

## WARNING MAGNETIC DRILL PRESS

Any piece of equipment can be dangerous if not operated properly. **YOU** are responsible for the safe operation of this equipment. The operator must carefully read and follow any warnings, safety signs and instructions provided with or located on the equipment. Do not remove, defeat, deface or render inoperable any of the safety devices or warnings on this equipment. If any safety devices or warnings have been removed, defeated, defaced or rendered inoperable, **DO NOT USE THIS EQUIPMENT!!!**

**⚠ WARNING:** Operating, servicing and maintaining this equipment can expose you to chemicals including Chromium (Hexavalent Compounds) & Chromium 6 (Chromium VI) from steel which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize your exposure, avoid breathing dust. For more information go to [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov)

This 120-volt equipment may require a grounded outlet, do not modify plug.

Keep clear of all rotating parts. Make sure to remove the chuck key before engaging drill. Always secure your work.

### Makita HB350 FUNCTIONAL DESCRIPTION

Cutter capacity - 1.3/8"

Chuck Capacity - 1/2"

No load speed - 850 rpm Power consumption - 1050w

Clamping force - 1800lb

L x H x W - 8.7/8" x 19.5/16" x 7.11/16"

Weight - 26lb

Voltage - 120v

### THE BROACH CUTTING CONCEPT

If you are unfamiliar with the use of annular (or broaching) cutters, take a few minutes to read this guide you will benefit from the better performance and longer life of the tool if you understand the concept. Annular cutters only cut material at the periphery of the hole, rather than converting the entire hole to shavings. As a result, the time and energy required to make the hole is lower than for a traditional twist drill. The broaching capacity of a machine is therefore greater than the twist drill capacity. The slug ejected after the cut also has a higher scrap value than shavings.

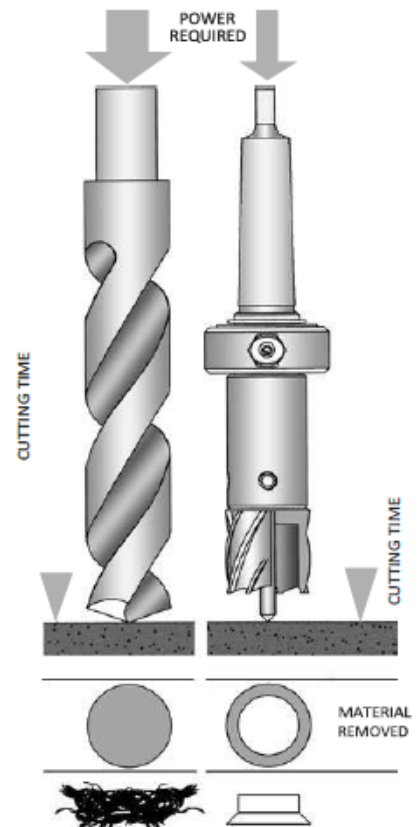
### FITTING THE SAFETY CHAIN

A safety chain should be used wherever possible as a safety precaution in the event of a power failure releasing the magnet; particularly in situations where the machine is clamped onto a vertical surface or in an inverted position.

### SAFETY CHAIN INSTRUCTIONS

When the machine has been clamped to the workpiece in the correct position for drilling, the chain should be fitted at a secure part of the drill. Then passed around a substantial part of the workpiece and fastened securely.

Once the cut is complete, the chain should be released, and the machine supported before the magnet is disengaged.



## GENERAL POWER TOOL SAFETY INSTRUCTIONS

**INTENDED USE** The intended use of this magnetic drill is to drill holes in ferrous metals. The magnet is used to hold the drill in place while the drill is functioning. It is designed for use in fabrication, construction, railways, petrochemical, and any other applications when drilling ferrous metal. Any deviation from its intended use will not be covered by warranty.

**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.

**ELECTRICAL SAFETY:** 1. 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 tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user. 2. 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. 3. Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock. 4. 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. Damaged cords increase the risk of electric shock. 5. 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:** 1. 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. 2. 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. 3. Avoid accidental starting. Be sure switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents. 4. Remove adjusting keys or switches before turning the tool on. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury. 5. Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enable better control of the tool in unexpected situations. 6. Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hardhat, or hearing protection must be used for appropriate conditions.

**TOOL USE AND CARE:** 1. 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. 2. 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. 3. 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. 4. 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. 5. Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users. 6. 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. 7. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. 8. 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.

If the person receiving this handout will not be the user of the equipment, forward these instructions to the operator. If there is any doubt as to the operation or safety of the equipment,

**DO NOT USE!!! CALL A TOOL SHED IMMEDIATELY!!!**

**FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN INJURY OR DEATH**

## FITTING THE CUTTER

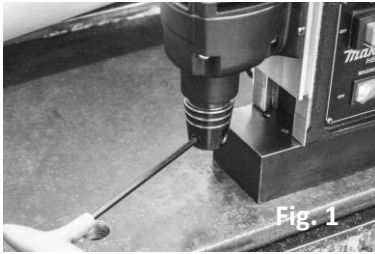


Fig. 1

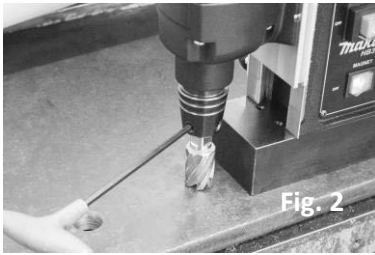


Fig. 2

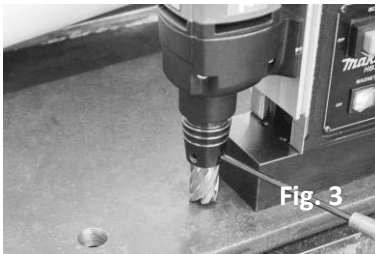


Fig. 3

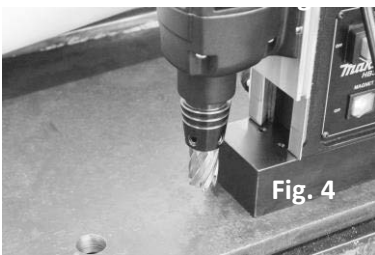


Fig. 4

### INSERTION OF PILOT PIN

- The pilot pin is used to both center the cutter and to eject the slug on completion of the cut. It has a flat side to allow coolant to run down to reach the center of the cut where the heat is greatest. Slide the pin through the hole in the center of the cutter shank.

### FITTING THE CUTTER

Fig 1.

To insert the cutter in the arbor, first loosen the grub screws, using an M5 hexagonal wrench. Ensure the grub screws are sufficiently loose enough to allow the shank of the cutter to enter freely.

Fig 2.

Ensure the drive flats on the cutter shank are fully aligned with the two grub screws in the machine arbor.

Fig 3.

Ensuring the shank of the cutter is fully inserted inside the arbor, tighten the grub screws fully to give the cutter a secure fitting inside the arbor.

Fig 4.

The cutter is now ready for use.

### FITTING THE OIL BOTTLE

The cutting oil bottle is held in a sprung bracket attached to the top of the drill body. Fit the bracket by removing one of the cap screws from the top plate and replace the bolt through the fixing lug on the bottle bracket, tightening the bolt enough to allow some radial movement of the bracket. The coolant tube is a push fit into the self seal gland at the base of the tap and a similar fitting on the lower arbor bracket.

### APPLYING COOLANT

- Cutting oil ensures longer cutter life and enables the slug to be ejected cleanly. A 500 ml bottle is included with the machine.
- Oil will be automatically delivered to the cutter when the cut commences.
- When cutting on vertical surfaces or upside down, cutting paste, gel or foam is recommended. It is best applied inside the cutter before drilling.
- Plug the machine into the power socket and the red LED on the electronic control panel will flash.

*N.B. Safety strap and guards have been omitted from the photo's for clarity.*

## OPERATION:



### 1) Power

Ensure power to the drill and the drill is safe to operate.



### 2) Magnet ON

To turn the magnet ON or OFF, use the magnet switch as pictured.



### 3) Motor ON

Press the GREEN Switch to turn the motor on. Proceed with cutting - following all safety guidelines...



### 4) Motor OFF

To stop the motor press the RED switch. The motor will stop and the magnet will remain on.

Go back to step 3 to start over.