

~ FABRICATION ~



WOOD

OPERATING INSTRUCTIONS



WOOD

INTRODUCING

the



HAND ROUTER



Hand Routing Machine, wood workshop. For use with wood only

Access Level 2 (see Wood Workshop induction Guide on Access Levels)

Shapes and profiles wood in 2 dimensions only using shaped cutters

PPE Basic

- Suitable workcoat (provided)
- Spectacles, goggles or faceshield rated to BS/EN 166 (provided)
- Breathing Face Mask rated to FFP1/FFP2 (provided)
- Sturdy boots will help when working with sheet material or heavy portable machines

What to do before use

- Perform a VISUAL inspection of the machine BEFORE use, looking for damage to the casing, missing or loose guards or fixings
- CHECK the plug and cable for signs of damage, in particular the cable for bare or exposed wiring or damage to the sheath and on the plug, you should be looking for a cracked housing, bare wires or signs of electrical scorching
- ENSURE the machine is UNPLUGGED before putting in cutting tools
- Use the CORRECT collet size for the cutting tool.
- ENSURE ALL cutting and routing tools are SHARP before use. BLUNT tools are MORE DANGEROUS because they behave unexpectedly through the wood and take more effort. The most common PROBLEM with tools is PINE RESIN cluttering up the clearing gullets and teeth. Chipped teeth are the next most common problem. Staff should maintain clean and sharp cutting and routing tools
- Place the tool MOST of the way down INTO the collet, exposing just the cutting section and NO MORE than 2mm of the tools shank (the silvery end, opposite the cutting end)

- **ENSURE** the collet lock is **TIGHTLY** secured using the correctly-sized spanner
- **ENSURE** your work is **SECURELY** clamped to the bench or to a clamping board or vacuum bed and **STAYS SECURE**. Routers place considerable force onto wood, depending on the size and function of the cutting tool
- **PLACE** extraction collar around the cutting tool **BEFORE** plugging in
- **FAMILIARISE** yourself with the primary controls; **START** and **STOP**, plunging control and depth stops
- Breathing filters **SHOULD** be worn since routing generates a **LOT** of wood dust, much of it airborne – meaning it is deeply penetrating to lungs
- Ear defenders **MUST** be worn with routers; they are very noisy machines when cutting or shaping wood
- **NEVER WEAR GLOVES** with a working hand router

How to use the Hand Router

- Plug in the router to **EITHER** the extraction unit or the mains socket
- **BEFORE** switching on, **MAKE SURE** the speed controller is set to minimum (around 12,000rpm for most makes)
- **SET** your depth stops manually, **BEFORE** switching on
- The recommended **MAXIMUM** depth of cut is **HALF** the tool diameter for most rebate or groove routing tools. For shaped profiles, it is best to use a full cut, but exercising **GREAT CARE** during the initial plunge into the wood surface
- Pick up the router in **BOTH** hands and flick the **START** switch to **ON**. Most routers have a ‘soft’ start, which means they apply power **SLOWLY** to prevent the router pulling out of your grip due to torque (twisting) effects
- If connected in-line with the extraction, this should switch **ON AUTOMATICALLY** as soon as the router is switched **ON**
- Allow the router to reach a **STEADY** speed **BEFORE** increasing the routing motor speed, **DEPENDING** on the wood being routed and the size and shape of the shaping or routing tool
- Get yourself into a good, **SOLID** stance, **ENSURING** that router cables, extract hoses etc. are **NOT** underfoot
- The floor should be **CLEAR** of wood waste which would make it slippery to walk on
- It is **BEST PRACTICE** to start in the **MIDDLE** of the board or edge, so that you have **GOOD SUPPORT** when starting your routing work
- **CAREFULLY** plunge into the surface or edge of the board to the preset depth, ensuring you have a **GOOD GRIP** of the machine handles

- **Work AGAINST the direction of the cutter face rotation. The machine will show you which direction this is, on the base and, on some machines, this is also on the top. YOUR INSTRUCTOR will show you the SAFE, PREFERRED working direction when routing**
- **If you notice CHARRING after routing a section, SLOW THE MOTOR DOWN or INCREASE YOUR SPEED through the wood. This should clear the problem**
- **When edging boards with a profile, it is best to rout in the direction SHORT edge, LONG edge, SHORT edge and finally LONG edge. This prevents tear-out of the end grain (SHORT edge) and leads to a superior finish**
- **When you stop, SWITCH OFF the machine but DO NOT PUT IT DOWN onto the bench UNTIL it has STOPPED COMPLETELY. Once stopped, put the router down on its SIDE, with the router tool facing TOWARDS the bench middle**
- **DO NOT allow a router machine to run UNATTENDED AT ANY TIME or with a STOPPED machine resting on the cutting tool – release the depth stop if placing onto a bench**
- **When you have FINISHED COMPLETELY, make sure the router is unplugged as soon as you have VISUALLY VERIFIED the cutting tool has STOPPED. Dial down the motor speed to MINIMUM for the NEXT OPERATOR**
- **PICK UP the cable and put onto the bench**
- **RELEASE the cutting tool collet, allowing the cutting tool to fall from a small height onto the bench or extract via a gloved hand. This is the ONLY condition in which you should wear a glove with this machine**
- **CHECK the cutting tool for signs of damage and clean off the dust on the machine AND cutting tool using the extraction hose. If you do notice damage to the CUTTING TOOL you MUST inform a member of staff – you risk somebody else if you don't**
- **CAREFULLY replace the cutting tool and router machine in a manner in which YOU found the machine**

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

Date

Name

Signature