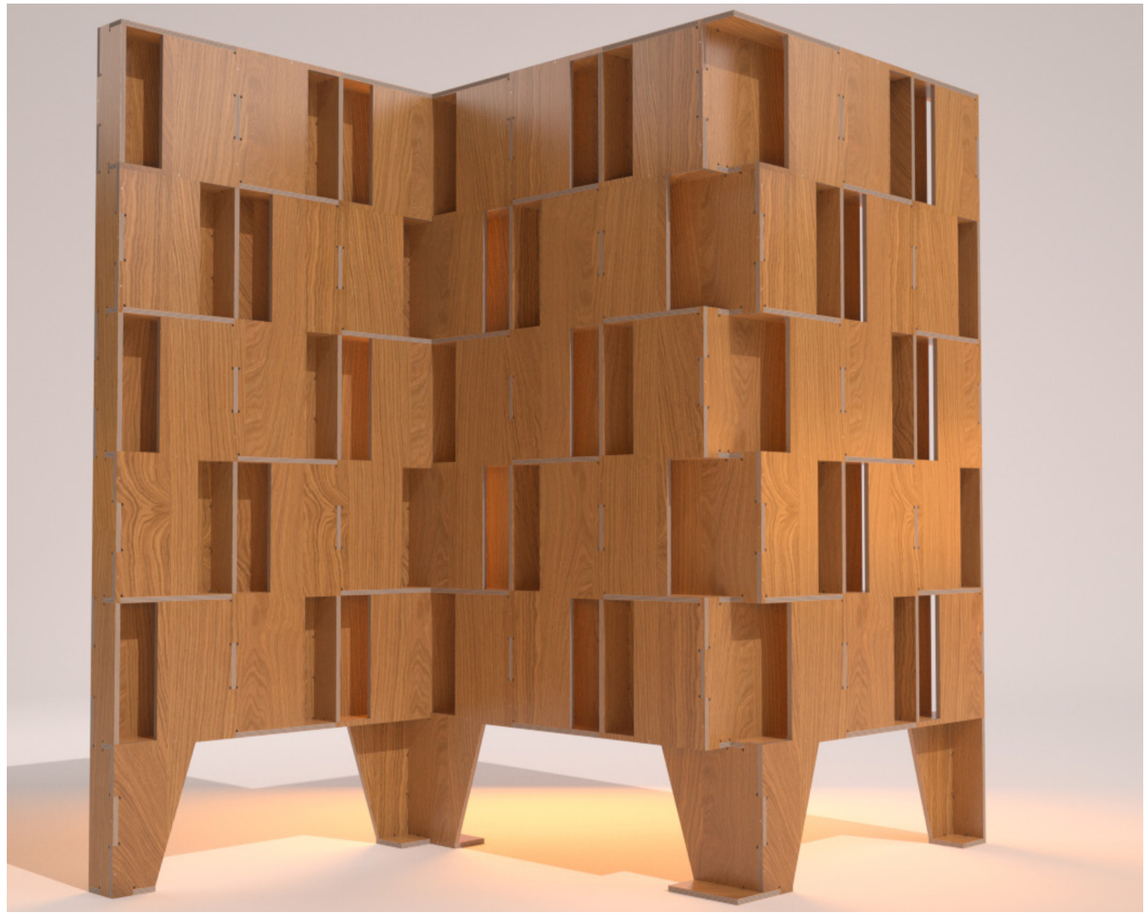
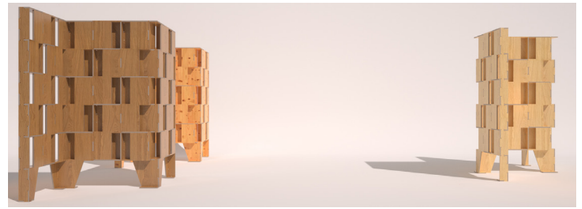


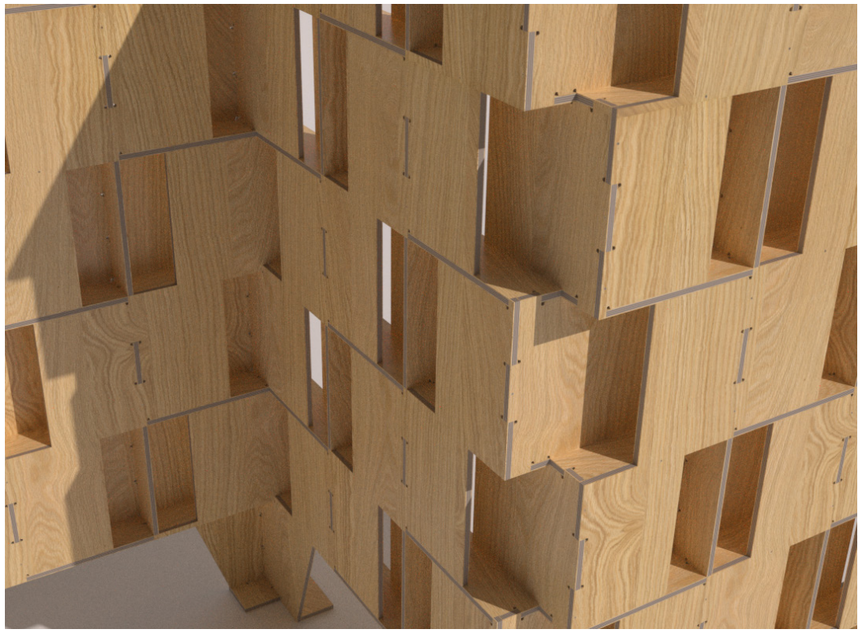
BETA INSTRUCTIONS 06.12.2014

MATERIALS & FINISHES

AtFAB pieces can be made out of any sheet material that your CNC machine can cut. Materials can be pre-finished, so finished pieces come directly off the machine ready for assembly.

Materials can also be kept raw until after cutting, so you can finish parts individually or wait until the entire furniture object is assembled to finish it. See atfab.co for examples.





AtFAB

Cellular Screen *Beta**

The Cellular Screen is in beta testing. This version was successfully prototyped at full scale multiple times, and functions as intended. We are seeking feedback specifically on assembly methods. We'd like to hear about your techniques and how we may best communicate putting the screen together. We welcome your insights and questions as you make your version, and thank you for participating in our R&D process.

The Cellular Screen is a double layered structure that both reflects light and provides visual privacy. The basic, compact version shown here is well suited as a privacy screen or room partition for your office, maker space or home.

With its ability to extend in all directions and transform within its cells, the Cellular Screen is a widely adaptable partition system with almost limitless possibilities to enclose and shape spaces of all kinds.

CELLULAR SCREEN DIMENSIONS		
total length	1820	72”
total height	1750	69”
total depth	1060	42”

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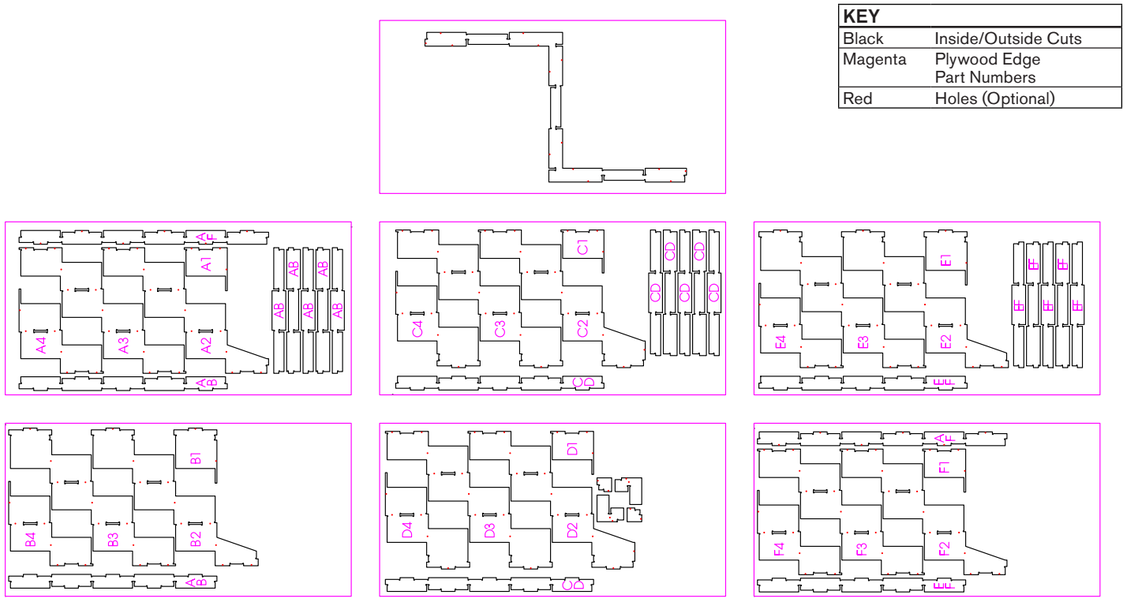
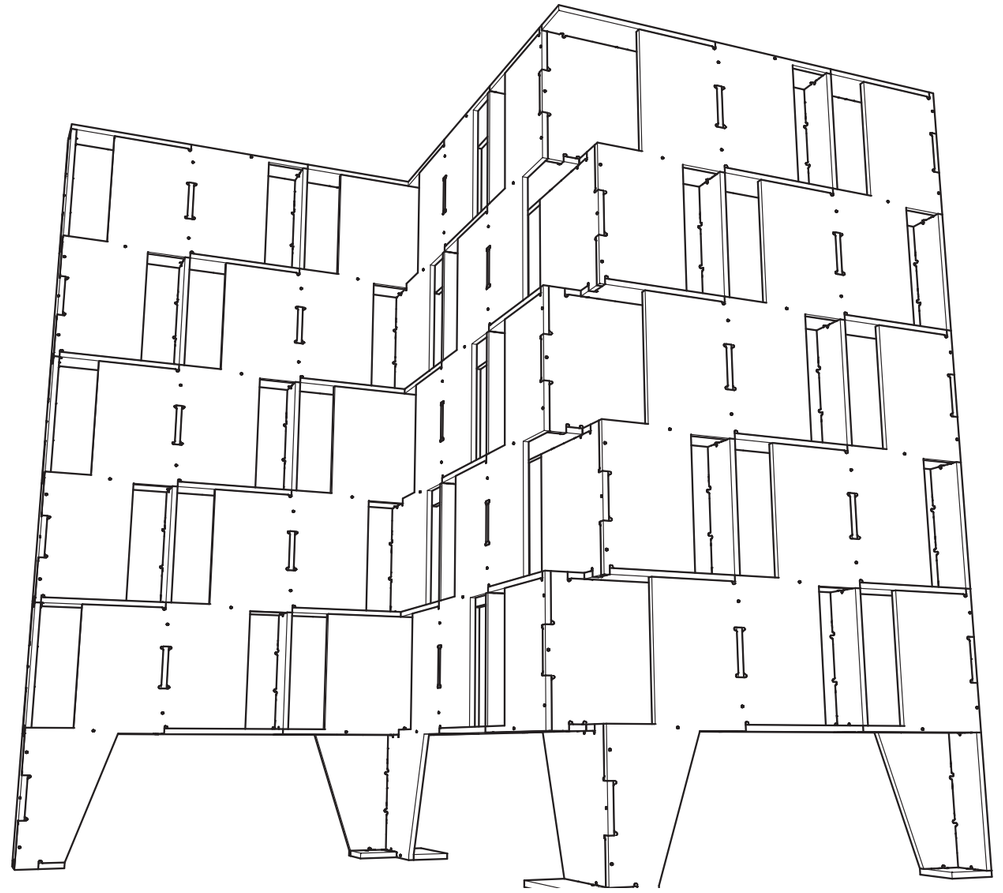


KEY	
Black	Inside/Outside Cuts
Magenta	Plywood Edge Part Numbers
Red	Holes (Optional)



CUT FILES

One cut file is provided to cut all required Cellular Screen parts.

The Cellular Screen file has through cuts and drilled holes. You will find these separated by layers in the DXF file, and noted above.

We also provide part numbers on a separate layer. These numbers will simplify the screen assembly process, and should be transferred onto labels (or etched directly onto the parts, as we like to do). CNC cutting on the appropriate side of the line is critical to ensuring that tabs and slots fit together.

Use the approximate linear inches to assist in cost estimating the scope of CNC services.

MATERIALS

Cut files provided are scaled for 12mm (½") Plywood.

Consult sheet material supplier and manufacturer instructions for finishing material faces and edges. If sealing, oiling and waxing, or painting your Screen, also consult manufacturer instructions.

CNC machines require their own supplies, consult your fabricator to find out recommended bit sizes for CNC routers, masking to protect your materials, and anything else the machines need.

We recommend purchasing a 20% material surplus to use for testing and calibration, which is required for ensuring a good fit between the Table parts.

WAKING CHEST SUPPLIES	
1/2" (12) sheets	7
fasteners	210

AtFAB

THE TEST PIECE

A good fit between furniture parts is essential for a sturdy, functioning Cellular Screen. Since nominal material thicknesses can vary from product to product, some advanced preparation is necessary.

The small Test Piece (AtFAB_test.dxf) provided in the download enables you to calibrate your machine settings exactly to your material thickness, prior to cutting out an entire furniture object.

The Test Piece has examples of all joint conditions that you'll encounter in every AtFAB furniture object.

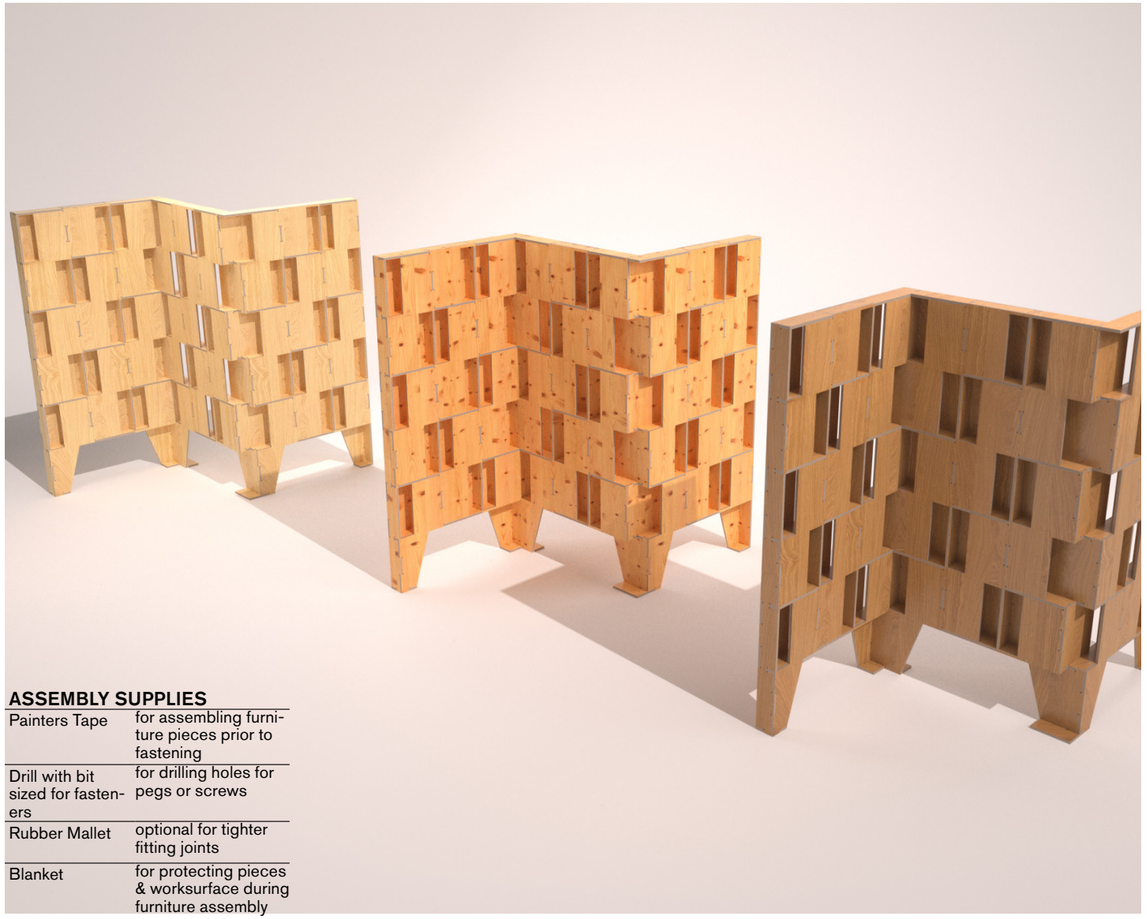
Cut as many iterations of the Test Piece until all of its parts can be put together easily but still fit snugly enough to stay together.

Multiple settings can be evaluated by "bracketing" toolpath offsets, cutting speeds, bit sizes, and any other features that have an impact on how much material is removed as the CNC tool cuts.

It is possible to make very minor adjustments within the CAD file, if overall furniture dimensions aren't critical. This is best achieved by scaling the entire file by 1-3%, so that slots are closer to the material thickness.

If you're planning to finish your Screen after cutting, it's important to finish the Test Piece as you would your Screen to ensure the joints fit after sanding and coating.

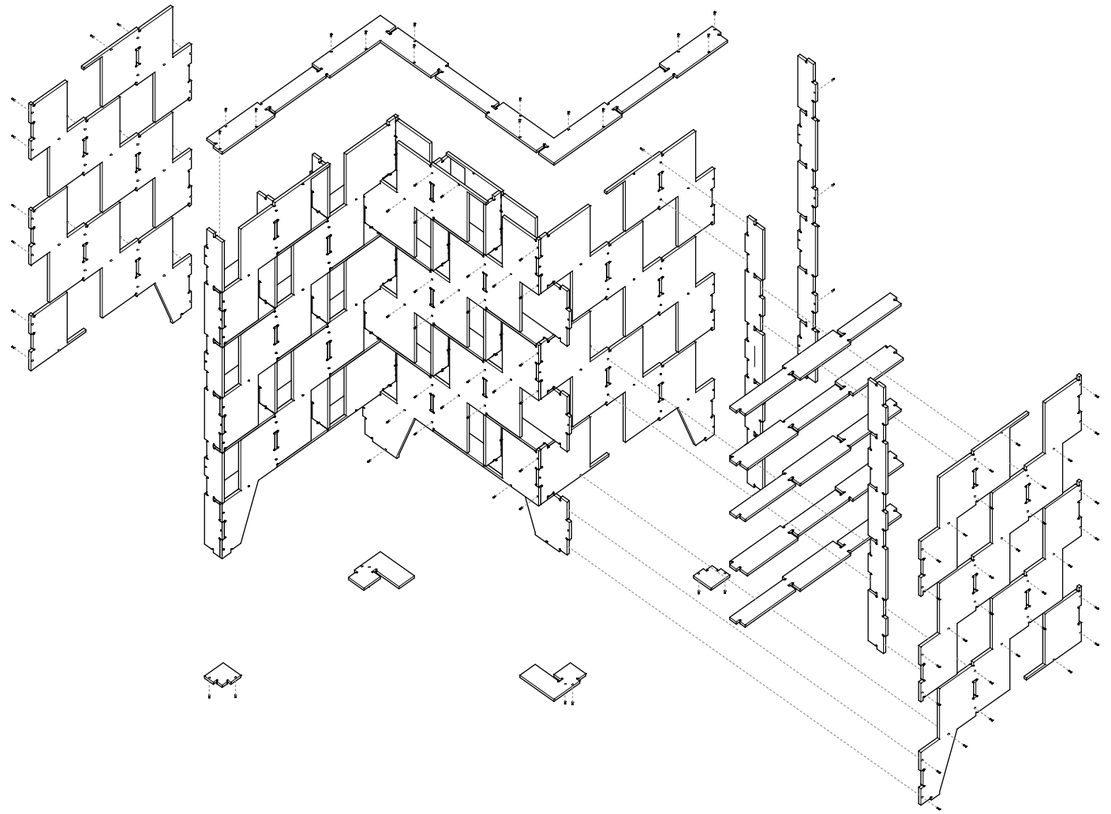
Once you're pleased with the fit, save your CNC settings and start cutting your Cellular Screen!



ASSEMBLY SUPPLIES

Painters Tape	for assembling furniture pieces prior to fastening
Drill with bit sized for fasteners	for drilling holes for pegs or screws
Rubber Mallet	optional for tighter fitting joints
Blanket	for protecting pieces & worksurface during furniture assembly

BETA INSTRUCTIONS 06.12.2014



PREPARATION

AtFAB's design using slots, tabs and notches makes objects easy to assemble with a couple of people.

Moving quilts to protect the pieces and your worksurface are handy.

Blue painters tape is especially helpful in holding pieces together as you assemble your object.

If you've chosen a tighter fit between joints, a rubber mallet/persuader can be helpful in putting tight fitting pieces together.

For increased durability, we recommend securing joints with dowels or fasteners. The cut files provide holes for the CNC to pre-drill into the face of the furniture pieces.

If securing joints with dowels, you'll need a power drill with a bit sized to match your pre-drilled holes and hardwood dowels. Pre cut dowels into into 1" lengths.

The CNC can also be set to drill pilot holes for countersunk mechanical fasteners. If gluing, omit fastening holes from CAD files.

ASSEMBLE

Generally, we have found it easiest to assemble each separate leaf on the floor.

- Using the part numbers as a reference, group face and frame parts by leaf: A/B, C/D, & E/F. Set aside the foot and top pieces, they will go on last.
- Working on the floor, place 'A' face pieces facedown on the floor, slot and tab A/B frame together, and then slot 'B' face pieces (good side facing upward) onto the frame tabs. Repeat with leaf C/D and E/F. Secure parts temporarily together with painters tape, if necessary.
- Once leaves are assembled, stand two leaves up and carefully fit them into one another, repeat with the third leaf. Some face parts may need to be removed to ease this process.
- Put the extra face pieces into place, and also put top and foot pieces into place. Now you are ready to begin fastening.

FASTEN

With the entire screen assembled, upright, and secured with tape, you can begin fastening.

Start fastening lower face pieces first, and work upward.

If using pegs, drill through pre-drilled holes and 1¼" into edge of opposing part; insert pegs.

If using hardware, screw through pre-drilled pilot hole and into opposing part.

If gluing, apply a minimal amount of adhesive to interior face of tabs and slots, which require reinforcement. Joints that hold together on their own don't need adhesive. Follow adhesive instructions for gluing, clamping and drying time.

Do you have a better way of assembling the Screen? We are seeking detailed methods and sequence for assembling the parts. Do you have any tips to ease the process? Have you identified a particularly challenging step? We welcome your feedback and insights on assembling the Screen, which we can share with other makers.

AtFAB BETA

IMPORTANT INFORMATION FOR BETA TESTING

ABOUT BETA TESTING

We are offering beta files that have had limited full scale testing, and/or limited instructions for assembly. We have made 1:6 scale prototypes from the cut files, and have built full scale versions of very similar designs. Due to the size of the task, however, we have yet to prototype these particular designs at full scale, which is why we are leaning on our community to help us.

In general, we feel confident in the quality of these cut files and the performance of the designs. We've had a smooth process of translating our other published AtFAB designs from scale models into full scale prototypes, and anticipate the same for these larger designs. While we've done all we can to ensure a successful result, there remains a chance for defects somewhere in the process. We kindly request that you only proceed with making these files if you understand these limits of our research, review these terms & conditions, and acknowledge that use of these files is entirely at your own risk.

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