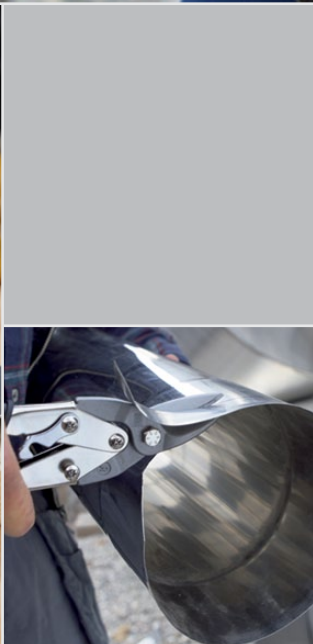


# Cutting Tool: Safe Use & Selection



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## Industrial Tool Safety & Snip Selection

Employers are responsible for maintaining in good repair any tools and equipment supplied to workers. Workers must use tools and equipment properly and report any defects to supervisors. Tools and equipment should be inspected regularly. Use the guards and personal protective equipment which we all know are needed but sometimes tend to overlook. **Never** disable, for the sake of convenience any built in safety features or guards on tools. Basic hazard awareness and common sense can prevent serious injuries with industrial hand and power tools.

**Common Causes of Accidents** - Typical causes of hand and power tool accidents include the following:

- Using the wrong tool for the job
- Tools falling from overhead
- Sharp tools carried in pockets
- Using cheaters on tool handles
- Excessive vibration
- Failure to support or clamp work in position
- Carrying tools by hand up or down ladders

### Safe practices for the industrial work place

- **Use the right tool for the job.** Using a clamp to lift, using a cheater bar on a handle or, using pliers instead of a proper wrench are typical examples of the mistakes which commonly lead to accidents and injuries.
- **Use tools as recommended by the manufacturer.** For example, don't use cheaters on handles. This will exert greater forces on the tool than it was designed for and is likely to cause breakage and possible injury.
- **Damaged or broken tools should be removed from service.** Clamps with broken pads, bent handles, corroded pads, snips with notched blades, bent clamps, damaged spindles etc. are all unsafe and should be removed from service and be either repaired or destroyed.



- **Maintain tools in safe operating condition.** Keep handles, pads and spindles clean, secure and safe. Don't rely on friction tape to secure split handles or to prevent handles from splitting. Check wedges and handles frequently. Keep handles smooth and free of rough or jagged surfaces. Replace handles, spindles, blades and pads that are split, corroded, or that cannot be refitted securely.
- **Never climb ladders with tools in your hand.** Tool holders / pouches free your hands while climbing or working on ladders, scaffolding, and other areas where access may be difficult. When carrying tools up or down from elevated places, put them in substantial bags or boxes and raise and lower them with strong ropes.
- **Spark-resistant tools** (non-ferrous tools) are recommended where flammable materials or explosive dusts or vapors might be present. These tools, such as brass or copper hammers or mallets, should still be used with caution; remember, they may not guarantee safety in all explosive situations such as in the presence of gasoline vapors. It is always safer to eliminate the hazard by ensuring a safe atmosphere through isolation, ventilation, or purging.
- **Protect the cutting edges of tools when carrying them.** Carry them in such a way that they won't be a hazard to yourself and others. Carry pointed or sharp edged tools in pouches or holsters.
- **Keep your hand tools clean.** Protect them against damage caused by corrosion. Wipe off accumulated dirt and grease. Dip the tools occasionally in cleaning fluids or solvents and wipe them clean.
- **Lubricate** adjustable and other moving parts to prevent wear and misalignment.
- **Stay aware of your surroundings** – look around and keep a mental note of what is going on around you. Identify & be mindful of potential dangers.
- **Falling tools** are a dangerous hazard for workers below. Keep track of tools, especially when working at heights on scaffolds or other access equipment.

- **Inspection and Repair of Industrial Tools** - Tools should be inspected by a person qualified through training and experience to determine the safe condition of the tool. Worn or damaged tools should be tagged “**DEFECTIVE – DO NOT USE**” and returned to the shop for repair or replacement. Regular inspection of all tools is necessary and should cover tool maintenance. Observing proper handling and storage of tools should also be a part of the inspection process. Responsibility for inspection is usually left to the supervisor; however, tools should be checked by those who use them daily. Hand tools that get the heaviest use and abuse should be inspected frequently. To maintain and repair tools properly requires the right facilities and equipment. A good workbench, repair tools, vises, and good lighting are necessities. Only persons skilled in the repair of tools should be allowed to do the repairs.
- **Misuse** - Misuse of hand tools is a common cause of injury in the work place. In many cases, the injury results because it is assumed that everyone knows how to use most common hand tools. This is not the case. It is the responsibility of the supervisor and employer to ensure that workers are trained in the safe and proper use of hand tools.

### **Personal Protection**

**Hands** – Hands can be caught in machines, crushed by objects, or cut by sharp-edged tools such as chisels, knives, and saws. Hands can also be damaged by being burned, fractured, or sprained unless you stay alert. Always wear protective gloves appropriate to the job being done.

**Feet** – Always wear the correct protective footwear for the job (Steel toed, rubber, leather etc...)

**Eyes** – Eyes are highly susceptible to injury; however, most eye injuries are preventable. Always wear appropriate safety glasses / face shields for the job.

**Ears** – Hazardous noise levels are inherent in industry. Hearing protection should be worn whenever there is a risk of excessive exposure.

## Safe Use & Selection of Cutting Tools

### Proper selection

1. Right, left or straight cutting?
  - a. Left or right cutting snips has nothing to do with the hand you favor, but what side of the tool the lower blade (table) of the snip is on.
  - b. Any snip with a straight blade pattern will cut a straight line; however, for long cuts in large sheets choosing a pair with offset blades will make the job easier.
  - c. Use a right cutting snip when cutting curves from left to right (clockwise).
  - d. Use a left cutting snip when cutting curves from right to left (counter clockwise).
2. Always be sure to select the correct size and type of snips for the job.
  - a. Don't try to cut tight curves with a straight pattern snip.
  - b. Use offset models for long cuts through large sheets of material.
  - c. To avoid springing the blades, do not try to cut material that is too thick (0.0625 / 16 gauge). Even in soft metals.
  - d. For ease of cutting & longer life when cutting harder metals choose a snip with the hardest HRC cutting edge
  - e. Use wire cutters for cutting wire! The quickest way to ruin a pair of snips is to use it on material it was not designed for.

### Safe usage

1. Improper use of cutting tools can lead to personal injury or material damage. Ask yourself - Is this the tool designed for this job!
2. Snips are generally used to cut light gauge galvanized sheet metal, copper sheet, and tin. Do not use them to try & cut steel rod or wire.
3. Flying metal particles are always a hazard, so care should be taken to maintain control over cut off bits & pieces.
4. Always wear appropriate protective gear such as gloves, safety glasses etc... while working.
5. Cutting direction should always be away from the body.
6. Be careful of the sharp edges on the cutting blades.
7. Keep blades closed when snip is not in use.

8. Be careful of the sharp edges of the material being cut as you use the tool.
9. Use only hand pressure for cutting.
  - a. Never hammer, or use your foot, to get extra pressure on the cutting blades.
  - b. Do not use “cheater bars” on handles.
10. Folding utility knives are best stored closed for safety
11. The sharpest knife is the safest knife – change blades frequently & dispose of used blades in a safe manner.

### Recommendations & Tips

1. It is advisable not to cut exactly on the layout line. It is good practice to leave about 1/32-inch of metal beyond the layout line for final dressing and finishing.
2. To avoid jagged cuts:
  - a. Try not to make the cut the full length of the snip blades. If a cut is made through the points, the material being cut will have a tendency to tear sideways as the cut is completed. Stop the cut about ¼-inch before reaching the points of the blades and then take a fresh bite.
  - b. Use high quality snips with micro serrations on the blades
  - c. Highest quality snips of a superior design do not require serrations at all to maintain a grip during cutting.
3. When making a straight cut, place the work over the workbench so that the layout line is slightly beyond the edge of the bench.
4. Hold the snips at a slight angle so that the sheet metal being cut is in full contact with the table of the snip (lower jaw).
5. To cut a large circle or hole within a sheet of metal or other sheet materials, start by drilling or punching a small entry hole in the center of the circle and proceed to make a spiral cut leading out to the desired circumference. Keep cutting away until all unwanted material is removed.
6. To cut a large circle or disc from sheet metal or other sheet materials, start from the outside of the material and make a cut tangent to the layout line but slightly beyond it to allow for dressing and finishing. This way you will always be able to see the layout line and still have material left over for final dressing and finishing.
7. Keep the blade pivot bolt and nut properly adjusted at all times.



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8. Snips should be carefully put away after use. Wipe the cutting edges with a lightly oiled cloth. Occasionally oil the pivot bolt.
9. Never use snips to cut heavy wire, cable, nails, rod, etc., as these materials may damage the cutting edge or the shearing action of the snip.