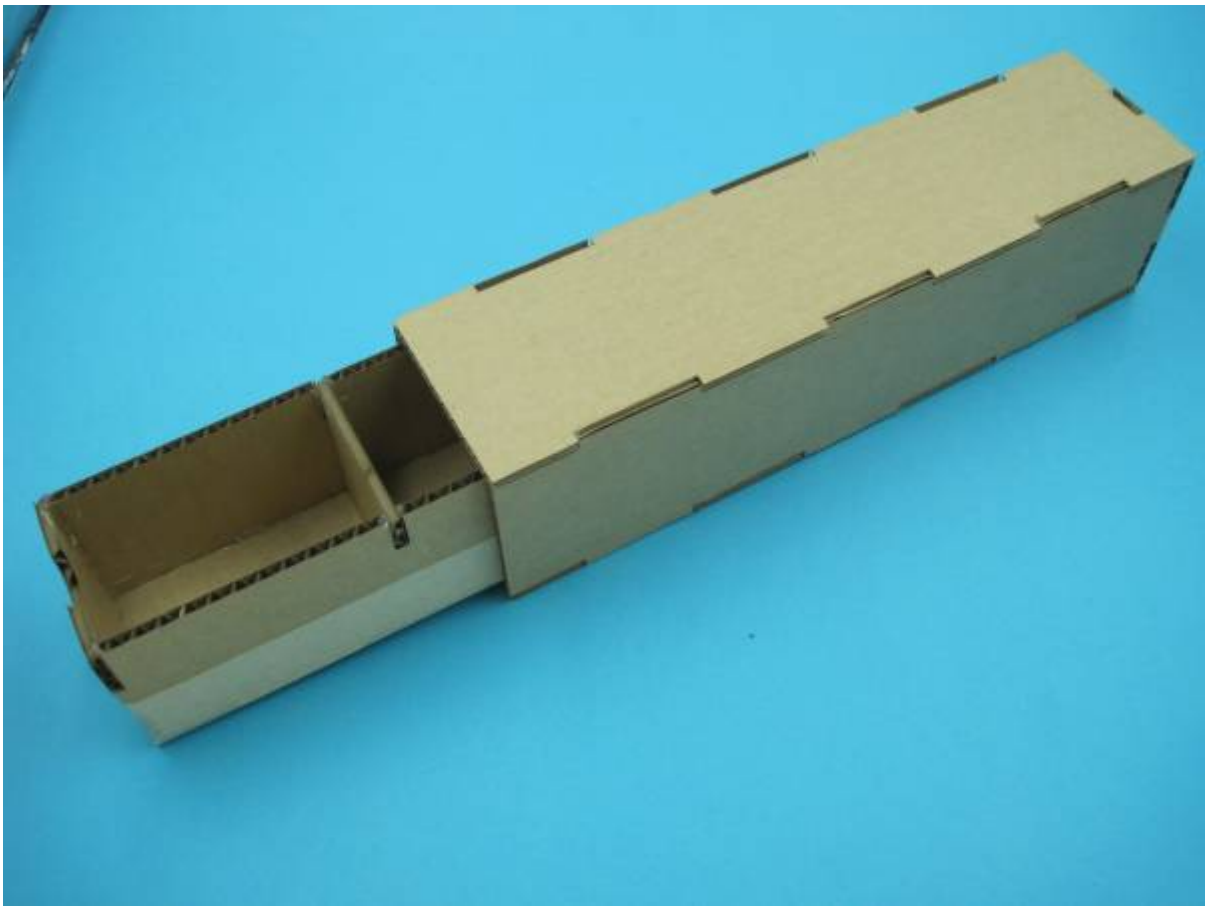
Component Boxes

SLQ Wiki Fabrication Lab 2026/01/24 02:13

~~REVEAL~~

Component Boxes

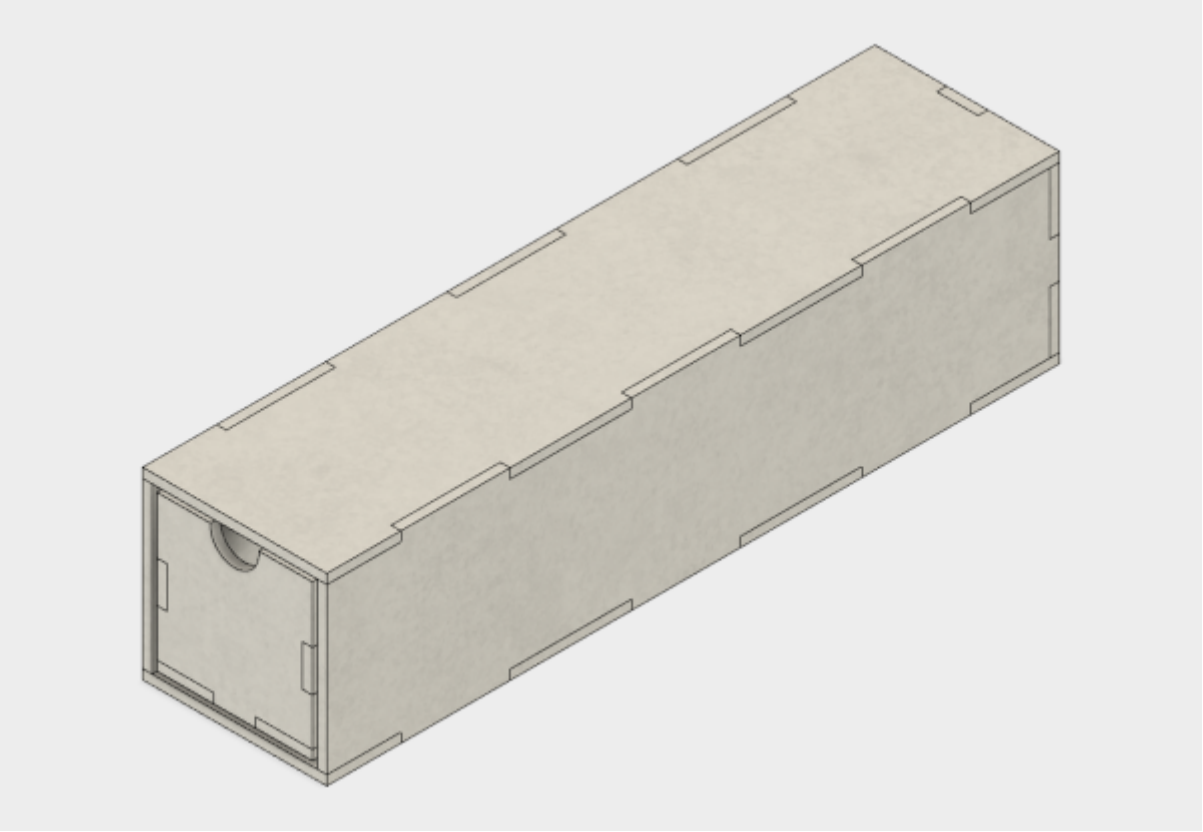


- Chest and draw, from cardboard with internal dividers.
- For storing fixings, small parts and components.
- Initial designs are for 4mm corrugated board, cut on laser (with tabs) or cnc-knife.
- Designed by Andrei Maberley.

Fits into a milkcrate for transportation.

Milkcrates fit into Milkcrate Shelving.

Quarter Width/Quarter Height - Laser-Cut



This is a single chest and draw, design to fit 16 in a milkcrate.

Build Instructions

These instructions cover using the files provided to;

- make existing design at The Edge (In-House),
- Modify the design to suite other materials or sizes (Custom)
- make the existing design using another facility (External)

In-House

Materials

- 2 sheets 4mm corrugated card per box. (520 x 420mm)
- Masking tape

Tools and Equipment

- Lasercutter
- Hot Glue gun

Instructions

Preparation

- Book some time of the laser cutter (if you need to do an induction you can find the latest announcements here)
- Download the CDR file

layout_x1.cdr

At The Edge

- Ask the facilitator for two sheets of 4mm cardboard when you are in the Fabrication Lab.[1)]
- Cut the box with the settings
  - 50% power
  - 4% speed
- Assemble the draw using masking tape on the outside, then glue on the **inside**.
- Assemble the chest, gluing on the tabs **only** - too much glue and the drawer will stick.

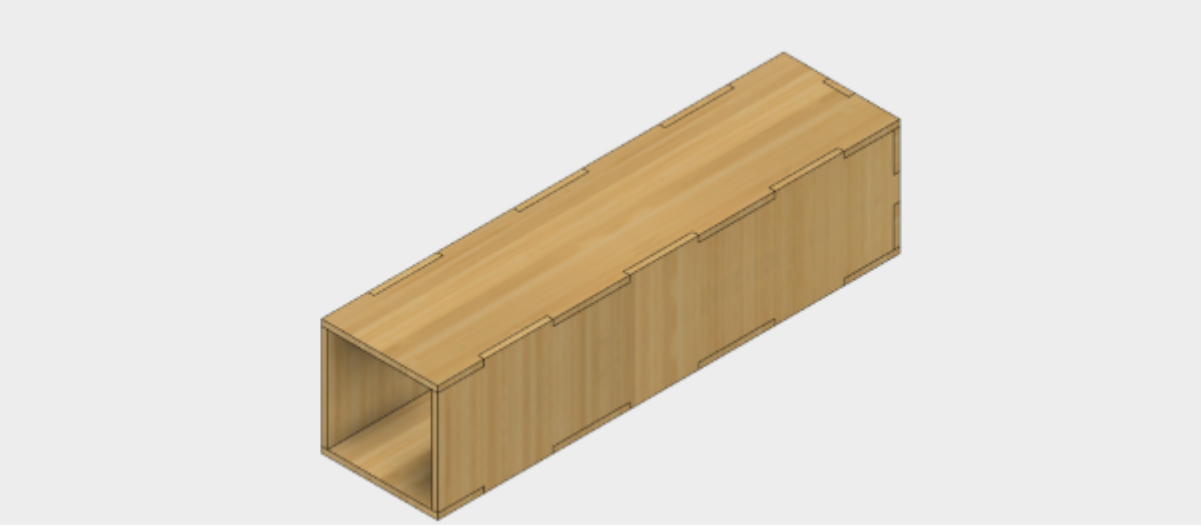
Custom

The 3D model can be viewed, interacted with and downloaded from here https://a360.co/2D4gpg7.

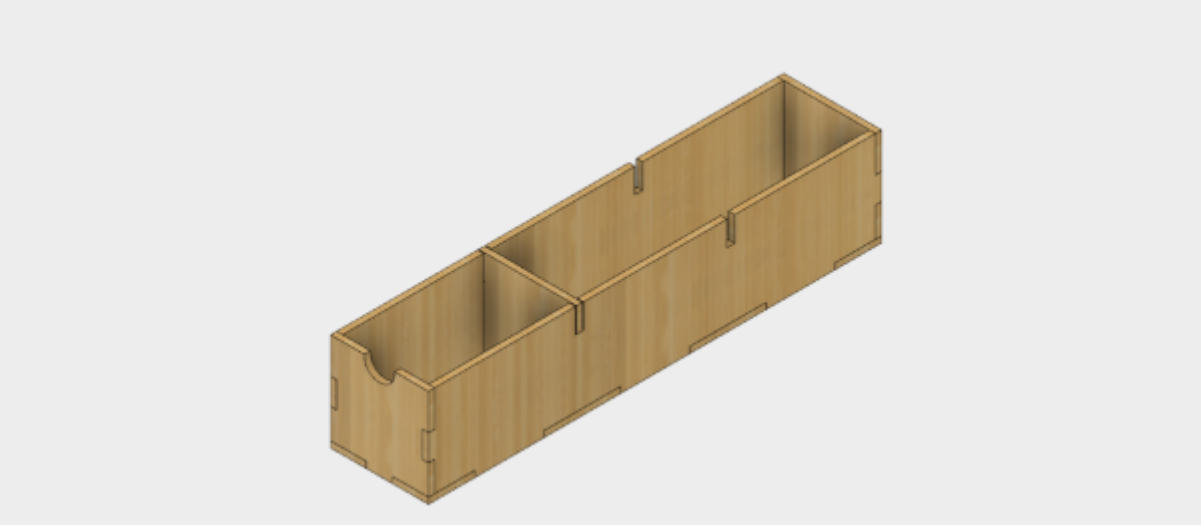
You will need to provide an email to recieve the download.

To customise the material thickness, dimensions and tolerances you can change the parameters of the original design in Fusion360..

The design has two main components - the chest;



and the draw.



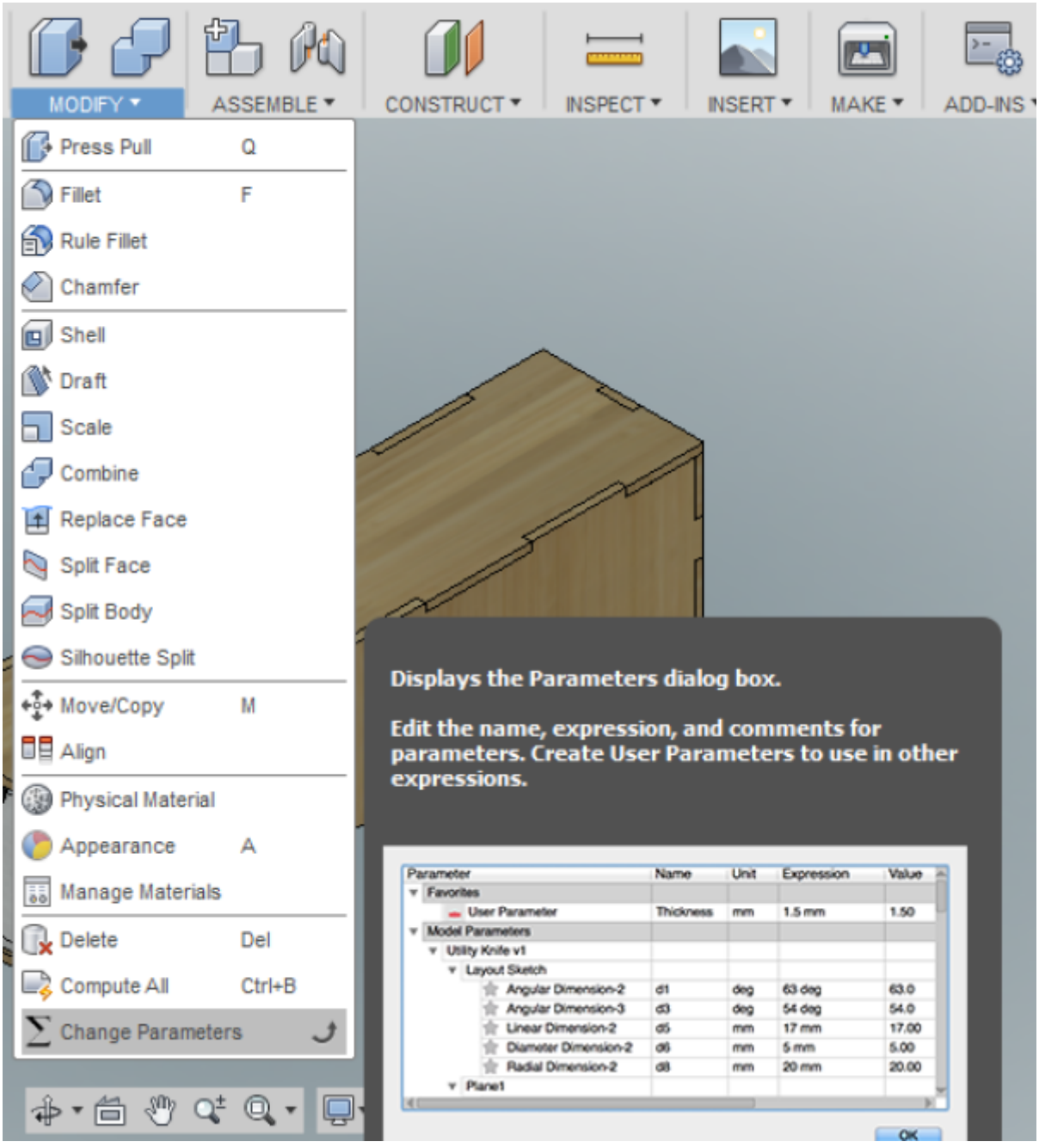
The dimensions are based on the external of the **chest**. This is to ensure that the chest and draw fit **inside** our container.

Changing Parameters

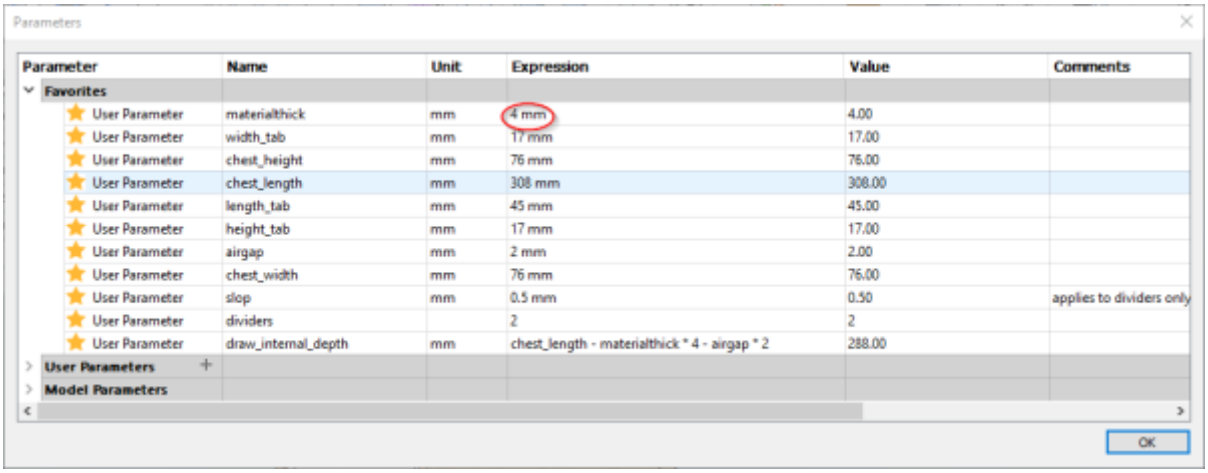
Before playing with the parameters remember;

- that they can (and will) interact in strange ways.
- Undo early and often.
- adjusting material thickness can affect everything.
- Changing the overall length/width and height to **smaller** values can break the tabs.
- the tab dimensions can be adjusted, but not the **number** of tabs. (ie the number of tabs is dependent on tab dimensions)

Open the model, then go to the parameters menu.



The parameters you will can change are favourites at the the top of the list.



External

Quarter Width/Quarter Height Files

The individual faces as DXFs are:

- draw_front.dxf
- draw_back.dxf
- draw_sides_x2.dxf
- draw_divider_x2.dxf
- draw_bot.dxf
- chest_sides_x2.dxf
- chest_top_bot_x2.dxf
- chest_back.dxf

Layout for cutting - sheet dimension minimum 560mm x 320mm.

- CDR file

  layout_x1.cdr

Rayjet Settings are:

- 50% power
- 4% speed

Export for other formats:

- PDF

  layout_x1.pdf

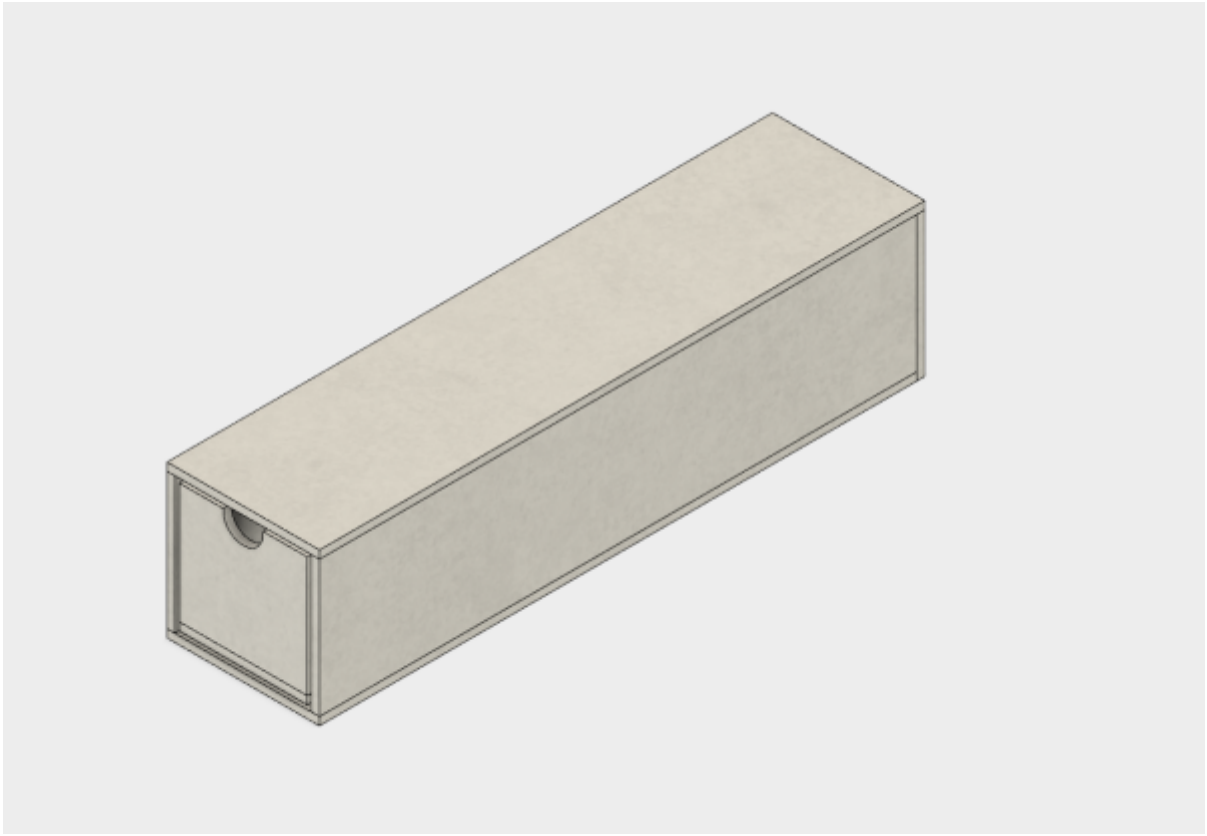
- DXF

  layout_x1.dxf

chest_draw_quarter_width_quarter_height_1_.dxf

Quarter Width/Quarter Height - CNC - Knife

As above - but without tabs.



The Fusion360 file and 3D model is viewable here https://a360.co/2CGh3iY

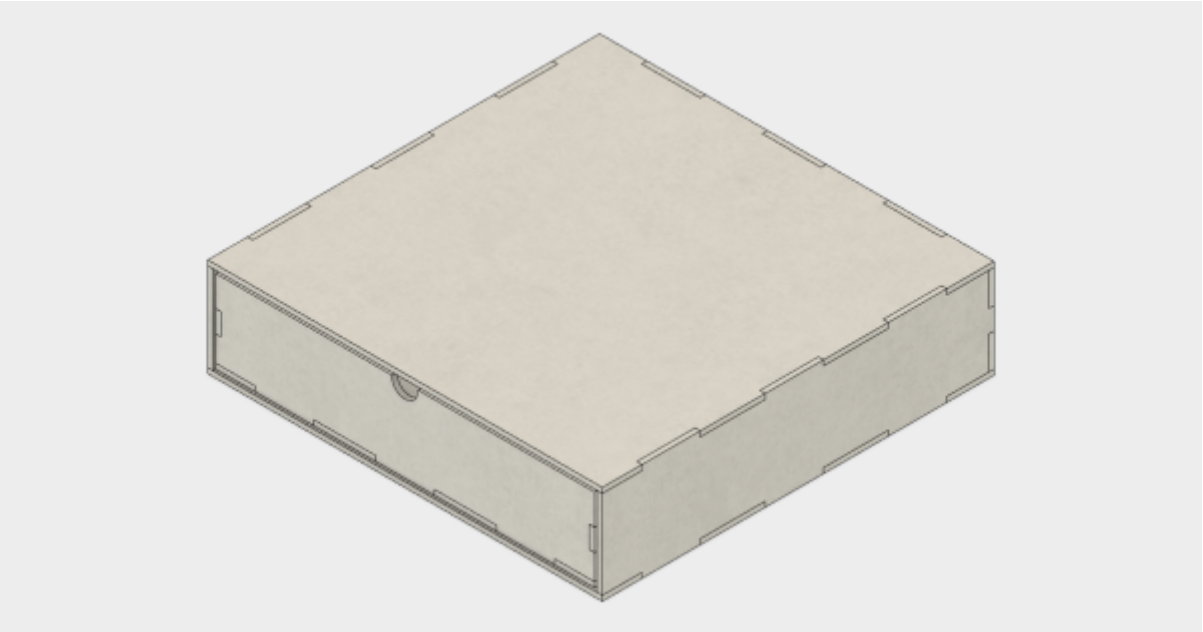
The individual faces as DXFs are:

- cnc_knife_draw_front.dxf
- cnc_knife_draw_back.dxf
- cnc_knife_draw_bottom.dxf
- cnc_knife_draw_sides_x2.dxf
- cnc_knife_chest_back.dxf
- cnc_knife_chest_top_bot_x2.dxf
- cnc_knife_chest_sides_x2.dxf

Layout for cutting - sheet dimension minimum 535mm x 310mm - sheet (page) size 2200 x 1200.

- CDR file
  cnc_layout_1.cdr
- PDF
  cnc_layout_1.pdf
- DXF
  cnc_layout_1.dxf

Full Width/Quarter Height - Laser-Cut



The Fusion360 file and 3D model is viewable here https://a360.co/2DaWUG2.

The individual faces as DXFs are:

- full_width_draw_front.dxf
- full_width_draw_back.dxf
- full_width_draw_sides_x2.dxf
- full_width_draw_divider_x2.dxf
- full_width_draw_bot.dxf
- full_width_chest_sides_x2.dxf
- full_width_chest_top_bot_x2.dxf
- full_width_chest_back.dxf

Layout for cutting. **Two sheets** each a full sheet dimension 726mm x 432mm for Rayjet.

- full_width_sheet_1.cdr
- full_width_sheet_2.cdr

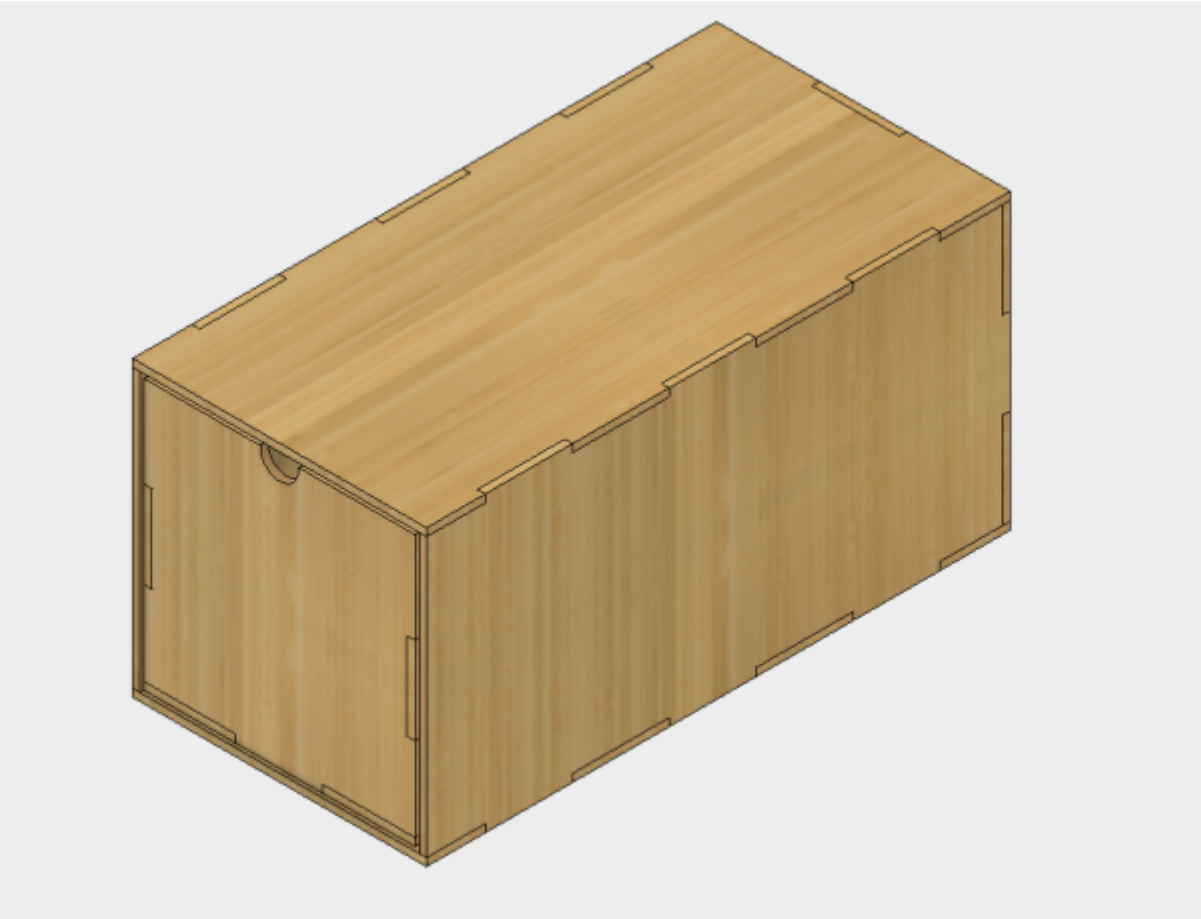
Rayjet Settings are:

- 50% power
- 4% speed

Export for other formats:

- full_width_sheet_1.pdf
- full_width_sheet_2.pdf
- full_width_sheet_1.dxf
- full_width_sheet_2.dxf

Half Width/Half Height - Laser-Cut



The individual faces as DXFs are:

- halfwthhalfhgt_chest_back.dxf
- halfwthhalfhgt_chest_sides_x2.dxf
- halfwthhalfhgt_chest_top_bot_x2.dxf
- halfwthhalfhgt_draw_back.dxf
- halfwthhalfhgt_draw_bottom.dxf
- halfwthhalfhgt_draw_divider.dxf
- halfwthhalfhgt_draw_front.dxf
- halfwthhalfhgt_draw_sides_x2.dxf

Layout for cutting. **Three sheets** each a full sheet dimension 726mm x 432mm for Rayjet.

- halfwthhalfhgft_drawfontdiv.cdr
- halfwthhalfhgft_drawer.cdr
- halfwthhalfhgft_chest.cdr

Page Credits

Created by *Andrei Maberley* on 2018/01/08 14:09.

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1)
cardboard is free for limited personal and prototyping use