

~ FABRICATION ~



OPERATING INSTRUCTIONS



INTRODUCING

the



PILLAR DRILL



Pillar drill, wood workshop. For use with wood only
Access Level 2 (see Wood Workshop induction Guide on Access Levels)
Drilling holes into a variety of hard and soft woods

PPE Basic

- Suitable work coat (provided)
- Spectacles, Goggles or Faceshield rated to BS/EN166 (provided)
- Dust mask (temporary or fixed) rated to FFP1/FFP2 (provided)
- Ear defenders or Ear Plugs (if adjoining processes in operation, including LEV) or plugs (provided)
- Stout footwear

What to do before use

- CHECK machine isolator is in the OFF position
- VISUAL check of the machine for signs of damage or problems and report to a technical member of staff team
- KNOW the location of START and STOP controls on the machine
- KNOW the location of the EMERGENCY STOPS on the machine, including FOOT STOPS and WALL STOPS
- A brief RUNNING check of the Drill watching & listening for reportable faults – is advised before use, especially after changing chuck speed
- CHECK guards are in good condition
- ADEQUATE overhead/natural/machine lighting?
- Tell a member of staff if ANY of the above is a problem BEFORE starting your work
- ALWAYS have your work clamped-down via CRAMPS, VISE or GRIPS BEFORE starting your work. If you are UNSURE of the best method for doing this, seek ADVICE from a member of technical staff BEFORE starting your work

How to Use This Drilling Machine

- **ENSURE** a member of technical staff knows you will be using the machine **BEFORE** starting your work
- **ENSURE** you have received training in the **SAFE USE** of the machine and received a room **INDUCTION** **BEFORE** starting your work
- **ENSURE** the machine is switched **OFF** at the wall box **BEFORE** starting **ANY** work – especially if you need to change chuck rotation speeds
- Depending on the drill type and diameter, set an **APPROPRIATE** chuck speed, using the training given to you beforehand. If you are **UNSURE** of how to do this, seek **ADVICE** from a member of technical staff **BEFORE** starting your work
- As a **ROUGH GUIDE**; larger diameter drill bits, such as Forstner bits and Expansion bits require **SLOWER SPEEDS** than, for example, standard twist (**JOBBER**) drill bits
- **NEVER** leave a chuck key in the chuck **FOR ANY REASON**. Always **HOLD** onto the key and as you take your hand from the chuck, then the key moves **AWAY** as well
- The **GUARD** must **ALWAYS** be down and covering the chuck and most, if not all of the drill bit. **DO NOT** leave the drill guard in the raised or open position **UNLESS** using **VERY SMALL** diameter drill bits – in which the guard may hinder its progress into the work through poor visibility
- Using a nail or other sharp-pointed Steel tool, **LIGHTLY** tap a locating point into the wood to allow the drill to **CENTRE** and not wander, which may cause sudden drill bit **BREAKAGE**. This is especially important for **SMALL DIAMETER** drill bits
- All stock material **MUST** be secured with a vise or clamps **PRIOR** to machining
- If the stock becomes **LOOSE** in the vise or clamp, **STOP** the machine immediately. **DO NOT** attempt to hold the work by hand
- To **SET** a rotation speed, make sure the power is **OFF**. Take hold of the chuck and rotate, by hand, moving the speed control levers until the required speed is chosen
- **LONG** drill bits or **SCREW-MOUNTED** drill bits should **NOT** be used in Jacob Chuck-type vertical drill press machine
- There are **TWO** parts to a drill; the **MOUNTING SHANK** (normally cylindrical) and the **CUTTING PROFILE**. You should **ONLY** mount the drill, **CUTTING PROFILE DOWN**, in the chuck as far as the **MOUNTING SHANK**

- For very **SMALL** drills, you should **ALSO ENSURE** that the drill is **CENTRALLY-mounted** between all three or four chuck jaws. **LOOK** right under the chuck and **CHECK** that the drill bit is **NOT** locked **BETWEEN** the vice jaws – which will cause the drill to drill off-centre when switched on
- Ensure that the **SAFETY STOP EXTENSION** is set to the **DEPTH** of the drill operation – this will stop the machine **IMMEDIATELY** if the work comes loose from the vice or clamp and spins in the drill bit
- Switch **ON** the machine via the **GREEN START** button. Allow the drill bit to come to full-speed before working
- **SLOWLY** turn the feed handle around so that the drill bit comes into contact with the work **SLOWLY** as well
- For **LARGE DIAMETER** drill bits in wood, it is **RECOMMENDED** to use **PULSE** drilling. Pulse drilling involves drilling **DOWN** a few mm, then **RETRACTING** back the bit to clear it of waste material, then drilling **DOWN** a few more mm – and so on. This keeps the drill bit **COOL** and **DOES NOT** allow swarf or shavings to form into a thick, rotating bundle
- When an operator has finished working on the drill press, switch **OFF** the machine and wait for it to come to complete **STOP**
- **DO NOT LEAVE** a drill machine running unattended. You should switch **OFF** the machine and wait until it has stopped **BEFORE** leaving the machine – **NOT** even for a minute
- All operators **MUST CLEAN** and **TIDY** the machine of waste material and off-cuts **BEFORE** leaving the machine
- **ENSURE** the machine is switched **OFF** at the wall box before leaving the machine

Date

I verify that I have read and understood the information detailed within this document

Name

Signature