Water-Jet Instructions (MAE C)

The following document is for setting up a file for Water jetting (WJ) at MAE C.

Jeff's Lab

To send a file to be WJ you could also go through Jeff Bielling (the HWLEE Lab) by following these instructions: Waterjet Software Instructions.docx.

All HWLEE Prototype Shop Requests

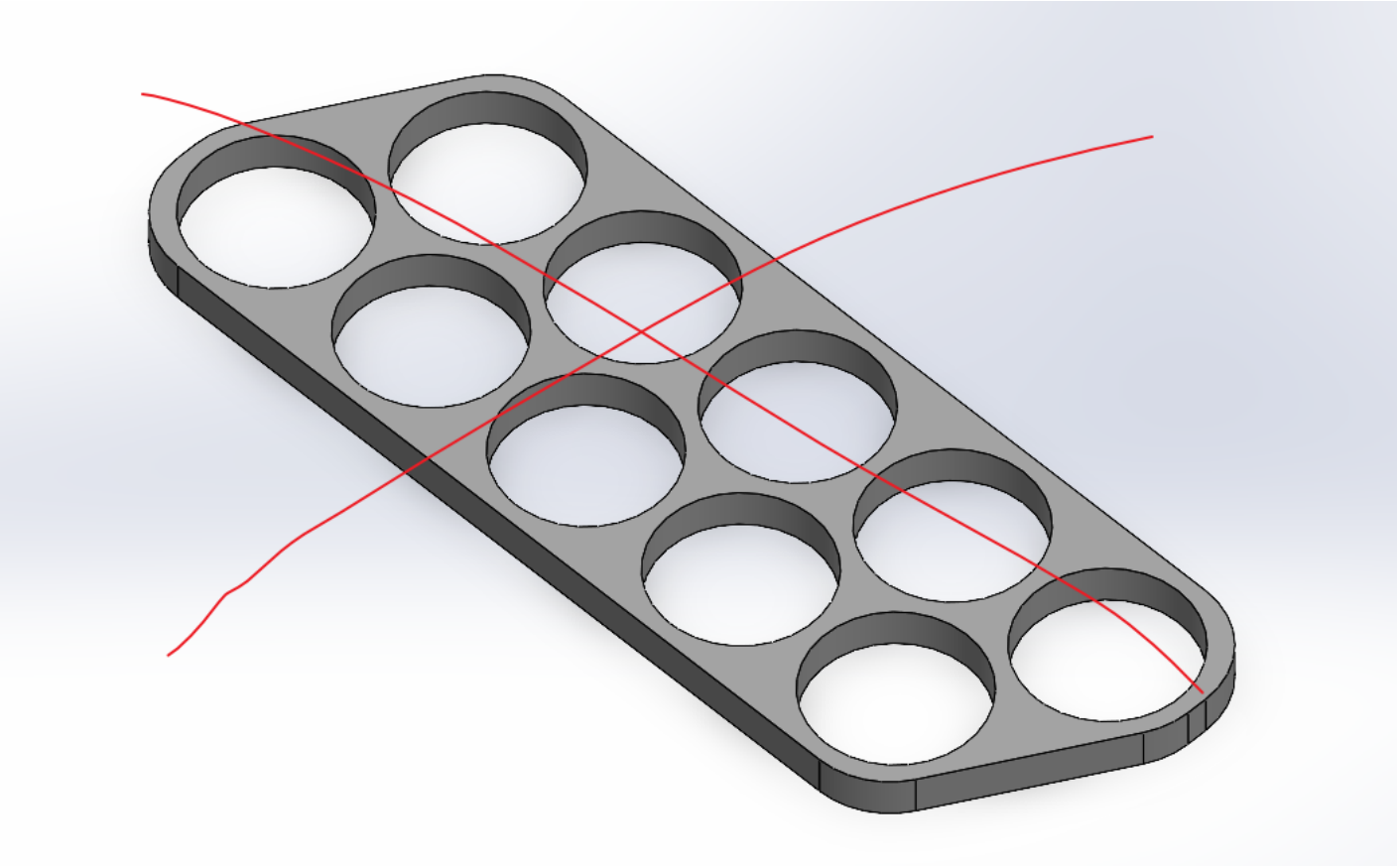
- https://uflorida.sharepoint.com/teams/ENGHWLEELab/Lists/Shop%20Usage%20Requests/Default.aspx?env=WebViewList
- Hours of Operation: Monday-Friday 7:30am – 4:00pm closed 12-1 for lunch
- HWLEE Prototype labs are dedicated to HWCOE students and faculty for research or class assignments only, no private projects are accepted
- Requests need at least 3 days prior notice for approval on a first come first served basis
- All Machine Shop Equipment requests must have attached a screenshot of requesters Official UF transcript with name & UFID verifying successful completion of EML2322L (no exceptions) before approval
- No sandals, shorts, jewelry, long sleeves or long hair of a length that could potentially be caught in machinery must be securely tied back as to not fall forward to avoid being caught in machinery moving parts
- All Waterjet requests must have DXF (top view/pane) attached to the request for review, raw material margins need to be at minimum ½" for clamping
- Material dimensions (LxWxT) need to be included in the notes section of the request for the waterjet. Operating Software recognizes in inches if mm is desired, please specify for conversion factoring
- All Waterjet requests other than metal, wood and polycarbonate material must have MSDS attached to verify potential safety hazards
- Metal 3D (Additive Manufacturing) print requests require funding chartfield information from your department AD to cover material costs only
- FDM print requests will be capped at $150 total per student or $300 student team organization per calendar year
- No food or drink are allowed in any of the PT labs

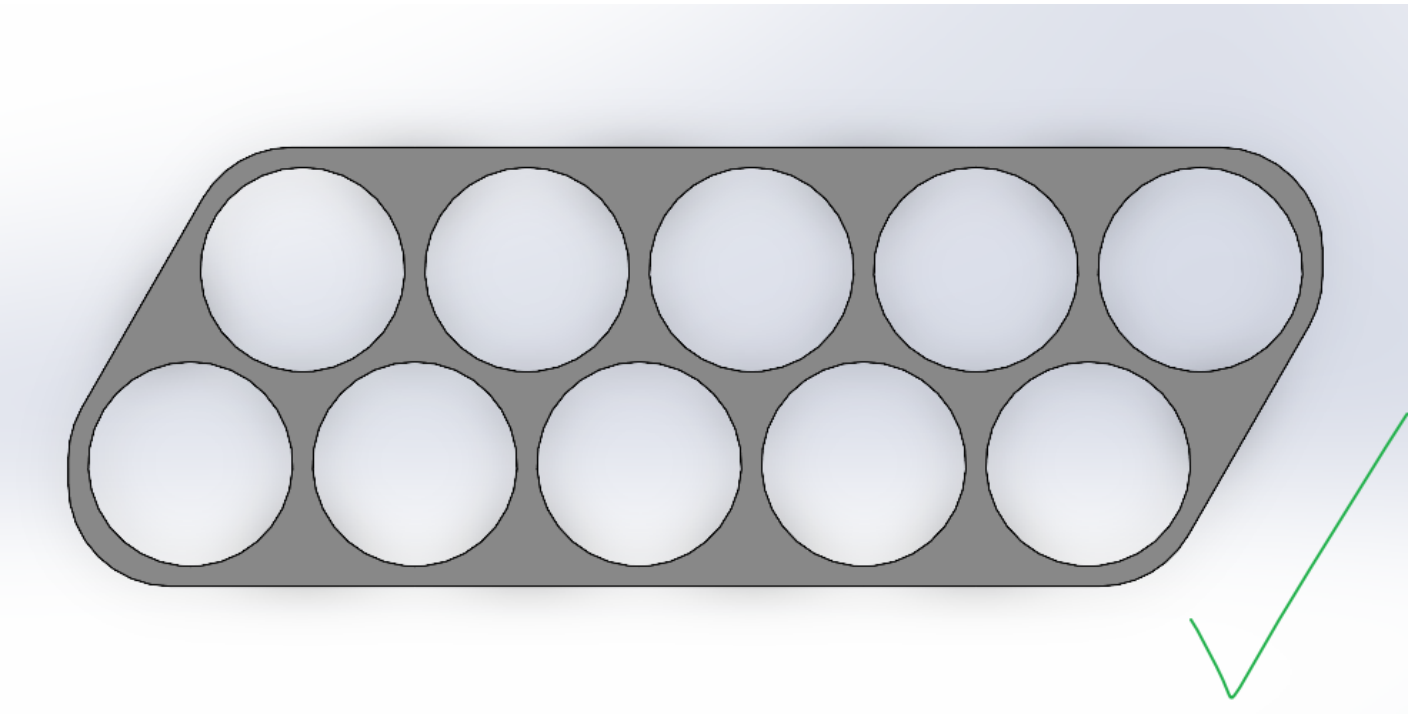
MAE C

The main difference between this document and the one linked above is that you do most of the work at the machine in MAE C. Shown below is how to set up the .dxf.

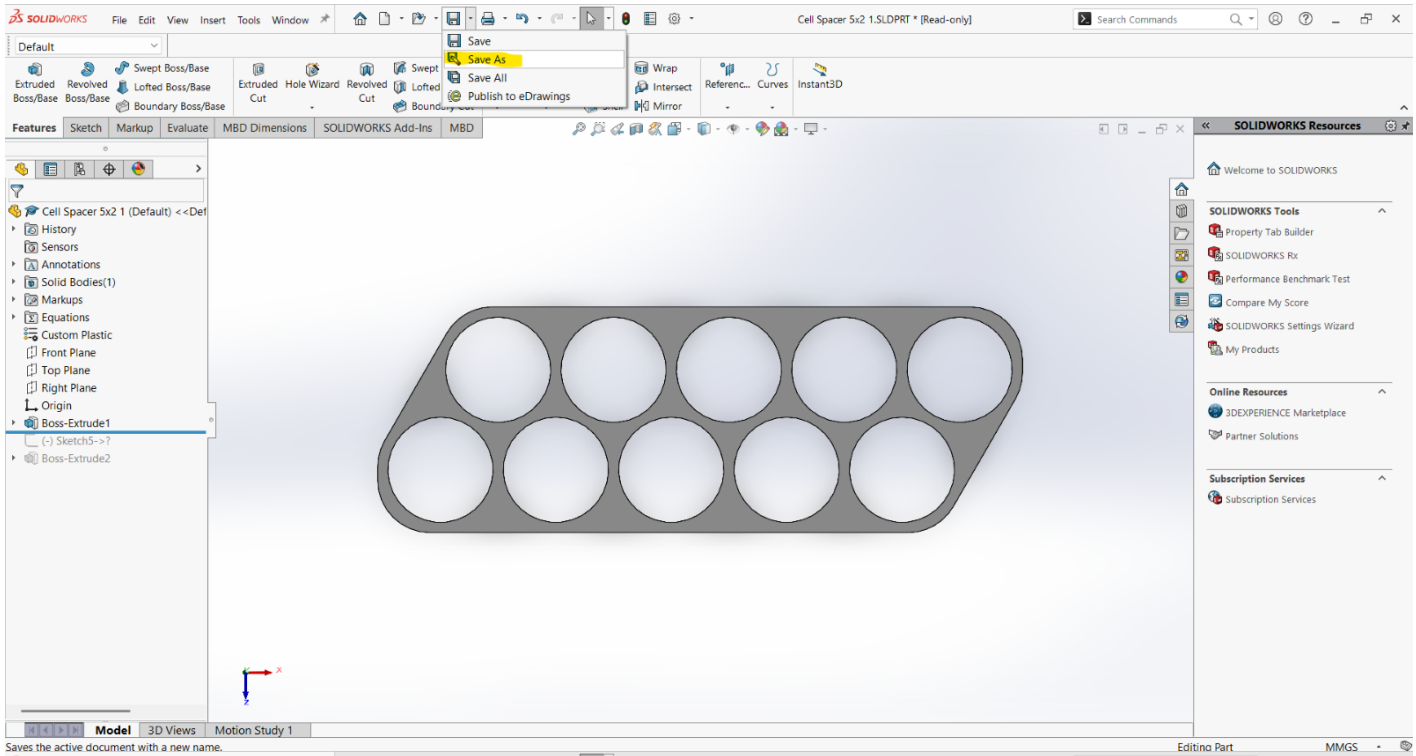
Step by Step

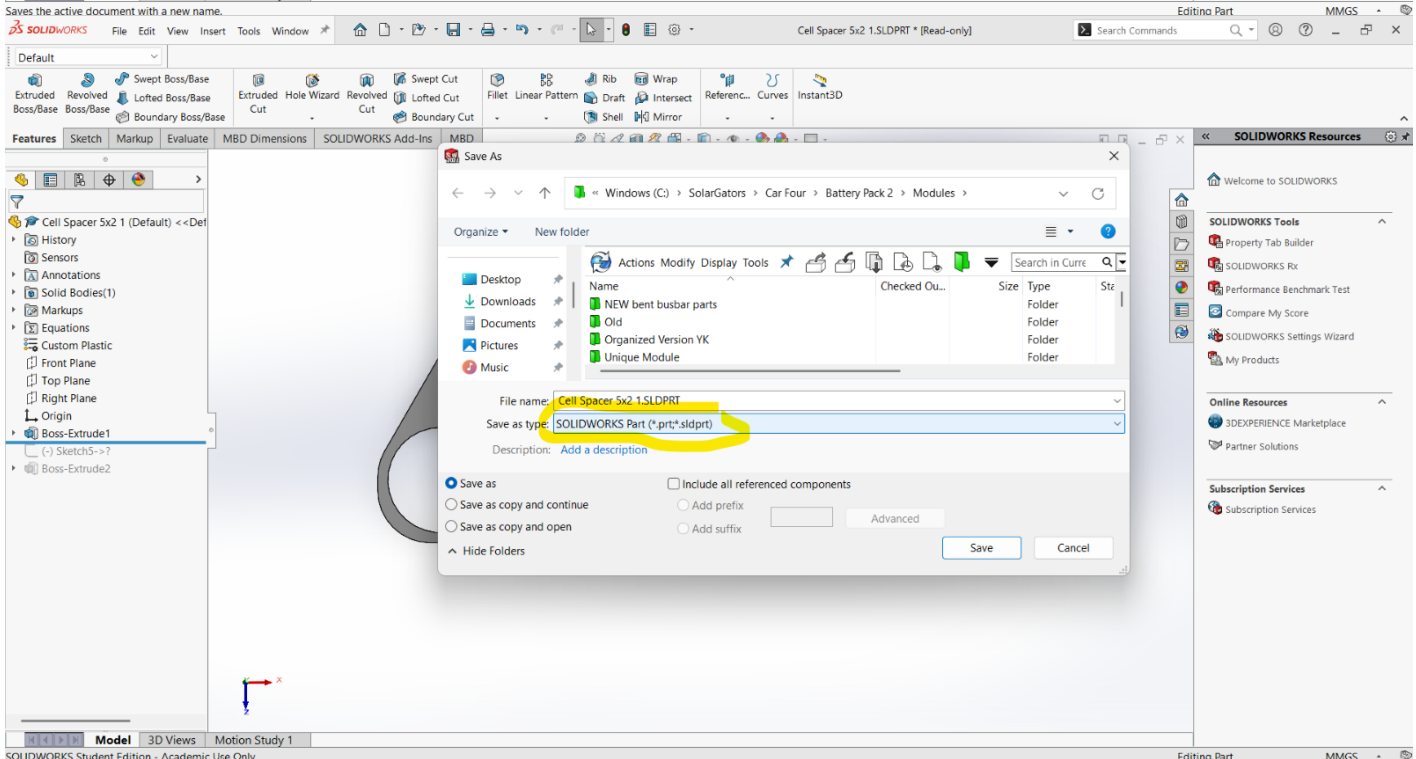
First open the file you want to WJ in SolidWorks and look normal to the face you would like to WJ. Remember the WJ can only cut out 2D contours.

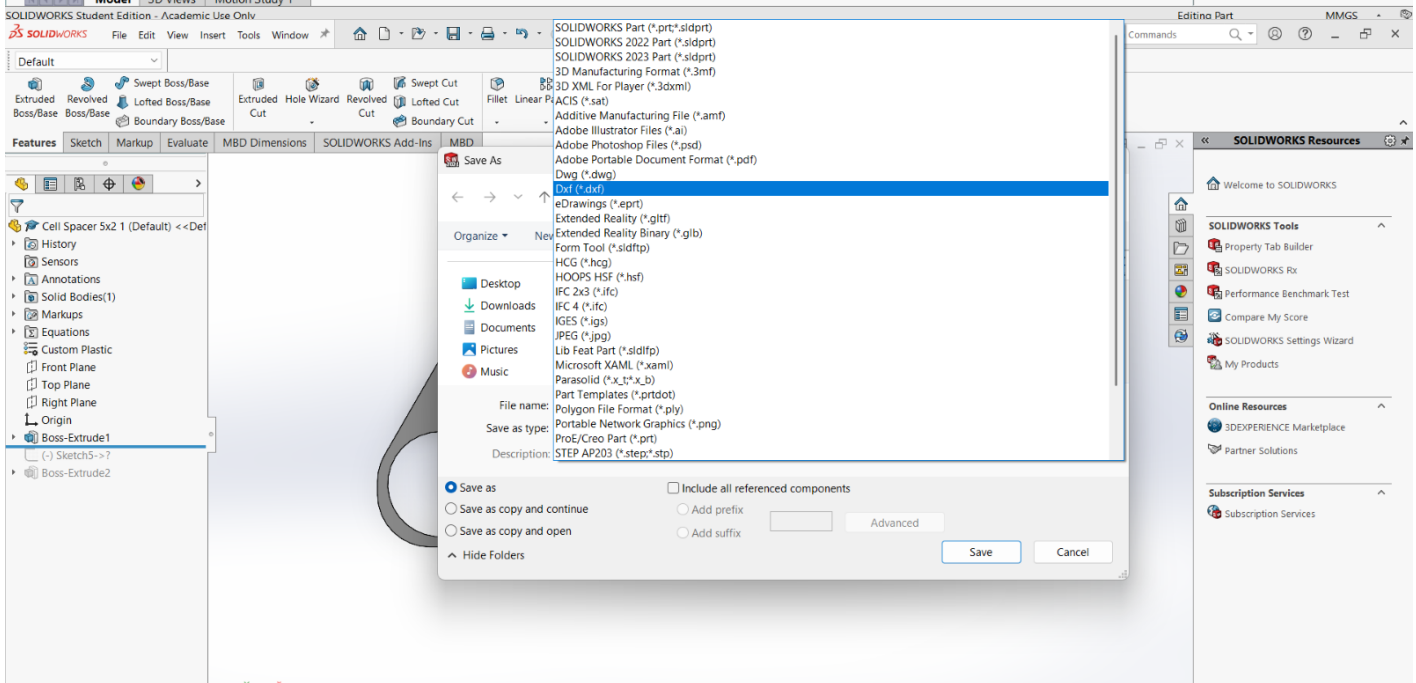




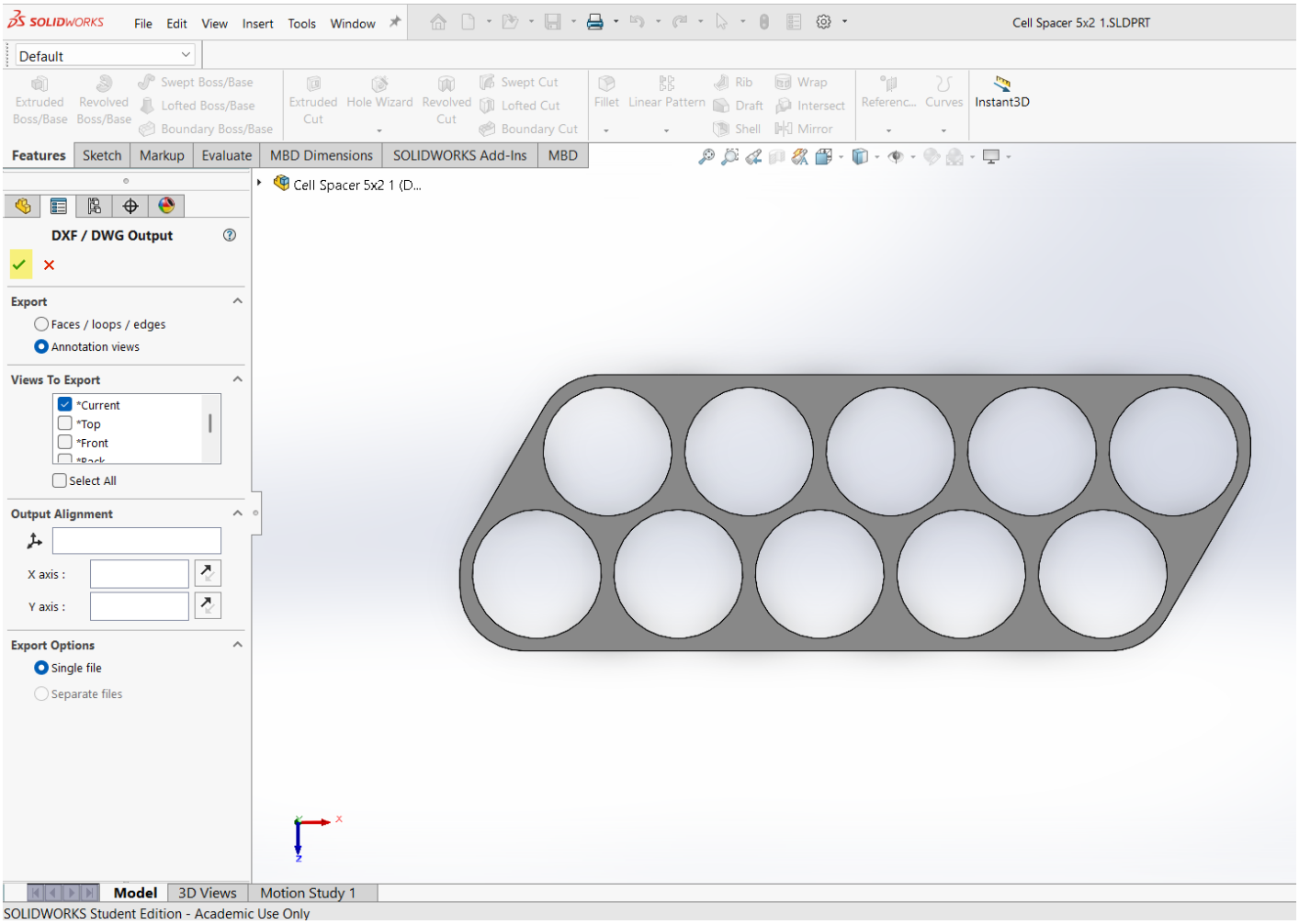
Then go to “Save As”


Save
Save As
Save All
Publish to eDrawings
Cell Spacer 5x2 1.SLDPRT * [Read-only]
Search Commands
Features
Sketch
Markup
Evaluate
MBD Dimensions
SOLIDWORKS Add-Ins
MBD
Cell Spacer 5x2 1 (Default) <<Def
History
Sensors
Annotations
Solid Bodies(1)
Markups
Equations
Custom Plastic
Front Plane
Top Plane
Right Plane
Origin
Boss-Extrude1
Sketch5->?
Boss-Extrude2
SOLIDWORKS Resources
Welcome to SOLIDWORKS
SOLIDWORKS Tools
Property Tab Builder
SOLIDWORKS Rx
Performance Benchmark Test
Compare My Score
SOLIDWORKS Settings Wizard
My Products
Online Resources
3DEXPERIENCE Marketplace
Partner Solutions
Subscription Services
Subscription Services
Model
3D Views
Motion Study 1
Saves the active document with a new name.
Editing Part
MMGS

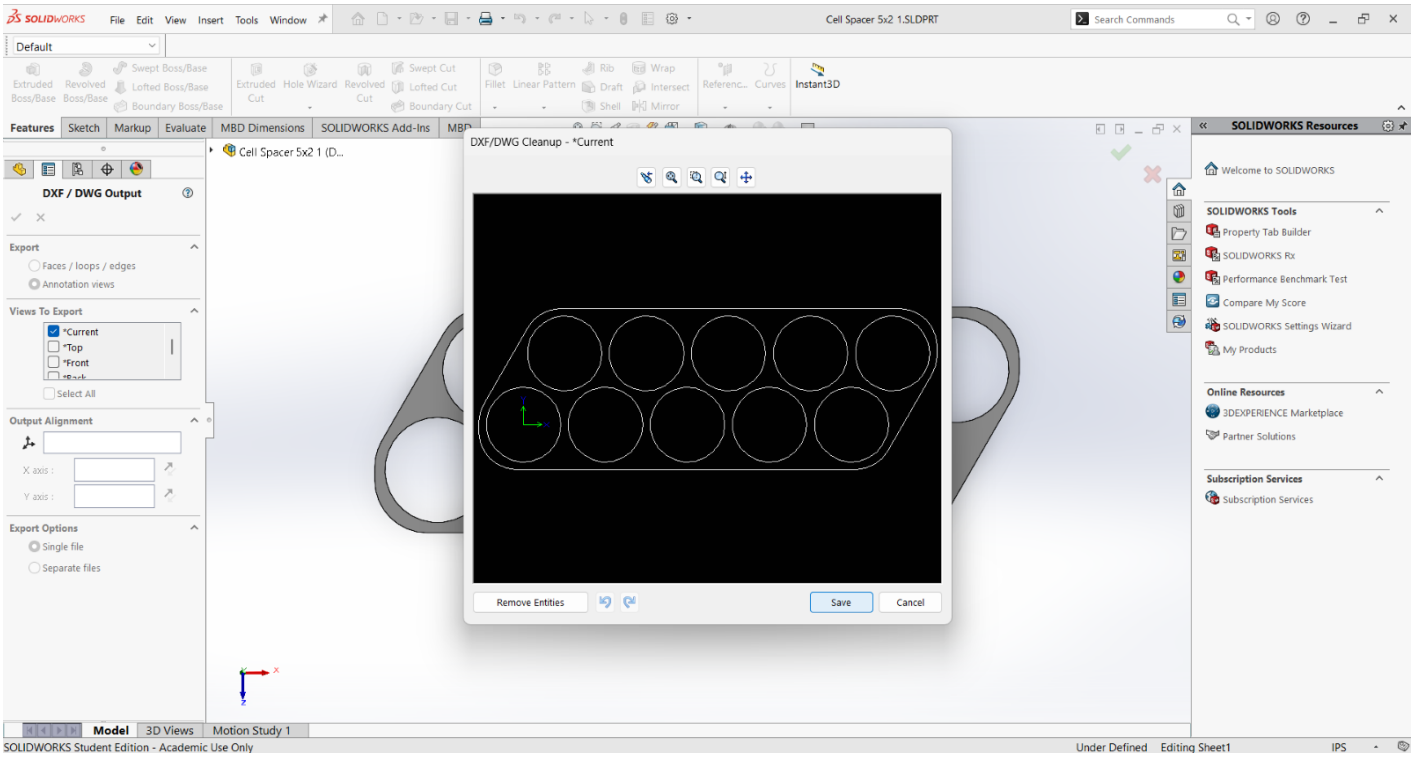

Save As
Windows (C:) › SolarGators › Car Four › Battery Pack 2 › Modules
Organize
New folder
Actions
Modify
Display
Tools
Search in Curre
Desktop
Downloads
Documents
Pictures
Music
Name
Checked Ou...
Size
Type
NEW bent busbar parts
Old
Organized Version YK
Unique Module
Folder
File name:
Cell Spacer 5x2 1.SLDPRT
Save as type:
SOLIDWORKS Part (*.prt;*.sldprt)
Description:
Add a description
Save as
Save as copy and continue
Save as copy and open
Include all referenced components
Add prefix
Add suffix
Advanced
Hide Folders
Save
Cancel


SOLIDWORKS Part (*.prt;*.sldprt)
SOLIDWORKS 2022 Part (*.sldprt)
SOLIDWORKS 2023 Part (*.sldprt)
3D Manufacturing Format (*.3mf)
3D XML For Player (*.3dxml)
ACIS (*.sat)
Additive Manufacturing File (*.amf)
Adobe Illustrator Files (*.ai)
Adobe Photoshop Files (*.psd)
Adobe Portable Document Format (*.pdf)
Dwg (*.dwg)
Dxf (*.dxf)
eDrawings (*.eprt)
Extended Reality (*.gltf)
Extended Reality Binary (*.glb)
Form Tool (*.sldftp)
HCG (*.hcg)
HOOPS HSF (*.hsf)
IFC 2x3 (*.ifc)
IFC 4 (*.ifc)
IGES (*.igs)
JPEG (*.jpg)
Lib Feat Part (*.sldlfp)
Microsoft XAML (*.xaml)
Parasolid (*.x_t;*.x_b)
Part Templates (*.prtdot)
Polygon File Format (*.ply)
Portable Network Graphics (*.png)
ProE/Creo Part (*.prt)
STEP AP203 (*.step;*.stp)
Save As
Desktop
Downloads
Documents
Pictures
Music
File name:
Save as type:
Description:
Save as
Save as copy and continue
Save as copy and open
Include all referenced components
Add prefix
Add suffix
Advanced
Hide Folders
Save
Cancel

Save as a .dxf



Click the checkmark. Here you can also change your orientation, but you should not need to if you were already looking normal to the face you want to WJ.



Now click ”Save”. Here you can ”remove entities” if there is any text or lines you do not wish to cut. The origin does not need to be removed. To double check that the dxf looks how you intended, use the Omax software (download link in the WJ software instructions) to do so.

Now that you have saved the dxf, it is ready to be placed onto a USB drive and taken to MAE C to WJ. Follow the linked guide at the very top to see how.

Unique Sheets or Multiple Parts with Protomax

You can also use the software to place multiple parts onto a unique sheet to save space instead of using the FlowNest software at MAE C. Although the FlowNEST at the WJ is good for many parts, its programming for optimizing the space does not always seem the most efficient. So, shown below is how you can do the same process but on your own before going to MAE C.

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