

Making a Press Machine

A press is used to produce prints on different mediums, such as paper and fabric, or to emboss paper and cardstock.

Design Considerations

A printing press is basically a sandwich of the medium you want to print or emboss and a stamp that gets pressed between a roller and a flat surface. We looked into different presses to understand how the machine works and what to consider when designing one.

We put down three main points to consider when designing:

- Adjust for different thicknesses of materials
- Stability of the machine
- The plate should not slip

Controlling the Thickness

As we can use various mediums to print on and print with, we need to control the height of the gap between the roller and the flat surface. We found this is done in 2 ways:

1. Moving the top roller

Like this open press.



2. Adding layers of flat surfaces

Like this Sizzix press.



We found moving the top roller offers more flexibility and a tidy workflow (no need to store and go through different thicknesses of plates).

Securing the Plate

We found two methods to secure the plate:

1. Use a gear system, like the open press



2. God knows what sorcery holds the plate in the Sizzix

Printmaking Materials and Alternatives

Ala' had some experience making her own stamps to use with her handmade paper, she tried different types of wood such as MDF, HDF, Maple, and Pine. She also tried rubber stamps, linoleum, and Laser-safe linoleum.

We searched the web for printing and embossing materials and tools, and what alternate materials we can experiment with.

Drypoint etching materials

- Linoleum
- Balsa wood
- Zinc or copper plates (1mm thickness)

Alternatives

- Aluminum cans
- CDs
- Tetra paks
- Try different types of wood (MDF, HDF, Maple, Pine, Cherry, ...)
- Collagraphs (make a collage of different materials)

Etching tools alternatives

- A needle in a mechanical pen
- A thumbtack taped to a stick

Paints and inks

- Relief printing ink
- Etching ink

Alternatives

- Watercolor pencils (used with damp paper)
- Watercolor
- Oil paint
- Watercolor crayons

- Chalk pastel
- Biochromes?

Embossing

- Cardstock
- 3D printed plate
- Try etching materials as well (Tetra paks, CDs, ..)

References

- [Open Press Project – The 3D-printed printing press](#)
- [Printmaking Supplies Alternatives - Diana Kohne | logo design | illustration | Pocket Press | Pasadena, California](#)
- [Sizzix | Die Cutting Machines, Dies & Embossing](#)

Mood Images

Bill of Materials

For making the machine

For printing

- Etching ink
- Relief printing ink
- Linoleum sheets