

Carpentry Level One



Hand and Power Tools 27103-13





Objectives

Identify the power tools commonly used by carpenters.

- c. Describe the safe use of drill presses.
- d. Describe the safe use of routers and laminate trimmers.
- e. Describe the safe use of portable power planes.
- f. Describe the safe use of power metal shears.
- g. Describe the safe use of pneumatic and cordless nailers and staplers.



Performance Task

2. Demonstrate or describe the safe and proper use of five of the following power tools:

- Circular saw
- Portable table saw
- Compound miter saw
- Drill press
- Router/laminate trimmer
- Portable power plane
- Power metal shears
- Pneumatic nailer/stapler

Kickoff Activity

- What power tools are needed to construct a freestanding one-car garage?



Section 2.3.0

- Drill presses consist of an electric drill and work table combined into one unit.
- Floor and benchtop models are common for shop work. Electromagnetic-base drill presses are common on a job site.



Section 2.4.0

- A router is a portable electric tool used to cut joints and patterns in wood.
- Routers have high-speed motors that allow the tools to make clean, smooth cuts.
 - Shaping edges
 - Rabbeting
 - Beveling
 - Dovetailing
 - Dadoing, fluting, and reeding
 - Mortising



Section 2.4.0

- A laminate trimmer is a specialized type of router used to trim and shape the edges of plastic laminate materials, such as those used for countertops.



Section 2.5.0

- A portable power plane is used to fit trim and framing members that will be fastened together.
- Common uses of power planes include:
 - Straightening
 - Edge planing
 - Chamfering
 - Beveling



Section 2.6.0

- Power metal shears are used to make burr-free cuts in sheet metal, metal strips, special lightweight materials, and steel studs.
- Common applications for power metal shears include:
 - Chimney and roof flashing
 - Making openings in ductwork
 - Trimming metal roof panels
 - Clipping strapping and stud hangers



Section 2.7.0

- Pneumatic nailers and staplers are fastening tools powered by compressed air, which is fed to the tool through an air hose connected to an air compressor.



STAPLER



STAPLES



NAILER



NAILS



COIL NAILER



FINISH NAILER

Section 2.7.0

- Identify whether a nailer or stapler is the best tool for the following tasks.

Task	Nailer	Stapler
Installing finish work	X	
Installing ceiling tile		X
Installing paneling		X
Constructing cabinets	X	
Installing insulation		X
Installing framing	X	



Section 2.7.0

- Pneumatic nailers and staplers are extremely dangerous. They are just as dangerous and deadly as a firearm. **NEVER** point these tools at anyone or in anyone's direction. When nailing or stapling, keep your hands away from the contact area.



Wrap Up

Be prepared to list the safety precautions for each of the power tools your instructor lists on the board.

Next Lesson: Review and Testing
Review Sections 1.0.0–2.7.0

