

HC-1X Pipe Hole Cutter

Operator's Manual



⚠️ WARNING!

Read this Operator's Manual carefully before using this tool. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.

Safety Symbols

In this operator's manual and on the product, safety symbols and signal words are used to communicate important safety information. This section is provided to improve understanding of these signal words and symbols.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, will result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE indicates information that relates to the protection of property.



This symbol means read the operator's manual carefully before using the equipment. The operator's manual contains important information on the safe and proper operation of the equipment.



This symbol means always wear safety glasses with side shields or goggles when handling or using this equipment to reduce the risk of eye injury.



This symbol indicates the risk of fingers, hands, clothes and other objects catching on or between gears or other rotating parts and causing crushing injuries.



This symbol indicates the risk of hands, fingers or other body parts being cut by the blade.



This symbol indicates the risk of electrical shock.



This symbol means do not wear gloves while operating this machine to reduce the risk of entanglement.



This symbol means wear a hard hat when working overhead to reduce the risk of head injury.

General Safety Rules*

WARNING

Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.

SAVE THESE INSTRUCTIONS

Work Area

- **Keep work area clean and well lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

Electrical Safety

- **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way.**

Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.

- **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord.** Never use the cord to carry the tool or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.
- **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce the risk of electric shock.

Personal Safety

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- **Avoid accidental starting. Be sure switch is OFF before plugging in.** Carrying power tools with your finger on the switch or plugging in power tools that have the switch ON invites accidents.
- **Remove adjusting keys or wrenches before turning the tool ON.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
- **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, nonskid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries

Tool Use and Care

- **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
- **Do not force the tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it was designed.
- **Do not use the power tool if the switch does not turn it ON and OFF.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle tools out of the reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users
- **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.
- **Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the tool's operation.** If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- **Use only accessories that are recommended by the manufacturer for your model.** Accessories that

may be suitable for one tool, may become hazardous when used on another tool.

Service

- **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
- **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electrical shock or injury.

Hole Cutter Safety Warnings

WARNING

This section contains important safety information that is specific to this tool.

Read these precautions carefully before using this Pipe Hole Cutter to reduce the risk of electrical shock or other serious personal injury.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE!

Keep this manual with the machine for use by the operator.

- **Always wear appropriate eye protection. Cutting tools can break or shatter.** Cutting produces chips that can be thrown or fall into eyes.
- **Do not wear gloves or loose clothing when operating machine. Keep Sleeves and jackets buttoned. Do not reach across machine.** Clothing can be caught by the machine resulting in entanglement.
- **Keep fingers and hands away from rotating chuck and saw.** This reduces the risk of entanglement and cutting injuries.
- **Properly secure the Pipe Hole Cutter to the pipe. Improperly secured Pipe Hole Cutter can fall and cause striking and crushing injuries.**
- **Do not use for hot tapping.** When cutting into an existing system, the pipe must be drained and depressurized prior to cutting. This reduces the risk of electrical shock and other serious injury.
- **When working overhead, all personnel should wear hard hats and be clear of the area below the tool.** This reduces the risk of serious injury should objects fall.
- **Only use Pipe Hole Cutter to cut holes in pipe as directed in this manual.** Do not use for other purposes or modify. Other uses or modifying this tool for other purposes may increase the risk of serious injury.

Read and understand the instructions and warnings for all equipment being used before operating the Pipe Hole Cutter. Failure to follow all instructions and warnings may result in property damage or

serious personal injury.

WARNING Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:

- Lead from lead based paint
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specifically designed to filter out microscopic particles.

Model HC-1X Description, Specifications And Standard Equipment

Description

The Model HC-1X Pipe Hole Cutter is designed to cut holes up to 4" into steel pipe.

The HC-1X has a 5/8" capacity drill chuck to accommodate all sizes of hole saws and hole saw arbors. An integral motor and gear reduction optimizes performance of large diameter hole saws. The two feed handles allows the operator to use the Pipe Hole Cutter from either the left or right side. A rotating leveling vial in the base allows repeated holes to line up. Only 11" high, the compact design, allows the HC-1X to be used in tight quarters or above in- stalled pipe close to ceilings.

Specifications

Cutting Capacity.....Up to 4" (114 mm)
 Pipe Mounting Capacity..... 1 1/4" - 8" (32mm-200 mm)
 Drill Chuck Capacity.....1/16" - 5/8" (2mm-16 mm)
 Drill Chuck Speed.....240 RPM
 Motor Power.....1800 W
 Current Draw Rating.....8 Amps @ 220-240V
15 Amps @ 120V

Dimensions

Height.....10.63" (27 cm)
 Length.....12.59" (32 cm)
 Width.....11.02" (28 cm)
 Weight.....28 lbs. (12.8 Kg)

Standard Equipment

- Pipe Hole Cutter
- Chuck Key

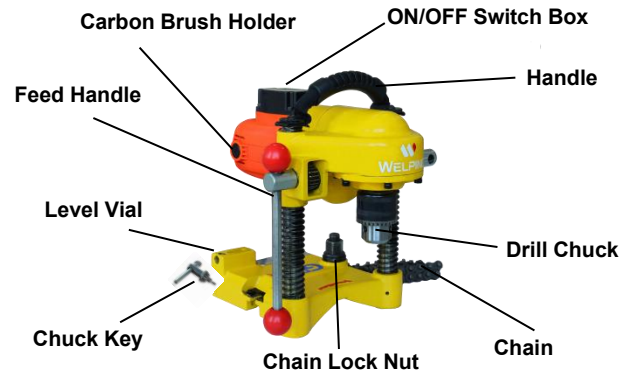


Figure 1 – HC-1X with Standard Equipment

NOTICE Selection of appropriate materials and installation, joining and forming methods is the responsibility of the system designer and/or installer. Selection of improper materials and methods could cause system failure.

Stainless steel and other corrosion resistant materials can be contaminated during installation, joining and forming. This contamination could cause corrosion and pre- mature failure. Careful evaluation of materials and methods for the specific service conditions, including chemical and temperature, should be completed before any installation is attempted.

Pre-Operation Inspection

WARNING



Before each use, inspect your Pipe Hole Cutter and correct any problems to reduce the risk of serious injury from electric shock and other causes and prevent tool damage.

1. Make sure that the Pipe Hole Cutter is unplugged and the ON/OFF switch is in the OFF position.
2. Clean any oil, grease or dirt from the tool, including the handles and controls. This aids inspection and helps prevent the tool or control from slipping from your grip.
3. Inspect the Pipe Hole Cutter for the following items:
 - Inspect the power cord and plug for damage or modification.
 - Proper assembly and completeness.
 - Broken, worn, missing, misaligned or binding parts. Make sure that the motor assembly moves smoothly and freely up and down the posts of the base assembly. Confirm that the chain and chain lock nut move freely.
 - Any other condition which may prevent safe and normal operation.
 - If any problems are found, do not use the Pipe Hole

Cutter until the problems have been repaired.

4. Inspect the arbor, hole saw and drills to be used with the Pipe Hole Cutter for wear, deformation, breakage or other issues. Do not use dull or damaged cutting tools. Dull or damaged cutting tools increase the amount of force required, produce poor quality cuts and increase the risk of injury.
5. With dry hands, plug the cord in. Test the electrical cord to insure that it is operating correctly.
6. With the Pipe Hole Cutter on a stable surface check the Pipe Hole Cutter for proper operation. Keep clear of the chuck. Move the ON/OFF switch to the ON position. The motor should start and the chuck turn counter clockwise viewed from the chuck end. Inspect the tool for misalignment, binding, odd noises or other unusual conditions. Move the ON/OFF switch to the OFF position. If any issues are found, do not use the tool until it has been repaired.
7. After the inspection is complete, with dry hands unplug the tool.

Machine And Work Area Set-Up

WARNING



Set up the Pipe Hole Cutter and work area according to these procedures to reduce the risk of injury from electrical shock, entanglement, crushing and other causes and prevent tool damage.

Properly secure the Pipe Hole Cutter to the pipe. Improperly secured Pipe Hole Cutter can slip and fall and cause striking and crushing injuries.

Do not use for hot tapping. When cutting into an existing system, the pipe must be drained and depressurized prior to cutting. This reduces the risk of electrical shock and other serious injuries.

When working overhead, all personnel should wear hard hats and be clear of the area below. This reduces the risk of serious injury should equipment or other objects fall.

1. Check work area for:
 - Adequate lighting.
 - Flammable liquids, vapors or dust that may ignite. If present, do not work in area until sources have been identified and corrected. The hole cutter is not explosion proof and can cause sparks.
 - Clear, level, stable, dry location for all of the equipment and operator.
 - Properly grounded electrical outlet of the correct voltage. A three prong or GFCI outlet may not be properly grounded. If in doubt, have outlet inspected by a licensed electrician.

- Clear path to electrical outlet that does not contain any potential sources of damage for the power cord.
2. Inspect the work to be done. Determine the pipe type and size, and clearance around the pipe. Determine the size and location of the hole to be cut. Clearly mark the cut location. If installing a fitting, follow the fitting manufacturer's instructions. Determine the correct equipment for the job. See the Description and Specification sections for tool information.

Make sure that the pipe to be cut is well supported and stable. The pipe must be able to handle the weight of the Pipe Hole Cutter and the forces applied during cutting without moving.

If working on an existing system, make sure that the system has been depressurized and drained. The Pipe Hole Cutter are not designed for hot tapping purposes. Cutting into pressurized or systems with fluids in them can cause spills, electrical shock and other serious injury. Know the contents of the pipe and any specific hazards associated with the contents.

3. Confirm that the equipment to be used has been properly inspected,
4. Select an appropriate hole saw for the work to be performed. Make sure that the hole saw is properly assembled per its instructions and is in good working order. The use of a pilot drill is recommended. The pilot drill should extend no more than 3/8" (10mm) past the end of the hole saw, and should be securely tightened.
5. With the Pipe Hole Cutter on a stable surface, install the hole saw into the chuck. Always make sure that the ON/OFF switch is in the OFF position and the Pipe Hole Cutter is unplugged before installing or changing the hole saw or drill.
 - Open the chuck wide enough for the shank of the hole saw. If needed, the chuck key can be used to open the chuck. Make sure that the shank and the chuck jaws are clean.
 - Fully insert the shank into the chuck. Make sure that the hole saw is centered in the chuck and firmly tighten the chuck by hand.
 - Use the chuck key in all three chuck holes to securely tighten the chuck onto the shank. Make sure to remove the chuck key from the chuck before turning the tool ON.

Mounting The Pipe Hole Cutter On The Pipe

Pipe Hole Cutter weigh up to approximately 28 pounds. Use good lifting technique when placing on the pipe, do not overreach, and keep good balance and footing at all times. Depending on the circumstances, two people may be necessary to mount the Pipe Hole Cutter onto the pipe

Pipe Hole Cutter can be used at any angle or orientation. If cutting a hole on the side or bottom of a pipe, it may be easier to place the Pipe Hole Cutter on the top of the pipe to fasten the chain around the pipe and then move the Pipe Hole Cutter into final position.

1. Make sure the chain is hanging freely and the chain lock nut is fully loosened.
2. Carefully lift the HC-1X Pipe Hole Cutter and place with the V-shaped guides squarely on the pipe near the location of the cut. Make sure the chain is not between the pipe and tool base.
3. Always keep at least one hand on the Pipe Hole Cutter to stabilize and guide it. Grasp the end of the chain and pull it snugly around the pipe. Hook the closest chain pin on the wear plate and firmly tighten the chain lock nut to hold the Pipe Hole Cutter to the pipe. (See Figure 2)



Figure 2 – Hooking the HC-1X Chain

4. The base of the HC-1X Pipe Hole Cutter includes a level vial that can be used to align a series of holes. When the Pipe Hole Cutter is placed at the desired angle, the vials can be rotated to the level position, and subsequent holes can be made at the same angle by leveling the Pipe Hole Cutter with the vials. (See Figure 3 and Figure 4)



Figure 3 – HC-1X Pipe Hole Cutter Level Vial 1



Figure 4 – HC-1X Pipe Hole Cutter Level Vial 2

5. With one hand on the Pipe Hole Cutter to stabilize and guide it, slightly loosen the chain lock nut to allow final positioning of the tool. Align the pilot drill with the desired cut location, and firmly tighten the chain lock nut. Do not remove your hands from the Pipe Hole Cutter until you have confirmed that it is securely attached to the pipe. The Pipe Hole Cutter must be securely and squarely attached to the pipe to help reduce the risk of hole saw jamming.

Powering the Pipe Hole Cutter

1. Confirm that the ON/OFF switch is in the OFF position.
2. Make sure that the power cord is routed out the back of the tool away from the chuck and work area. Run the cord along the clear path to the outlet, and with dry hand plug in. Keep all connections dry and off the ground. If the power cord is not long enough, use an extension cord that:
 - Is in good condition
 - Has a three prong plug similar to that on the tool.
 - Has sufficient wire size (16 AWG (1.5mm²) for 50' (15.2m) or less, 14 AWG (2.5mm²) for 50' – 100' (15.2m – 30.5m) long). Undersized wires can over-heat, melting the insulation or causing a fire or other damage

Maintenance Inspection

WARNING

Make sure that the ON/OFF switch is in the OFF position and the tool is unplugged before performing any maintenance or making any adjustments.

Maintain tool according to these procedures to reduce the risk of injury from electrical shock, entanglement and other causes.

Cleaning

After each use, wipe any chips or oil off with a soft, clean, damp cloth, especially areas of relative motion such as the posts. Clean any dust and debris from the motor vents.

Lubrication

The Pipe Hole Cutter gearboxes are designed as sealed systems, and should not require any additional grease unless significant leakage has occurred. In those cases, the tools should be returned to a service center.

Do not lubricate the bearings that ride on the posts. The bearings are not designed to be used with lubricants, and lubricants will hold dirt and debris that could damage the bearings.

As needed, the chain and screw assemblies can be lubricated with a light lubricating oil. Wipe any excess oil from exposed surfaces.

Changing Brushes

Check motor brushes every six months and replace

when worn to less than 1/2".

1. Remove four brushes cap on both sides of the motor cover. (See Figure 5)
2. Using a pair of pliers, pull the motor brushes straight out. Detach the connector.



Figure 5 – Brush Placement - Brushes Position

3. Inspect the commutator for wear. If excessively worn, have tool serviced.
4. Depress the brush into the holder and insert into the motor housing. Inspect to make sure insulator sheets are properly positioned between brush holder and housing. Attach the connector and replace the motor cover.

Accessories

WARNING

To reduce the risk of serious injury, only use accessories specifically designed and recommended for use with the WELPING or GruvMaster Pipe Hole Cutter. Other Accessories suitable for use with other tools may be hazardous when used with the Pipe Hole Cutter.

Machine Storage

WARNING The Pipe Hole Cutter must be kept indoors or well covered in rainy weather. Store the machine in a locked area that is out of reach of children and people unfamiliar with pipe hole cutter. This machine can cause serious injury in the hands of untrained users.

Service and Repair

WARNING

Improper service or repair can make machine unsafe to operate.

The "Maintenance Instructions" will take care of most of the service needs of this machine. Any problems not addressed by this section should only be handled by an authorized WELPING or GruvMaster service technician.

Tool should be taken to a WELPING or GruvMaster Authorized Independent Service Center or returned to the factory.

For information on your nearest WELPING or GruvMaster Authorized Independent Service Center or any service or repair questions:

- Contact your local WELPING or GruvMaster distributor.
- Visit welpingtool.com or gruvmastertools.com to find your local contact point.
- Contact WELPING or GruvMaster Technical Service Department at top@welping.cn or sales@welping.cn

Disposal

Parts of the Pipe Hole Cutter contain valuable materials and can be recycled. There are companies that specialize in recycling that may be found locally. Dispose of the components in compliance with all applicable regulations. Contact your local waste management authority for more information.



For EC Countries: Do not dispose of electrical equipment with household waste!

According to the European Guideline 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national legislation, electrical equipment that is no longer usable must be collected separately and disposed of in an environmentally correct manner.