

Portable Magnetic Drill.

Document no. SMS-06-SW-1378	Work description: Drilling metal using magnetic drill		
	Scope: Applies to Magnetic drills only.		
Review date 19/07/12	References: Manufacturer's manual. OHW Structure Erection SMS-06-SW-0959.		
Responsible supervisor <i>Insert name in BLOCK letters</i>	PPE and precautions	Competencies or qualifications	Licences or permits required



- Eye Protection
- Hearing Protection
- Safety Helmet
- Industrial Clothing
- Safety Foot Wear

Trades person/competent Operators must have had sufficient training/instruction in the use of this type of equipment before using.

N/A

Tools and equipment required: Magnetic Drill

IF CONTROL MEASURES ARE NOT SUITABLE AND MAJOR CHANGES ARE NEEDED, CONDUCT A RISK ASSESSMENT AND DEVELOP NEW CONTROLS ACCORDING TO SMS-06-PR-0104 WORKPLACE RISK MANAGEMENT.

WARNING

- Read and save all instructions for future reference.
- Keep work area clean
- Consider work area environment, do not expose/use tool to rain, damp or wet locations.
- Do not use tool in presence of flammable liquids or gases.
- Guard against electric shock; prevent contact with grounded surfaces, eg pipes, radiators, ranges& refrigerator enclosures.
- Store idle tools in a dry, high and lock-up place, out of reach.
- All visitors should keep away from work area.
- Do not force tool, do not abuse electric cord.
- Do not wear loose clothing or jewellery.
- Rubber gloves and non slip foot wear are recommended for outdoors.
- Wear protective hair covering to contain long hair.
- Also use face or dust mask if cutting operation is dusty.
- Use work clamps or a vice to hold work. It's safer than using your hand and it frees both hands to operate tool.
- Do not over reach: keep proper footing and balance at all times.

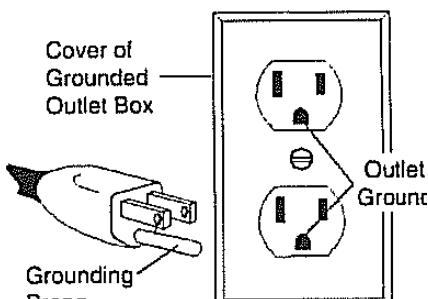
Grounding Instructions

Fig. A

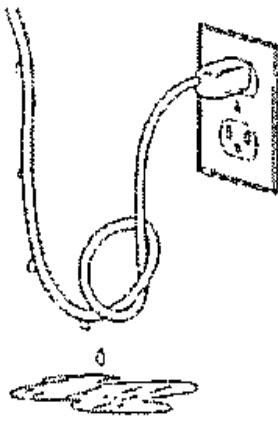
WARNING

- Improperly connecting the grounding wire can result in the electric shock.
- Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.
- If the cord or plug is damaged, have it repaired by a qualified electrician.
- The drill machine must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. As Fig A

WARNING

DO NOT USE DRILLING MACHINES ON SURFACES OR MATERIALS BEING WELDED. DOING SO CAN RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE DRILLING MACHINE.

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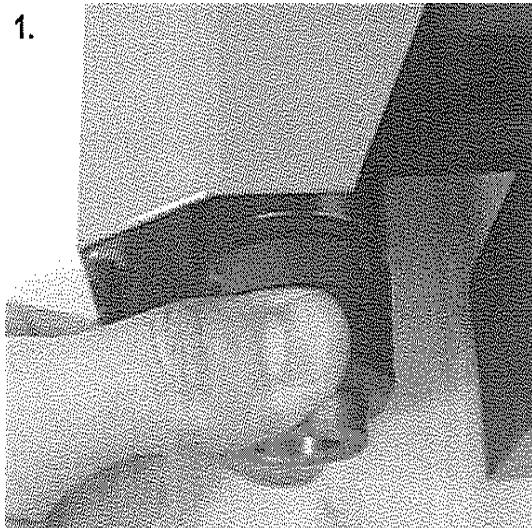
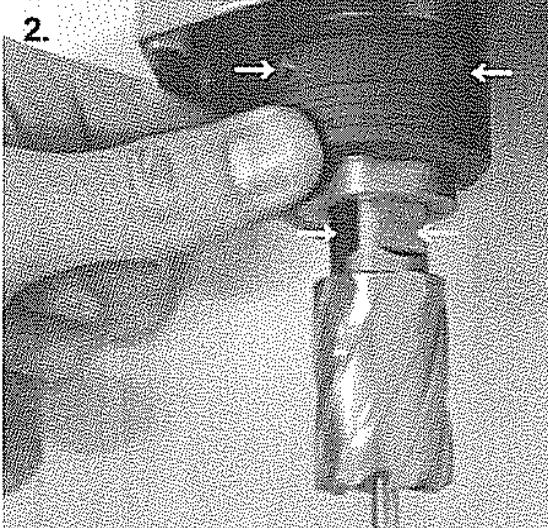
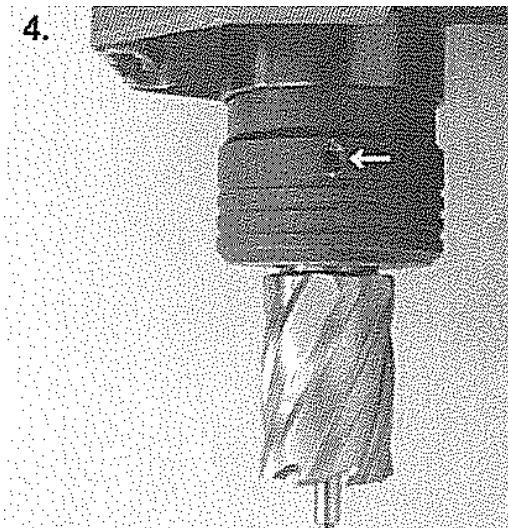
Extension Cords	<p>Use only 3-wire extension cords that have 3-prong receptacles that accept the plug. Replace and repair damaged cords. Be sure to use one heavy enough to carry the current your product will draw. Undersize cords will cause a drop in line voltage resulting in loss of power and overheating. See table for the correct size to use depending on cord length and nameplate amperage rating. The smaller the gauge numbers the heavier the cord.</p>	<table border="1"> <thead> <tr> <th colspan="5">MINIMUM GAUGE FOR EXTENSION CORDS</th> </tr> <tr> <th>VOLTS</th><th colspan="4">TOTAL LENGTH OF CORD IN FEET</th></tr> </thead> <tbody> <tr> <td>120V</td><td>0.25</td><td>25-50</td><td>51-100</td><td>101-150</td></tr> <tr> <td>240V</td><td>0.50</td><td>51-100</td><td>101-200</td><td>201-300</td></tr> <tr> <th>AMPERAGE</th><th></th><th></th><th></th><th></th></tr> <tr> <td>0-6</td><td>18</td><td>16</td><td>16</td><td>14</td></tr> <tr> <td>6-10</td><td>18</td><td>16</td><td>14</td><td>12</td></tr> <tr> <td>10-12</td><td>16</td><td>16</td><td>14</td><td>12</td></tr> <tr> <td>12-16</td><td>14</td><td>12</td><td colspan="2" rowspan="2">NOT RECOMMENDED</td></tr> <tr> <td colspan="5">RECOMMENDED WIRE GAUGE</td></tr> </tbody> </table>	MINIMUM GAUGE FOR EXTENSION CORDS					VOLTS	TOTAL LENGTH OF CORD IN FEET				120V	0.25	25-50	51-100	101-150	240V	0.50	51-100	101-200	201-300	AMPERAGE					0-6	18	16	16	14	6-10	18	16	14	12	10-12	16	16	14	12	12-16	14	12	NOT RECOMMENDED		RECOMMENDED WIRE GAUGE				
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DRIP LOOP	<p>To help prevent cutting fluids from travelling along power cord and contacting power source, tie a drip loop in power cord as shown in figure C.</p>	 <p>Fig. C</p>																																																		

Special Instructions	<ol style="list-style-type: none"> 1. Read and follow operator's manual thoroughly 2. DO NOT touch rotating cutter or parts. 3. Do not touch rotating cutter or parts. Always stop machine completely and unplug power source before changing cutters, cleaning clips, refilling lubrication or performing adjustments 4. Always wear eye protection. Any tool can shatter. 5. Always use safety chain or strap provided with machine. 6. Always use proper tooling. Keep cutters securely fastened. 7. DO NOT use dull or broken cutters. 8. Beware of ejected slugs at end of cut. They become HOT during the cut. 9. Keep bottom of magnet burr free and clear of chips and debris. 10. Keep all safety features functioning and working properly. 11. To reduce the risk of electric shock, DO NOT remove or alter electrical panels or use machine in damp, wet areas. 12. Use only authorised service centres for repairs.
	 Warning Be sure drill is disconnected from the power source before making adjustments.

What you should know before you drill.	<ol style="list-style-type: none"> 1. Type of material to be drilled, material thickness and position should all be determined to ensure proper selection of cutting tools. 2. Remove any excessive mill scale or rust from surface to be drilled. 3. When drilling thin materials it is recommended that you place a steel plate under the work piece and magnet area whenever possible. 4. Material that has been flame cut may become heat treated and therefore difficult to drill. Avoid drilling near such areas whenever possible. 5. Special cutter lubricants are available for using the drill and annular cutters in the horizontal position. Consult your distributor for more information.
	 Warning Do not drill on materials where welding is also simultaneously being performed.

	 Warning Powering drilling machine from a generator without proper surge protection device may cause damage to Printed Circuit Board in machine.
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Ready to make the cut.	<p>1. The drill uses a quick release arbor system which accepts standard holemaker and slugger cutters by locking onto the two flats of the cutter. Alternate brand cutters may not be suitable.</p>  <p>2. Align the two flat sections of the cutter shank with the two indents that are on the arbor collar. While keeping the collar pushed upwards, slide the cutter into the arbor.</p>  <p>3. The annular cutter is now secured into the arbor and ready for use. To remove the cutter from the arbor, repeat this action in reverse.</p>  <p>4. DO NOT LOOSEN GRUB SCREW ON ARBOR COLLAR. NOTE: Ensure all setup steps are completed (including the next page) prior to drilling.</p>  <p>5. Fill coolant reservoir with a water-soluble coolant. 6. Position the drill on the work piece. 7. Lower cutter/drill to surface of material. When using cutter tool holder, coolant flow starts when pilot pin is depressed. Lifting pilot pin off work surface will stop coolant flow. 8. Place the drilling machine on the work piece with pilot pin over centre of the hole to be cut. 9. Move the rocker switch located on the panel to the ON position. The switch will illuminate DC power in going to the magnet. 10. The drill has a "smart" magnet feature fitted. Drill will not operate unless there is sufficient magnetic adhesion available. 11. Depress motor ON switch to drill starts. 12. To start a cut, apply pressure until the cutter has established an external groove. Then apply steady pressure through the remainder of the cut. The drill is designed to evacuate chips when drilling. 13. Position chip guard toward work area before drilling.</p>
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After the Cut	<p>1. After the cut has finished, the slug should be expelled on the down stroke. If the slug is not expelled after the cut, disconnect the drill from power source and remove the cutter from the arbor body, then expel the slug.</p>
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**Caution:**

The Pilot should not be used to do this.

2. After the cut is finished, return motor to the full upright position, depress motor OFF button and wait until motor fully stops. Move magnet switch to the OFF position to release the magnetic base from the material.