

General Safety

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.



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.

Coring Rigs and Motors

Portable coring rigs and motors, once considered a high-priced specialty tool, are becoming more economical and common on construction projects, as the demand for drilling larger-diameter holes through concrete, stone, asphalt, and other similar base materials has increased. Available in many sizes and capacities, these coring rigs typically use a diamond bit, and are designed for either dry or wet use. Whenever water is used near an electrical tool, it is extremely important to follow the instructions provided in the tool's operator's manual.

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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.

- When coring with water, wear insulated boots and gloves.
- Dress right. Do not wear 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.



Know what is behind a workpiece before you do the job. Do not core into existing walls or other blind areas where electrical wiring may exist. If this situation is unavoidable, disconnect all fuses or circuit breakers feeding this work site.

Choose the Right Tool and Bit

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 only the size and type of coring bits recommended for your tool in the operator's manual or on the tool.

Know your Workpiece

Take time to review your work and make sure that all necessary precautions have been taken before coring.

Securing Motor Base:

- Make sure the rig motor base is secured properly to the workpiece. An insecure rig can rotate and cause serious personal injury.
- When securing the rig base to concrete using anchors, check the operator's manual for the right size and type of anchor.
- When securing the coring rig using the vacuum pad attachment, make sure the work surface is clean and free from contaminants so a good seal is created; and verify that a minimum recommended vacuum (typically measured in "psi") is developed before coring. Check the operator's manual for any special requirements whenever using a vacuum pad.
- Do not use the vacuum for horizontal (wall) or overhead coring jobs.

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Before Coring...

Before coring with a coring rig and motor, 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 tool damage.

- Never core through a floor without first making sure the area below is clear of people, and that a falling core will not cause damage.
- Do not core through steel reinforcement without first consulting the project engineer to ensure that the integrity of the structure will not be damaged. Never core through tensioning cables.
- Always turn the tool off and unplug before removing a core from the bit. Make sure the carriage assembly is securely locked in place before placing your hands under the core bit.
- Before coring, compare the data on the tool nameplate with the voltage source and be sure that the voltage and frequency are compatible.
- 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.

While Coring ...

- Make sure the motor base is secured properly with either anchors or a vacuum base, depending on the type of job.
- Always keep firm footing when using coring rigs. Water may make the work area slippery. Use a collection device to keep the work area dry.
- In a binding situation, the tool will react in the opposite direction of the turning bit. When coring into the workpiece (clockwise), the rig will try to spin counterclockwise.
- Don't force the tool – Apply enough pressure to keep the bit coring smoothly. If the motor slows down, relieve the pressure. Too much pressure can damage the bit and cause you to lose control of the tool. Light pressure slows down coring and dulls the bit.
- If the bit binds in the workpiece, release the on/off switch immediately. Unplug the tool, then free the bit from the workpiece. Do not use a lock-on button in warped, pitched, knotty, or imbedded materials where binding may be more common. Do not try to free a jammed bit by starting and stopping the tool.
- If the rig shifts (moves) at all during coring, turn off the motor immediately and reposition the base of the rig.
- As you get close to breaking through the workpiece, reduce pressure and allow the bit to pass through the hole more easily.

When Done...



Unplug, clean and store the tool in a safe, dry place after use.