Technology
Chapter 7: Production Tools and Their Safe Use—Terms and Definitions

Arbors: spindles or shafts used to hold table saw blades and milling cutters.

Armature: the inner magnet in an electric motor. It is an electromagnet that can rotate.

Band saw: a saw that uses a blade made of a continuous strip or band of metal. These bands usually have teeth on one edge.

Chop saw: a circular saw used to cut narrow strips of material to length.

Chucks: attachments used to hold and rotate drills and router bits.

Circular saws: saws that use a blade in the shape of a disk with teeth arranged around the edge.

Computer: an information-processing machine that has changed the way we handle information. It can store information, and its programs can be changed.

Cutting motion: an action that causes material to be removed from a workpiece.

Cutting tool: a tool used in cutting actions.

Cycle: a complete set of motions needed to produce a surge of power.

Cylindrical grinders: grinders that use the lathe principle to machine a material. A workpiece is held in a chuck or between centers and rotated. A grinding wheel is rotated in the opposite direction.

Drilling machines: separating machines that produce or enlarge holes using a rotating cutter for the cutting motion.

Energy conversion: the changing of one form of energy into another.

Energy-processing converters: converters that process energy in various ways.

Feed motion: an action that brings new material in contact with a cutting tool and allows the cutting action to be continuous.

Field magnet: the stationary outer magnet used in electric motors.

Forstner bits: two-lipped woodcutters that produce flat-bottomed round holes.

Grinding machines: machines that use bonded abrasives to cut material.

Information processing: gathering, storing, manipulating, and retrieving information that can be found in books and photographs and on tape and film.

Input unit: a device used to enter data into a system.

Lathes: machines that produce a cutting motion by rotating the workpiece.

Linear motion: a cutting and feed motion in which the cutter or work moves in one direction along a straight line.

Machine tools: machines used to make other machines.

Material processing: changing the form of materials using tools and machines.
**Memory unit:** the section of the computer that holds information and instructions.

**Multiple-point tool:** a cutting device on which a series of single-point tools are arranged.

**Output unit:** a device used to display and record the results of the processing unit’s actions.

**Planing machines:** a machine tool that produces flat surfaces. Planing machines move the workpiece back and forth under the tool to generate the cutting motion.

**Processing unit:** the part of the computer, also called a *central processing unit (CPU)* or *microprocessor*, that manipulates the data.

**Program:** the instructions a computer uses to process data and produce output.

**Radial saw:** a circular saw that moves a rotating blade across the workpiece.

**Reciprocating motion:** a back-and-forth movement.

**Rotating motion:** a motion that uses round cutters or spins a workpiece around an axis.

**Sawing machines:** machines that use blades with teeth to cut materials to desired sizes and shapes.

**Scroll saws:** saws with a blade that is a strip of metal with teeth on one edge.

**Shaping machines:** a metalworking machine tool that produces flat surfaces. Shaping machines move a single-point tool back and forth over the workpiece to produce the cutting motion.

**Single-point tool:** a simple cutting device with a cutting edge on the end or along the edge of a rod, bar, or strip.

**Spade bits:** flat cutters on the end of a shaft, used to drill holes.

**Stroke:** the movement of a piston from one end of a cylinder to another.

**Surface grinders:** grinding machines that work on the metal planer principle.

**Table saw:** a circular saw that uses a linear feed of the material. The workpiece is pushed into the rotating blade to generate the cut.

**Turning machines:** separating machines that rotate a workpiece against a single-point tool to produce a cutting motion.

**Twist drills:** shafts of steel with points on the ends to produce chips.