Pillar Drill Safety

A pillar drill is used for drilling holes through materials such as wood, plastic and metal. A pillar drill has a long column that stands on the floor and is used to drill larger pieces of materials and to make larger holes.

Using a pillar drill can be hazardous, so as with any kind of machinery, you should always read the instructions before use and follow safety rules to prevent injury.

Protective Gear

Always wear protective goggles that provide all-around protection for your eyes when drilling materials. Your goggles should fit snugly, securely and be worn at all times while drilling to prevent particles from being thrown violently into your eyes.

Chuck Guard

When using a pillar drill, always use the guard as it is one of the most important parts of the machine in terms of safety. The guard can be adjusted and is used to keep long hair or loose clothing from becoming entangled in moving parts of the drill. Should this happen, turning off the machine may not be enough to prevent your clothing or hair from being wound in, risking your scalp coming into contact with the chuck or drill. Therefore, the guard should be properly adjusted and used whenever you use the machine.

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Chuck Key

The chuck key can be the most dangerous part of the machine. It is usually held by a length of chain, so you do not forget to leave the chuck key in one of the location holes on the chuck. Leaving the key is one of the most dangerous things you can do because once the chuck is switched on, the chuck key can come flying out, causing injury to you or someone in the immediate vicinity. It is important that you always check that the chuck key is returned to its storage position before you turn on the machine.

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Holding Devices

When drilling holes into any material, use a holding device, such as a clamp, to securely and safely hold the material in place. Alternately, you can also use a machine vice, which is a mechanical screw apparatus used for holding or clamping materials. Never hold materials with your hands while drilling as sharp edges on drills and pieces that you work with can cause cuts. If your skin comes into contact with cutting fluids, oil and grease, it may irritate your skin. In addition, you can also burn yourself by holding materials with your hand as drilling can cause pieces to become hot.

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It is essential to select the correct cutting speed and the feed. Following are the most common used cutting speed and feed rate.

Drill Speeds

- Mild steel 6 - 9 m/min
- Stainless Steel 4 - 9 m/min
- Aluminium 30 - 36 m/min

Feed Rate

- 5.5 mm diameter twist drill 0.08 - 0.15 mm/rev
- 30 mm diameter twist drill 0.04 - 0.55 mm/rev

Safety

It is important, that at all times, when working in an engineering environment, safety glasses, steel toe cap boots, overalls and ear defenders,

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