2D Machining from 2D Detailed Drawings
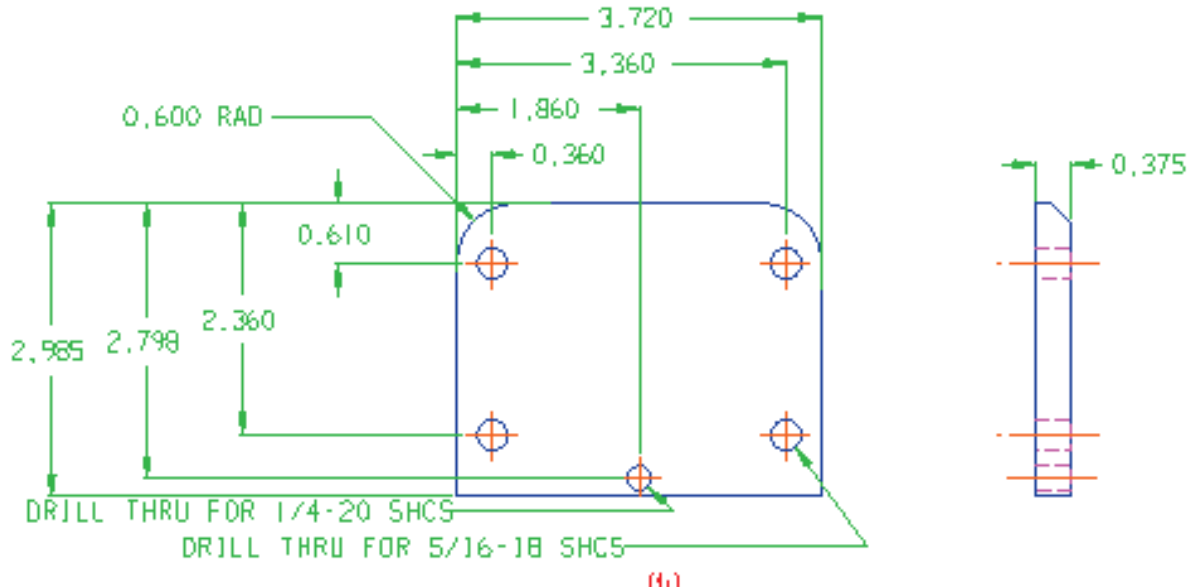

Part data for 2D machining can come directly from 2D detailed drawings created by your CAD system.

All CAD systems can export 2D drawings in AutoCAD format - *.dxf or *.dwg - which can be imported into Prospector for machining.

For those lucky enough to use ExpertCAD, you can import the native *.ddd format directly.

Text and dimensions are imported as profiles which can be helpful if you want to do engraving using the scribe machining strategy.

When creating the project, define your block around the portion part data you are going to machine to assist with visualizing the data.

Don't forget to put the part data in machine position when you create the project because where it is on the drawing is wherever the draftsman placed it!

Use View/Display/Hide by Color, Hide by Layer to hide the dimensions, centerlines, text, hidden lines to make it easier to isolate the profiles that you will be machining.

Because the data is just 2D, you need to tell Prospector more about the feature to be machined:
- Where is the top of profile or pocket in Z?
- How deep to profile or pocket?
- Does the pocket or profile have any draft?

With simple 2D part data:
- You can't do 3D machining.
- There is no remaining stock model.
- There is no verification of the cutter path to detect gouges or collisions with stock.

Introduction to 2D Machining

PROSPECTOR
The Gold Standard In Moldmaking

2D Machining from 3D Data
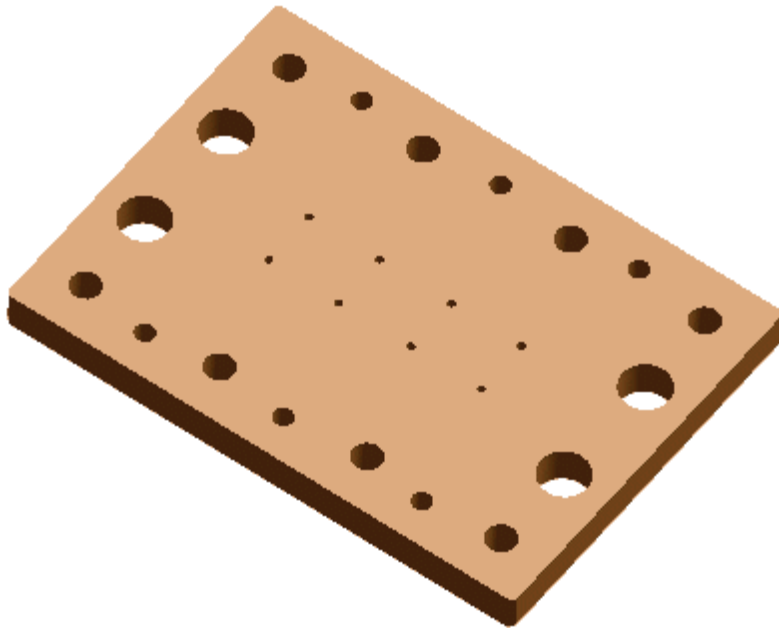
Creating a project with 3D data allows both 3D and 2D programming unless you enable this switch on the 2nd page of the New Project wizard:

Project Type

☑ 2D Machining Only
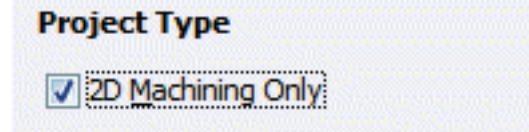
If you enable this switch, the remaining stock model will **_not_** be created or updated and **_no verification_** for part gouges or stock collisions will be performed.

If your 3D data originates from a solid modeling CAD system (e.g. you imported a Parasolid *.x_t or *.x_b file), 2D programming is much easier because:

- Prospector can determine how deep different features are. You don't need to input this data.
- Different features for hole making can be detected (counterbores, through holes, blind holes, ...).
- Prospector "knows" more about these 3D features, many program parameters are automatically filled in for you!

If you **_don't_** enable the 2D Machining Only switch on the New Project wizard, 2D programs are checked for stock collisions and part gouges. Holemaking programs aren't checked for obvious reasons.

If your part data is not a solid model (e.g. 3D IGES data), Prospector can't help as much with detecting different 2D features. You will likely need to use the profile tools to extract boundaries from the surface model for 2D profiling and pocketing.

Our Recommendation...

Whenever possible, ask for a 3D Parasolid part data file to create your project.

If you have 3D data, don't enable the 2D Machining Only switch. It will take longer to create and update the stock model but you get the benefit of program verification.