

All power tools can be dangerous if both general and tool specific safety instructions are not followed carefully. General safety instructions apply to all power tools, both corded and cordless.

Start with a Safe Work Area



Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.



Do not operate power tools in explosive atmospheres, near flammable liquids, gases, or dust. Power tools create sparks, which may ignite the dust or fumes.

- Keep bystanders, children, and visitors away when using a power tool. Distractions can cause you to lose control.



Electricity can be Dangerous

Grounded tools (three pronged cords) must be plugged into a properly grounded installed outlet. Never remove or cut off the grounding prong or modify the plug in any way. Do not use any adapter plugs.



Double Insulated tools have a polarized plug (one blade is wider than the other.) This plug will fit into an outlet only one way. Do not change the plug in any way.



Do not use AC only rated tools with a DC power supply.



Store battery packs away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects. These things can make a connection from one terminal to the other, shorting the battery terminals together and causing burns or fire.



- When using a power tool, don't touch grounded surfaces such as pipes, radiators, ranges and refrigerators. There is a higher risk of electric shock if your body is grounded.

GFCI

In damp locations, only plug your tool into a Ground Fault Circuit Interrupter (GFCI). If the work area does not have a permanent GFCI on the outlet, use a plug-in GFCI. Wear rubber gloves and footwear.



Don't use or leave power tools in the rain or wet conditions.



Do not abuse the cord, carry the tool by its cord, or pull the cord to unplug it. Keep the cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.



Always hold the tool by the insulated gripping surfaces. Contact with hidden wiring or its own cord will make exposed metal parts of the tool "live" and shock the operator.

Rules about Extension Cords

- When using a power tool outside, use an extension cord marked for outdoor use with "W-A" or "W". These cords are made for outdoor use.
- Extension cords with 3-prong grounding plugs must be plugged into 3-prong outlets when using grounded tools.
- Replace damaged or worn cords immediately.

Amps

The wire gauge and length of the extension cord must be able to handle the amps of the tool. Find the Amps (A) on the tool's nameplate and use the chart to determine the necessary wire gauge for your extension cord length.

Nameplate Amps	Extension Cord Gauge			
	Cord Length in Feet			
	25'	50'	100'	150'
0-6	18	16	16	14
6-10	18	16	14	12
10-12	16	16	14	12
12-16	14	12	Not Recommended	

Good Personal Safety is a Must

Following good safety practices when using all power tools is a must. Make a habit of including safety in all of your activities.



Always read and understand the tool's operator's manual, tool markings and the instructions packaged with the accessory before starting any work.

- Stay alert, watch what you are doing and use common sense when using a power tool.



Do not use tools when you are tired or under the influence of drugs, alcohol, or medication.

- Dress right. Do not wear gloves, loose clothes or jewelry. Contain long hair. Loose clothes, gloves, jewelry, or long hair can be caught in moving parts.
- Keep handles dry, clean and free from oil and grease.
- Be sure the power tool's switch is OFF before plugging it in or inserting a battery pack. Do not carry tools with your finger on the switch.



Remove adjusting keys and wrenches before turning the tool ON.

- Always keep a firm footing when using power tools. Be sure you have balance and control before you start the job.



Use safety equipment. Always wear eye protection. A dust mask, non-skid safety shoes, hard hat, or hearing protection must be used when needed. The reference to “safety goggles” or “safety glasses” in product specific sections provides potential options - always refer to the tool’s operator’s manual for the specific eye protection recommended, which should be marked as complying with current national standards.

- Unplug tool/remove battery before changing accessories.



Keep hands away from rotating or moving parts.

Do the Job Safely

- Use the power tool accessories only for the jobs for which they were designed.



Secure and support the workpiece. Use clamps and a stable work surface. Do not hold the work by hand or against your body.

- Keep guards in place and working properly.
- Do not force the tool. Use the right tool for your job. It will do the job better and safer.
- Use only accessories recommended by the tool manufacturer. Accessories that may be suitable for one tool may become hazardous when used on another tool.



Do not touch the drill bit, blade, cutter or the workpiece immediately after operation; they may be very hot and may burn you.

- If a method of dust collection is available with the power tool, it should be used to reduce the risk of dust-related hazards.

Maintenance Keeps Tools Working Safely and Effectively

- Do not use a tool if the switch does not turn it on and off. It must be repaired.



Look at the tool before using it. Are moving parts misaligned or binding? Is anything broken? Damaged tools must be fixed before using them. Develop a maintenance schedule for your tool.

- Maintain accessories carefully. Keep blades and bits sharp and clean.
- Take your tool to be serviced by qualified repair people. Service or maintenance performed by unqualified personnel could result in a risk of injury. For example: internal wires may be misplaced or pinched, safety guard return springs may be improperly mounted.
- When servicing a tool, use only identical replacement parts. Follow instructions regarding maintenance in the tool’s operator’s manual. Use of unauthorized parts or failure to follow the maintenance instructions may create a risk of electric shock or injury.
- Clean and lubricate a tool only as directed in its operator’s manuals. Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts.
- Maintain labels and nameplates. These carry important information. If unreadable or missing, contact the manufacturer for a replacement.

When Done, Store the Tools out of Harm’s Way



To avoid accidental starting, unplug the cord, remove batteries or lock off the switch when the tool is not being used, when changing accessories, and when adjusting or cleaning tools.

- Keep tools out of the reach of children and people unfamiliar with the tools.

Table Saws

Table Saws are one of the most commonly used stationary power tools in woodworking shops. To use them safely, they must be properly set up, maintained with care, and specific operating procedures must be followed to prevent accidents.

Good Personal Safety is a Must

Following good safety practices when using table saws is a must. Make a habit of including safety in all your activities.



Always read and understand the tool's operator's manual, tool markings and the instructions packaged with the accessory before starting any work.



Always wear safety goggles or safety glasses with side shields complying with current national standards, and a full face shield when needed.



Use the appropriate mask or respirator in dusty work conditions.

Wear proper hearing protection, as needed.

- Dress right. Do not wear gloves, loose clothes or jewelry. Contain long hair. Loose clothes, gloves, jewelry, or long hair can be caught in moving parts.
- Crowded, cluttered work areas that can cause tripping or loss of balance are particularly dangerous.
- Keep the saw table clear of other tools, workpieces, and debris.
- Only use table saws that are completely assembled and secured according to their instructions. A table saw should be equipped with a rip fence, miter gage, blade guard, riving knife or spreader and anti-kickback device.
- Children and onlookers should be kept out of the work area. They may distract the operator leading to an accident.
- Never alter a guard or use the tool with a guard missing. Be sure all guards are in place and working properly before each use. Do not defeat guards.

Choose the Right Tool and Blade

Choosing the correct tool and the proper accessory for your application can help to reduce the risk of serious injury. When used according to the manufacturer's instructions, the proper tool and accessory will do the job safer and faster.



Use sharp blades. Damaged or dull blades could throw teeth, posing a serious injury risk. A sharp blade will tend to cut its way out of a pinching condition.



Use the correct blade for your tool. Check this carefully: Does it have the proper size and shape arbor hole?

- Use the proper blade for the job. Watch out for overheating or vibrating blades.
- Use clean saw blades. A buildup of pitch or sap on the surface of the saw blade increases blade thickness and also increases blade friction.

RPM Make sure the speed marked on the blade is at least as high as the no load RPM marked on the tool.

Know your Workpiece

- Use auxiliary work stand/tables to properly support and control long or wide workpieces.
- Cut only wood, wood-like, or plastic materials. Do not cut metal.
- Avoid cutting small pieces of material which cannot be properly secured. Injury could result from small pieces being thrown back at the operator if the blade pinches and binds.
- Be very cautious of stock that is pitchy, knotty or warped. These are most likely to create pinching conditions and possible kickback.
- Do not cut wet wood. It produces higher friction against the blade. Also the blade tends to load up with wet sawdust, creating a greater probability of kickback.
- Anti-kickback devices may not work when cutting smooth, hard surfaces. Always cut with the smooth, hard surface down, on the table.
- Check the workpiece for nails or other foreign objects.

Before Cutting...

Before working with a table saw, make sure the tool and its accessories are in proper working order. Failure to do so may increase your risk of injury and may result in kickback, blade pinching, binding or stalling, and loss of control. These situations may cause the workpiece to jump back at the operator that can result in an injury.



The saw should always be turned off and disconnected from its power source before making adjustments, installing accessories or making repairs.



Check blades carefully before each use for proper alignment and possible defects. Never use a bent, broken or warped saw blade.

- Make sure the blade has adequate blade set. Blade set provides clearance between the sides of the blade and the workpiece, thus minimizing the probability of binding.

Blade Set



- Be sure the blade flanges (washers) are clean and correctly assembled on the shaft and that the blade is properly supported.
- Check often to assure that the blade guard functions properly and returns quickly to its rest position. If a guard seems slow to return or “hangs up”, adjust, repair or replace it immediately.
- Be sure the tool switch works properly. Do not use a tool if the switch does not turn it off when returned to the off position.
- The rip fence must be parallel to the saw blade to prevent binding and possible kickback.



Make sure the blade is installed to rotate in the proper direction – towards the front of the saw.



Do not use grinding wheels, wire brushes, or abrasive wheels on a table saw.

While Cutting ...



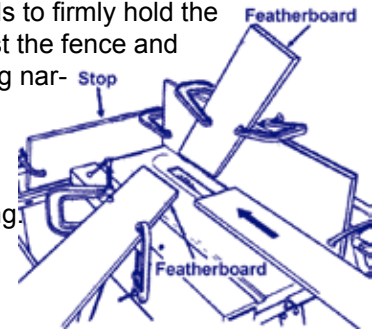
Concentrate on what you are doing and be aware of kickback (a sudden reaction to a pinched, bound or misaligned blade). Kickback can cause an uncontrolled workpiece to be thrown toward the operator and is the result of tool misuse and/or incorrect operating procedures or conditions. Take these specific precautions to help prevent kickback:

- Always keep the fence parallel to the blade.
- Always push the workpiece through the cut.
- Set blade height to no more than 1/8 in. to 1/4 in. greater than the thickness of the material being cut.
- Use the riving knife or the spreader for all “through-sawing” operations (where the saw blade cuts through the thickness of the workpiece).
- When using the table saw for non-through cutting operations, such as dadoing, grooving or moding, use pushsticks, pushblocks, featherboards, jigs or fixtures to keep your hands and fingers away from the saw blade.
- Do not use the fence as a cut-off stop when cross-cutting.
- Always use the miter gauge when cross-cutting, and hold the workpiece firmly against the miter gauge to assure a straight and even cut.
- When you start your saw, allow the blade to reach full speed before contacting the workpiece.



Be alert to the possibility of the blade binding and kickback occurring.

- Do not cut “freehand”. Always use the miter gauge or rip fence to ensure a straight cut.
- Use pushsticks to keep your fingers away from the saw blade for short or narrow ripping operations.
- Use featherboards to firmly hold the workpiece against the fence and table when ripping narrow stock.
- Always use a spreader /splitter for through-sawing. This prevents the kerf from closing and pinching the blade. Make sure the spreader is properly aligned with the blade.
- Always use the anti-kickback pawls /fingers. If a kickback should occur, they are designed to engage the workpiece and keep it from being thrown back toward the operator. Keep the teeth of the pawls /fingers sharp.
- Feeding work too aggressively can overheat a saw blade causing it to bind or warp and create a kickback. Buildup of sap on the blades, insufficient set, dullness, and “freehand” cuts can all result in an overheated blade.
- Never reach over or behind the saw. Keep arms, hands and fingers away from the blade.
- The saw blade may coast after the saw is turned off.



When Done...

- Turn off the saw after each completed job.
- When done cutting, unplug the tool and lock the switch in the “off” position to prevent unauthorized use.
- Clean and store the tool in a safe, dry place after use.

