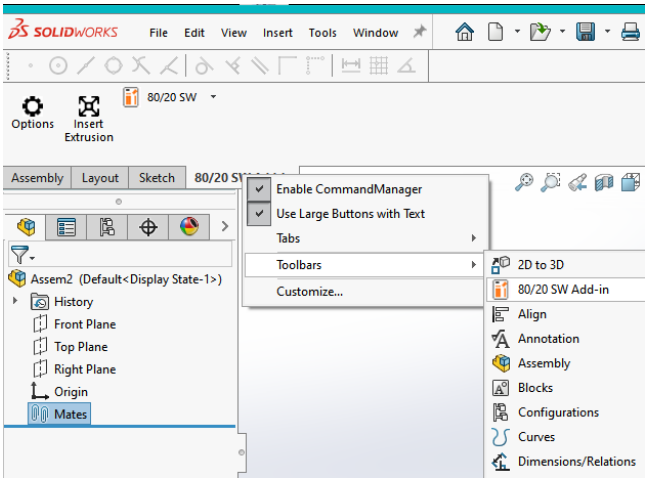
Tutorial

For AQSW support email: AUTOQUOTER@8020INC.COM

Installing and configuring AutoQuoterSW

- Download, unzip, and run installer following the prompts
- Startup SolidWorks 2020-2023
- Right click on the 80/20 SW Add-in tab/Toolbars and select 80/20 Add-in toolbar

  Optional: After activating the toolbar you can remove the 80/20 Add-in tab by right clicking on the tab/Tabs and unchecking 80/20 Add-in.

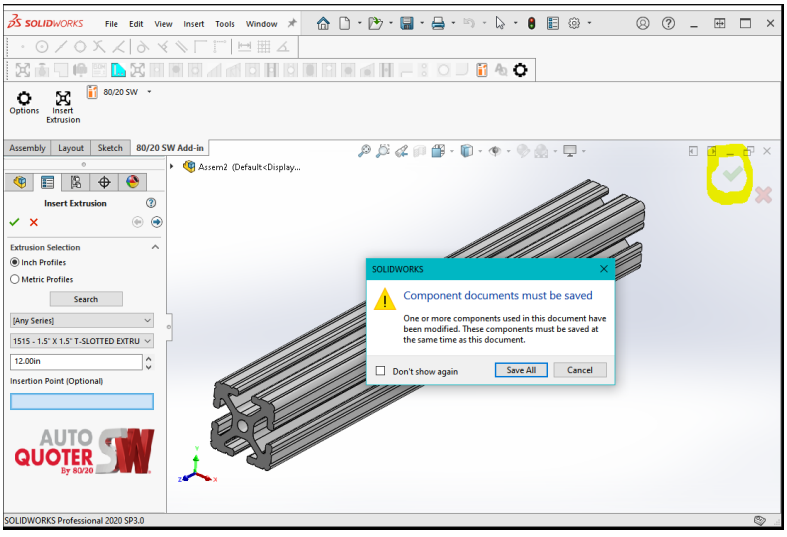


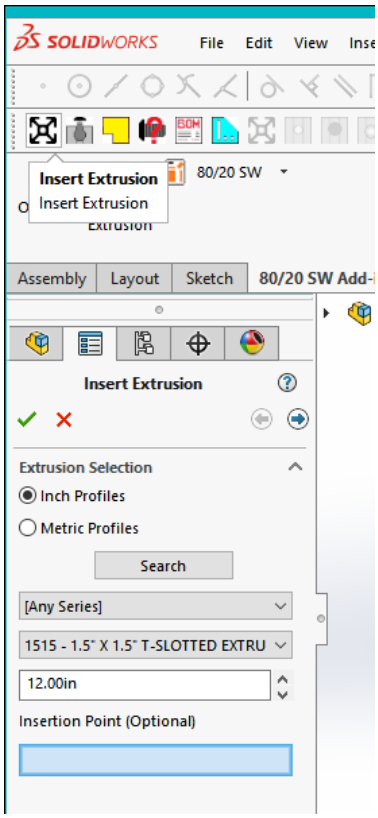
Start a new AutoQuoterSW frame assembly

- Start SolidWorks
- Start new assembly
  - Close all automatic pop up dialogs regaurding the new assembly file
  - Save the assembly (This will be the default location for this assemblies BOM/XML files)

Insert an Extrusion

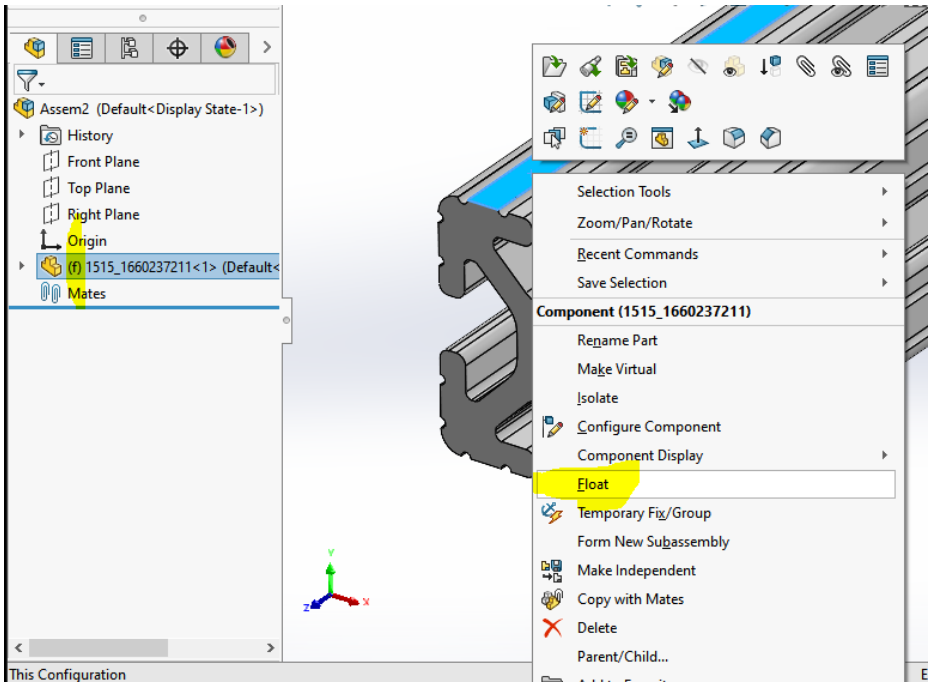
- Select, and drop down the 80/20 SW button
- Choose the extrusion series
- Select the extrusion
- Enter the bar length, (The SW assembly units will determine the extrusion units)
- Select Insertion Point and pick a point on an object to place the model more closely to the final location
- Click save all in the pop-up dialog and select the green check to insert the bar

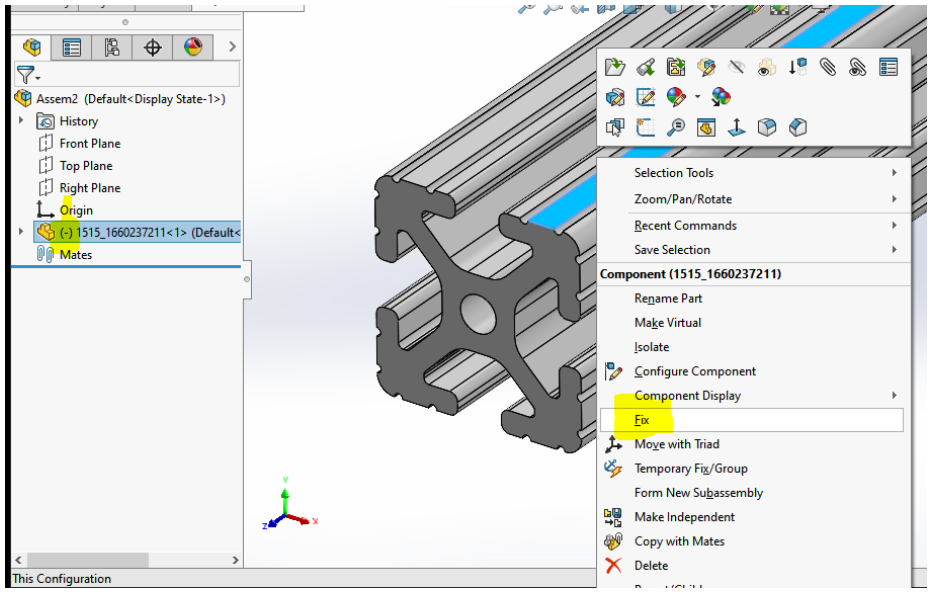




HELPFUL ADVICE FROM ROSS: All SW components by default will be inserted at the 0,0,0 location in the middle of the assembly drawing. If more than one extrusion/part are inserted to the default, the 2nd,3rd,4th,… component will insert on top of the previous component. To help eliminate confusion and frustration, after you insert the 1st component, right click on the part, and select "Float". This will allow the part to be moved a little to the side. After moving, then right click on the part and select "Fix". Now when components are inserted, they will still insert at 0,0,0 but will not overlap each other.

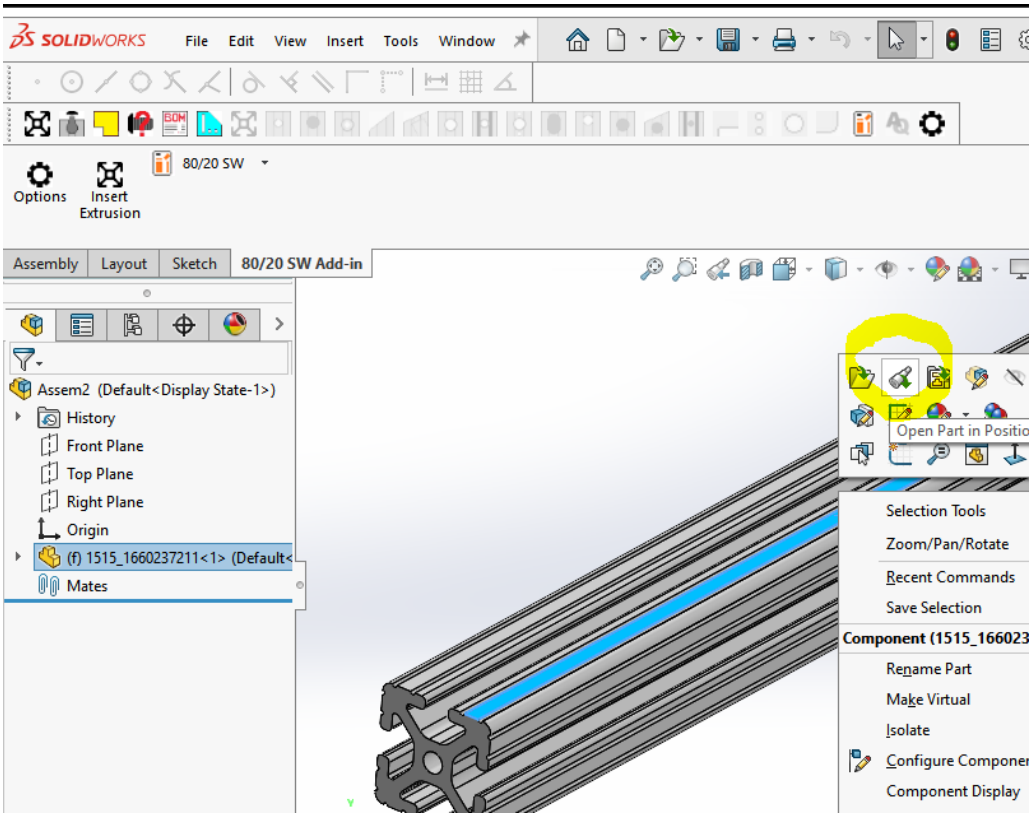
Notice the "f" on the Fixed part in the design tree. You can also right click on the PN in the tree and change if its set to "Fixed" or "Float".





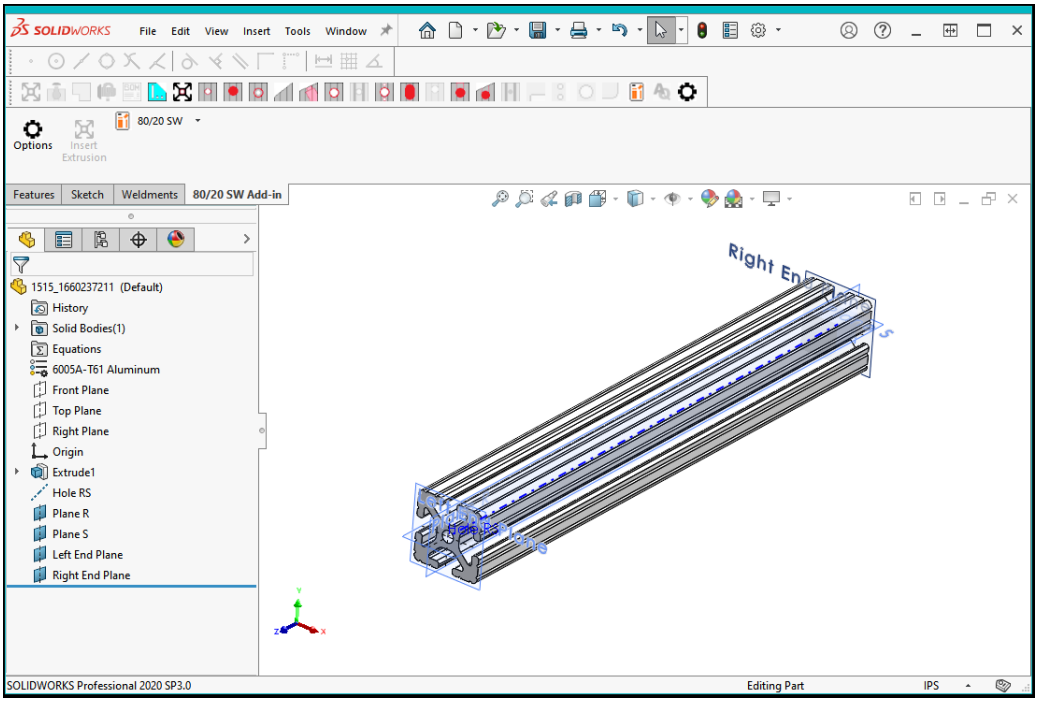
Extrusion Machining

- Right click on the bar to machine and select the SW **"Open Part in Position"** button



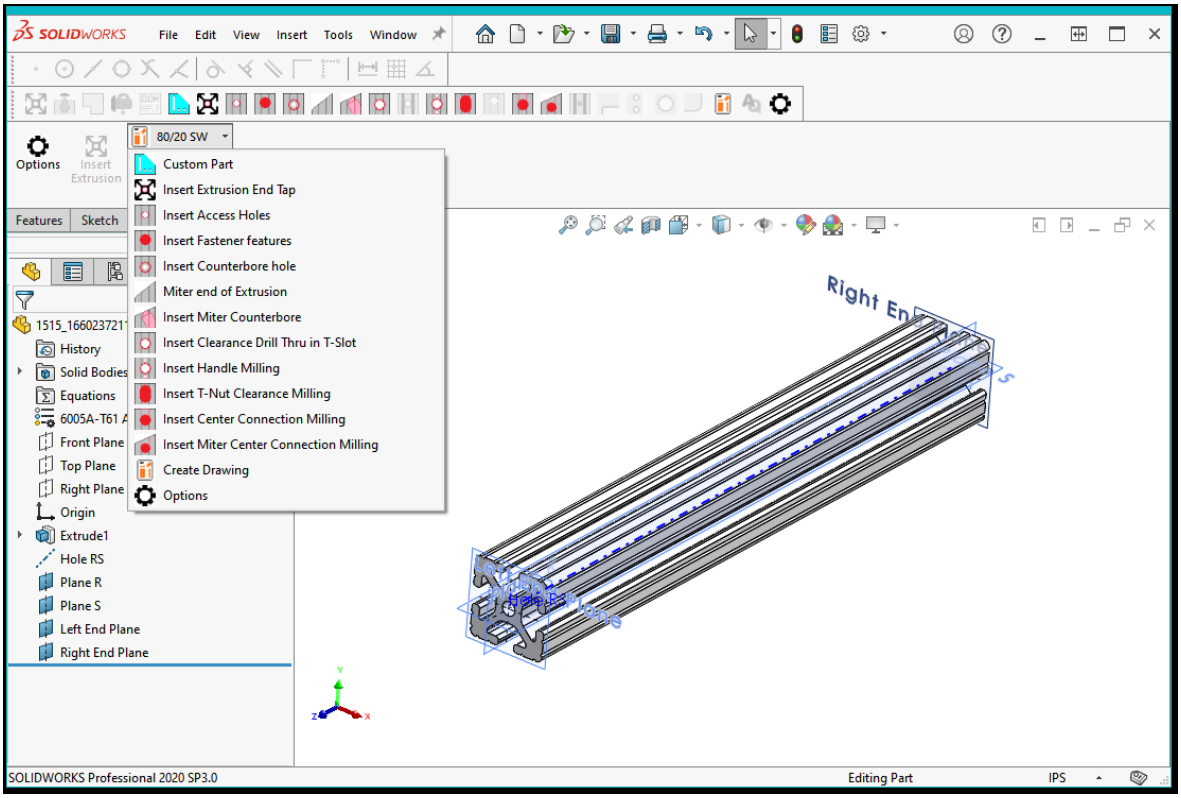
- Extrusion is now in edit mode *(The bar must be in edit mode to add ANY **machining**)*

(This step is required for ALL machining services, so it will not be shown on the following pages)



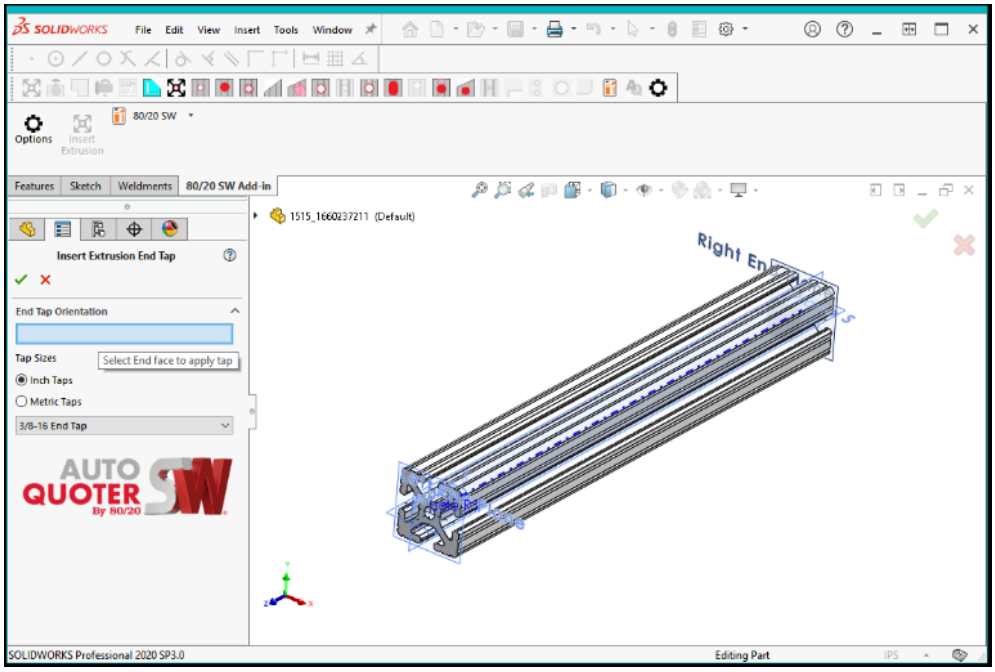
Machining Services list

- This is where all available machining services are located from the dropdown menu

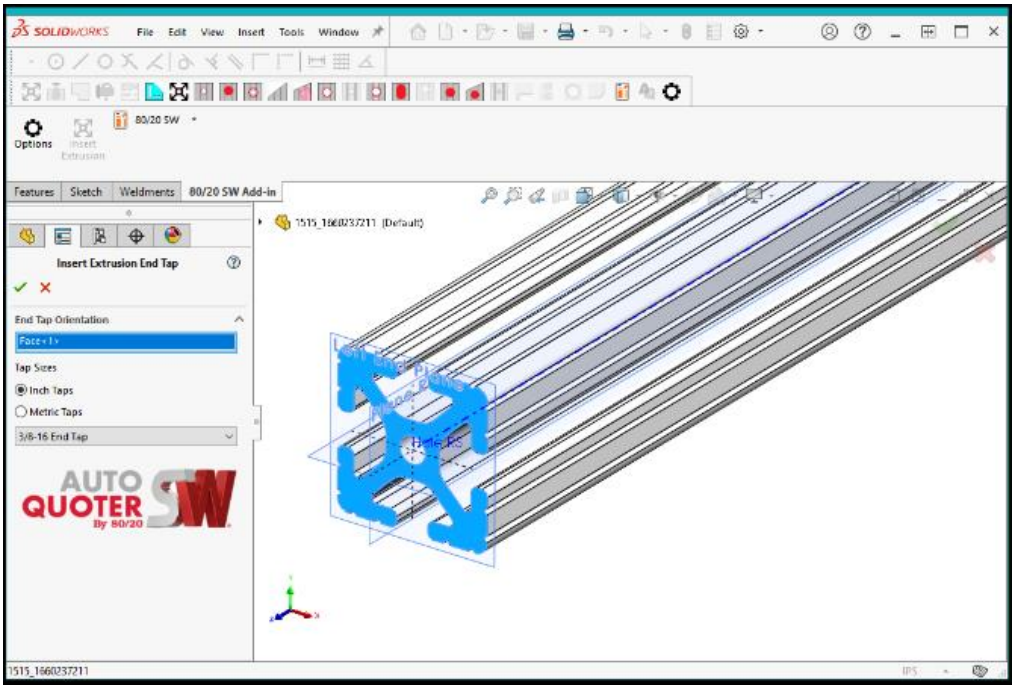


End Taps

- Select “Insert Extrusion End Tap” from the toolbar



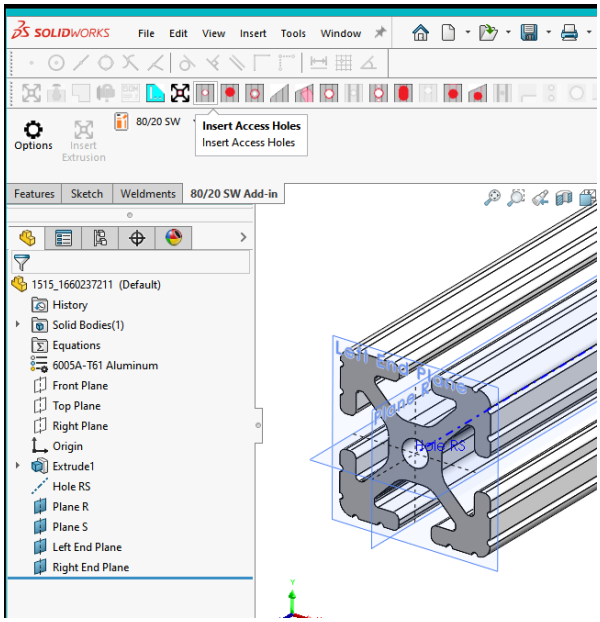
- Highlight the box under “End Face for Tap”
- Select the end of the extrusion to tap



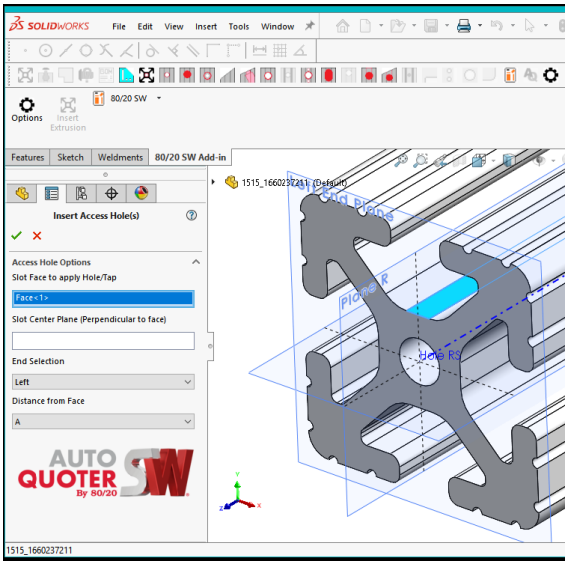
- Choose “Inch Taps” or “Metric Taps”
- Select a tap size from the drop-down options
- Select the green check to tap the bar

Access Holes

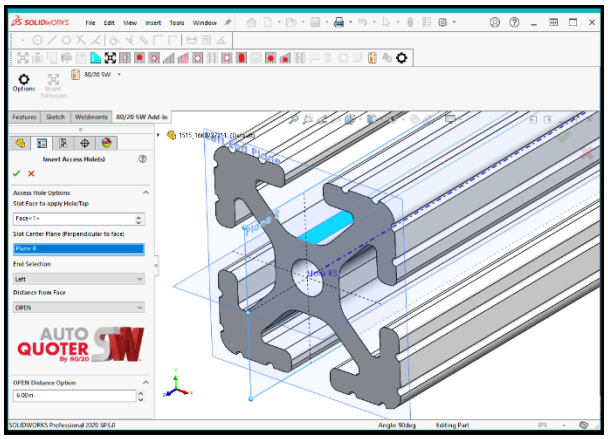
- Select “Insert Access Holes” from the toolbar



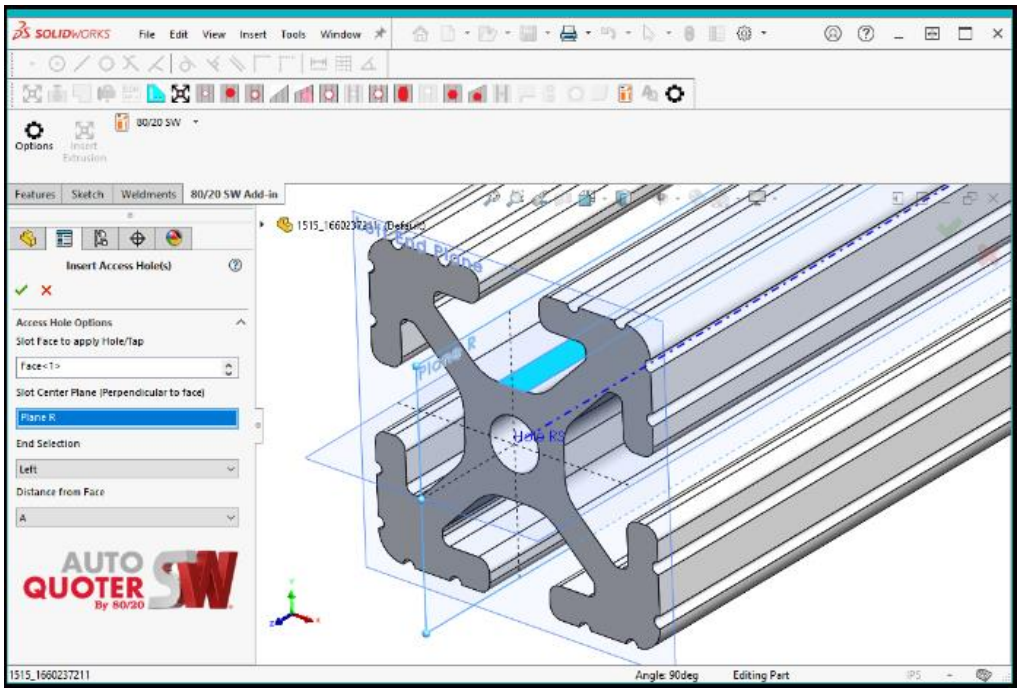
- Highlight the box under “Slot Face to apply Hole”
- Select the face at the bottom of the t-slot



- Highlight the box under “Slot Center Plane”
- Select the construction plane <u>Perpendicular</u> to the previous face

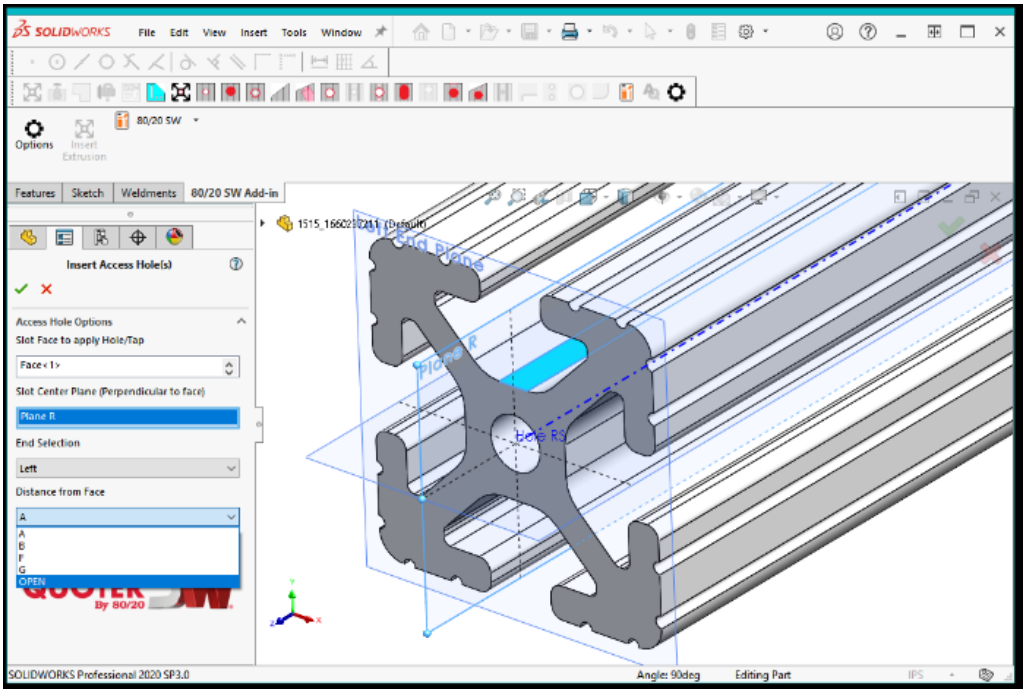


- Under “End Selection”, choose “Left” or “Right” from the drop down
- Under “Distance from Face”, choose from the available styles



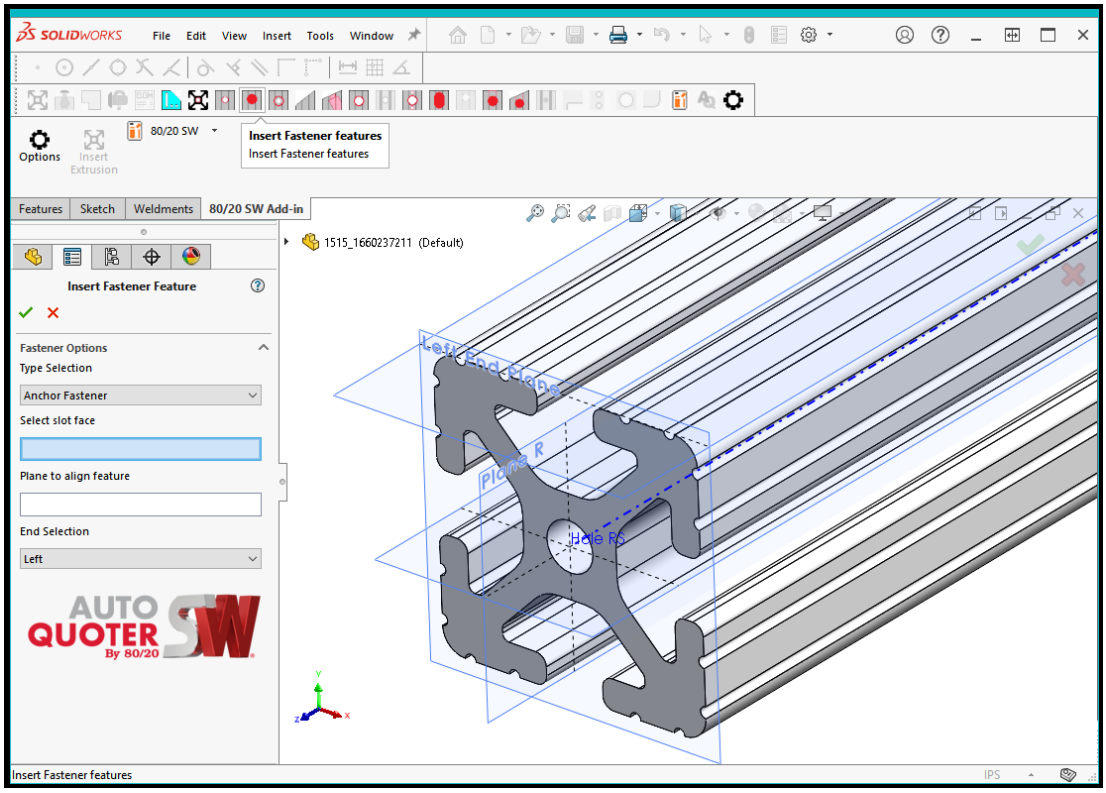
- If “open” style is selected and additional box will open for entering a distance from the end

Select the green check to machine the bar

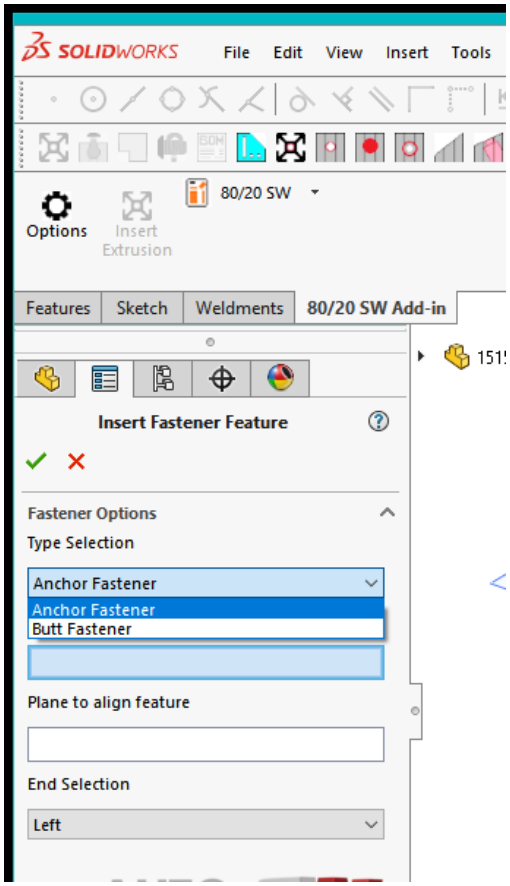


Anchor and Butt Fasteners

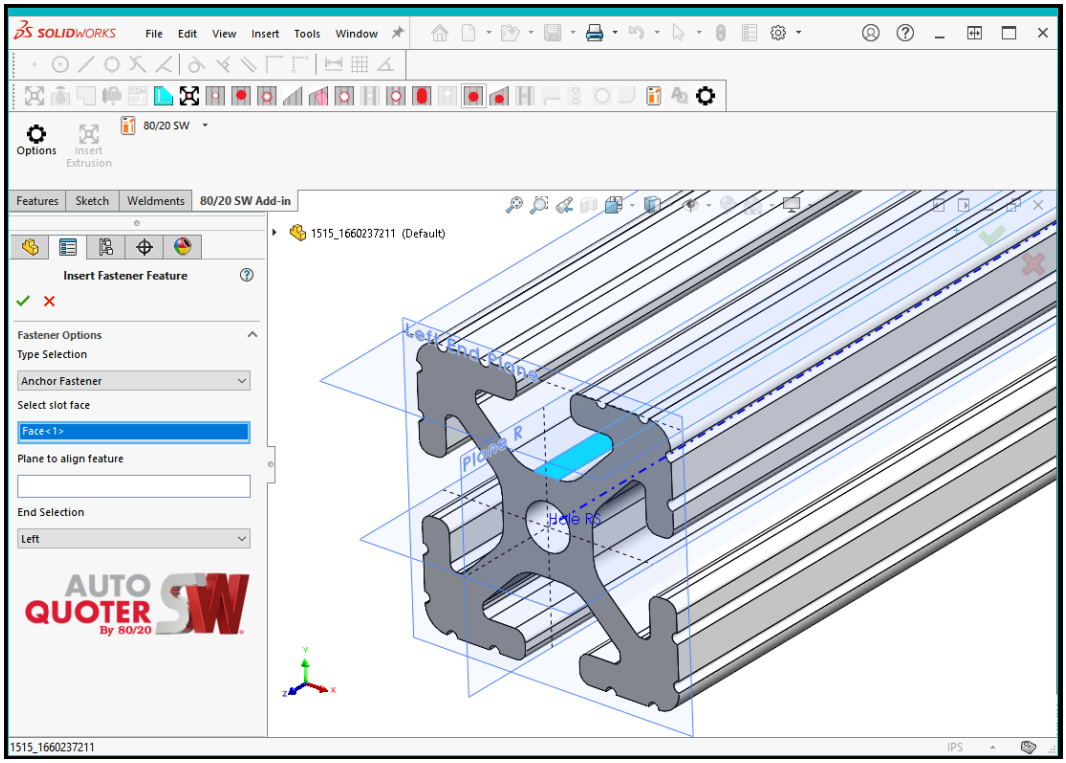
- Select Insert “Fastener Features” from the toolbar



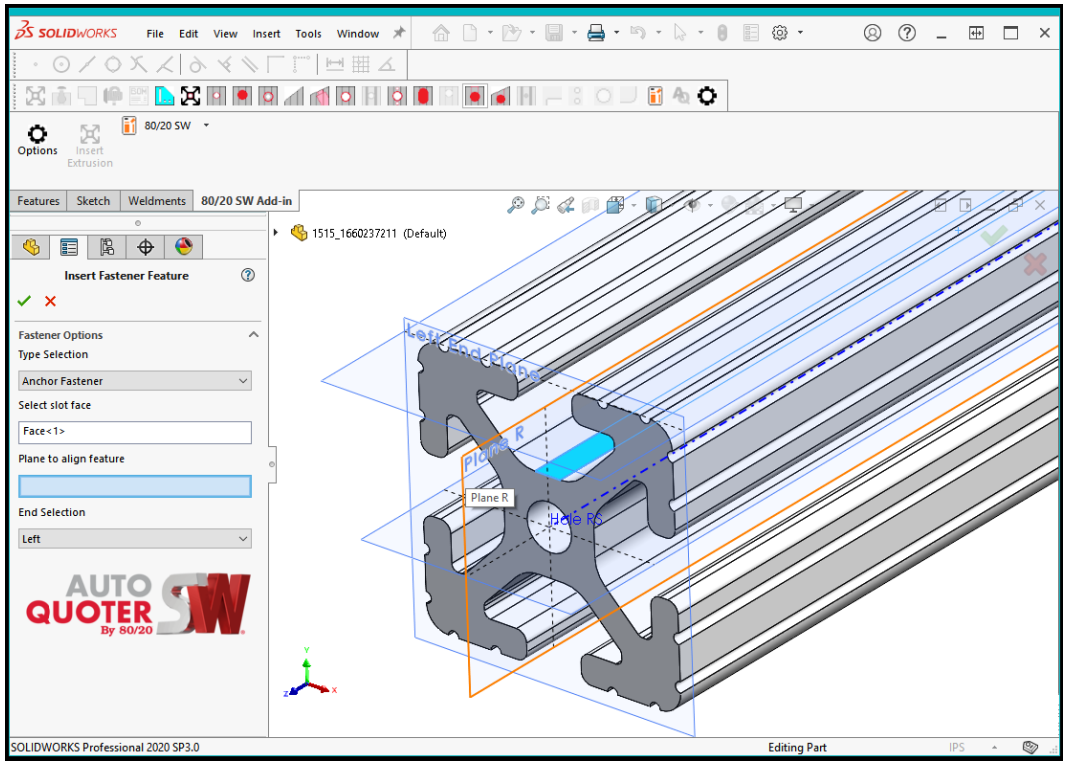
- Under “Type Selection”, choose “Anchor Fastener” or “Butt Fastener” from the drop down



- Highlight the box under “Select slot face”
- Select the face at the bottom of the t-slot



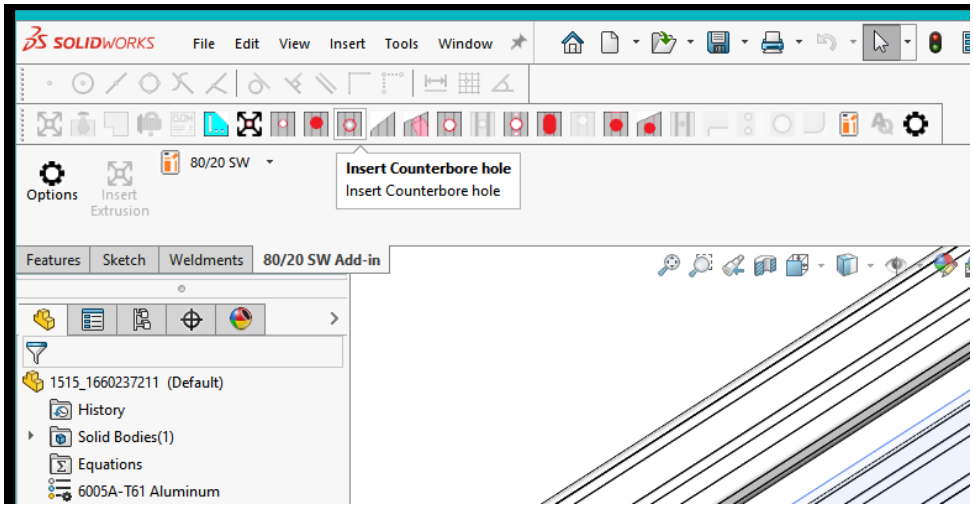
- Highlight the box under “Plane to align feature”
- Select the construction plane <u>Perpendicular</u> to the previous face



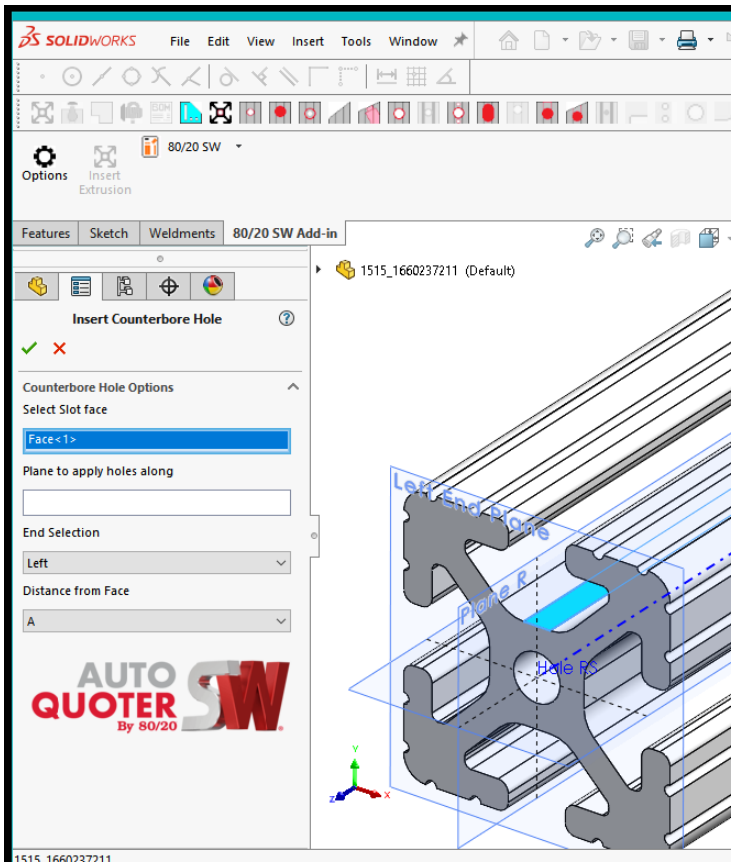
- Under “End Selection”, choose “Left” or “Right” from the drop down to select which end to machine
- Select the green check to machine the bar

Counterbore Hole

- Select “Insert Counterbore Hole” from the toolbar



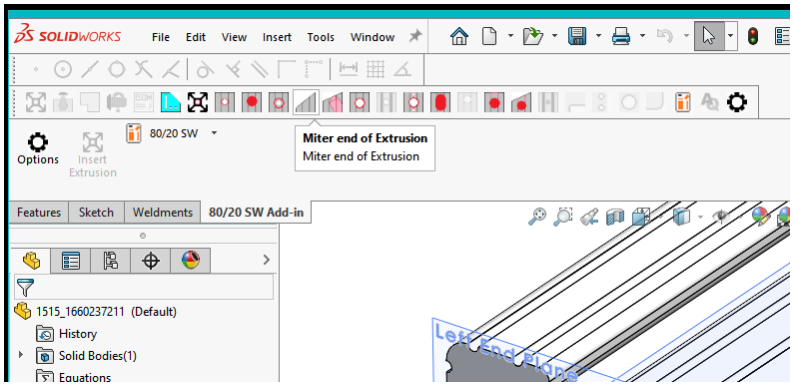
- Highlight the box under “Select Slot Face”
- Select the face at the bottom of the t-slot



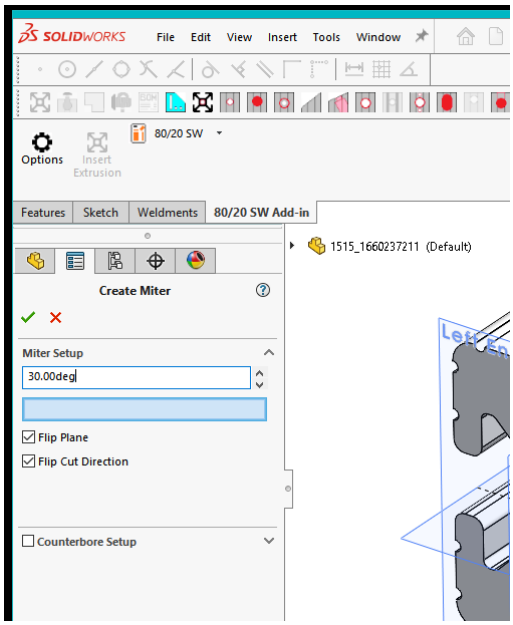
- Highlight the box under “Plane to apply hole along”
- Select the construction plane <u>Perpendicular</u> to the previous face
- Under “End Selection”, choose “Left” or “Right” from the drop down
- Under “Distance from Face”, choose from the available styles
- If “open” style is selected and additional box will open for entering a distance from the end
- Select the green check to machine the bar

Miter cut Extrusion

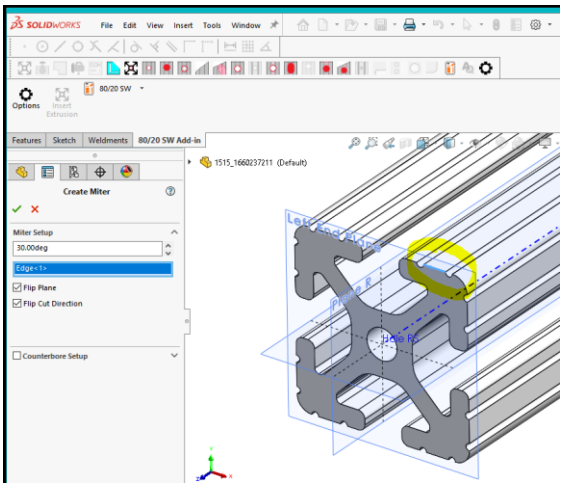
- Select “Miter end of Extrusion” from the toolbar

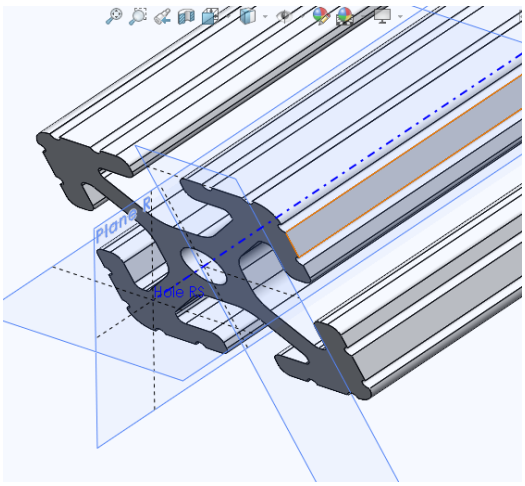


- Highlight the box under “Miter Setup”
    - Input the required angle

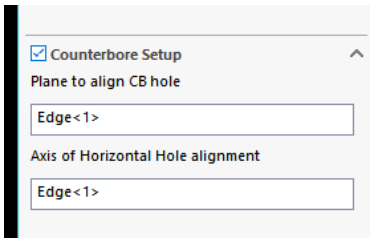


- Highlight the box under the miter angle
- Select the edge (Sharp Point) of the miter cut
- Hit the green check to create a mitercut only (To include the counterbore see below)

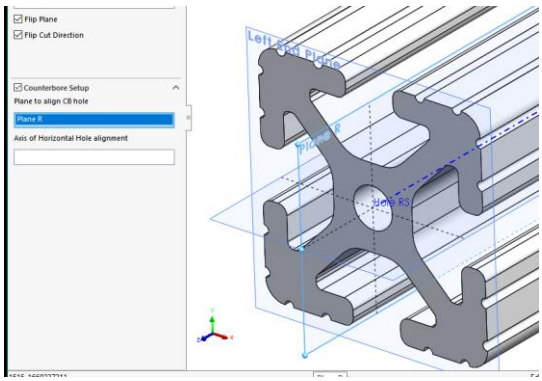




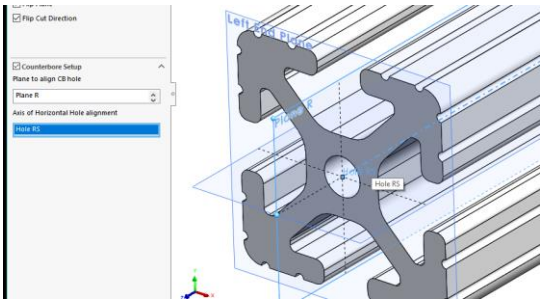
- To add the Miter Counterbore at the same time as the mitercut, check the Counterbore Setup box



- Under “Plane to align CB hole” select the bar plane to align the Counterbore machining

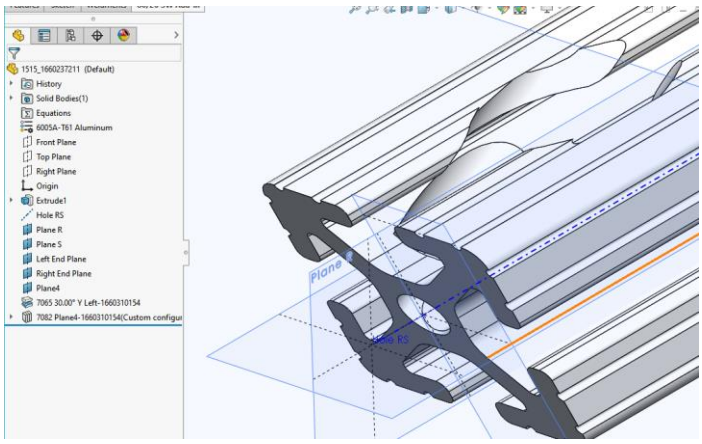


- Under “Axis of Horizontal Hole alignment” select the hole axis line.



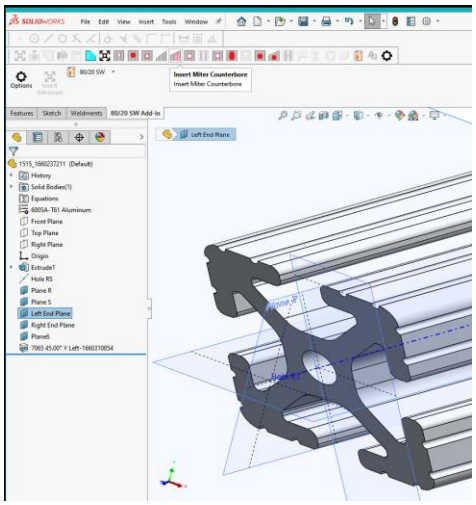
- Select the green check to machine the bar

*** NOTE: The Mitercut & Counterbore services DO include hardware, but they are NOT represented in the AQSW Models or on the BOMs. ***

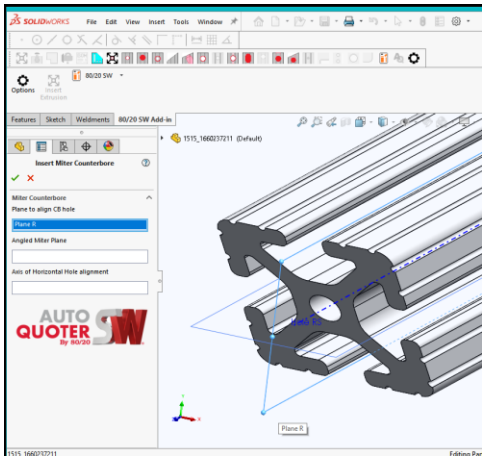


Add a miter counterbore separately after creating the miter

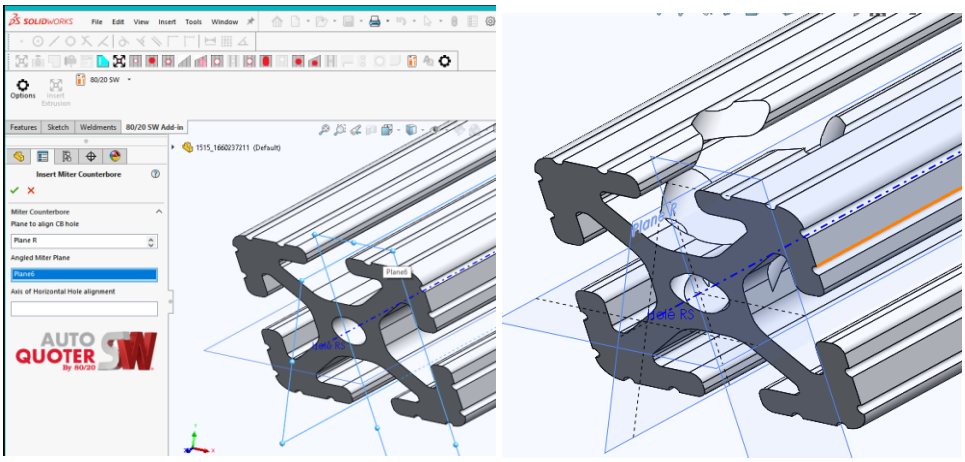
- Select “Insert Miter Counterbore” from the toolbar



- Under “Plane to align CB hole” select the bar plane to align the Counterbore machining



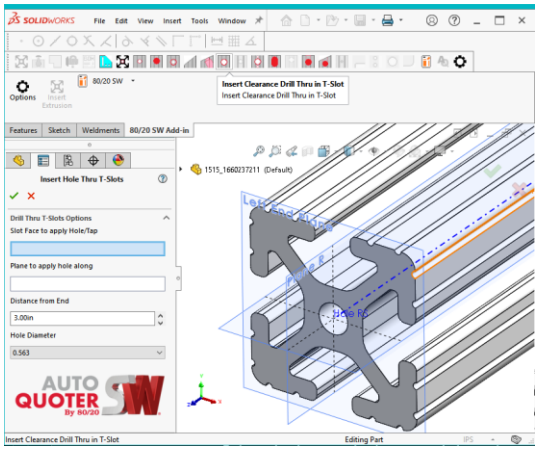
- Under “Angled Miter Plane” select the angled plane on the end of the bar



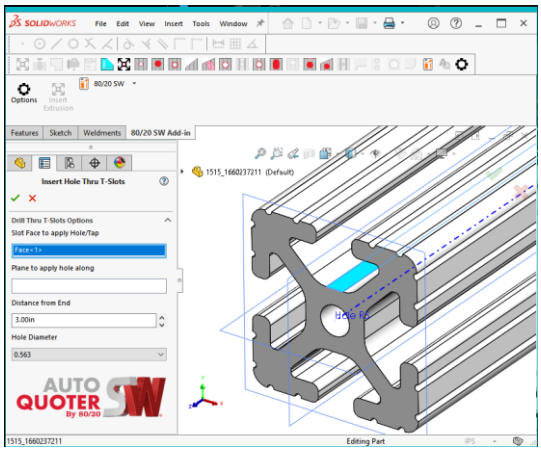
- Under “Axis of Horizontal Hole alignment” select the hole axis line.
- Select the green check to machine the bar

Clearance Hole Drill Though

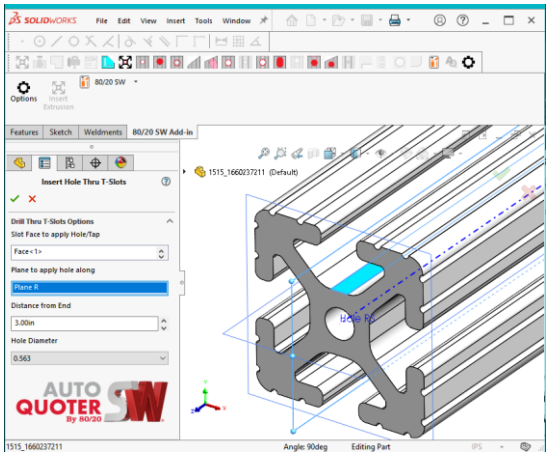
- Select “Insert Clearance Drill Thru in T-Slot” from the toolbar



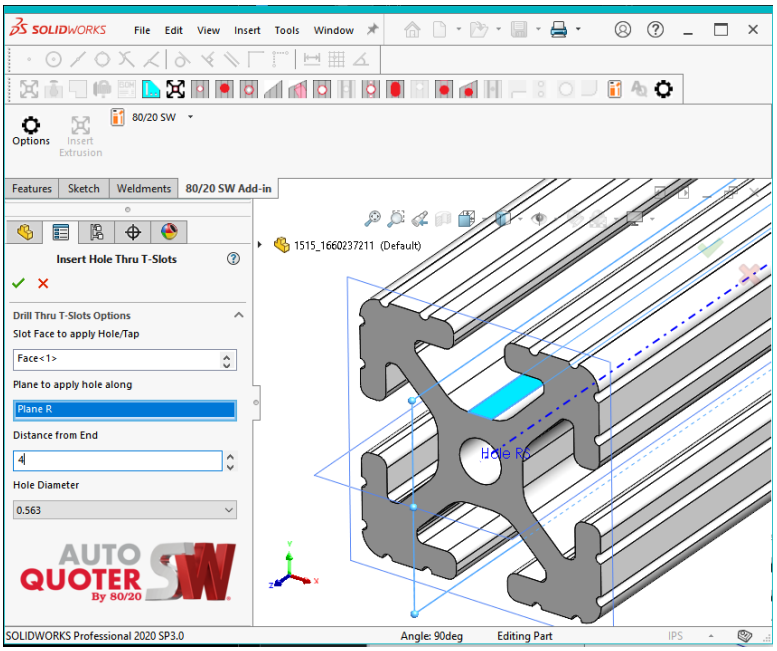
- Highlight the box under “Face to apply Hole/Tap”
- Select the face at the bottom of the t-slot



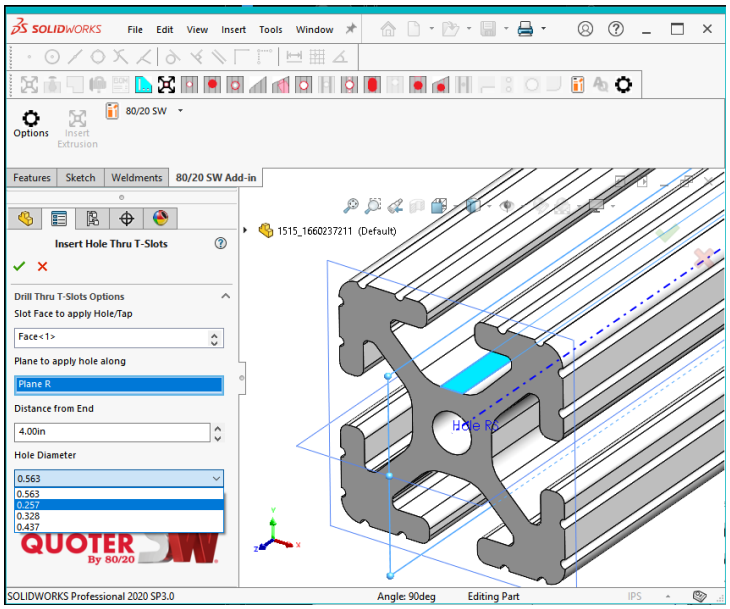
- Highlight the box under “Plane to apply hole along”
- Select the construction plane <u>Perpendicular</u> to the previous face



- Under “Distance from End”, enter a distance from the left end of bar



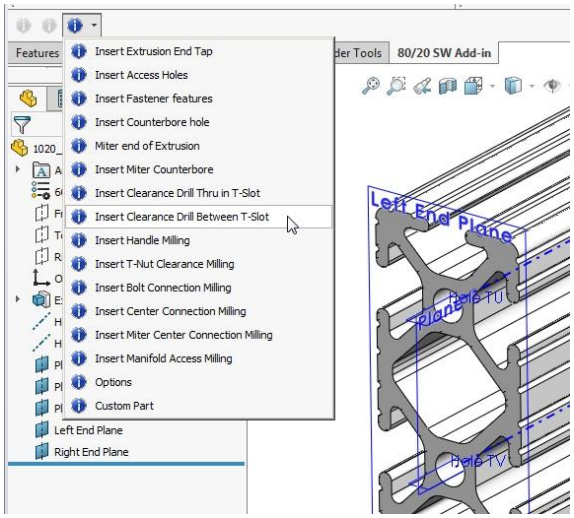
- Under Hole Diameter, select a hole size from the available options.



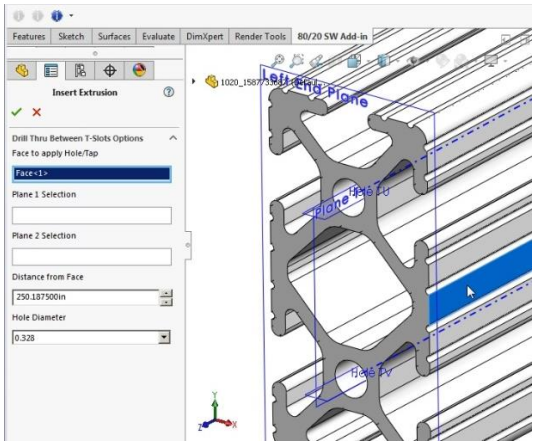
- Select the green check to machine the bar

Clearance Drill between T-Slots

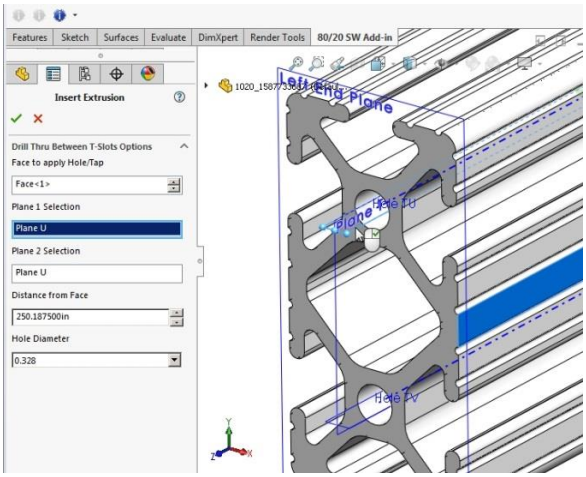
- Select “Insert Clearance Drill Between T-Slot” from the 80/20 SW dropdown



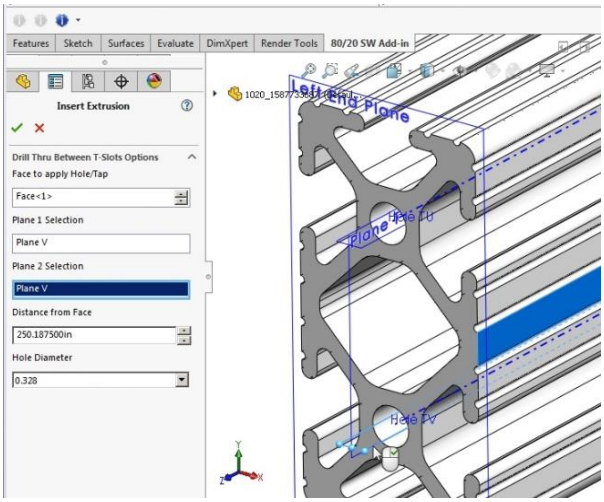
- Highlight the box under “Face to apply Hole/Tap”
- Select the face of the extrusion



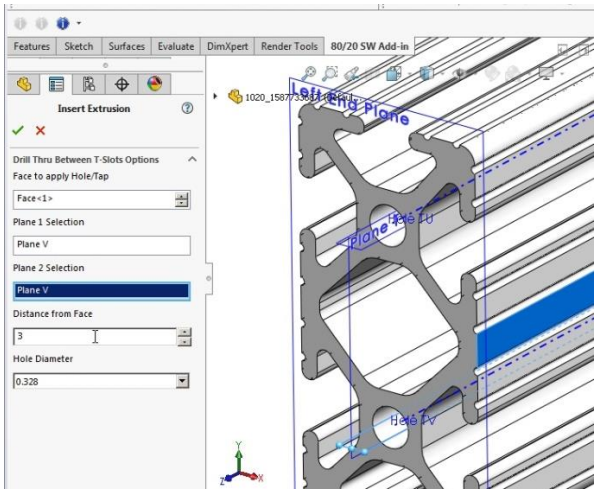
- Highlight the box under “Plane 1 Selection”
- Select the construction plane <u>Perpendicular</u> to the previous face



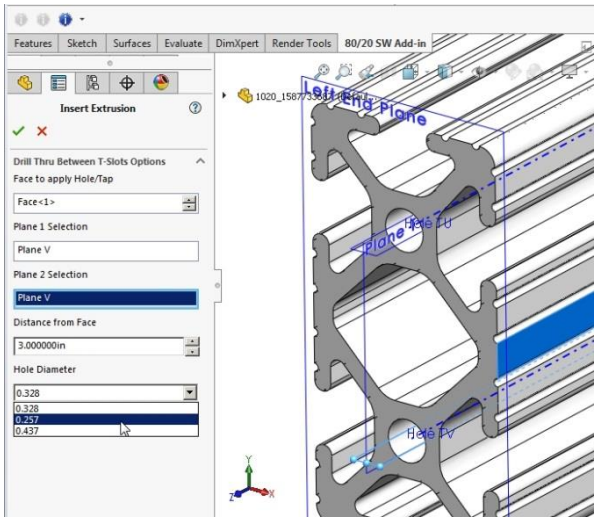
- Highlight the box under “Plane 2 Selection”
- Select the construction plane <u>Perpendicular</u> to the previous face



- Under “Distance from Face”, enter a distance from the left end of bar



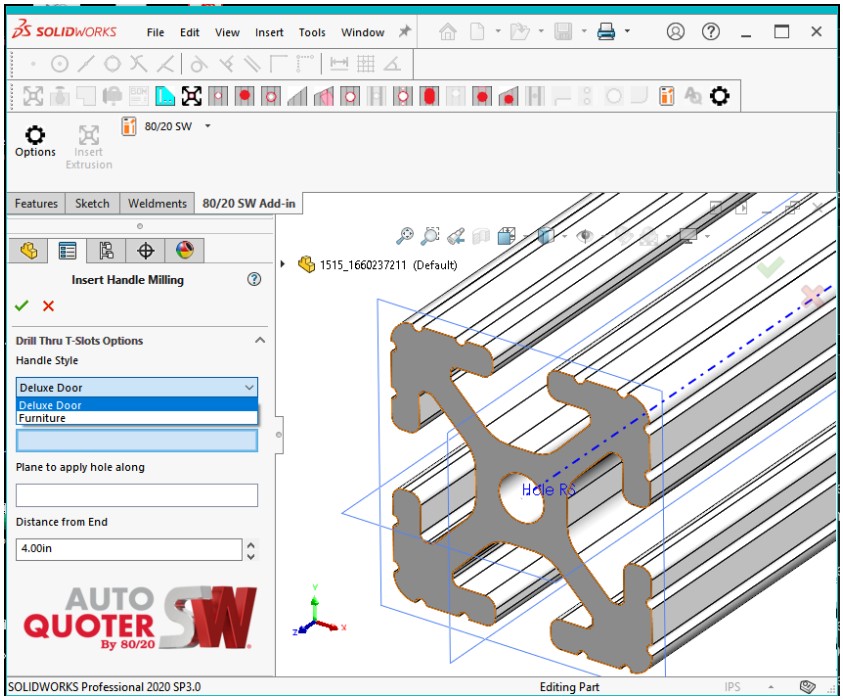
- Under Hole Diameter, select a hole size from the available options.



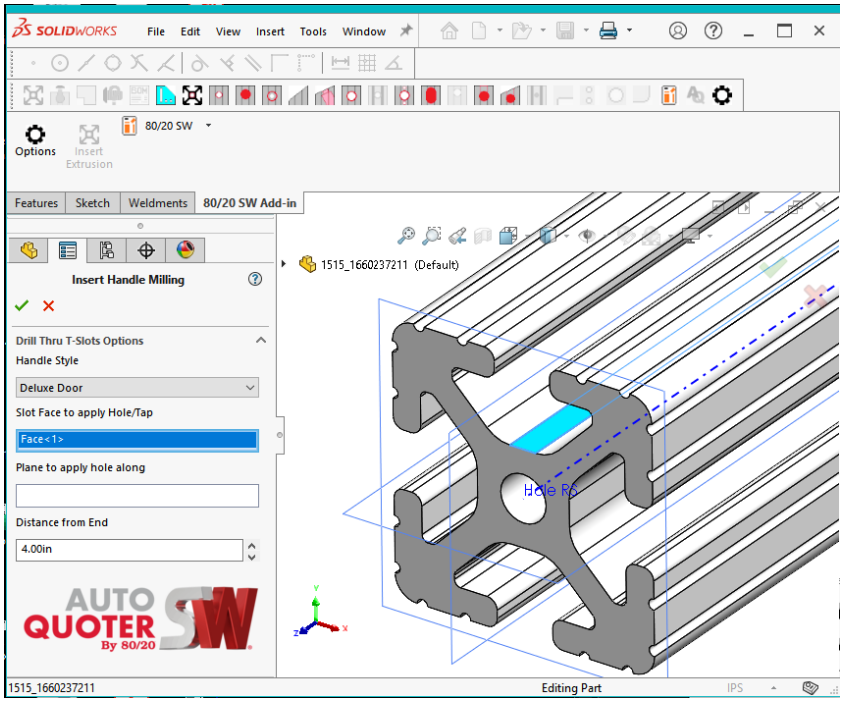
- Select the green check to machine the bar

Handle Milling

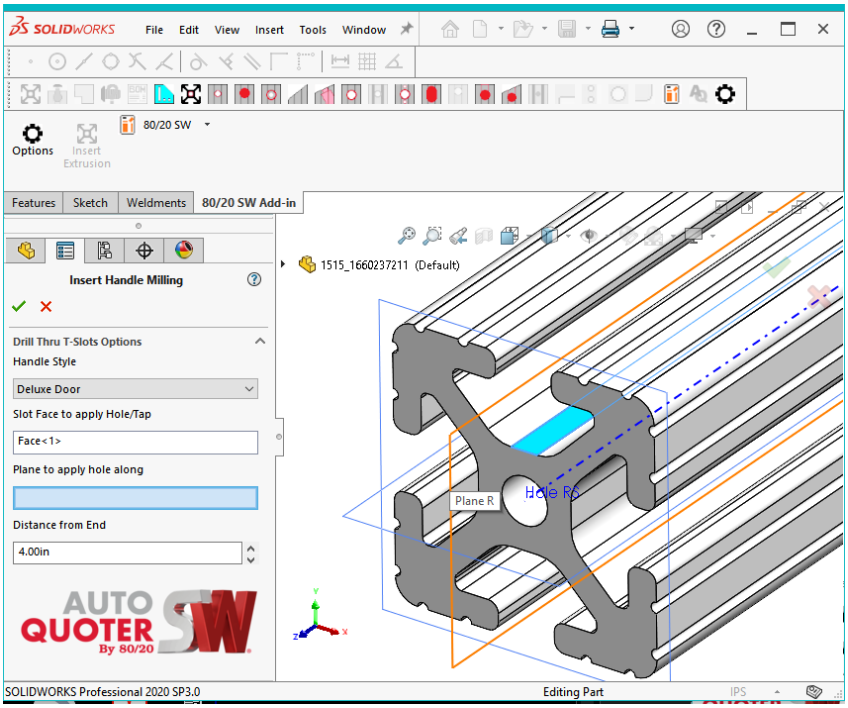
- Select the handle style from the dropdown
- Select “Insert Handle Milling” from the toolbar



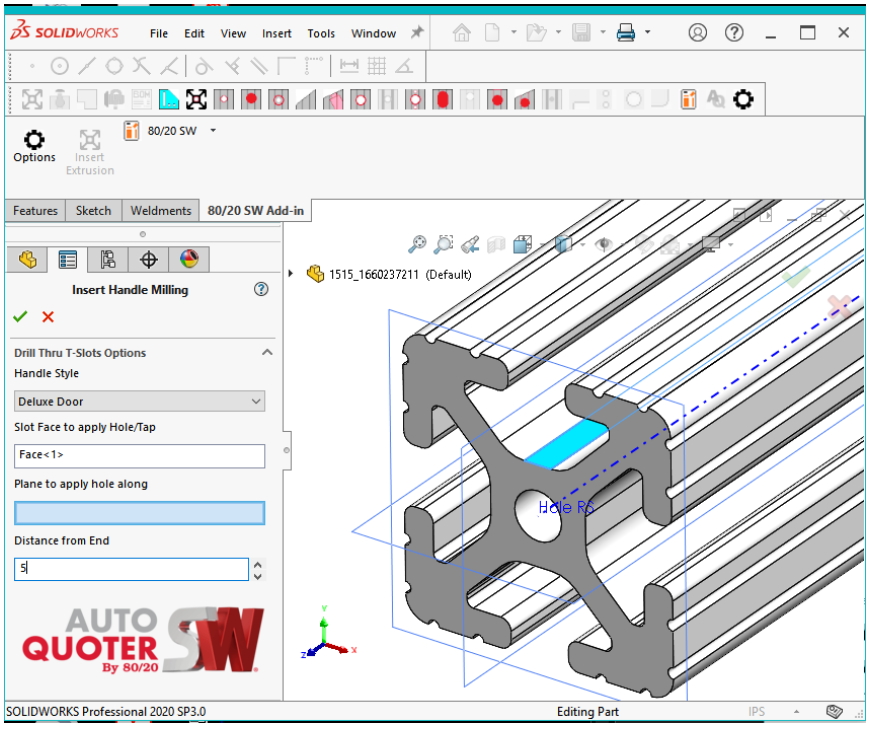
- Highlight the box under “Face to apply Hole/Tap”
- Select the face at the bottom of the t-slot



- Highlight the box under “Plane to apply hole along”
- Select the construction plane Perpendicular to the previous face



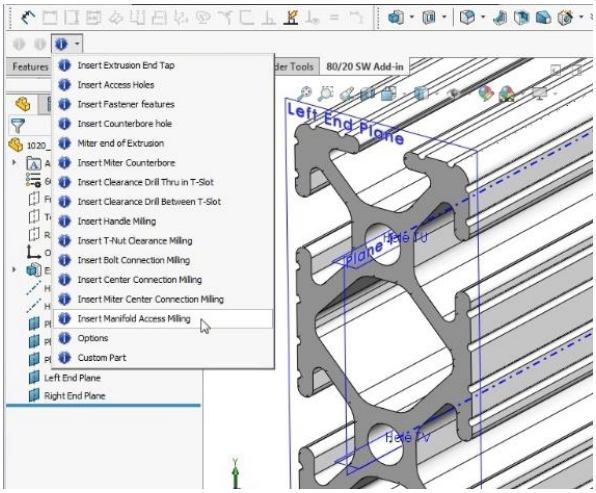
- Under “Distance from End”, enter a distance from the left end of bar



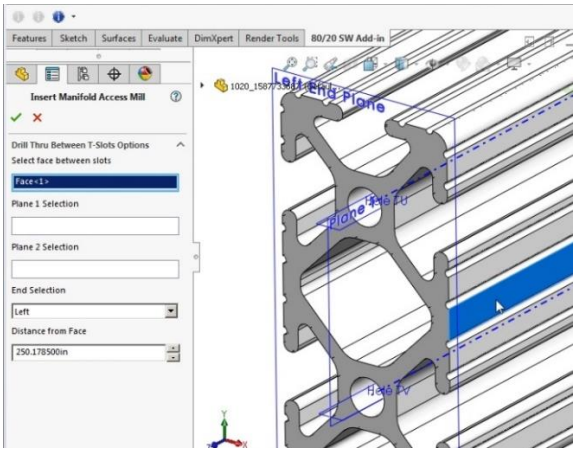
- Select the green check to machine the bar

Manifold Access Hole

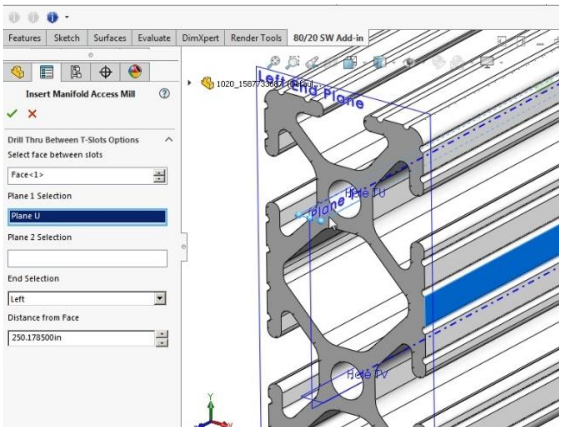
- Select “Insert Manifold Access Milling” from the 80/20 SW dropdown



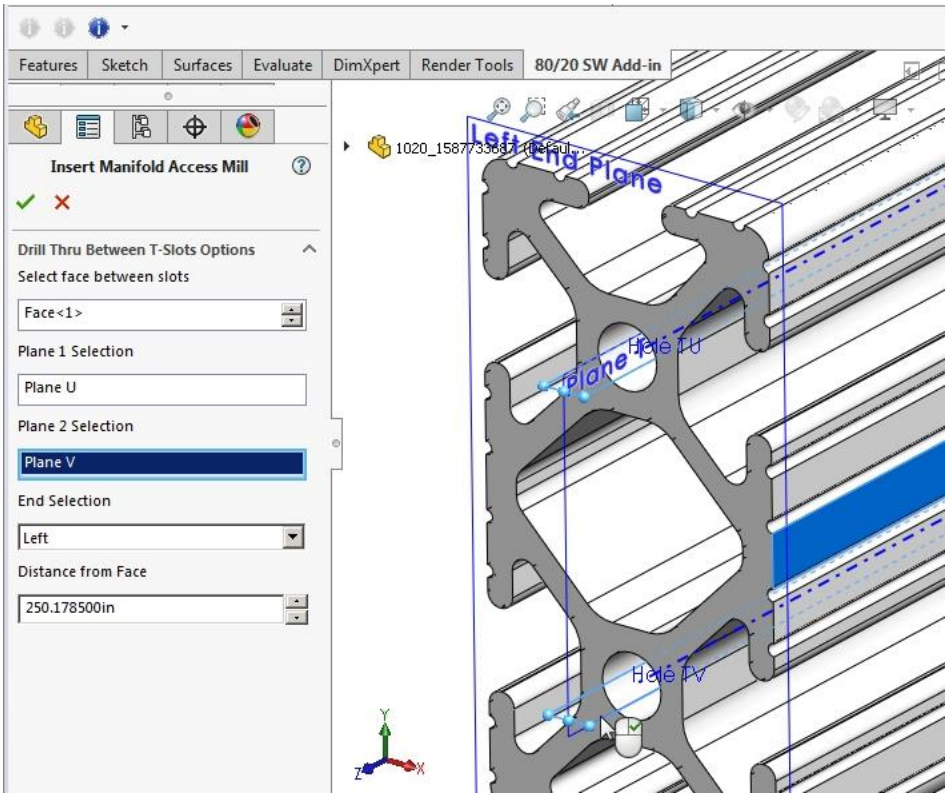
- Highlight the box under “Select face between slots”
- Select the face of the extrusion



- Highlight the box under “Plane 1 Selection”
- Select the construction plane <u>Perpendicular</u> to the previous face



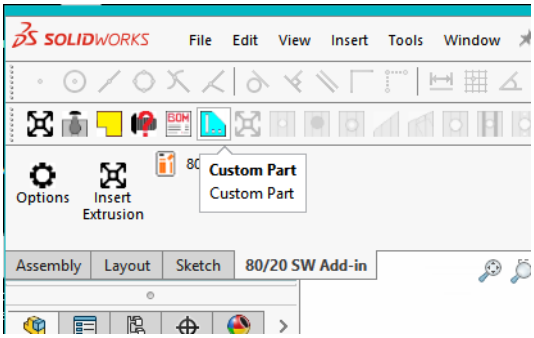
- Highlight the box under “Plane 2 Selection”
- Select the construction plane <u>Perpendicular</u> to the previous face

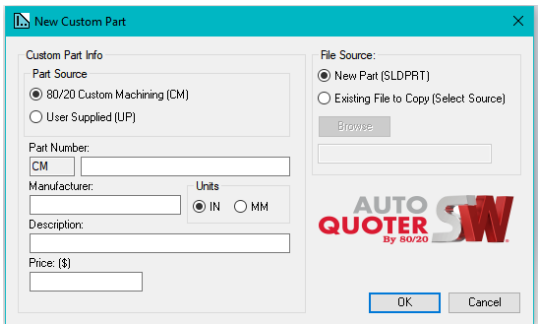


- Under “Distance from Face”, enter a distance from the left end of bar
- Select the green check to machine the bar

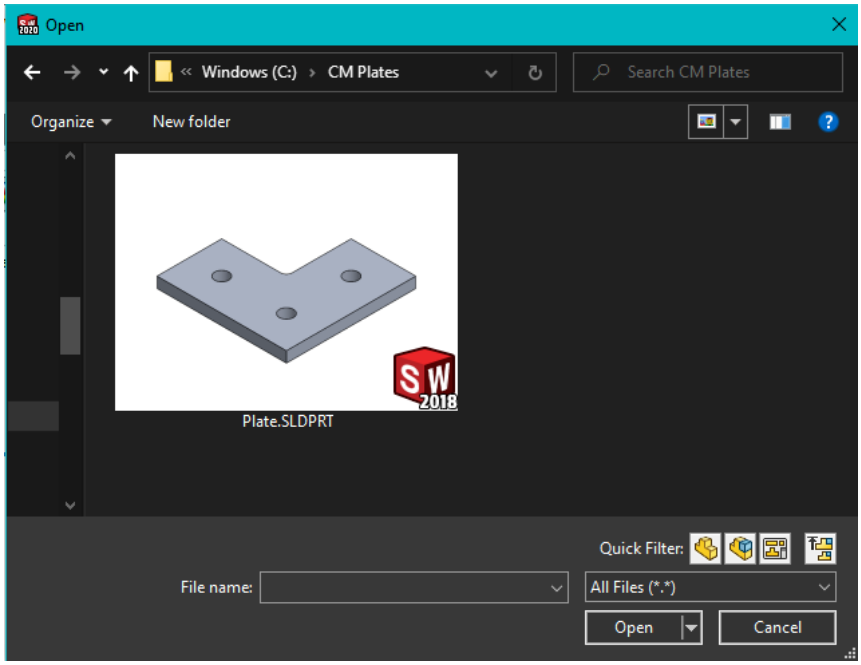
Custom Part (CM-) / User Part (UP-)

- Select “Custom Part” from the toolbar





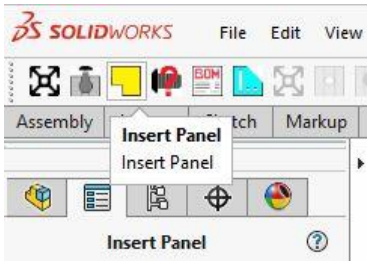
- Select Either “CM” are “UP” options
- Under “Part Number”, Enter the 80/20 CM number or Third-Party Part Number
- Under each consecutive box, enter the “Manufacturer”, “Units”, “Description”, and “Price”
- Under “File Source”, select either “New Part” or “Existing File to Copy”
    - By choosing “New Part” you can start a new model from scratch to add to your assembly and automatically rename with the UP- or CM- part number
    - By choosing “Existing File” you will be given a Browse dialog to navigate to a previously modeled (Plate, Bracket) or third-party model (Cylinder, Motor, Fixture, ???) and automatically rename with the UP- or CM- part number to include in the assembly and AQSW BOM



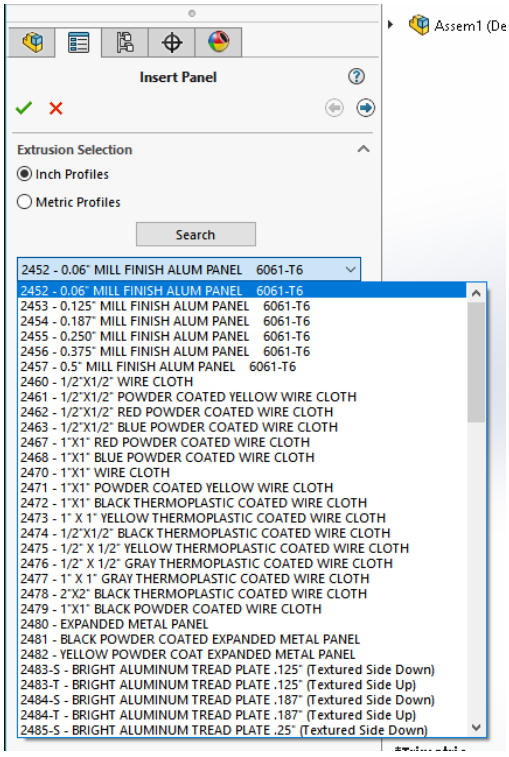
- Save the renamed existing part or newly created part.
- Select “OK” to close the dialog
- Through SW, insert or drag and drop the CM- or UP- into the assembly.

Panel Insertion

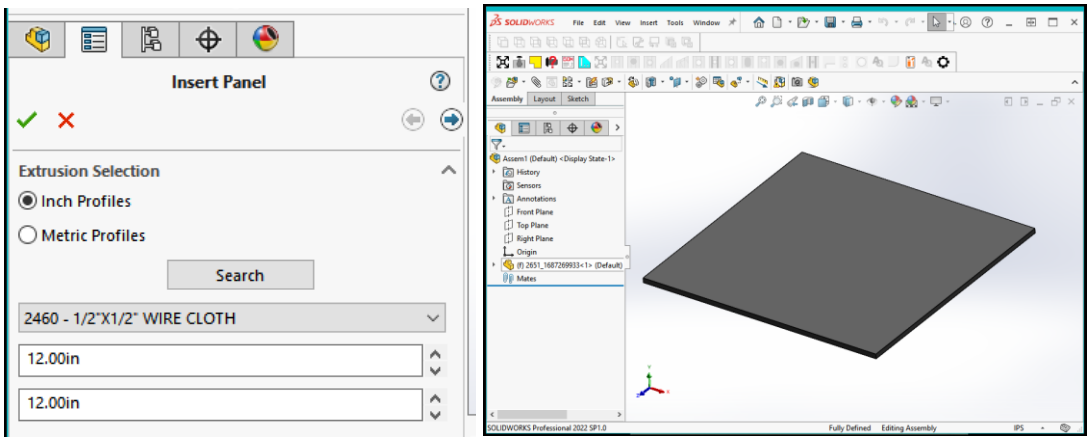
- Select “Insert Panel” from the toolbar



- Select “Inch” or “Metric”, then “Search”, or the panel from the dropdown list.

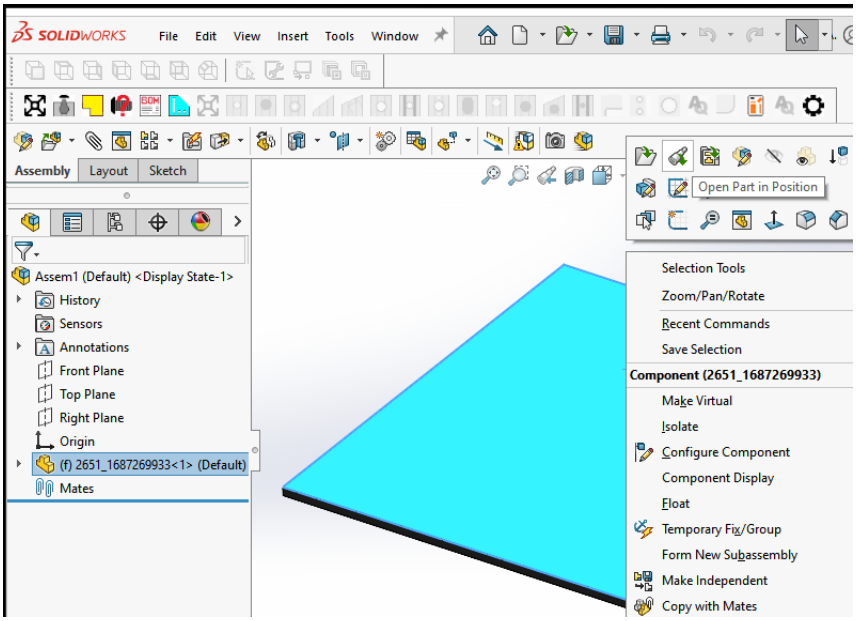


- Enter the “X” then the “Y” panel dimensions. * The default units depend on the SW assembly units. You can also override the units manually by entering “in” or “mm” after the dimension.



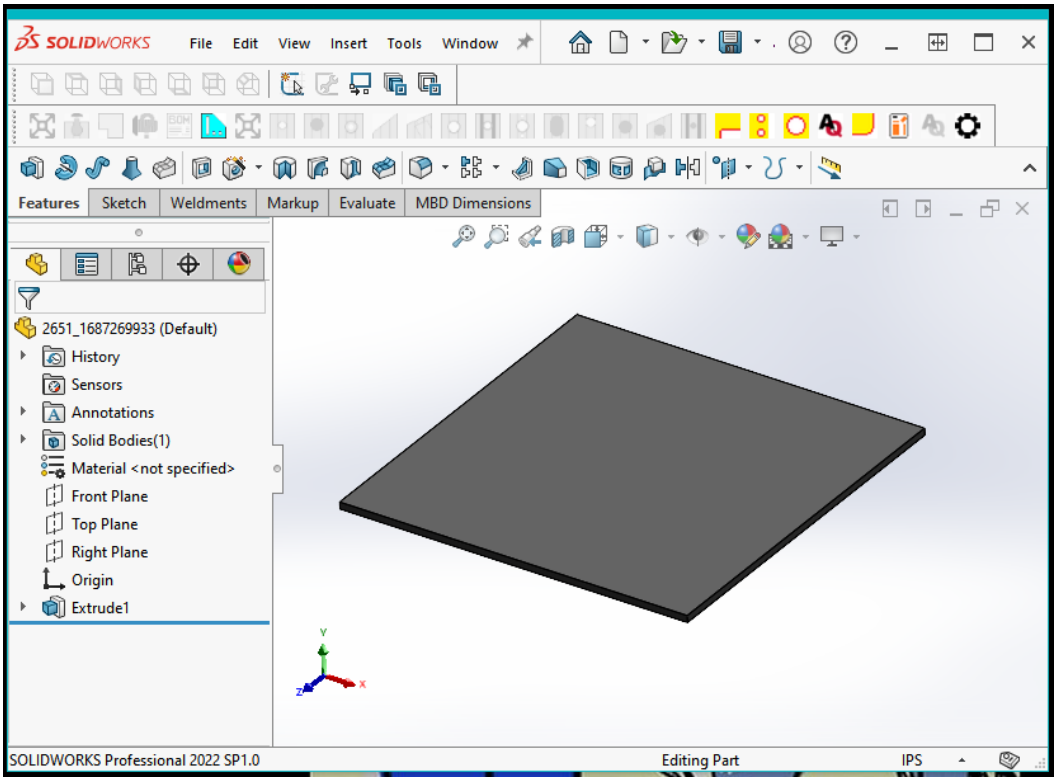
Panel Machining

- Right click on the panel to machine and select the SW “Open Part in Position” button



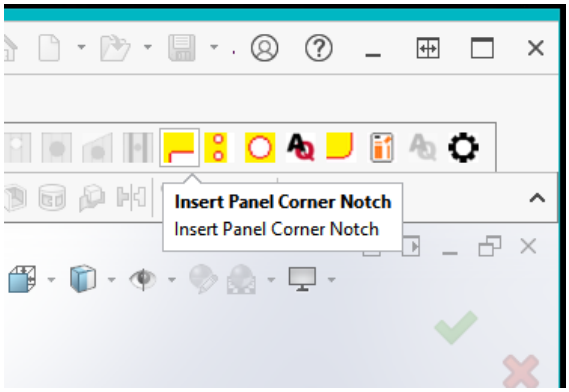
- Panel is now in edit mode *(The panel must be in edit mode to add ANY **machining**)*

(This step is required for ALL machining services, so it will not be shown on the following pages)



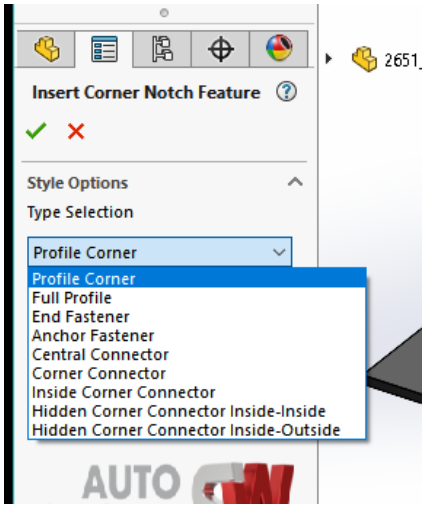
Panel Corner Notches

- Select the “Insert Panel Corner Notch” button

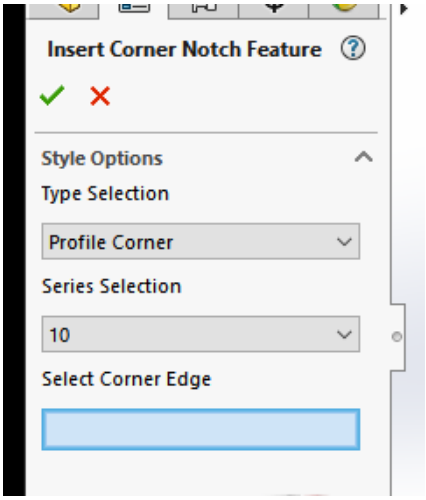


(The following steps apply to all the types listed in the dropdown, so it will not be shown on the following pages)

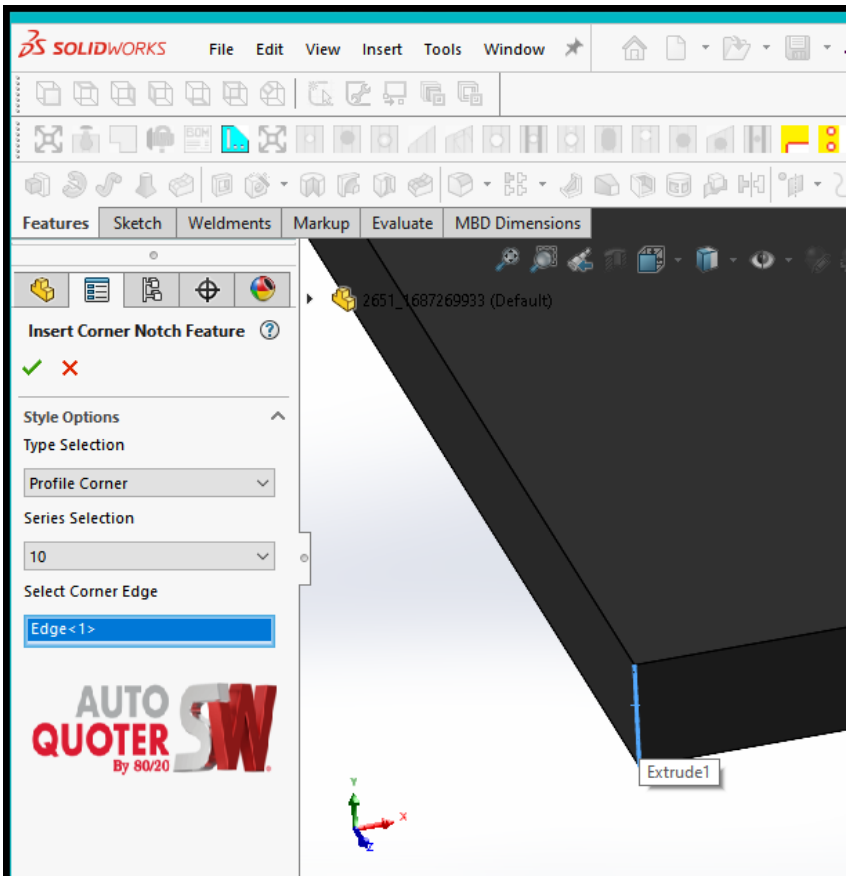
- Choose “Style Options” / “Type Selections”



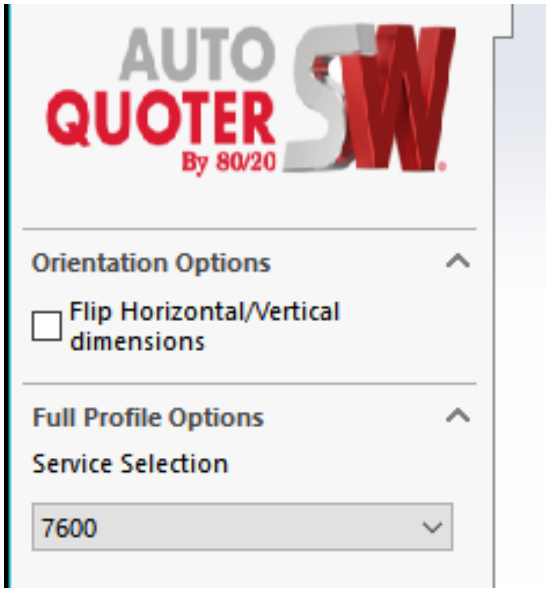
- Select “Profile Corner” and choose the series



- Highlight the “Corner Edge” box and choose the corner edge of the panel

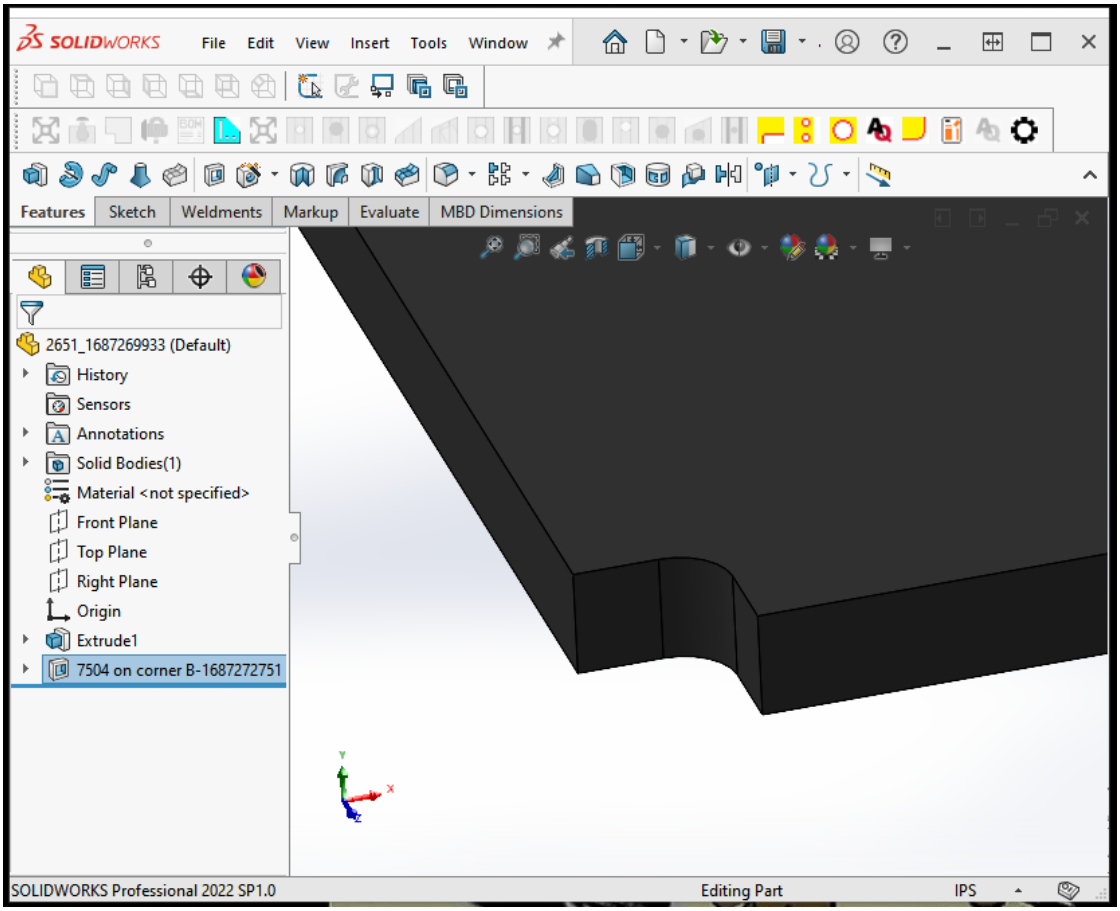


(NOTE: There are “rectangular” shaped services that require a “Horizontal”/”Vertical” orientation callouts. For those services an additional checkbox will be displayed. By default with no check the machining will be Horizontal, for Vertical, check the box)



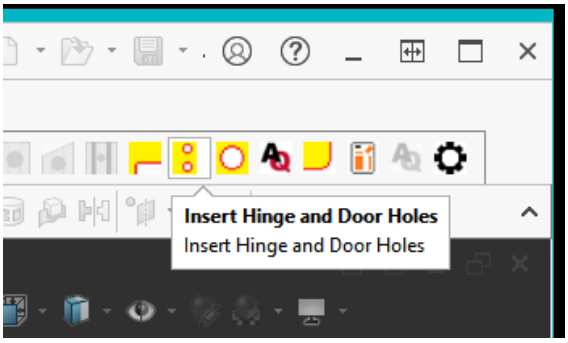
- Select the green check to machine the panel
- You will also see that it is listed in the Design Tree.

(At any time while in Edit Mode you can delete the machining service in the tree)

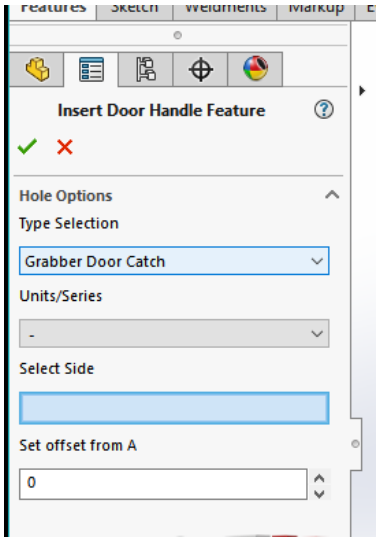


Hinge and Door Holes

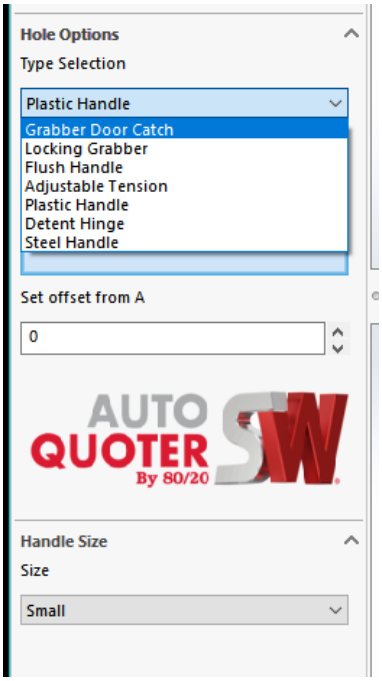
- Select the “Hinge and Door Holes” button



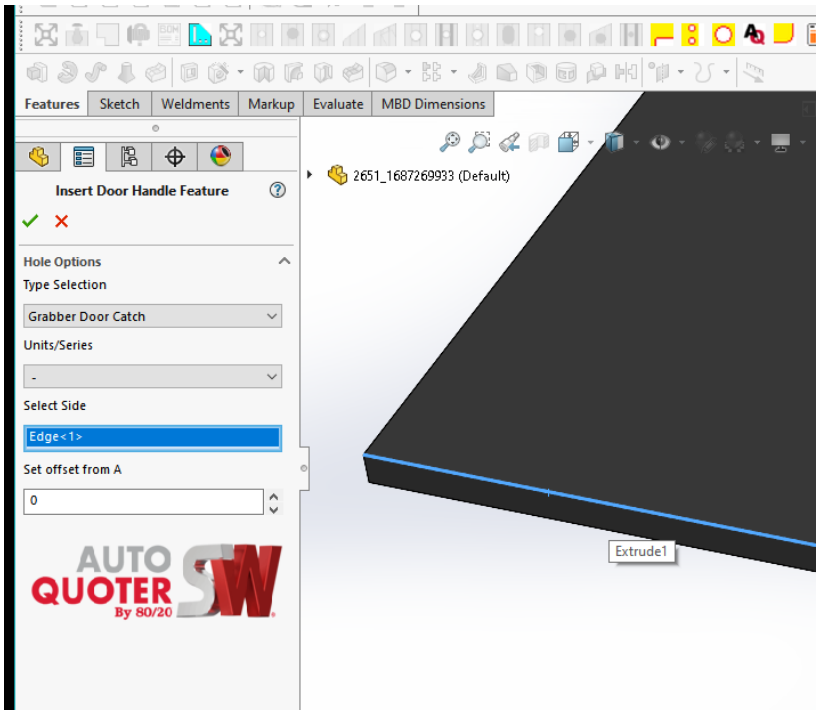
- Choose “Hole Options” / “Type Selection”



- Choose “Grabber Door Catch *** Select series if applicable.**

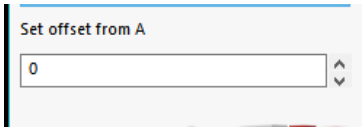


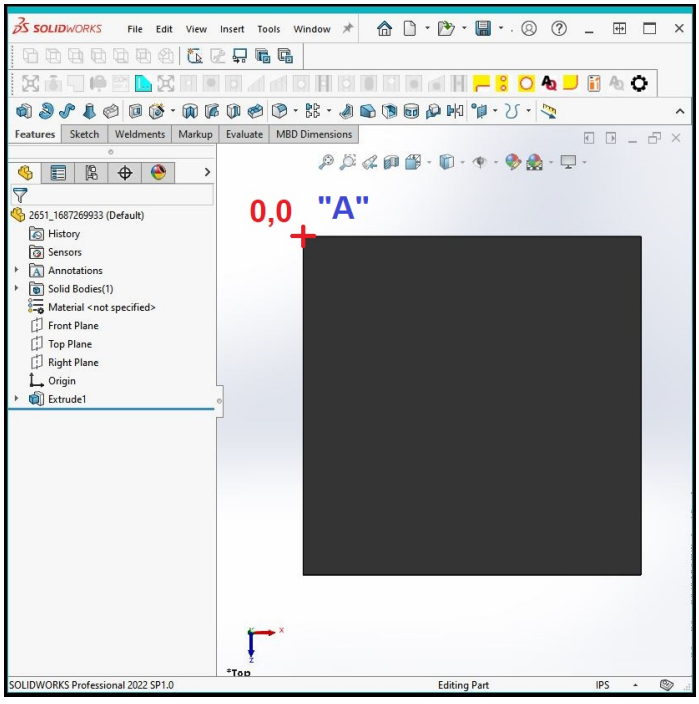
- Highlight the “Side Edge” box and choose the top or bottom Side edge of the panel



- Highlight the “Side Edge” box and choose the top side edge of the panel

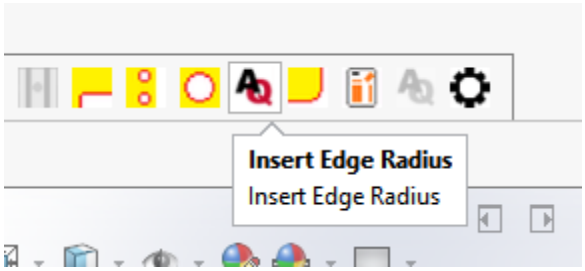
(NOTE: When you see “Set offset from A”, “A” is the top left corner (0,0 dimension) of the panel. The offset is the distance in Inches/mm from “A”, either down the side or horizontally across the panel)



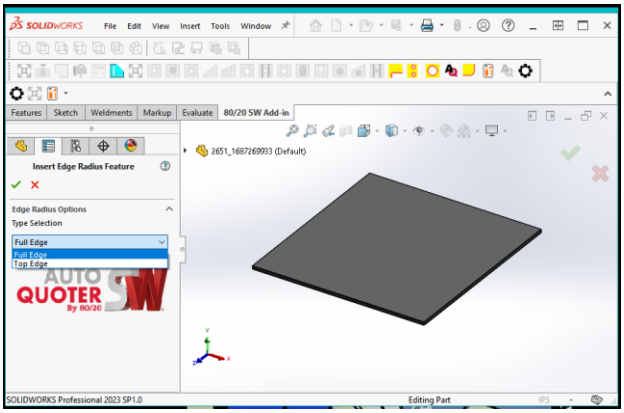


Panel Edge and Full Edge Radius

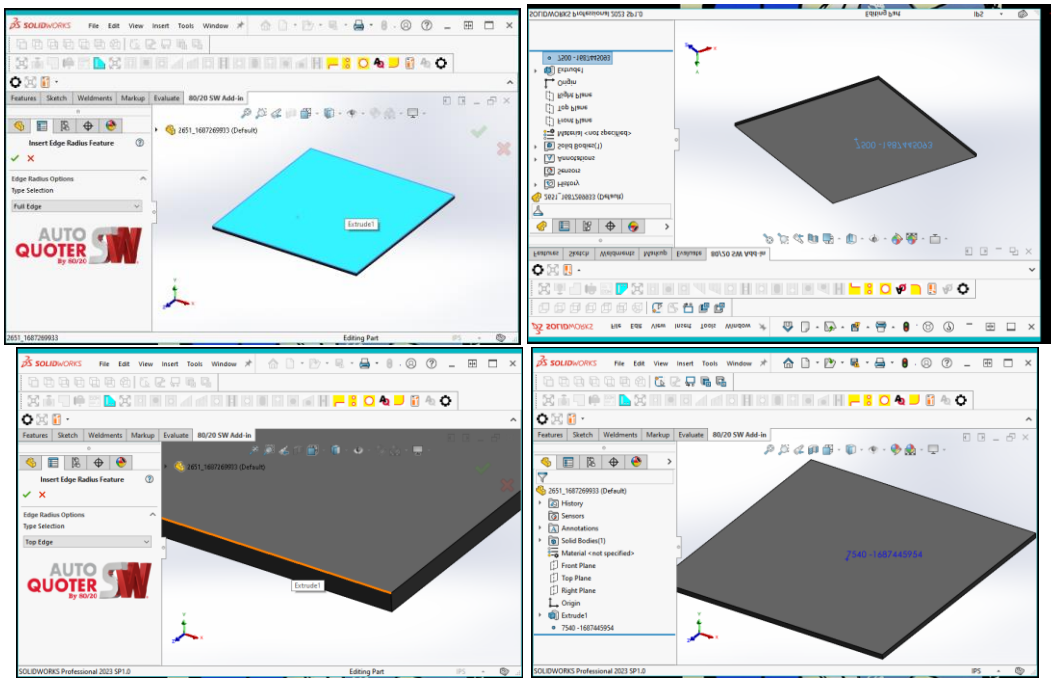
- Select the “Insert Edge Radius” button



- Select “Full Edge” or “Top Edge” from the Type Selection dropdown



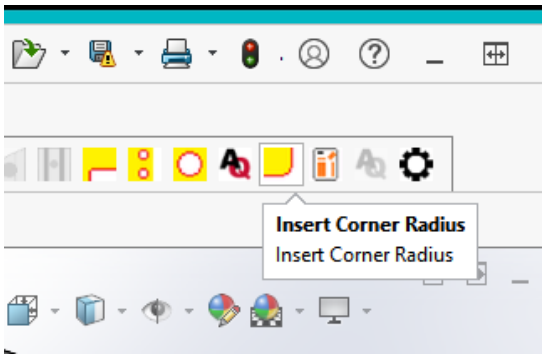
- Select “Full Edge” or “Top Edge” from the Type Selection dropdown
  - For “Full Edge” select the top panel surface
  - For “Top Edge”,



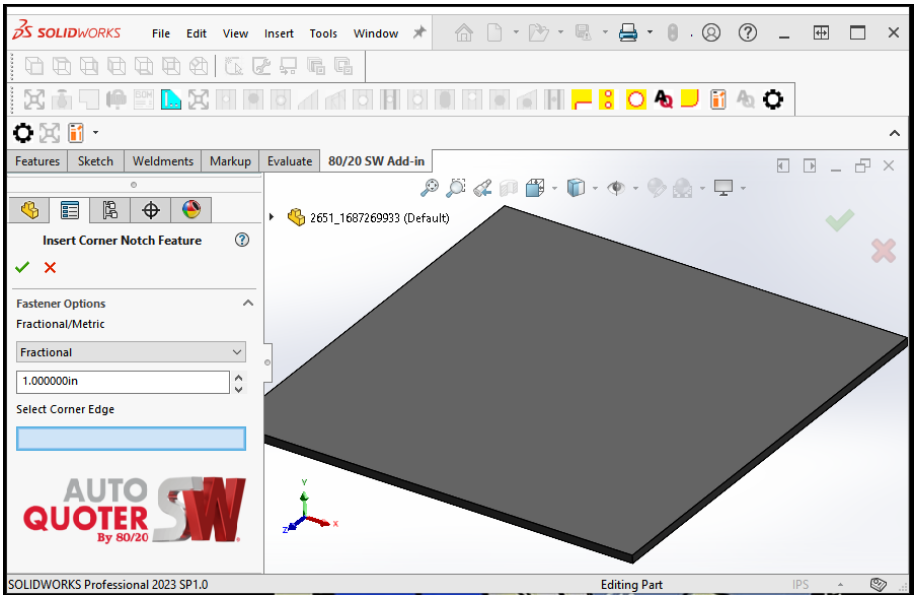
NOTE: Regaurdless of which service used, AQSW will only attatch a line of text on the panel. Actual machineing of the panel will be in a future release.

Panel Corner Radius

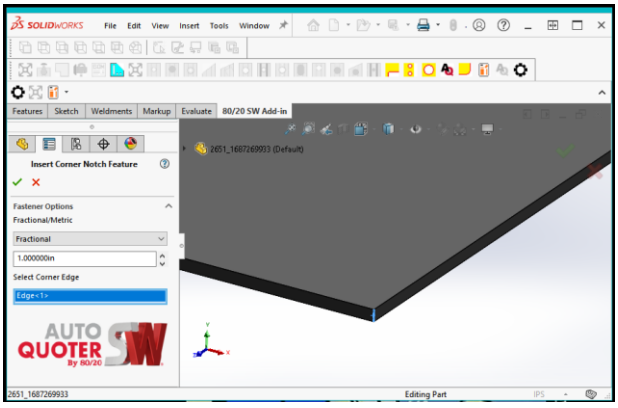
- Select the “Insert Radius Edge” button

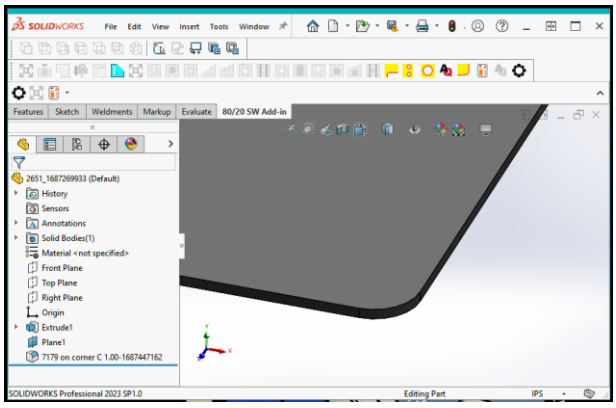


- Choose “Fractional or Metric from the Dropdown



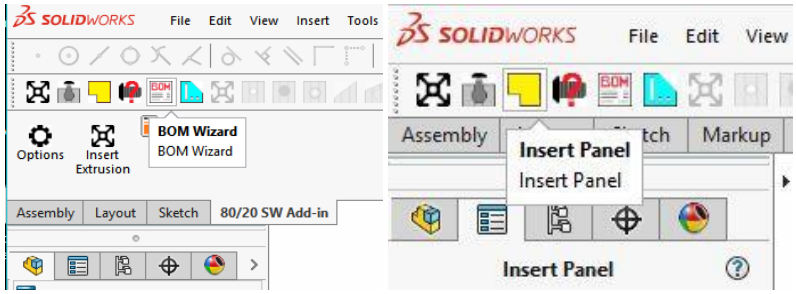
- Enter the radius dimension up to 3” or 76.2mm
- Select the corner edge
- Hit the green check



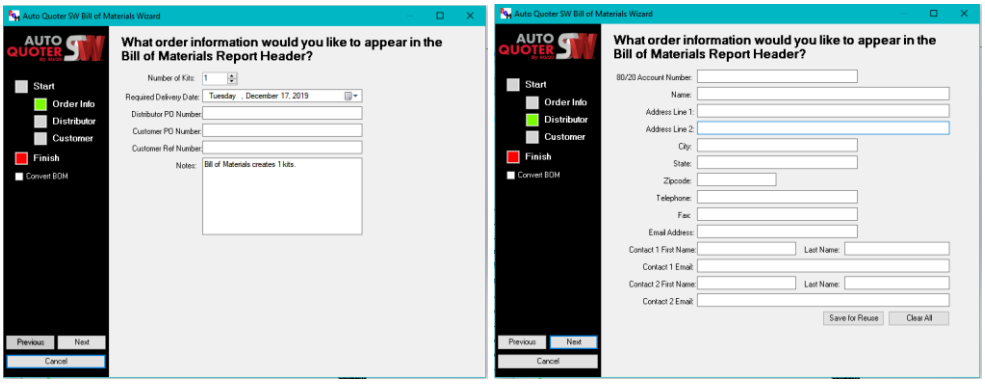


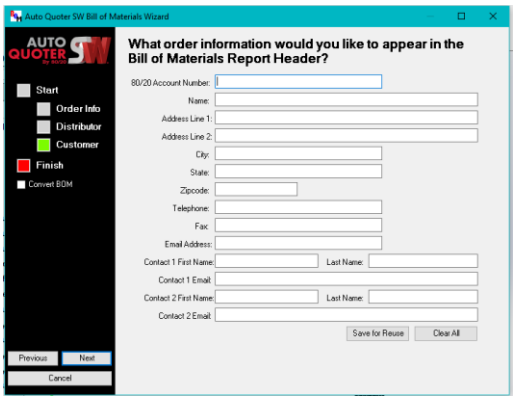
BOM Creation

- Select “BOM Wizard” from the toolbar

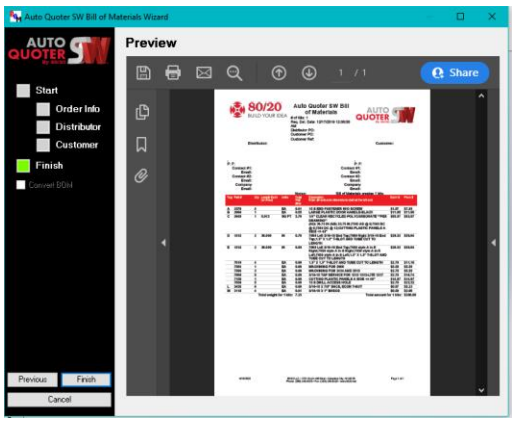


- Enter the Order / Distributor / Customer information by hitting “Next” to change screens





- You will have a PDF BOM preview popup



- Hit “Finish” to save the PDF and XML BOM files.

NOTES: