

ME104 CAD Project Instructions and Example

You are now ready to create your own working drawings, both by drafting and with CAD. This project is all your own; you will decide what you want to model, take your own measurements, and create your own drawings. Find an object that interests you (for example, perhaps you have always found wind-up toys to be interesting) and use it as the basis for this final project. An example (see **Figures 1 through 4** below) has been provided to help guide you through this project.

Instructions:

1. Disassemble your item of choice without altering or destroying any of its parts. If you must clip a welded item, it is recommended that you seek the help of a local machine shop.
2. Take measurements of the component parts. Use rulers and/or calipers to obtain the most precise readings of length, width, etc.
3. Draw three-view sketches of each part, using these measurements, your drafting tools, and the skills you have learned in Units 2 and 3 of this course.
4. Create 3D models of all parts in T-FLEX CAD. This will require you to implement the techniques learned in Units 2 and 3 of this course.
5. Assemble all parts in T-FLEX CAD (see **Figure 1** below).

Please follow the given example (a pulley assembly built from component parts) to guide you in your work. **Table 1** gives the quantity of each component needed in the assembly, and **Figures 2 through 4** show the orthographic projection of each part along with its dimensions in inches. All of these files (T-FLEX CAD files for both individual parts and assembly) are also available for download from Unit 4 of the ME104 site, or directly via the link below:

[Pulley Assembly Example Files \(T-FLEX CAD\)](#)

Note that these files are in a zipped (compressed) folder; you will have to download and unzip the folder, then open them in T-FLEX CAD.



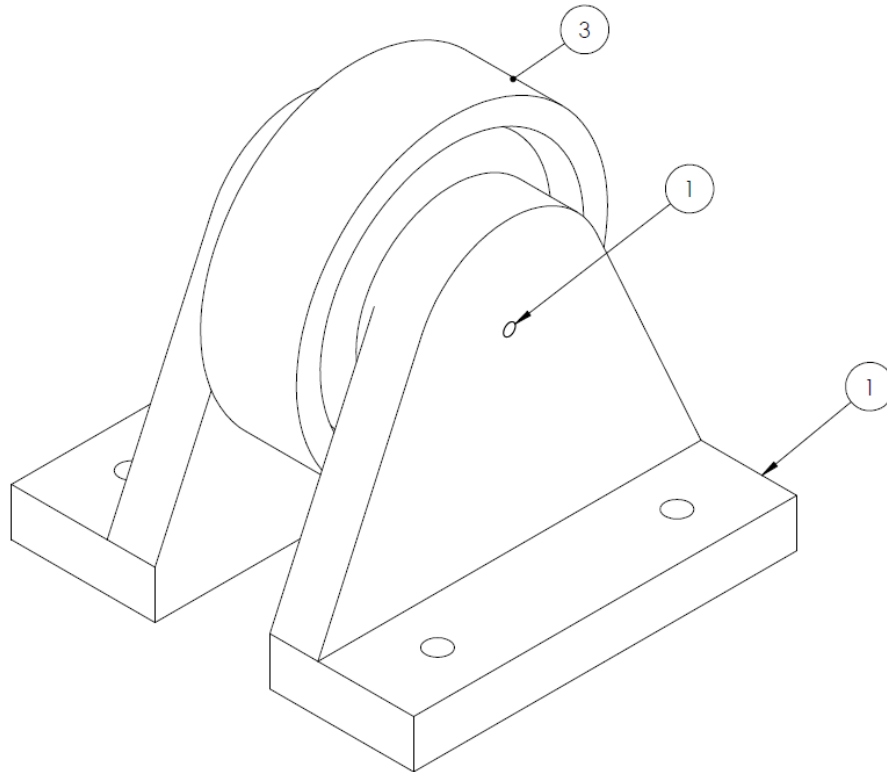
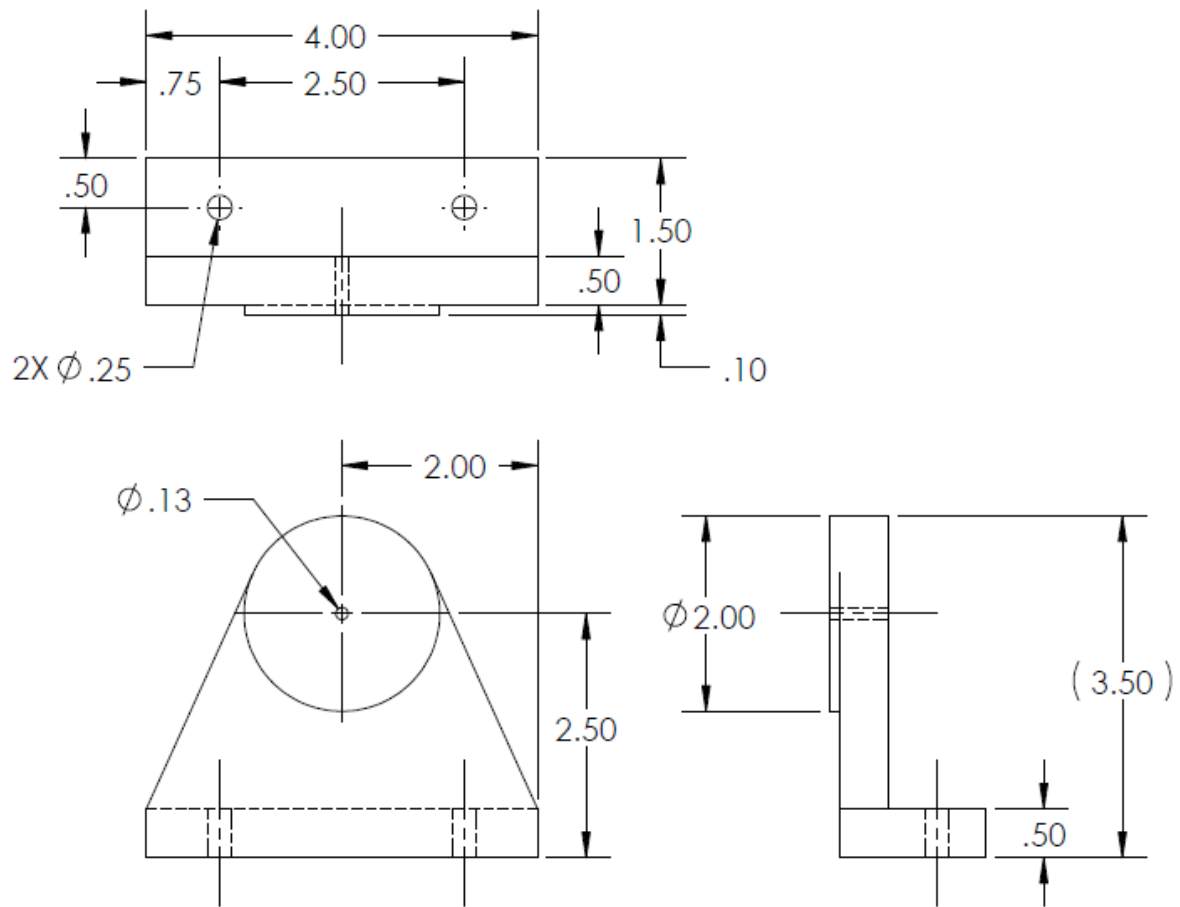


Figure 1: Pulley Assembly

ITEM NO.	PART NUMBER	QTY.
1	MOUNT	2
2	PIN	1
3	WHEEL	1

Table 1: Parts List of the Pulley Assembly



MOUNT

Figure 2: Orthographic Projection of Mount in the Pulley Assembly

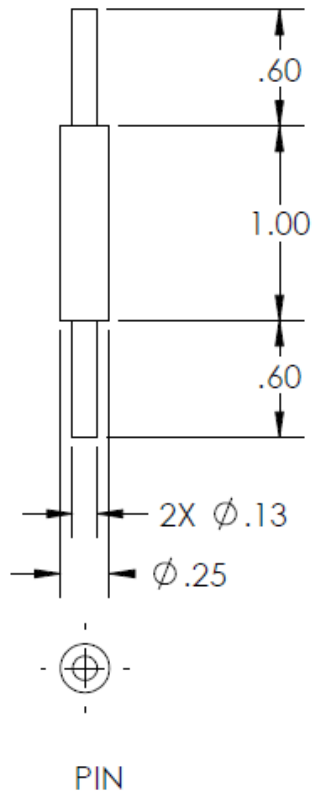


Figure 3: Orthographic Projection of Pin in the Pulley Assembly

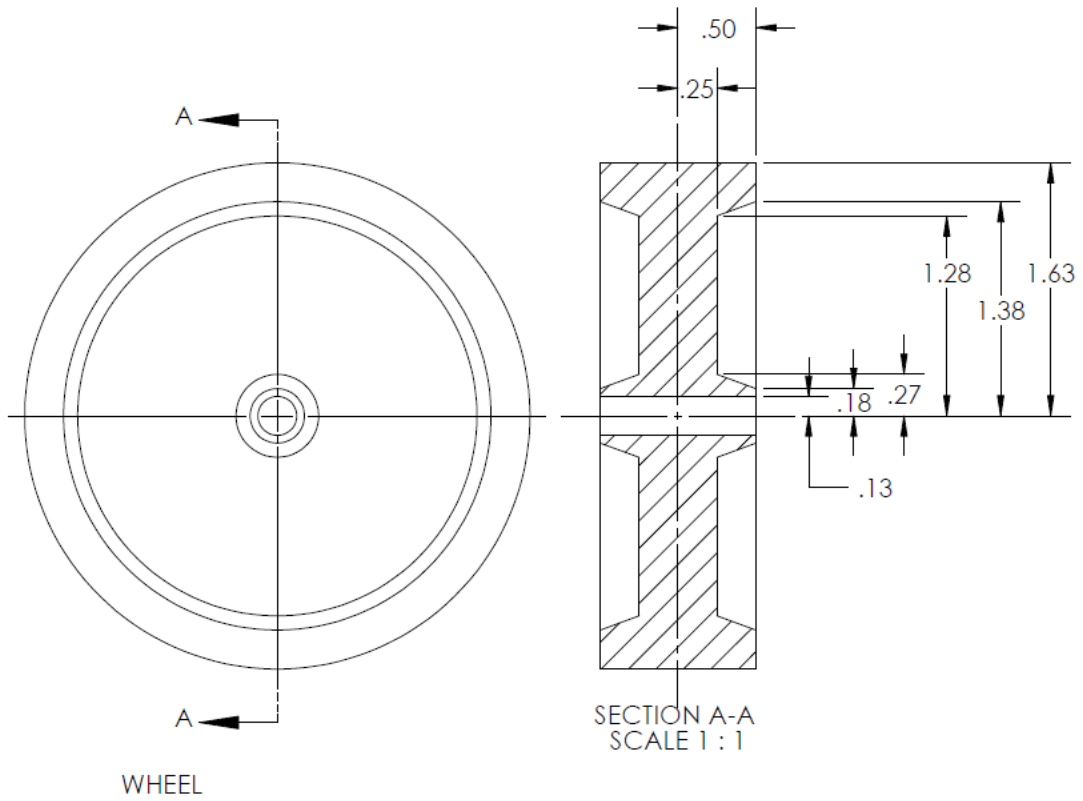


Figure 4: Orthographic Projection of Wheel in the Pulley Assembly