



Project In-A-Box: Speed Vise Handle

Our team at Autodesk Education is excited to welcome you to this, our first in a series of projects for learning and teaching Fusion 360. These projects are hands-on exercises meant for individual learners as well as classroom instruction to easily explore everything needed to learn to start making products, right now. This first project, the speed vise handle, leads learners through simple CAD and CAM workflows in Fusion 360 and results in a real, useful part. We hope you enjoy these projects in your classroom. We always enjoy your feedback, let us know how it goes.

Project plan

Speed Vise Handle

1. Series welcome video: [“Project-in-a-Box: Welcome”](#)
2. Project overview introduction video: [“Project-in-a-Box: Introduction”](#)
3. Review Project overview in the following pages
4. Gather materials needed for project
5. Download project assets “Download Project-in-a-Box”
6. Print drawings needed for project or have a second monitor for viewing
 - Speed Vise Handle Drawing.pdf
7. Watch Part one tutorial videos while following along in Fusion 360
 - Part one – Handle
 - [1- CAD design](#)
 - [2- CAM program](#)
 - A step-by-step guide is also included as an additional aid
8. Watch Part two tutorial videos while following along in Fusion 360
 - Part two – Knob
 - [1- CAD design](#)
 - [2- CAM program](#)
 - A step-by-step guide is also included as an additional aid
9. Machine parts
10. Celebrate completion of the project

Project highlights:

- Two machined components
 - Speed handle
 - Speed handle knob
- Hardware
 - Shoulder bolt
 - McMasterCarr #91259A583

Project overview

Speed Vise Handle

- **Required tool list:**
 - 1/4" Spot drill
 - #7 (.201 Dia) drill
 - 1/4-20 cut tap
 - 3/8" Flat end mill
 - Face mill (or substitute end mill for facing)
 - 1/4" Chamfer mill
 - 1/4" Engraving tool
 - Harvey #30130 or similar can be used for very fine line engraving
 - May substitute with small ball mill depending on features to engrave
 - Letter P (.323 Dia) drill
- **Required materials:**
 - Two sets of soft jaws
 - Or a single set of reversible soft jaws
 - 3/8" spacer for spacing jaws during soft jaw cutting
 - Gauge block/pin, stacked parallels, drill blank etc.
 - Material
 - Speed vise handle = 1.5" x .75" cut to 5.75" 6061-T6 Aluminum
 - Knob = 2" diameter cut to 3" 6061-T6 Aluminum