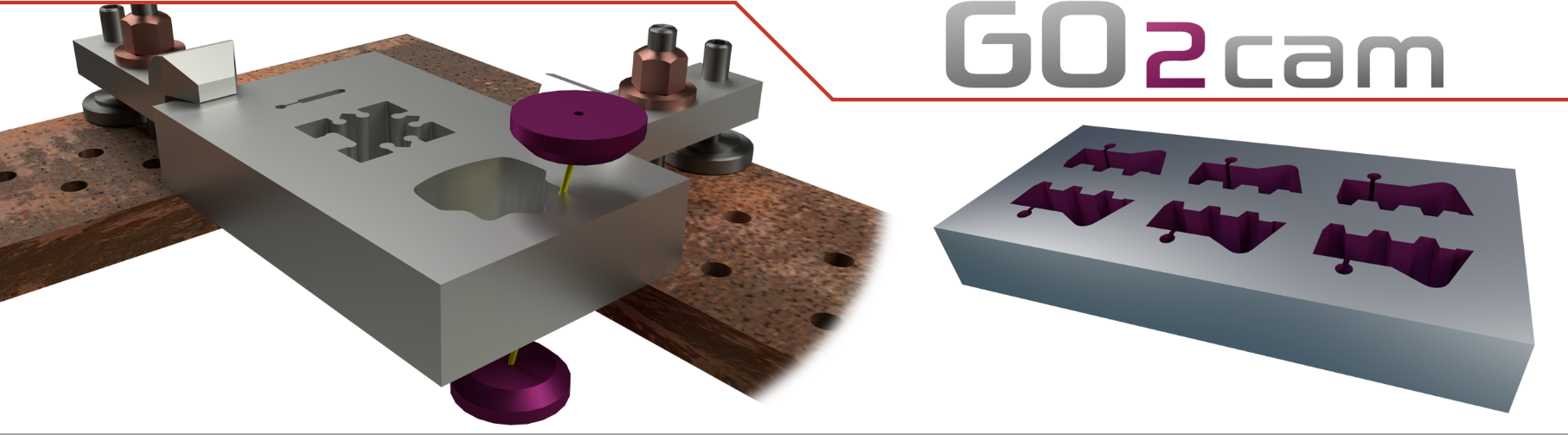
W02

# GO2cam V6.10

# Tutorial

# W02 – Taper Cut



## Process of Design:

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| Start a new drawing:  * Left click on **File**      * Left click on **New** |  |
| Start:  * Left click on **Wireframe** * Left click on **Creation** |  |
| 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 |  |
| Create 4 parallel lines:  * Left click on the function **Line** * Left click on vertical aixs * 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 |  |
| 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. |  |
| 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 |  |
| 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 . |  |
| 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 |  |
| Save file:  * Left click on the menu **File** * Left click on “**Save as**”, and name it to “**W02\_Taper Cut**” * Left click on Save. |  |

1. **Process of machining:**

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| 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. |  |
| 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**.   * Modification of stock: * 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. |  |
| Change views : Two possible ways to change views:   * Left click on  or right click on centre of the interactive axis, and then select the **Isometric** view |  |
| Applying a complete cycle:  * Left click on * Left click on icon * Choose mode "**Die"** * Left click on the profile   **Note: Because of the machining contour, the thread point is automatically selected**.   * Enter the value 5 for both Top Z and Taper.   **Note: If the profile is clockwise, type value – 5 in box of Taper, or reverse the profile.**   * Verify the side of the taper |  |
| Selection of tool:  * Left click on * In the list of tool, select tool **"Cobra Cut 0.25**" |  |
| Selection of cycle:  * Left click on * Left click on **Taper Cutting** | Graphical user interface, application  Description automatically generated with medium confidence |
| Calculation of Cycle :  * Left click on **Cycle Calculation** |  |
| Applying a straight cut cycle  * Left click on * Left click on * Choose mode "**Die"** * Select the profile * Check whether the height is 0 |  |
| 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** | Graphical user interface, application  Description automatically generated |
| Simulation :  * Left click on * 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. |  |
| 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. |  |

## Multi-pass machining procedure:

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

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| 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 |  |
| Selection of tool:  * Left click on * In the list of tool, select **"Cobra Cut 0.25**" |  |
| Selection of cycle:  * Left click on * Left click on **Taper Cutting** * Left click on **Cycle Calculation** |  |
| 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**. |  |
| Applying a second **« complete cut profile » :**  * Left click on * 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** |  |

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| Applying a Third toolpath of **"Cut of complete profile in inverse direction"** :  * Left click on * 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 |  |
| Simulation :  * Left click on * Choose mode **"Dynamic"** or **"Toolpath"** * Left click on  to start simulation |  |