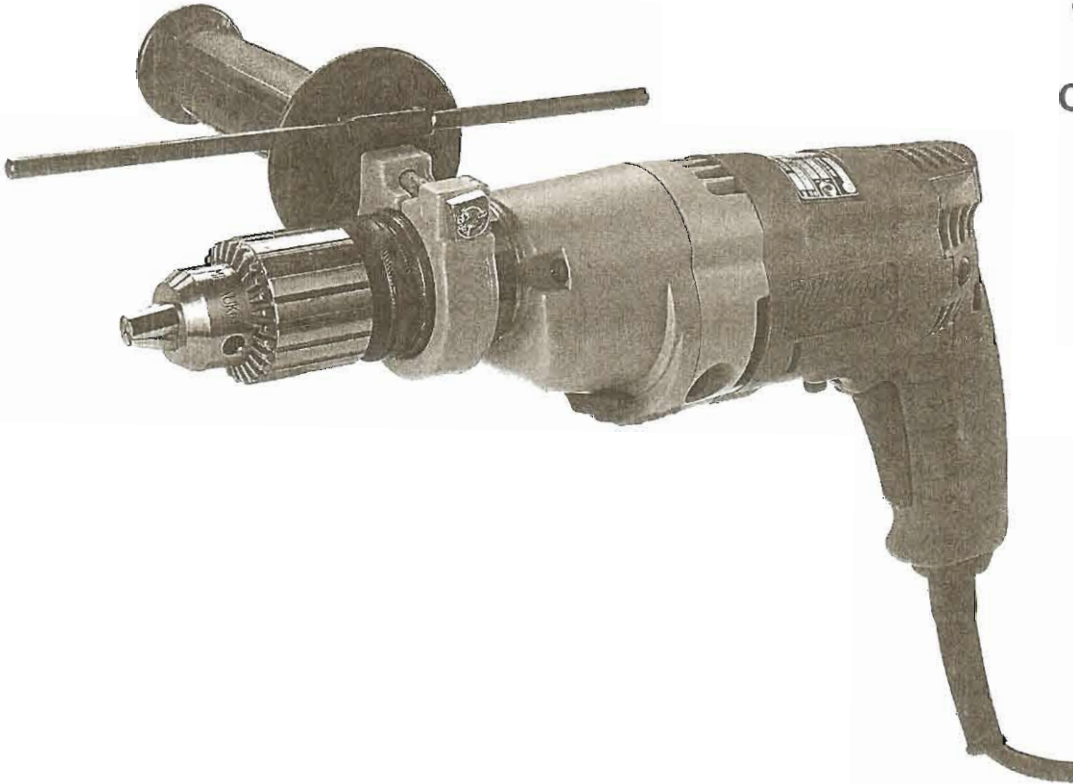




**OPERATOR'S MANUAL
MANUEL de L'UTILISATEUR
MANUAL del OPERADOR**



**Catalog No.
No de Cat.
Catálogo No.
5370-1
5371-20
5374-1
5376-1**

**HEAVY-DUTY 1/2" REVERSING HAMMER-DRILL
EXTRA ROBUSTE PERCEUSES À PERCUSSION 13mm (1/2") ROTATION
RÉVERSIBLE
TALADRO-MARTILLOS HEAVY-DUTY 13 mm (1/2") DE REVERSIBLES**

**TO REDUCE THE RISK OF INJURY, USER MUST READ AND UNDERSTAND OPERATOR'S MANUAL.
AFIN DE RÉDUIRE LE RISQUE DE BLESSURES, L'UTILISATEUR DOIT LIRE ET BIEN COMPRENDRE LE
MANUEL DE L'UTILISATEUR.
PARA REDUCIR EL RIESGO DE LESIONES, EL USUARIO DEBE LEER Y ENTENDER EL MANUAL DEL
OPERADOR.**

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 personal injury.
SAVE THESE INSTRUCTIONS.

WORK AREA

1. Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
2. 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.
3. Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control. Protect others in the work area from debris such as chips and sparks. Provide barriers or shields as needed.

ELECTRICAL SAFETY

4. 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 adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
5. Double Insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation  eliminates the need for the three wire grounded power cord and grounded power supply system.
6. 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.
7. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
8. Do not abuse the cord. Never use the cord to carry the tools 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.
9. 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

10. Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
11. 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.

12. Avoid accidental starting. Be sure switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools with the switch on invites accidents.
13. Remove adjusting keys or wrenches before turning on the tool. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
14. Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
15. Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

TOOL USE AND CARE

16. 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.
17. Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
18. Do not use tool if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.
19. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
20. Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
21. Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools with sharp cutting edge are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools "Do not use" until repaired.
22. 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.
23. 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

24. Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
25. 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 electric shock or injury.

SPECIFIC SAFETY RULES

1. Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a “live” wire will make exposed metal parts of tool “live” and shock the operator.
2. Maintain labels and nameplates. These carry important information. If unreadable or missing, contact a *MILWAUKEE* service facility for a free

GROUNDING



WARNING!

Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the cord or plug is damaged. If damaged, have it repaired by a **MILWAUKEE** service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Grounded Tools:

Tools with Three Prong Plugs

Tools marked "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet (See Figure A). If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock.

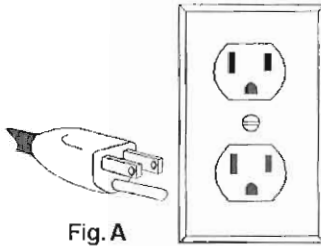


Fig. A

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in Figure A.

Double Insulated Tools:

Tools with Two Prong Plugs

Tools marked "Double Insulated" do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association and the National Electrical Code. Double Insulated tools may be used in either of the 120 volt outlets shown in Figures B and C.

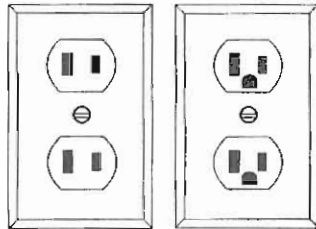


Fig. B

Fig. C

EXTENSION CORDS

Grounded tools require a three wire extension cord. Double insulated tools can use either a two or three wire extension cord. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. Refer to the table shown to determine the required minimum wire size.

The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum wire size.

Guidelines for Using Extension Cords

- If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.
- Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.
- Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

Recommended Minimum Wire Gauge for Extension Cords*

Nameplate Amperes	Extension Cord Length					
	25'	50'	75'	100'	150'	200'
0 - 5	16	16	16	14	12	12
5.1 - 8	16	16	14	12	10	--
8.1 - 12	14	14	12	10	--	--
12.1 - 15	12	12	10	10	--	--
15.1 - 20	10	10	10	--	--	--

* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE USE.

TOOL ASSEMBLY

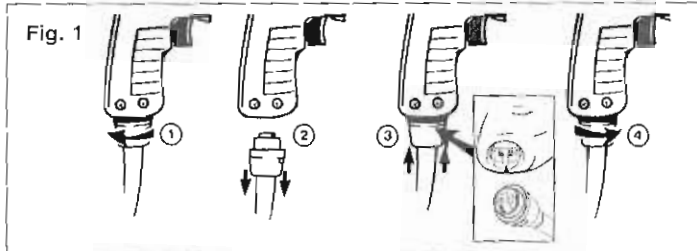


WARNING!

To reduce the risk of injury, always unplug tool before attaching or removing accessories or making adjustments. Use only specifically recommended accessories. Others may be hazardous.

Removing and Replacing Quik-Lok® Cords (Fig. 1)

MILWAUKEE's exclusive Quik-Lok® Cords provide instant field replacement or substitution.



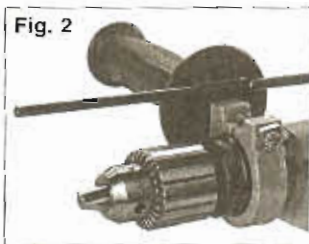
1. To remove the Quik-Lok® Cord, turn the cord nut 1/4 turn to the left and pull it out.
2. To replace the Quik-Lok® Cord, align the connector keyways and push the connector in as far as it will go. Turn the cord nut 1/4 turn to the right to lock.

Attaching the Side Handle

MILWAUKEE Magnum Hammer-Drills are furnished with a side handle to provide an insulated grasping surface and improved control of the tool. A handle ring, which fits behind the hammer/drill selector collar, locks the handle and depth rod in place. To change the setting of the depth rod, loosen the handle slightly and slide the depth rod to the desired position. Always tighten the side handle before operation. Be sure the handle ring is flat against the collar hex and away from the chuck and selector collar.

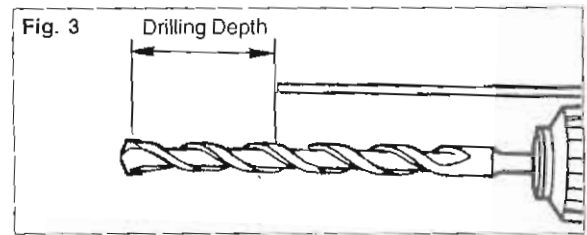
When using large bits or exerting substantial pressure, position the side handle 180° from the switch handle. This provides a "T" alignment to balance the tipping effect of the force applied to each handle.

Adjusting the Side Handle Position (Fig. 2)



1. Loosen the side handle by unscrewing the handle grip slightly.
2. Rotate the side handle to the desired position.
3. Hold the side handle in the desired position and flat against the collar hex while tightening the handle grip securely.

Setting the Depth Gauge (Fig. 3)



1. Loosen the depth gauge by unscrewing the side handle grip slightly.
2. Slide the depth gauge rod backward or forward until it is set for the desired depth.

NOTE: The drilling depth is the distance between the tip of the bit and the tip of the depth gauge rod.

3. Hold the side handle in the desired position and flat against the collar hex while tightening the handle grip securely.



WARNING!

To reduce the risk of personal injury and damage to the tool, hold and brace the tool securely. Brace tools with side handles as shown. If the bit binds, the tool will be forced in the opposite direction. Bits may bind if they are misaligned or when breaking through a hole. Wood boring bits can also bind if they run into nails or knots.

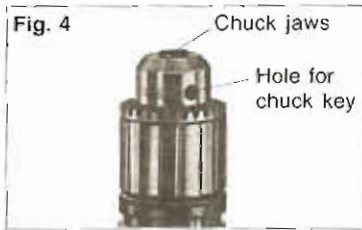


WARNING!

To prevent personal injury, always remove the chuck key from the chuck after each use.

Installing Bits into Keyed Chucks (Fig. 4)

Be sure that the shank of the bit and the chuck jaws are clean. Dirt particles may cause the bit to line up improperly. Do not use bits larger than the maximum recommended capacity of the drill because gear damage or motor overloading may result. For best performance, be sure that the bits are properly sharpened before use.



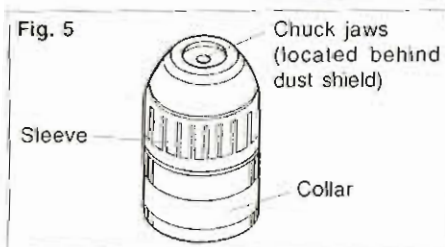
1. Unplug the tool.
2. Open the chuck jaws wide enough to insert a bit. Allow the bit to strike the bottom of the chuck. Center the bit in the chuck jaws and tighten the jaws by hand to align the bit.
3. Place the chuck key into each of the three holes in the chuck, turning it clockwise to tighten the chuck securely.

NOTE: Never use a wrench or means other than a chuck key to lighten or loosen the chuck.

4. To remove the bit, insert the chuck key into one of the holes in the chuck and turn it counterclockwise.

Installing Bits into Keyless Chucks (Fig. 5)

For best performance, always use sharp, clean bits and be sure the chuck jaws are clean. Dirt particles may cause the bit to line up improperly. Do not use bits larger than the maximum recommended capacity of the drill because gear damage or motor overloading may result.



1. Unplug the tool.
2. To open the chuck jaws, turn the sleeve in the direction marked **RELEASE**.
3. Allow the bit to strike the bottom of the chuck and center the bit in the chuck jaws.
4. To **close** the chuck jaws, hold the collar while turning the sleeve in the direction marked **GRIP**. Tighten securely.
5. To **remove** the bit, hold the collar while turning the sleeve in the direction marked **RELEASE**.

OPERATION



WARNING!

To reduce the risk of injury, wear safety goggles or glasses with side shields. Unplug the tool before changing accessories or making adjustments.

Selecting Action (Fig. 6)

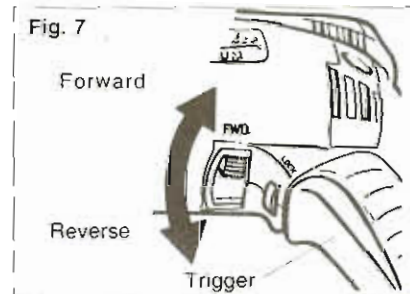
MILWAUKEE Hammer-Drills are designed to operate in either a "drill only" mode or a "drilling with hammering action" mode.



1. To select **Drilling Action**, pull the selector collar toward gear case collar and rotate counter-clockwise until selector collar locks in place.
2. To select **Hammer-Drilling Action**, pull selector collar toward gear case collar and rotate clockwise until selector collar locks in place.

NOTE: Constant pressure on bit must be maintained to engage hammering mechanism. When pressure on bit is released, hammering action will stop.

Using the Forward/Reverse Switch (Fig. 7)



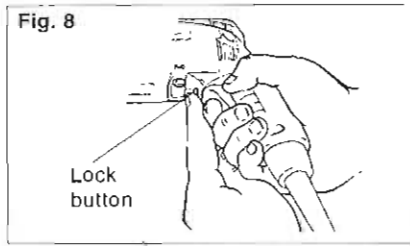
The forward/reverse switch can only be adjusted when the trigger is not pressed. Always allow the motor to come to a complete stop before using the forward/reverse switch.

1. For **forward** (clockwise) rotation, push the forward/reverse switch to **FWD** as shown.
2. For **reverse** (counterclockwise) rotation, push the forward/reverse switch to **REV** as shown. Although an interlock prevents reversing the tool while the motor is running, allow the motor to come to a full stop before reversing.

NOTE: When hammer-drilling, use the tool in forward rotation (clockwise) only.

Locking Trigger Switch (Fig. 8)

The lock button holds trigger in the ON position for continuous, full speed use.



1. To lock the trigger switch, push in the lock button while pulling the trigger. Then release the trigger.
2. To unlock the trigger switch, pull the trigger and release. The lock button will pop out.

Selecting Speed

The speed can be changed when the tool is at a complete stop or running under no load.

1. For **Low** speed (up to 1 000 rpm), turn the speed selector to position 1.
2. For **High** speed (up to 2 500 rpm), turn the speed selector to position 2.

Starting, Stopping & Controlling Speed

Place the drill bit on the work surface and apply firm pressure before starting. A center punch may be used, in steel, to make starting easier. Start the drill slowly to permit maximum control and to prevent the bit from wandering. When the hole has been properly started, increase the speed until maximum cutting efficiency is reached.

Increasing the speed of the drill permits increasing the amount of pressure applied. However, too much pressure will slow the drill bit and retard drilling efficiency. Too little pressure will cause the bit to slide over the work and cause excessive friction which will dull the point of the bit.

See "Specifications" for RPM and blows per minute information.

1. To **start** the tool, pull the trigger.
2. To **stop** the tool, release the trigger.
3. To **vary** the speed, increase or decrease pressure on trigger. The further the trigger is pulled, the greater the speed.

Stalling

If the drill slows due to loading, increase the speed until it operates properly. If stalling occurs, reverse the motor and remove the bit from the work and start again.

Operating

Position the tool, grasp the handles firmly and pull the trigger. Always hold the tool securely using both handles and maintain control. This tool has been designed to achieve top performance with only moderate pressure. Let the tool do the work.

If the speed begins to drop off when drilling deep holes, pull the bit partially out of the hole while the tool is running to help clear dust. Do not use water to settle the dust since it will clog the bit flutes and tend to make the bit bind in the hole.

APPLICATIONS



WARNING!

To reduce the risk of electric shock, check work area for hidden pipes and wires before drilling.

Drilling in Wood, Composition Materials and Plastic

When drilling in wood, composition materials and plastic, select the drill operating mode. Start the drill slowly, gradually increasing speed as you drill. Select low speeds for plastics with a low melting point.

Drilling in Metal

When drilling in metal, select the drill operating mode. Use high speed steel twist drills or hole saws. Use a center punch to start the hole. Lubricate drill bits with cutting oil when drilling in iron or steel. Use a coolant when drilling in nonferrous metals such as copper, brass or aluminum. Back the material to prevent binding and distortion on break-through.

Drilling in Masonry

When drilling in masonry, select the hammer-drill operating mode. Use high speed carbide-tipped bits. Drilling soft masonry materials such as cinder block requires little pressure. Hard materials like concrete require more pressure. A smooth, even flow of dust indicates the proper drilling rate. Do not let the bit spin in the hole without cutting. Do not use water to settle dust or to cool bit. Do not attempt to drill through steel reinforcing rods. Both actions will damage the carbide.