

Challenge exercise: Assembly modeling

The challenge: Use Assembly tools to define the relationship of motion between the components.

Open the supplied dataset **Assembly Modeling.f3d**. Define a Pin-Slot joint between the Knob and Base components. Configure the Joint dialog to appropriately position the Knob flush with the Top face of the Base component. Define Joint Limits for the Pin-Slot to ensure it only slides within the allowed domain of the Base's slot. Drive the joint to verify the motion.

Define an As-built Joint with Cylindrical motion between the Gear and Base components. Define Joint Limits for the Cylindrical joint so the gear slides only along the extent of the peg on the Base component. Drive the joint to verify the motion.

Complete the required activities:

- Ground the Base component
- Define a Pin-Slot joint and apply Joint Limits
- Define an As-Built Revolute Joint and apply Joint Limits
- Drive the applied joints to ensure the motion is as expected

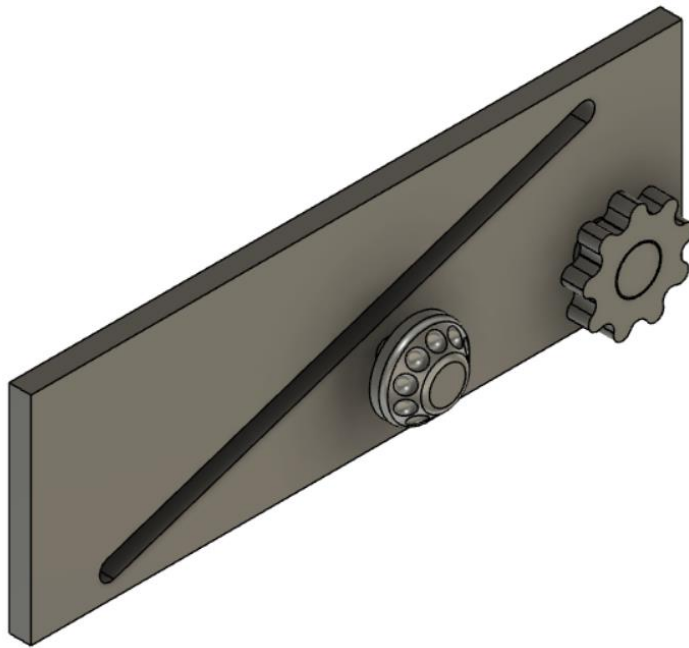


Figure 1. Provided components requiring assembly.