

# TOOLS

A tool is any physical item that can be used to achieve a goal, especially if the item is not consumed in the process. Tool use by humans dates back millions of years, and other animals are also known to employ simple tools.

Tools that are used in particular fields or activities may have different designations such as "instrument", "utensil", "implement", "machine", "device," or "apparatus". The set of tools needed to achieve a goal is "equipment". The knowledge of constructing, obtaining and using tools is technology.

## ScrewDriver

A screwdriver is a tool, manual or powered, for turning (driving or removing) screws. A typical simple screwdriver has a handle and a shaft, and a tip that the user inserts into the screw head to turn it. The shaft is usually made of tough steel to resist bending or twisting. The tip may be hardened to resist wear, treated with a dark tip coating for improved visual contrast between tip and screw—or ridged or treated for additional 'grip'. Handle are typically wood, metal, or plastic[1] and usually hexagonal, square, or oval in cross-section to improve grip and prevent the tool from rolling when set down. Some manual screwdrivers have interchangeable tips that fit into a socket on the end of the shaft and are held in mechanically or magnetically. These often have a hollow handle that contains various types and sizes of tips, and a reversible ratchet action that allows multiple full turns without repositioning the tip or the user's hand.



A screwdriver is classified by its tip, which is shaped to fit the driving surfaces—slots, grooves, recesses, etc.—on the corresponding screw head. Proper use requires that the screwdriver's tip engage the head of a screw of the same size and type designation as the screwdriver tip. Screwdriver tips are available in a wide variety of types and sizes (List of screw drives). The two most common are the simple 'blade'-type for slotted screws, and Phillips

## Wire cutters

Are pliers intended for the cutting of wire (they are generally not used to grab or turn anything). The plane defined by the cutting edges of the jaws intersects the joint rivet at an angle or "on a diagonal", hence the name.



## Spanner

A spanner is a tool used to provide grip and mechanical advantage in applying torque to turn objects—usually rotary fasteners, such as nuts and bolts—or keep them from turning.

The most common shapes are called open-ended spanner and ring spanner. The term wrench is generally used for tools that turn non-fastening devices (e.g. tap wrench and pipe wrench), or may be used for a monkey wrench - an adjustable spanner



## Soldering Iron

A soldering iron is a hand tool used in soldering. It supplies heat to melt solder so that it can flow into the joint between two workpieces.

A soldering iron is composed of a heated metal tip and an insulated handle. Heating is often achieved electrically, by passing an electric current (supplied through an electrical cord or battery cables) through a resistive heating element. Cordless irons can be heated by combustion of gas stored in a small tank, often using a catalytic heater rather than a flame. Simple irons less commonly used than in the past were simply a large copper bit on a handle, heated in a flame.



Soldering irons are most often used for installation, repairs, and limited production work in electronics assembly. High-volume production lines use other soldering methods.[1] Large irons may be used for soldering joints in sheet metal objects. Less common uses include pyrography (burning designs into wood) and plastic welding.