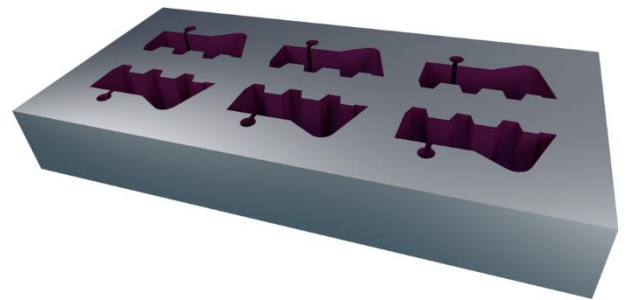


GO2cam



GO2cam V6.10 Tutorial W01 – Test Piece

I. Process of Design:

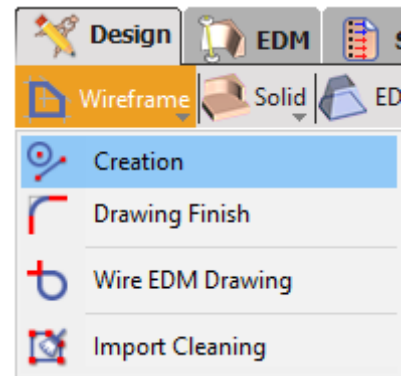
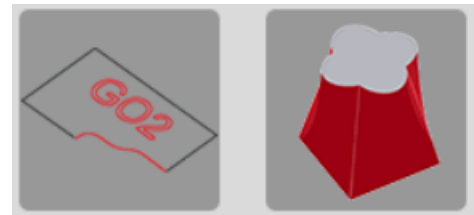
1. Start:

- In **GO2cam**, Left click on the module Wire EDM Classic



Note: If module is in grey, means your license file can't activate this module.

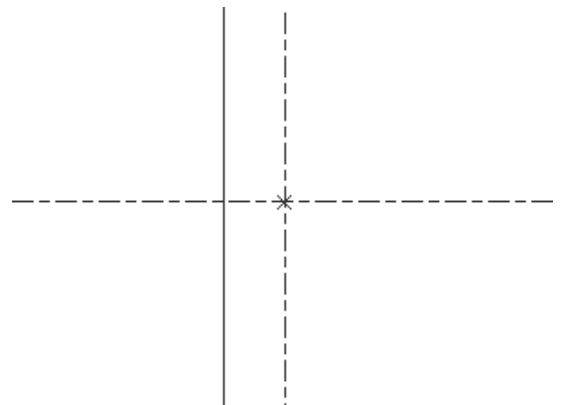
The design mode is activated by default.

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





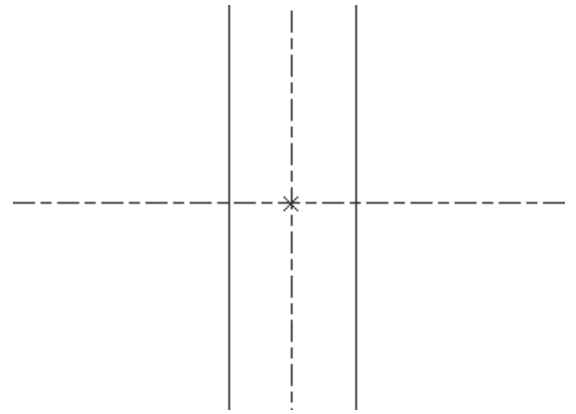
2. Creation of straight line :

- Left click on the function **Line** 
- Left click on vertical axis 
- Left click on the left side of vertical axis
- Type 5 in **Length**





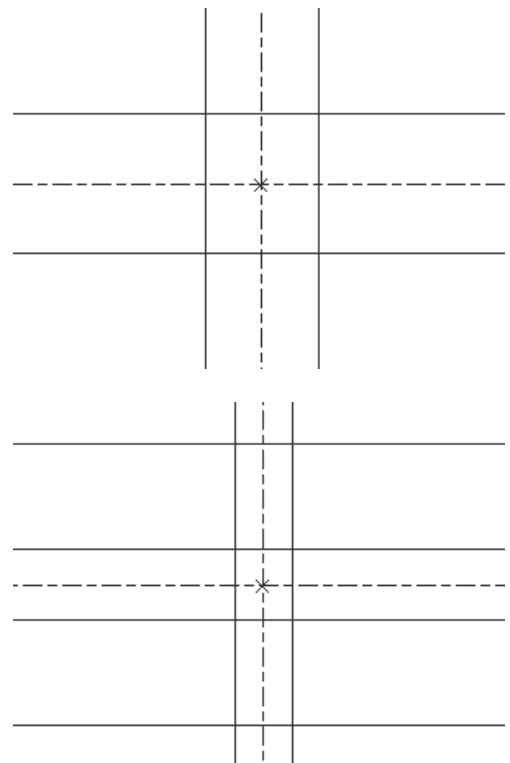
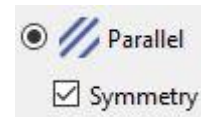
3. Creation of the second straight line :

- The function line  is still **active**
- Left click On the vertical axis again 
- Left click On the right side of the vertical axis
- Type 5 in **Length**





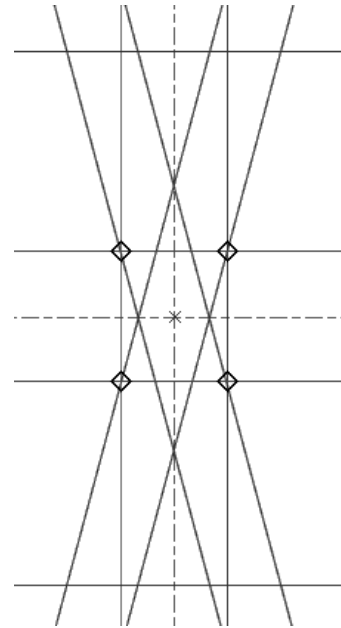
4. Create 2 symmetrical straight lines :

- The function Line  is still **active**
- Left click on the horizontal axis 
- Check the box **Symmetry**
- Left click in space
- Type $12.5/2$, Enter
- Perform the same operation again with a distance of 25





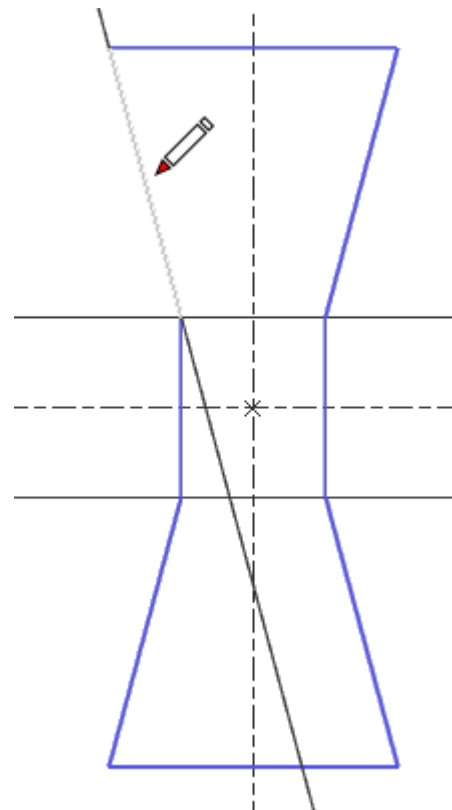
5. Create 4 straight lines at 15 ° /vertical direction:

- Function Line 
- Left click on intersection point when the cursor indicates this symbol 
- Left click in space
- Type the angle value - 75 (clockwise direction) or 75 (counter clockwise direction), and enter
- Repeat above to create all 4 lines



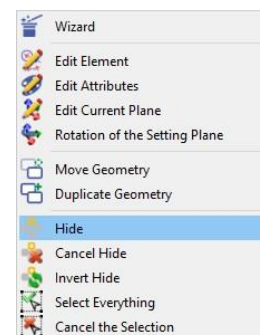
6. Limitation of Lines:

- Left click on 
- Click the elements you want to delete, and go2cam will highlight the item you want to keep
- Hold down the Shift key on the keyboard and click the item you want to keep. This is an optional behavior
- Limit and shape the element
- Left click on  to zoom in geometric elements on the screen








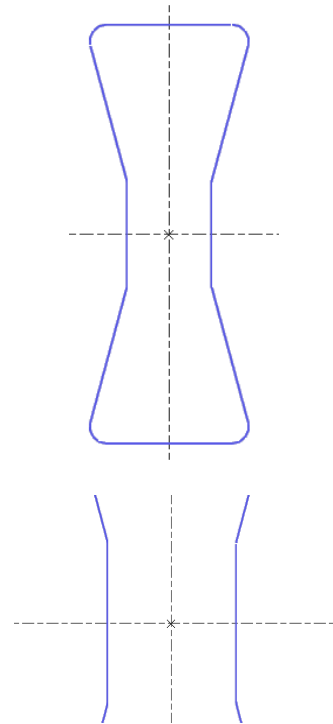
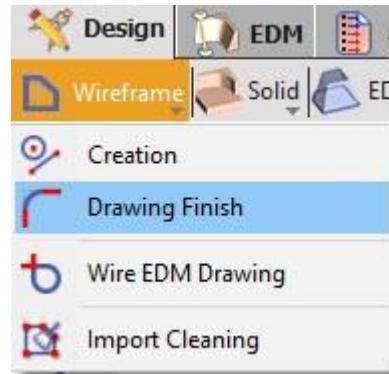
7. Hide the created Lines:

- Right click in window, Left click on Hide
- Then Left click on the 2 lines to hide

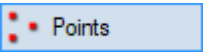




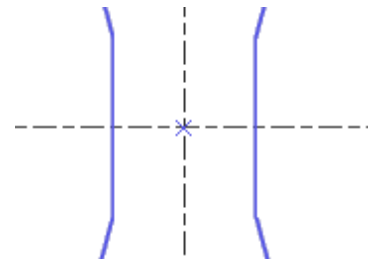
8. Creation of fillet:

- Left click on **Wireframe**
- Select **Drawing Finish**
- Left click on **Fillet** 
- Type 2
- Left click on the 4 corners
- Left click in drawing space to validate.
 - The function fillet  is still active
- Type value 0.5
- Left click on **Zoom** , define the area to be enlarged by two click.
- Left click on the 4 intersections
- Left click on  to validate
- Left click on  to zoom in geometric elements on the screen



• Create threading points :

- Left click on **Wireframe**
- Left click on **Creation**
- Left click on  **Points**
- Left click on **Points** 
- Type 0 of coordinates x and y
- Left click on 




9. Save files:


- Left click on the menu **File**
- Left click on **Save as**
- Type name : “W01_Test_Piece”
- Left click on **save**

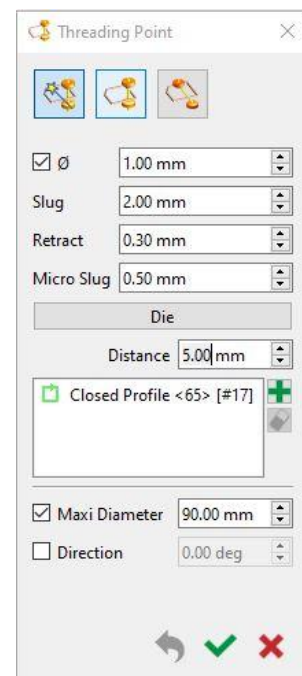
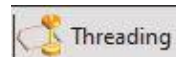
II. Machining process:

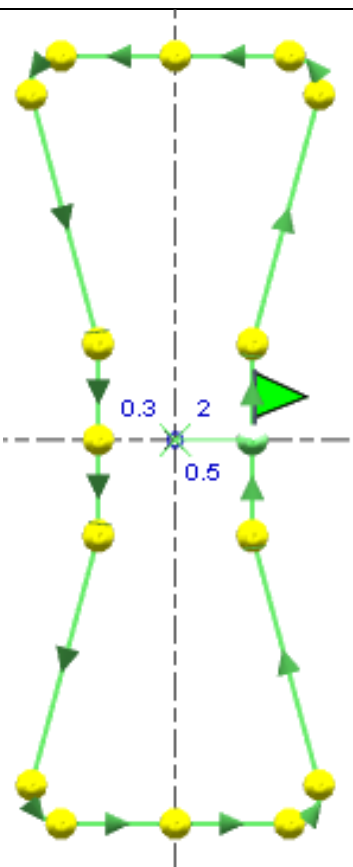
1. Definition of thread point :

- Enter in menu **Design**
- Enter in menu **Threading**
- Left click on **Manual Threadings on profiles** 

Auto Threadings on profiles is auto selected.

- Switch to mode "**Die**" and type 5 in distance dialog box.
- Enter value 2 in Slug
- Keep the retract value at 0.3
- Left click on the profile and threading point will be automatically created
- Left click on **Validate** 





2. EDM:

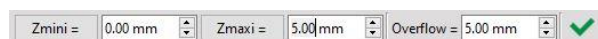
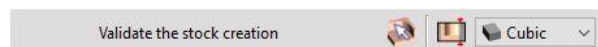
- Left click on icon



GO2Cam automatically create stock based on your geometry.

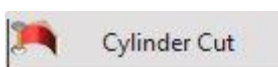
Note: This is a default definition of parallelepipedic stock, with a constant overflow of 5 mm around the geometry.

- Modification of stock:
 - Left click twice in box **Zmini** and then type 0
 - Left click twice in box **Zmaxi** and then type 5
- Left click on to validate the creation of stock





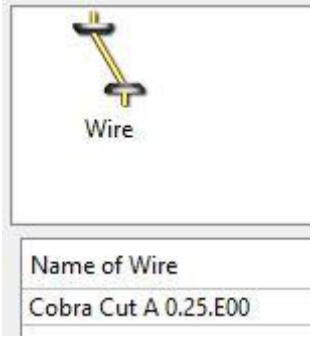



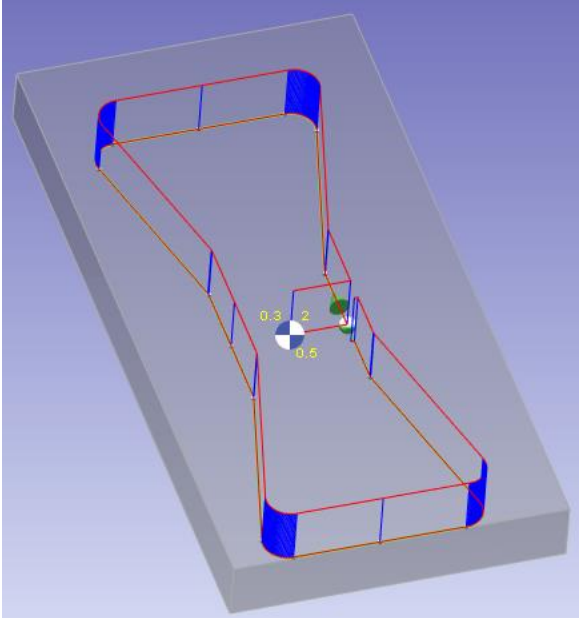
3. Apply the first toolpath of " Partial cut of the profile ":

- Left click on








- Left click on



<ul style="list-style-type: none"> Left click on  and select "Partial cut of the profile" Switch to mode "Die" Left click on the profile 	
<p>4. Selection of tool:</p> <ul style="list-style-type: none"> Left click on the second red light , to select tool In the list of tool, select tool "Cobra Cut 0.25" <p>Note: The thread only needs to be selected once, and will be automatically selected.</p>	
<p>5. Selection of cycle:</p> <ul style="list-style-type: none"> Left click on the red light , to select the cycle Left click on Straight Cut 	
<p>6. Calculation of cycle:</p> <ul style="list-style-type: none"> Left click on cycle calculation  	

7. Second toolpath of " Partial cut of the profile in inverse direction ":

- Left click on  Cylinder Cut
- Left click on 
- Left click on  Select "Partial cut of the profile in inverse direction"
- Check the mode is "Die"  Die 5.00 mm
- Make sure other settings remain unchanged
- Left click on , select techno named 'Straight Cut', the tool has been defined in the first operation



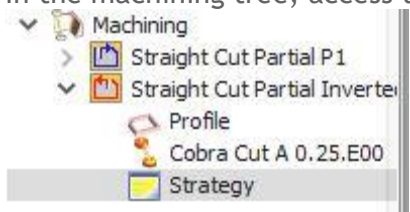
- Left click on cycle calculation 



Note: It can be observed that the retract occurs at the threading point as in the first operation, This toolpath actually will cut nothing.

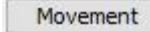
Therefore, we will optimize the toolpath to delete retract toolpath in sequenced cycles.

The parameter we will activate is to control retraction distance value of the threading point.

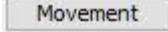

- In the machining tree, access the strategy by right click on straight cut and left click on Edit.

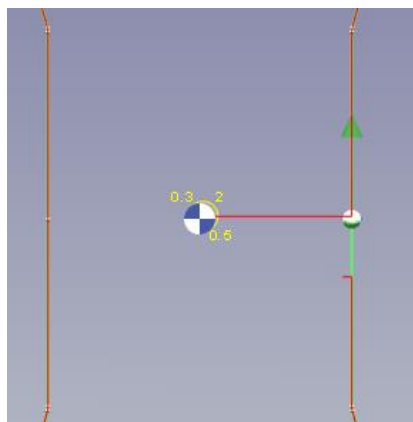


- Left click on , double-click on 

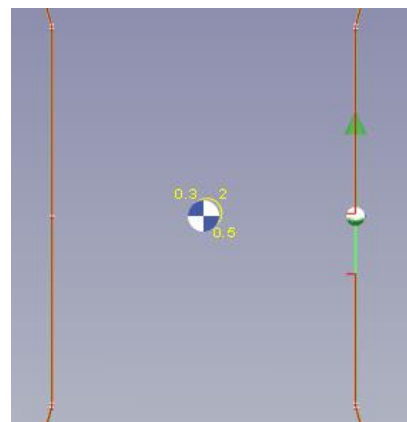
- Then left click on icon movement 
- Select "Yes" for threading on retract distance

Threading on retract distance ☐ No ☒ Yes

- Then left click on icon movement 
- Left click on Cycle Calculation 



No



Yes

- Third toolpath of "Cut of Slug in inverse direction ":

- Left click on  Cylinder Cut

- Left click on 

- Select the profile

- Left click on 

- Select "Cut of the Slug in inverse direction"

- Check the mode is "Die"  Die 5.00 mm

- Left click on  , select





Straight Cut

- Left click on **Cycle calculation**

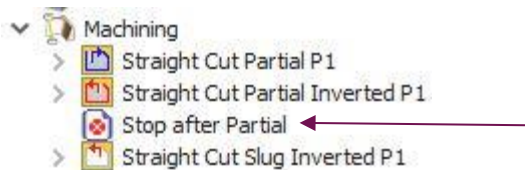


8. Threading point "Stop" :

- Left click in menu  **NC File**
- Left click on the command **Optimization** 
- Check the "Stop after Partials" box, give value 1, then Enter
-


Optimization **Night Job** ☐ By Folder ☒ Optimization of Profiles ☒ Stop after Partials **1**

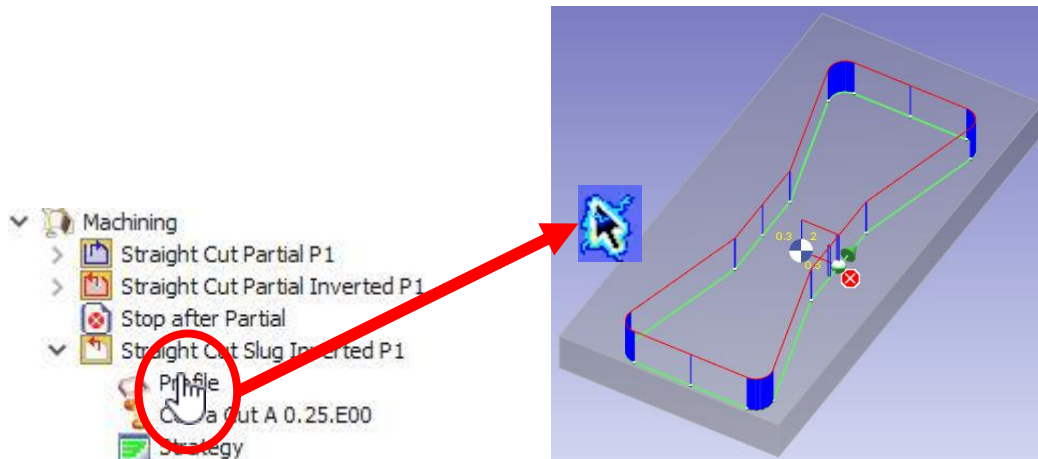
- Validate this command





The Stop is created between 'Partial cut of the profile in inverse direction' and 'Cut of Slug in inverse direction'


- Last toolpath of "Cut of the slug" :

- Left click on  Cylinder Cut
- Drag the profile icon from machining tree to the middle of the screen





- Left click on 
- Left click on  and select the type of cut to "Cut of the slug"

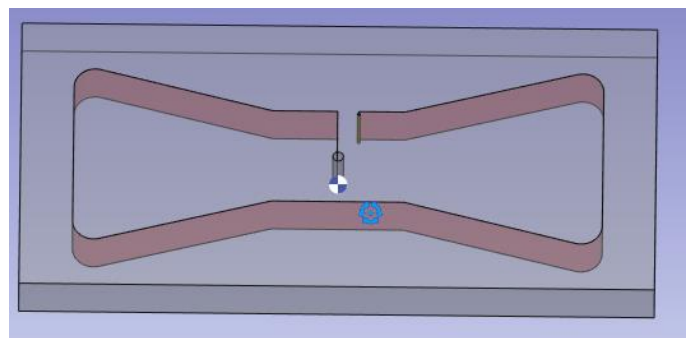


- Select strategy  Straight Cut

- Left click on Cycle Calculation 

9. Simulation :

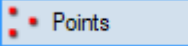

- Left click on 
- Choose mode "Dynamic"
- Left click on  to start simulation

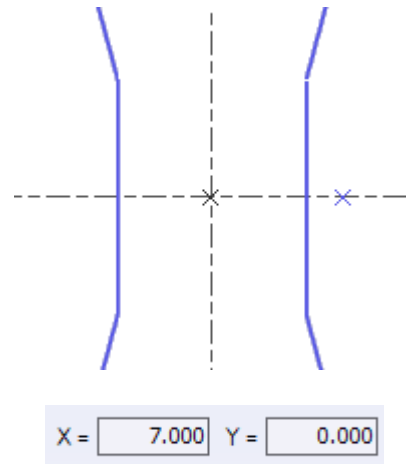




III. Process of punch machining:

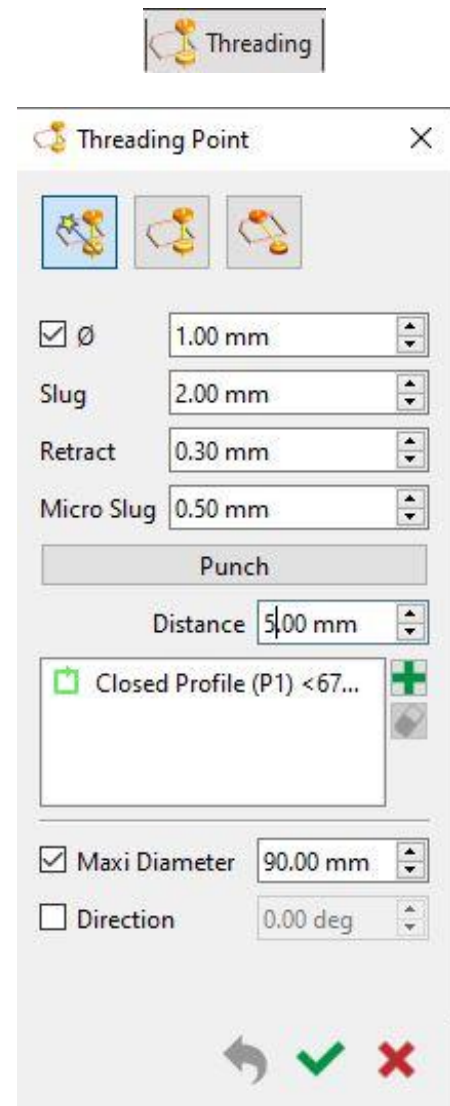
Save the .pce file of the geometry without machining for the later programming as punch

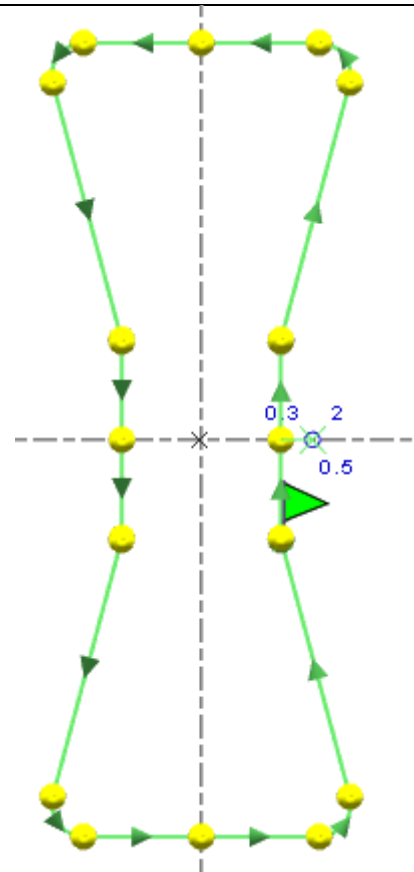
1. Create threading points :

- Return in menu Design
- Left click on **Wireframe**
- Left click on  Points
- Left click on  Points
- Type value X = 7 and Y = 0



- Define of threading points:
- Left click on **Wireframe**
- Enter in menu **Threading**
- Left click on **Manual Threadings on profiles**

-
- Change to mode "punch" and enter value 5
- Enter value 2 in Slug
- Left click on the profile, threading point is created automatically
- Left click on Validate 






2. Define Stock:

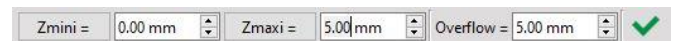
- Left click on the icon



The Stock Definition dialog box appears.

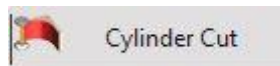
Note: GO2cam will remember the last entered value.

- Check that the value is same as last
- Left click on 



3. Toolpath "Complete + Stop" :


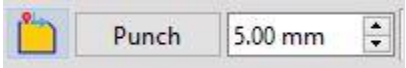

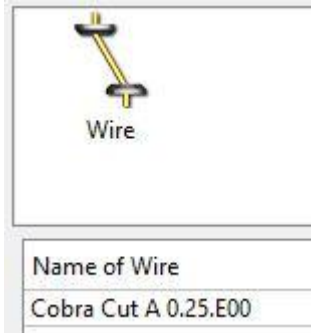



- Left click on



- Left click on geometry selection







- Select the profile
- Change to mode "Punch"


<ul style="list-style-type: none"> Left click on  and select "Cut of complete profile + Stop for the slug" 	
<p>4. Selection of tool:</p> <ul style="list-style-type: none"> Left click on  In the list of tool, select "Cobra Cut 0.25" 	
<p>5. Selection of cycle:</p> <ul style="list-style-type: none"> Left click on  Left click on Straight Cut Left click on cycle calculation  	

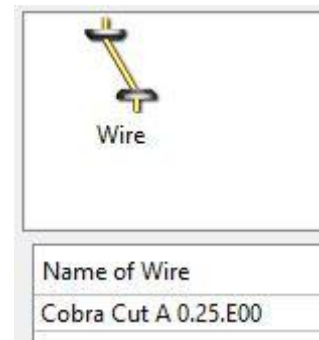
IV. Multi-pass process of punch machining:

Save PCE file without toolpath.



<ul style="list-style-type: none"> Cycle partial cut of the profile: Left click on  Cylinder Cut Left click on  Select the profile Left click on , select "Partial cut of the profile" and change to mode "Punch", 	
--	---

6. Selection of tool:

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






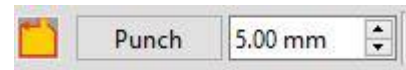
7. Selection of machining cycle:

- Left click on 
- Left click on **Straight Cut**
- Left click on cycle calculation 






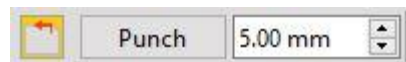
8. Cycle of partial cut of the profile in inverse direction:

- Left click on  Cylinder Cut
- Left click on 
- Select the profile
- Change mode to "Punch", select "partial cut of the profile in inverse direction"
- The tool has been selected in the last machining, please select the strategy **Auto**
- Left click on Cycle Calculation 





9. Cycle cut of the slug in inverse direction:

- Left click on  Cylinder Cut
- Left click on 
- Select profile
- Change to mode "Punch", select "Cut of the slug in inverse direction"
- The tool has been selected in the last machining, please select the strategy **Auto**
- Left click on cycle calculation 



10. Simulation :

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

