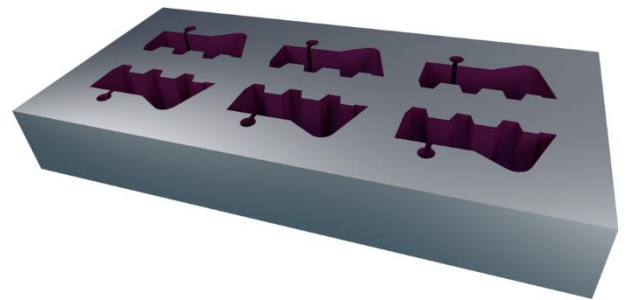


GO2cam



GO2cam V6.10

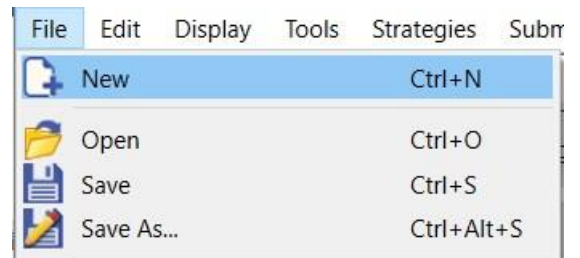
Tutorial

W02 – Taper Cut

I. Process of Design:

1. Start a new drawing:

- Left click on **File**
- Left click on **New**




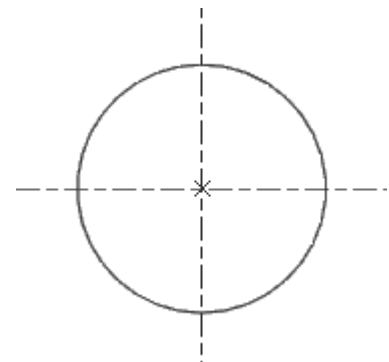
2. Start:

- Left click on **Wireframe**
- Left click on **Creation**





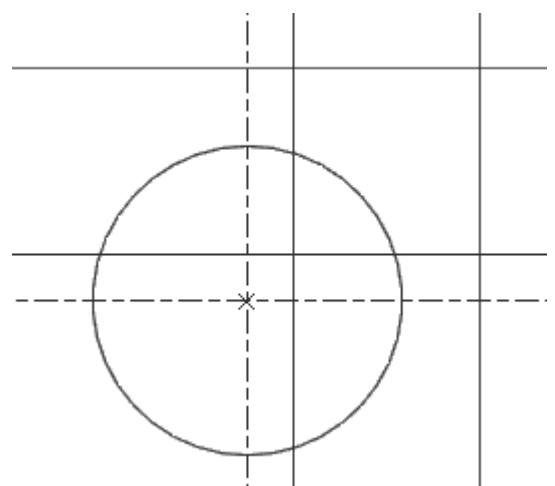
3. Creation of cycle:

- Left click on the function **Cycle** 
- Left click on **GO2cam origin**
- Left click on the drawing interface.
- Enter the radius value of 10





4. Create 4 parallel lines:

- Left click on the function **Line** 
- Left click on vertical axis 
- Left click on the right side of the vertical axis
- Type value 3
- Use same way to create two more vertical lines 15 mm and 0 mm to the right of vertical axis, and three horizontal lines 0 mm, 3 mm and 15 mm above horizontal axis

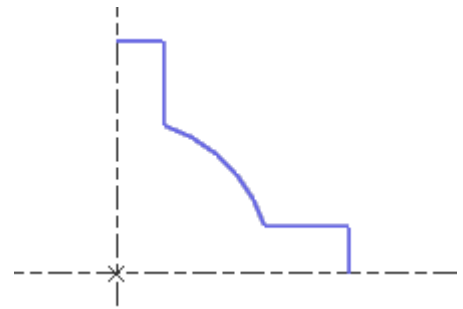


5. Limit the geometry:


- Left click on  then create a window to include the elements to be scaled
- Left click on the function **Drawing** 
- Left click on items to be deleted, GO2cam displays the items you will keep in white color.

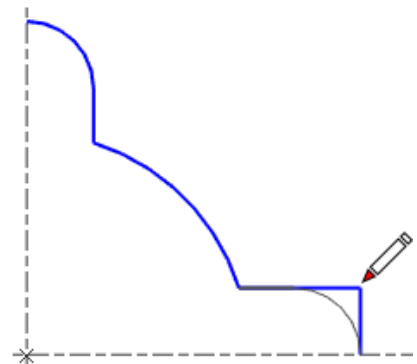
Note: An opposite method is to hold the Shift key on the keyboard and click the item you want to keep.

- Use the eraser icon  to delete the lines on the axes.



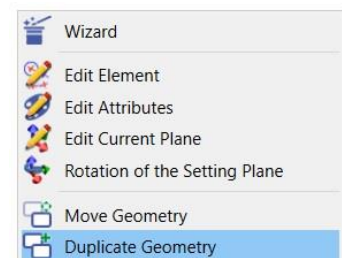
6. Create a 3mm fillet:

- Left click on **Wireframe**
- Left click on **Drawing Finish**
- Left click on **Fillet** 
- Type value 3 of radius
- Left click on these 2 corners

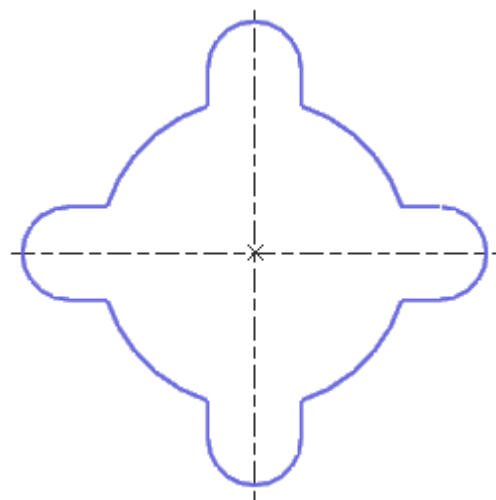
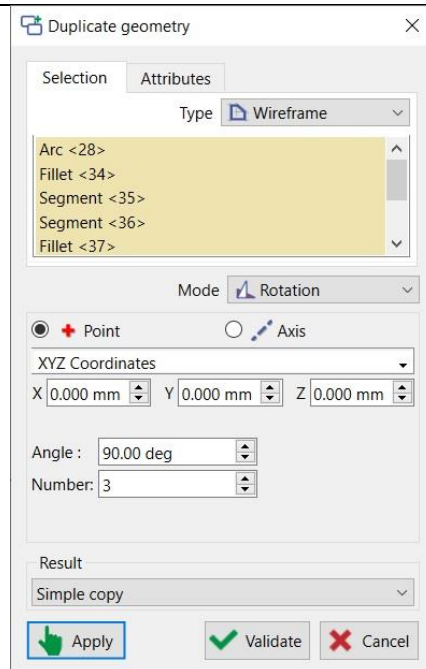


7. Copy of rotation:



- Right click in the background and select Duplicate Geometry.
- Make a selection box to include the geometry.
- Choose **Rotation** for the Mode.
- Double left click in the box **Angle** and type 90
- Type 3 in the number of copy.

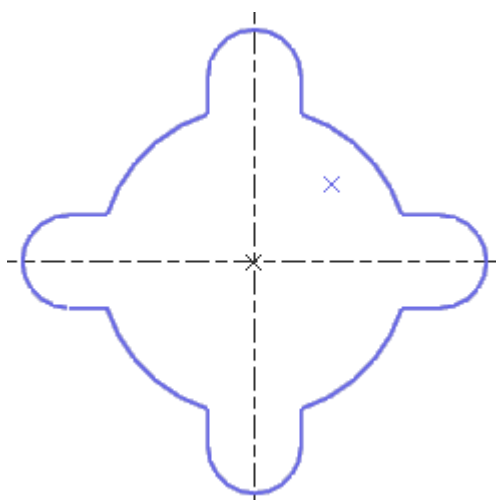


- Then click on Validate



8. Create threading points:

- Left click on **Wireframe**
- Left click on **Creation**
- Left click on **Points** 
- Type value X = 5 and Y = 5
- Then click on confirm 




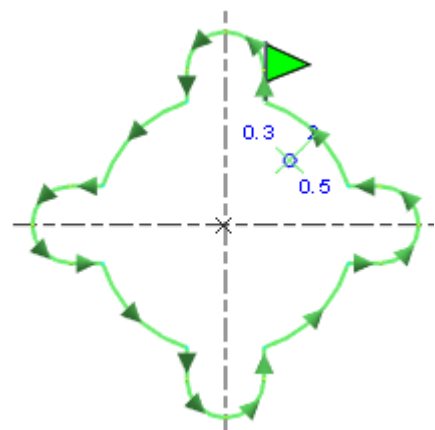
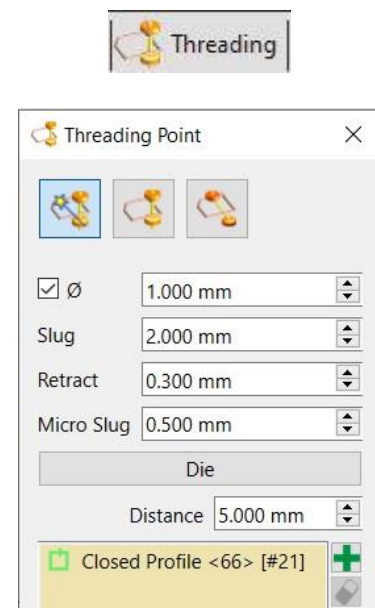
9. Save file:

- Left click on the menu **File**
- Left click on “**Save as**”, and name it to “**W02_Taper Cut**”
- Left click on **Save**.

II. Process of machining:

1. Definition of threading point:

- Return in menu **Design**
- Enter in menu **Threading**
- Left click on the function **Manual Threadings** and choose « **Auto-Threadings on profiles** » 
- Enter 2 mm for slug.
- Choose mode “**Die**” and type value for distance 5 mm.
- Left click on the profile, threading point is automatically created
- Validate.




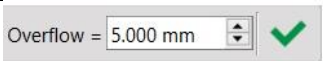


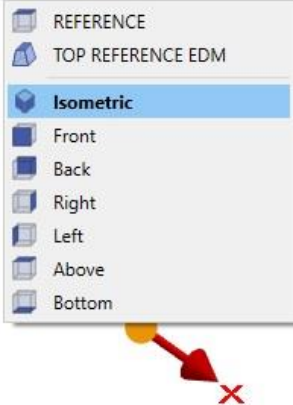





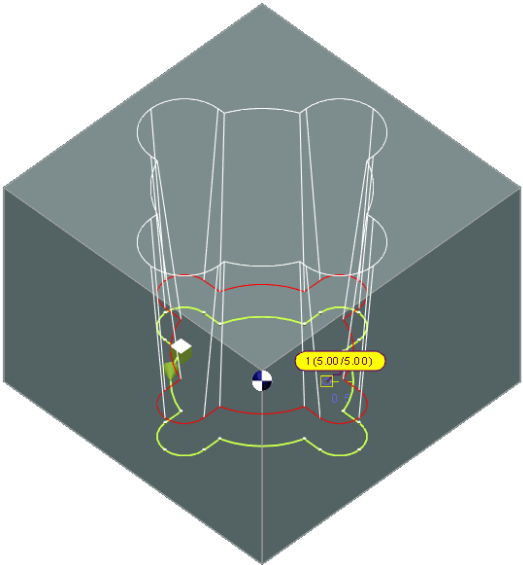
2. EDM:

- Left click on icon 


The stock is automatically created based on your geometry.

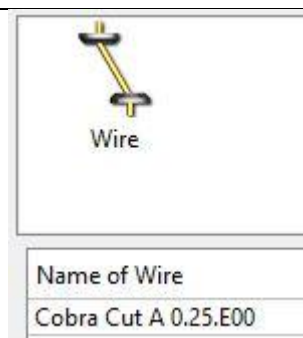
Note: This is a default definition of parallelepipedical stock, with a constant overflow of 5 mm around the geometry.




<ul style="list-style-type: none"> Modification of stock: <ul style="list-style-type: none"> Left click twice in box Zmini and then type 0 Left click twice in box Zmaxi and then type 30 Left click on  to validate the creation of stock. 	 
<p>3. Change views :</p> <p>Two possible ways to change views:</p> <ul style="list-style-type: none"> Left click on  or right click on centre of the interactive axis, and then select the Isometric view 	
<p>4. Applying a complete cycle:</p> <ul style="list-style-type: none"> Left click on  Left click on icon  Choose mode "Die" Left click on the profile <p>Note: Because of the machining contour, the thread point is automatically selected.</p> <ul style="list-style-type: none"> Enter the value 5 for both Top Z and Taper. <p>Note: If the profile is clockwise, type value - 5 in box of Taper, or reverse the profile.</p> <ul style="list-style-type: none"> Verify the side of the taper  	  

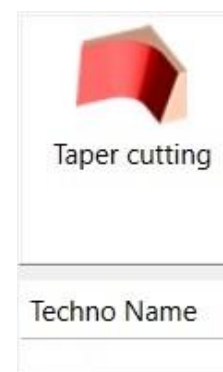
5. Selection of tool:

- Left click on 
- In the list of tool, select tool "Cobra Cut 0.25"



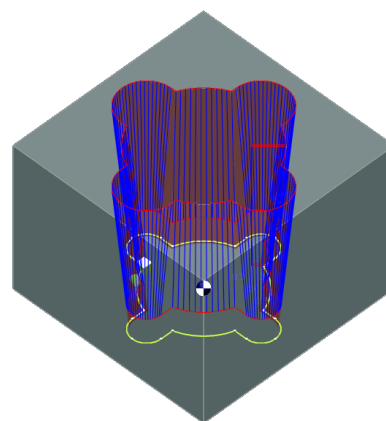
6. Selection of cycle:

- Left click on 
- Left click on **Taper Cutting**





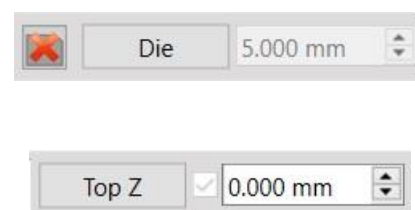
7. Calculation of Cycle :

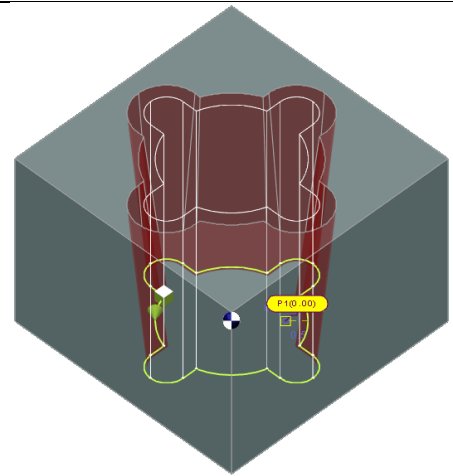
- Left click on **Cycle Calculation** 



8. Applying a straight cut cycle



- Left click on  **Cylinder Cut**
- Left click on 
- Choose mode "**Die**"
- Select the profile
- Check whether the height is 0

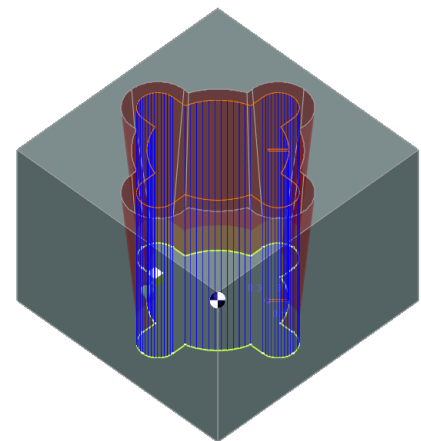









9. Selection of cycle:

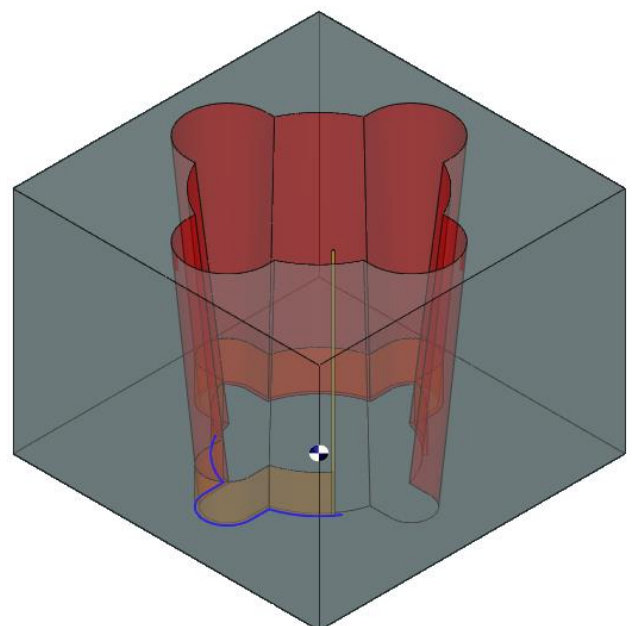
There is no longer a need to define a tool because it has been selected during the last cycle.

- Left click on 
- Left click on **Straight Cut**
- Left click on **Cycle Calculation** 



10. Simulation :

- Left click on  **NC File**
- Left click on 
- Left click on  to start simulation on all machining operations
- Click the space bar or click on  if you want to switch to step-by-step mode
- Left click on  or Press Escape to stop the simulation.



11. Generation of ISO program:



- Left click on
- From the suggested list, select the post-processor »E60_Charmilles_Robofil «
- Open and confirm

ISO program is generated.




```
File Edit Display Tools
%
N5 G92 X5000 Y5000 W5000
N10 M28
N15 M06
N20 M20
N25 G38
N30 G29
N35 G01 X5133 Y4867
N40 G41 D0
N45 G30
N50 X7071 Y6806 A0
N55 G28
N60 G03 X7071 Y7071 I6938 J6938 A5000
N65 G29
N70 X3000 Y9539 I0 J0
N75 G28
N80 G01 X3000 Y12000
N85 G03 X0 Y15000 I0 J12000
N90 X-3000 Y12000 I0 J12000
N95 G01 X-3000 Y9539
N100 G29
N105 G03 X-9539 Y3000 I0 J0
N110 G28
N115 G01 X-12000 Y3000
N120 G03 X-15000 Y0 I-12000 J0
N125 X-12000 Y-3000 I-12000 J0
N130 G01 X-9539 Y-3000
N135 G29
N140 G03 X-3000 Y-9539 I0 J0
N145 G28
N150 G01 X-3000 Y-12000
N155 G03 X0 Y-15000 I0 J-12000
N160 X3000 Y-12000 I0 J-12000
N165 G01 X3000 Y-9539
```

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III. Multi-pass machining procedure:

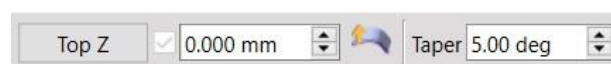
Save your file then re-open it. This time, keep the threading point and delete the machining.

1. Application first pass "Complete + Stop":


- In 
- Left click on 
- Left click on 
- Select the profile
- Choose mode "Die"
- Select cutting type "Complete+Stop"

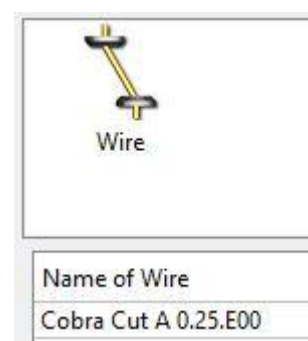
Note: The stop value of Slug has been defined when creating the threading point.

- Enter value 5 in box Taper
- Verify the side of the taper 





2. Selection of tool:

- Left click on 
- In the list of tool, select "Cobra Cut 0.25"






3. Selection of cycle:

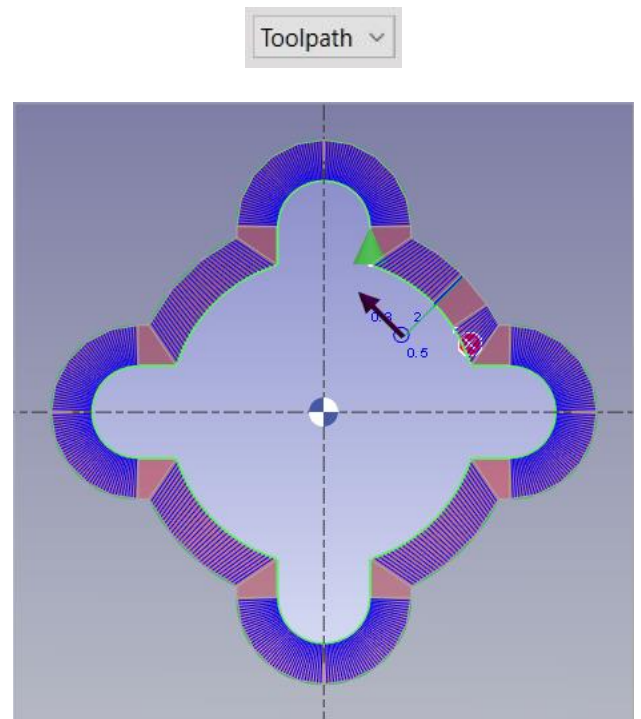
- Left click on 
- Left click on Taper Cutting
- Left click on Cycle Calculation 



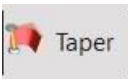


4. Simulation :

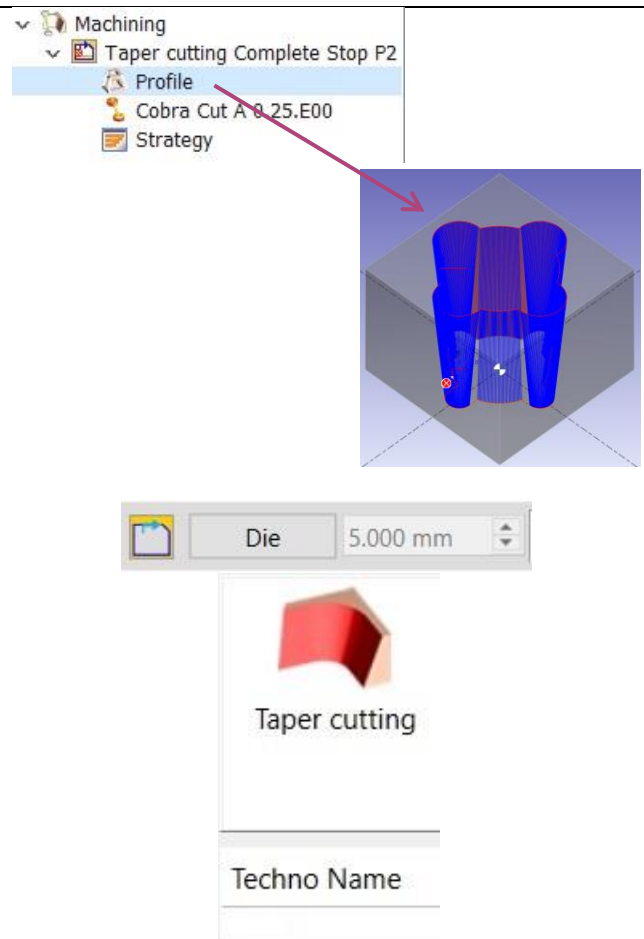
- Left click on 
- Switch the simulation to toolpath mode to view the stop 
- Left click on  to start the simulation

Note: In order to visualize the stop during the simulation, you must choose toolpath mode. Dynamic mode will not simulate the stop.

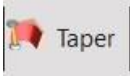




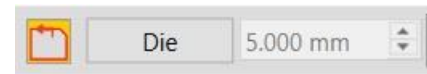
5. Applying a second « complete cut profile » :

- Left click on  Taper
- In the machining tree, drag profile icon into the middle of the screen
- Left click on 
- Change the cutting type to « Cut of the complete profile »
- Verify whether other settings remain unchanged
- Left click on Cycle Calculation 





6. Applying a Third toolpath of "Cut of complete profile in inverse direction" :

- Left click on  Taper
- In the machining tree, drag profile icon into the middle of the screen
- Left click on the icon 
- Change the cutting type to "Cut of the complete profile in inverse direction"
- Check whether other settings remain unchanged
- Select the strategy
- Left click on Cycle Calculation 



7. Simulation :

- Left click on 
- Choose mode "Dynamic" or "Toolpath"
- Left click on  to start simulation

