Clinostat Description

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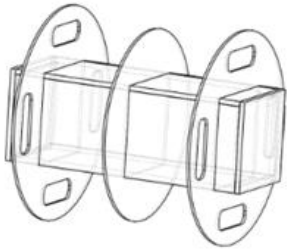
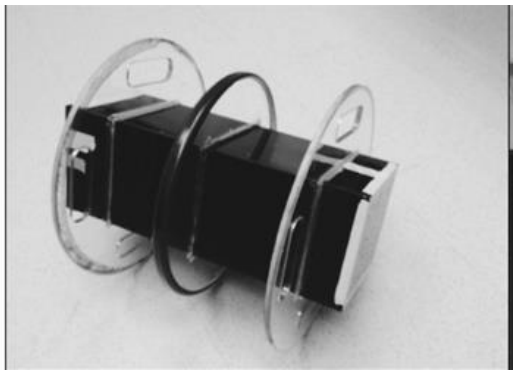
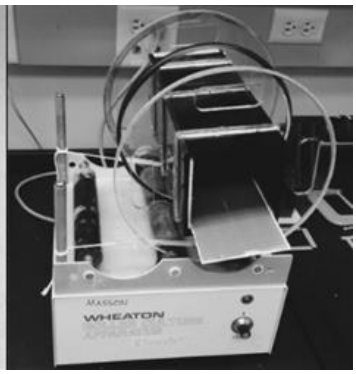
The box portion of the clinostat that rotates on the base was constructed out of several pieces of ¼'' thick acrylic. The black box is constructed with 8 pieces of black acrylic, 4 for the sides and 2 each for the ends. There are also three discs that were created to fit onto the rotating base. These were made out of clear acrylic. The figure below shows an engineering drawing of the assembled box, a picture of the actual box and a picture of the box atop the rotating base.







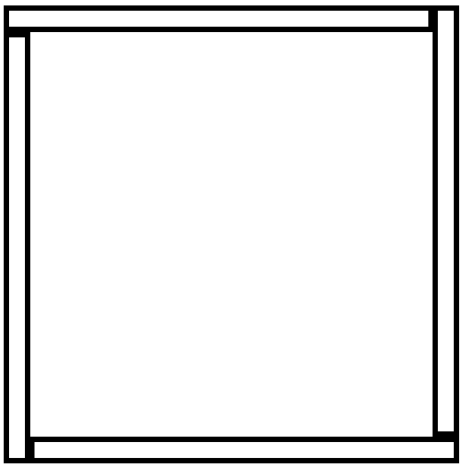
Instructions

Materials needed:

- 3 sheets of clear acrylic, ¼'' thick, 12'' x 12''
- 2 sheets of black acrylic, ¼'' thick, 12'' x 24''
- Weld-on acrylic solvent
- Hot glue gun
- Laser cutter

Directions

1. Use the .DXF files to cut the necessary pieces out of the aluminum.
2. The circles should be cut from the clear acrylic, one circle per sheet, and the box pieces should be cut from the black acrylic, one file per sheet.
3. Assemble the two box ends by centering the smaller squares on the bigger ones. Fix in place with a few drops of Weld-on.
4. Assemble the box sides using Weld-on as well. Each piece should be overlap an adjacent piece on only one end. Looking through the box sides, the pieces should fit together as shown in the figure below…



5. Slide the clear circles over the box and fix in place using the hot glue.
6. Check to make sure the assembly fits on the rotating base. If not, break off the circle pieces and glue again.

Notes

1. Use lab tape to secure the ends of the box in place during an experiment.
2. Electrical tape was added to the edges of the circles to provide better contact with the rotating base.
3. This is a design that was created for use with the equipment (rotating base) that we had on hand. It can and should be modified to fit other equipment.
4. The files necessary to cut these pieces out of acrylic are included with this post for download.