



## ENGINEERS DRILL (110/230v)

### SAFETY PRECAUTIONS & WARNINGS

It is in the interests of those operating this equipment, and for the safety of others, that these **SAFETY PRECAUTIONS & WARNINGS** are carefully read and understood before operating this equipment.

### PURPOSE

1. This heavy duty equipment is designed for drilling holes in metal, wood, plastic and other similar materials.

### PERSONAL SAFETY

2. This equipment is designed for operation by an able bodied adult. Anyone with either temporary or permanent disability must seek expert advice before using it. It must not be operated by minors, or by anyone under the influence of drugs or alcohol.
3. If the equipment is not used in a safe, careful and controlled way, personal injury or injury to others may result.
4. Before attempting to operate this equipment you must familiarise yourself with the equipment, its controls and operating characteristics.
5. Before starting your work, think and plan ahead to ensure you, and others around you, will be working in a safe environment.
6. When using this equipment, it is recommended that the following items of Personal Protective Equipment (PPE) be worn:
  - Ear defenders providing protection up to 94dB(A).
  - Dust mask to a minimum protection of EN149ffp2(s).
  - Impact resistant goggles to EN166-B or BS2092, grade 1 protection.

**NOTE: Other types of work, or environment, may require a higher level of PPE.**
7. With regard to electrical safety implications when using this equipment, see the section on 'ELECTRICAL SAFETY' below.

### ELECTRICAL SAFETY

8. The operating voltage of this equipment may be either 110v (yellow industrial plug connector), or 230v (square pin or blue plug connector).

#### 110v ENGINEERS DRILL (Yellow Plug)

9. Only use a portable transformer and only plug the transformer directly into the 230v socket.
10. Only suitably rated, heavy-duty 110v extension cable, not longer than 50m (160ft), must be used between the transformer and the equipment. Do not use 230v extension cables.
11. When routing the extension cable, avoid immersion in liquids and trapping the cable in windows, doorways and other areas that could cause damage to the cable. Avoid laying the cable in areas that are subject to site traffic. Ensure all connections are kept dry.

#### 230v ENGINEERS DRILL (Square Pin or Blue Plug)

12. To safeguard against electrical shock, always connect the equipment into a residual current device (RCD) that in turn is connected to a 230v socket.
13. Before using the equipment, press the 'RED' test button on the RCD to ensure that it is working. Re-set the RCD according to the instructions provided.
14. Only suitably rated, heavy-duty 230v extension cable, not longer than 50m (160ft), must be used between the mains (RCD) and the equipment.
15. When routing the extension cable, avoid immersion in liquids and trapping the cable in windows, doorways and other areas that could cause damage to the cable. Avoid laying the cable in areas that are subject to site traffic. Ensure all connections are kept dry.

### OPERATING AREA SAFETY

16. Before commencing work, ensure that the area you are to operate the equipment in is a safe environment. Erect safety barriers and warning signs as necessary.
17. Make sure that the work area is clear of obstructions and hazards (projections, cables, pipes, etc.).
18. Ensure the equipments cable and extension cables are routed safely. Keep them clear of traffic, wet areas and windows/doorways where they may become trapped.
19. Before commencing work, warn others who may be working in the vicinity of the equipment, to keep clear. If possible place safety barriers around your work area.
20. Anybody who is working near to you will also need to wear the appropriate PPE.
21. Protect others from noise, dust and debris.
22. Do not use this equipment where there is a danger of igniting fumes from petrol, or gas cylinders.

### BEFORE OPERATING THE EQUIPMENT

#### SAFETY CHECKS

23. Visually inspect the equipment and all its accessories (drill bits, chuck, cables, plugs, safety barriers, etc.) for serviceability (completeness, signs of damage, undue wear, etc.). Do not use the equipment if found damaged or worn - contact the hire company immediately.
24. Before attempting to operate the equipment, familiarise yourself with the equipments controls (rotation and speed). Make sure you understand their purpose and function.
25. Before commencing work, check for hidden electrical cables and pipe work.
26. Do not use this equipment in the rain or where it could become wet.
27. Before you start the equipment, you must know how to **STOP** it in an emergency.

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## OPERATING THE EQUIPMENT

### USING THE EQUIPMENT

28. Use the correct type of drill bit for the machine (tapered shank or parallel drill bits) and the material to be drilled.
29. When drilling metal, use the appropriate cutting fluid.
30. When large diameter holes have to be drilled, use a smaller diameter drill first to create a 'pilot hole' as a guide for the subsequent larger diameter drill.
31. Ensure the drill bit is positioned and secure in the machines chuck.
32. Where possible, secure the work piece in a vice or clamp the work piece to the bench.
33. Always both hands to hold and control the drill. Use the side handle and breastplate for additional control.
34. Keep the equipments electrical cable clear of the drill bit.
35. Always ensure the equipment is running at its optimum running speed before attempting to use the equipment.
36. Be aware of the reactive forces when the dill bit first contacts the work piece.
37. Do not use the drill bit to enlarge an existing hole – use a larger diameter drill bit.
38. Periodically, switch-off the machine and remove all accumulated swarf and debris.
39. Keep the equipments ventilation slots clear.
40. Do not attempt to change the drill bits rotation or speed whilst the machine is running. Switch it off first and allow the drill bit to stop rotating.
41. Do not allow the machine to labour, reduce the pressure on the equipment.
42. Always allow the drill bit to stop rotating before placing the equipment on the ground or workbench.
43. Stop working and switch-off the machine if someone approaches you.
44. Stop the equipment and un-plug it before moving it or making any adjustments or changing the drill bits.

### SECURITY AND MAINTENANCE

45. Visually check the condition of the equipment at the start of each day.
46. If the equipment operates erratically, or incorrectly, do not use and do not attempt to repair it. Inform the hire company.
47. Periodically clean the equipment to ensure it is free from dust, dirt and other debris.
48. When the equipment is left unattended for long periods (i.e. overnight), ensure it is made secure to prevent unauthorised use or loss.

### COLLECTION & PICK-UP

49. For safety reasons this equipment requires you to use a **VAN** or an **ESTATE**.

