click on the validate 
- Left click on each green arrow to position each jaw element relative to the workpiece. Note : the jaws have change places.

- Left click on the validate 
- Left click on the last cycle of operation 1 (tapping) in the machining axis to generate the second part setting

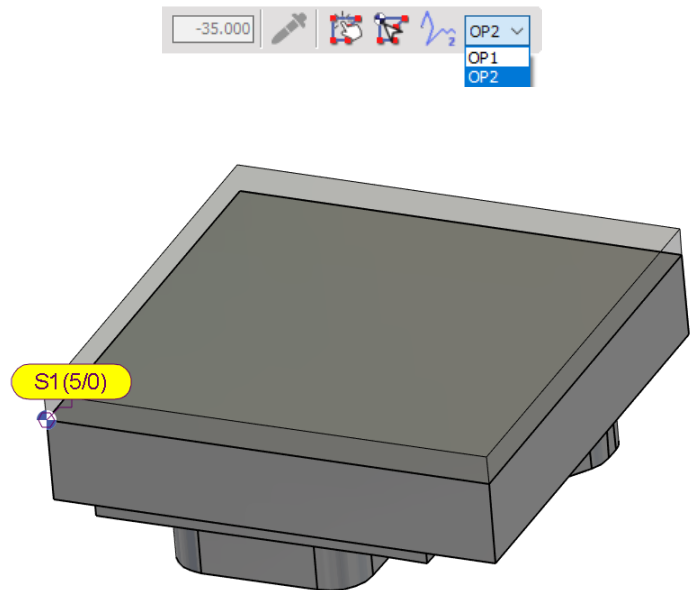
- Left click on the validate 




3. Geometry selection:

- Left click on 
- Select position 2 and plane OP 2
- Select automatic mode and click on top

Go2cam reads and displays the height of stock top Z and bottom Z.



4. Tool selection:


- Left click on 
- Left click on Face Mill Cutter
- In the list, select tool « F45AD D 50-22 »



Face Mill Cutter

Tool name	Diameter	Useful length
F45AD D 50-22.F09	21.00 mm	30.00 mm

5. Machining cycle selection:

- Left click on 
- Left click on Facing Pocket

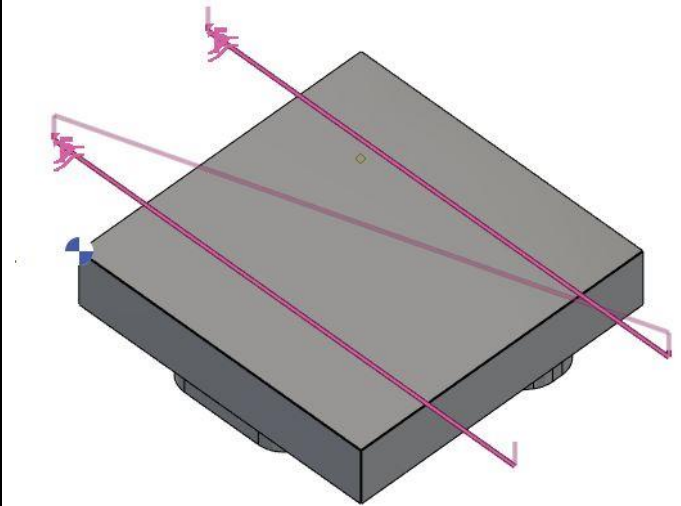


Facing Pocket

Techno. name	Z Step (Ap)
	0.00 mm

6. Calculation of tool path :

- Left click on Cycle Calculation



7. Generate ISO code for each operation:

- Left click twice on **Machining** to open the machining range
- For all operations in part setting 1, enter 1 in the set
- For all operations in part setting 2, enter 2 in the set
- Close the window

Operation list

Export SIMPLE

	Tool	Cycle Name	WP Name	Lay	Set	Se...	W...	Hi...	st...	Stock
1		OP1	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
2	1	Facing Pocket	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
3	4	millyuGO pocket	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
4	4	millyuGO pocket_1	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
5	2	Contouring_1	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
6	13	Feature_Pocket- Roughing	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
7	8	Feature_Pocket- Reworking	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
8	3	Feature_Pocket- Finishing Bo...	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
9	6	Feature_Pocket-Finition	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
10	5	Jig Boring	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
11	7	Drilling	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
12	9	Tapping	Milling No 4	1	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
13		OP2	REFERENCE	1	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Standard
14	10	Facing Pocket_1	Milling No 6	1	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Standard