



## Using the Engineer's Drill

1. Wear your protective equipment including ear defenders and goggles.
2. Any work that is not part of a fixture should be securely clamped or held in a Vice.
3. If the drill bit seizes in the hole, stop the machine and unplug. Free it by hand, but be careful - the bit will be hot.
4. Do not try to change the speed or the direction of rotation when the drill is running.
5. Withdraw the bit from the workpiece periodically to clear the accumulated swarf or woodchips.
6. Use an approved cutting oil when drilling metal to lubricate and cool the drill bit.
7. This is a powerful tool. If the drill bit sticks, the machine will try to go round. Switch off straight away if this happens.
8. Always grasp the drill with two hands on the handles provided, the on / off switch can be controlled with right or left hand. Additional stability and pressure can be applied by pushing with the chest against the breastplate on the back of the drill.
9. Keep the cable clear of the drill bit and any sharp edges on your work.
10. If you think the cable may be cut or damaged in any way, switch off and unplug at the supply before inspecting it. If the cable attached to the engineer's drill is damaged, stop using the machine. Contact the hire company. If an extension cable has been damaged, do not use it again.
11. Take care not to accidentally pull the plug from the socket.
12. Switch off and remove the plug from the socket before leaving the engineer's drill unattended.
13. If your equipment does not work properly do not attempt to repair it. Contact the hire company.

## Engineer's Drill

The rules and procedures in force where people are at work may require the person responsible for this equipment to carry out a specific risk assessment.

### It is important to read all of this leaflet BEFORE using the Engineer's Drill

1. Electricity can be hazardous and must always be used with great care.
2. This two handed engineer's drill is designed for heavy duty drilling in metal or similar materials.
3. The action of this drill can cause injury or damage if the machine is not used in a careful and controlled way.
4. If you have not used an engineer's drill before, familiarise yourself with the machine on some straightforward work before you start on the main task.
5. Plan your work and think ahead to make sure you will always be working safely.
6. You must have at least the following items of personal protective equipment: impact resistant goggles: EN166 - B or BS2092 grade 1; dust mask - a minimum of EN149 FFP3(s) protection; ear muffs or plugs giving protection for levels up to 94 dB(A); rcd if using a 230 volt (mains) supply.
7. This machine must not be used by minors, or by anyone under the influence of drugs or alcohol.
8. This engineer's drill is designed for operation by an able bodied adult. Anyone with either temporary or permanent disability must seek expert advice before using it.



Please store this leaflet safely. It may be required for further information



## WORK AREA

1. Do not use this engineer's drill where there is a danger of explosion. It will ignite fumes from petrol, or gas cylinders.
2. Make sure that the area is clear and safe and that no-one is near to you or could distract you.
3. Protect other people from the noise and danger. Warn others to keep away.
4. Check that there are no hidden electric cables, gas or water pipes where you are drilling. If you are drilling into a material that causes swarf - cover any surfaces or objects that may be damaged, or difficult to clean.

## OPERATORS

1. The following items of personal protective equipment (ppe) are the minimum that should be worn whenever you use this machine. Particular jobs or environments may require a higher level of protection.
2. You must wear impact resistant goggles (EN166 - B or BS2092 grade 1) when you are working with this machine.
3. This equipment is likely to cause noise levels up to 94 dB(A) - wear appropriate ear muffs or plugs giving hearing protection for this level as a minimum.
4. You will need to wear an appropriate dustmask (with a minimum of EN149 FFP3(s) protection) when you are drilling material that causes dust.
5. Make sure that you have no loose or flapping clothing that could get caught in the drill.
6. Anybody who is working near to you will also need to wear appropriate personal protective equipment.

## ENGINEER'S DRILL

1. Check your machine, chuck and key if supplied, cables and plugs. If anything is found damaged, do not use the engineer's drill - contact the hire company.

# Before Starting Work...



2. Check that the plug on your machine matches your supply. Do not try to force connections or improvise them. 14. Machines with a cylindrical yellow industrial plug fitted are designed to run off a special 110v supply. The hire company will have provided a portable transformer if you need to power the machine from a normal mains 230v supply. If a portable transformer has been supplied, take care not to injure yourself when moving it about - it may be heavier than you think. Machines designed to run directly from 230v mains will have either a normal square pin plug fitted, or a blue industrial plug.
3. Check on the biggest drill that your machine can use - if you overload it, the bit may jam, causing the drill to start to rotate. This can cause a serious hand or wrist injury.
4. If your drill operates at more than one speed, and is designed to rotate clockwise or anti clockwise, check the controls to ensure you have the right settings before you start work.
5. Make sure you understand all the controls - before you switch the engineer's drill on, you must know how to stop it.

## DRILL BITS

1. Switch the engineer's drill off, and unplug it before changing the drill bit. The bit will be hot.
2. Use only the right drill bits for the machine. They will be taper shank or straight shank if

- using a chuck.
3. If using taper shank bits, ensure the taper is clean and in good condition before inserting into the drill. If using collets to match the taper size, ensure they are also clean and in good condition.
4. Use the correct drift supplied to remove taper shank drills. Insert it into the slot on the spindle and tap it gently to release the drill. Do not use a makeshift drift.
5. If using a chuck, always use the chuck key provided to tighten the chuck using all three location holes. Do not force the chuck with anything else. Put the chuck key in a safe place before drilling.
6. If your drill operates at more than one speed, check you are using the right speed for the size of drill bit and the type of material you are drilling.
7. If you are going to drill wood or metal, make sure that the right drill bit is fitted.

## ELECTRICAL SAFETY

Your machine will only operate on one voltage: it will be 110v or 230v. 110v machines will have a yellow industrial plug fitted. 230v machines will have either a normal square pin plug fitted, or a blue industrial plug. Read the instructions below for your machine.

### 110 VOLT MACHINES (YELLOW PLUG)

1. If you are using a portable transformer, plug the transformer directly into the 230 volt socket. Do not use any 230v extension cables.
2. If you need to use an extension cable, follow any special instructions given by the



hire company. If the hire company have not given any special instructions, you should only use a suitably rated heavy duty 110v extension cable, not longer than 50 metres (160 feet). You must only use an extension cable between the transformer and the machine.

3. Lay the extension cable out carefully avoiding liquids, sharp edges, doorways or windows where it might be trapped, and places where vehicles might run over it. Unroll it fully or it will overheat and could catch fire.
4. Make sure that any extension cable connections are dry and safe.

### 230 VOLT MACHINES

#### (SQUARE PIN OR BLUE PLUG)

1. Use a residual current device ("rcd") plugged directly in to the 230volt socket. Plug your machine into the rcd. This will help to protect you against electric shock if the cable or machine get damaged.
2. Use the "TEST" button to check that the rcd is working each time you use it. Reset the rcd according to the instructions supplied with it.
3. If you need an extension cable, follow any special instructions given by the hire company. If the hire company have not given any special instructions, you should only use a suitably rated heavy duty one, not longer than 50 metres (160 feet). Plug it directly into the rcd.
4. Lay it out carefully avoiding liquids, sharp edges, doorways or windows where it might be trapped, and places where vehicles might run over it. Unroll it fully or it will overheat and could catch fire.
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For guidance on managing  
construction health risks go to  
[www.hse.gov.uk/construction](http://www.hse.gov.uk/construction)



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**Safety Guidance**

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