

H&S Training

Machinery & Resource Checklist

DO NOT RETURN TO ME-THIS IS FOR YOUR USE

IMPORTANT:

If machinery does not meet BS4163:2014 or adequate dust extraction is not in place where required, training may not be possible on that equipment.

To ensure the training can be carried out and all of the tasks easily accomplished in the time, please check that the following conditions are in place. If in doubt, please call me to discuss any problems.

A summary of the most important requirements:

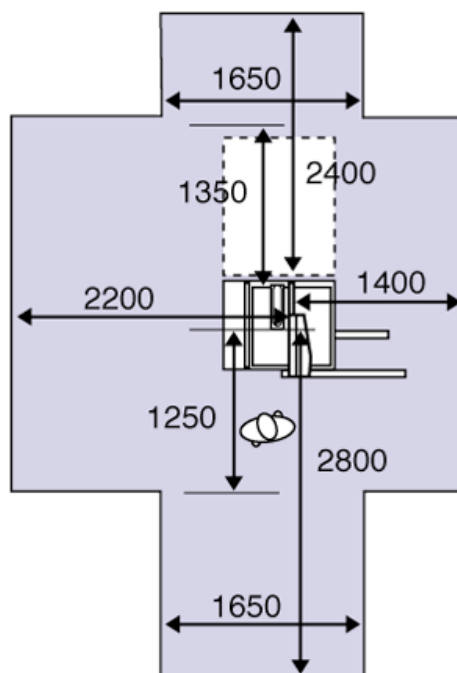
Requirement	✓
Dust extraction	
Guarding	
Emergency stops	
Electrical test certificates	
Gas test certificates	
Annual safe survey log (mechanical condition)	
An adequate supply of PPE (personal protective equipment) for all staff including: Dust masks, eye protection, ear defenders, leather gloves, face masks. Detailed specifications are included in appropriate section of this document.	
Clean and tidy work areas, particularly prep room	
Complete set of tools/accessories for each machine	
Adequate supply of wood, metal, plastics, brazing rod, fluxes, spare blades etc for practical tasks.	
Sharp tools and well maintained equipment. Check before the training.	

ITEMS IN RED ARE ESSENTIAL TO MEET H&S REGULATIONS
ITEMS IN BLACK ARE REQUIRED TO CARRY OUT THE TASKS

SPECIFIC EQUIPMENT

Circular Saw

Requirement	✓
Tilt arbor circular saw with annual safe condition survey record	
Rip fence, cross cut/mitre fence	
LEV (dust extraction) must be fitted in order to be used.	
The system must be working, maintained, and have a current LEV test certificate.	
The saw should have extraction from the base of the cabinet and the crown guard.	
The work area must be clean, tidy and have adequate space around the machine (see diagram below). Some prep areas do not quite meet this, simply because the room is not big enough. That may be OK as long as the material being prepared is not too large for the room.	
Good lighting, min 500lux. Ensure there are no dim or flickering tubes.	
Blades must be sharp and in good condition	
Blades suitable for ripping and cross cutting should be available: For 300 mm blades: Ripping 24-36 teeth. Cross cutting 48-60 teeth	
Blade cleaning spray eg CMT 2050 + plastic bag + brass wire brush	
PPE: Eye protection: EN166 3 4 9 B Ear protection: EN 352 Part 1 Dust mask: EN149:2001 FFP1 Suitable overalls	
Push sticks/blocks	
Maintenance tools-spanner, spindle pin	

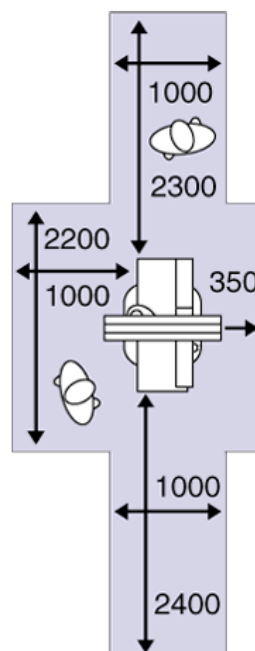


Band Saw

Requirement	✓
Band saw with annual safe condition survey record	
LEV (dust extraction) must be fitted in order to be used.	
The system must be working, maintained, and have a current LEV test certificate.	
This should have extraction from the lower cabinet and above the table near the throat plate, ideally via a bendy “stay put” pipe which can be moved to near the blade when cutting.	
Fence for parallel cuts	
Cross cut fence (can be made by technician)	
V block jig for cutting dowel	
Circle cutting jig	
PPE: Eye protection: EN166 3 4 9 B Ear protection: EN 352 Part 1 Dust mask: EN149:2001 FFP1 Suitable overalls	
Push sticks/blocks	
Maintenance tools	

Planer

Requirement	✓
PLANER THICKNESSER with annual safe condition survey record	
LEV with current test certificate	
Spare set of sharp blades	
Maintenance tools	
PPE: Eye protection: EN166 3 4 9 B Ear protection: EN 352 Part 1 Dust mask: EN149:2001 FFP1 Suitable overalls	
Push sticks/blocks	



Wood Lathe

Requirement	✓
Wood lathe. Must meet BS4163:2007 standards with annual safe condition survey record	
Floor or bench mounted	
LEV fixed or portable unit – dust extraction hood – current LEV test certificate	
PAT test label / record if electricity supply is by 13A plug	
Attachments: live centre 4 prong drive centre 1” dia cone centre face plate and wood screws woodturning expanding chuck and key (100mm dia) woodscrew chuck (75mm dia)	
High speed steel woodturning tools scrapers, roughing gouge spindle gouge skew chisels, parting tools bowl gouges	
PPE Goggles EN 166 4 B Safety Visor EN 166 4 B Dust Mask EN 149 FFP 1S (or 2S) Overall (close fitting sleeves)	
Calipers internal/external	

Close grained hardwood suitable for turning ie straight grain, free of knots.

1 For bowl. 100x100x50 thick

2 For spindle 40x40x300 long

Beech, Cherry, Ash, Mahogany derivatives

Centre Lathe

Requirement	✓
Centre Lathe. Must meet BS4163:2007 standards with annual safe condition survey record	
3 Jaw chuck and (spring loaded) key	
4 Jaw chuck and (spring loaded) key	
Tool post (height adjustable if possible)	
Live centre for tail stock (and removal bar)	
Morse taper Drill chuck	
Swarf hook & dust pan	
Coolant	
HS steel turning tools L and R hand cranked Finishing tool Parting tool Boring bar (optional)	
Centre drill	
Twist drills 4mm and 6mm	
Knurling tool	
Tailstock die holder and 6mm die	
Thread cutting compound (Treflex)	
Maintenance tools- Allen keys, Spanners, C spanners for chuck retaining ring (some larger lathes)	
Internal/external callipers, vernier callipers	
Lathe bed protection board for chuck changing	
PPE Goggles or visor EN166 4 B Overall with close fitting sleeves Disposable latex gloves (by risk assessment)	
Double ended grinder with fine & coarse wheel (silicon carbide for tipped tools)	
Wheel dresser for stone	

Casting

Requirement	✓
Tilt and pour crucible furnace and safety bund installed to BS4163:2007 standards.	
Fume/heat LEV with current LEV test certificate.	
Annual safe condition survey record	
Gas safety certificate	
Makers handbook	
PPE Leather aprons Leather spats Leather high cuff gauntlets Face shield EN166 9 MOLTEN METAL Stout shoes or boots	
Safety Equipment Fire extinguisher (correct type) Fire blanket Quenching trough HOT notice Tongs suitable to grip object being cast	
Equipment/materials Oil bound sand-Petrobond Parting powder and bag Sand Scoop or hand shovel 14" x 3/16" (350mm x 4.5mm)mesh sieve 14" (350mm) Box or container to seive sand into Flat wedge sand rammer Round sand rammer 1½" De-gassing tablets eg ECOGAS 16 Coverall Flux 2 x Steel moulding box eg 9"x 9" (230 x 230) sizes not important (wooden boxes should not be used for casting) 2 x Flat round nosed moulding trowel Round spoon Gate cutter LM4 Aluminium Alloy ingots Pyrometer (if possible) Plunger (for degasser) Skimmer	

Suppliers: K&M Ltd 0114 247 4733:

Technology Supplies: Ltd: www.technologysupplies.co.uk:

Flamefast Ltd: www.flamefast.co.uk

Milling Machines

Requirement	✓
Vertical/horizontal mill. Must meet BS4163:2007 with annual safe condition survey record	
User guide	
Machine vice	
All tools required for collet chuck, vice etc	
Autolock / collet chuck	
End mills, slot drills, ball nose slot drill	
Vertical arbour slitting saw	
Horizontal arbour slitting saw	
Slab mill	
Side and face cutter	
Machine vice with securing tee bolts	
Parallel bars and copper mallet	
Dial indicator and magnetic base	
Vee blocks	
Stepped clamp kit (with spanner)	
Heavy duty clamp kit (with spanner)	
PPE Goggles or visor EN166 4 B Overall with close fitting sleeves Disposable latex gloves (by risk assessment)	
Coolant	
Calipers: internal/external and vernier	

Heat Processes

Requirement	✓
Forging/brazing hearth installed to BS4163:2007 standards.	
Current Gas safety certificate	
Fume/heat LEV with current LEV test certificate.	
Annual safe condition survey record	
PPE EN 166 3 4 9 B Face Shield Leather gauntlets Leather apron	
Brazing rod/ soft solder	
Fluxes	
Pliers	
Tongs	
Quenching trough	
Electric soldering irons (with PAT test certificate) and stands	
Wire strippers	
Files and emery cloth	

Power Fret Saw

Requirement	✓
Power fret saw installed to BS41263:2007	
LEV/HEPA type vac extraction with current test certificate	
PPE Eye protection: EN166 3 4 9 B	
Spare blades	
Maintenance tools	

Portable Power Tools

Requirement	✓
All portable power tools must have:	
A current PAT Test certificate	
Dust extraction connections/suitable HEPA rated vac extractor	
PPE Goggles EN166 4 B Dust mask EN149 FFP2 Ear protection EN 352 PART 1 Overalls with close fitting sleeves	
Sharp spare blades/cutters	
Adjustment/maintenance tools	
User manuals	
Push sticks/blocks	
G clamps/trigger clamps	
Guide clamps for circular saw/router	

Pillar Drill

Requirement	✓
Pillar drill, floor or bench mounted with emergency foot stop	
PAT test label / record if electricity supply is by 13A plug	
Annual safe condition survey record	
PPE Eye protection EN1666 3 4 9 B	
Machine vice	
Hand vice	
Wooden table protection board (removable)	
Quick release "Mole"/ toggle clamp	
Drill bits: Twist drills Flat bits Forstner bits Hole saws	

Offhand Grinder

Requirement	✓
Bench or pedestal grinder. Bench grinder should be fixed	
Annual safe condition survey record	
Diamond or star wheel dresser	
PPE Eye protection EN1666 3 4 9 B Dust Mask EN 149 FFP 1S	
Local task light	
Silicon carbide or "green" wheel for tipped tools	

Polisher

Requirement	✓
Polisher floor or bench mounted with foot stop	
Annual safe condition survey record	
PPE Goggles or visor EN 166 4 B Dust Mask EN 149 FFP 1S	
Selection of mops for different materials	
Selection of polishing compounds for different materials	

Power Hacksaw

Requirement	✓
Power hacksaw floor mounted	
Annual safe condition survey record	
PPE Eye protection EN166 3 4 9 B Hand protection Rigger gloves	
Maintenance tools	
Roller stand to support long material	
Spare blade	
Dashpot oil	
Coolant	

Metal Arc Welding Mig

Welding machine meeting BS4163:2007	
Shielding gas	
Spare shroud	
Spare wire guides (tips)	
Welding wire, rust free	
Machine handbook	
Welding bench-steel topped	
Fume extraction with moveable arm and current Lev test certificate	
Tools Pliers Side cutters Mole grips Welding clamps Steel Wire brush Angle grinder and grinding discs	
Materials Mild steel sheet 16 SWG 100x50 4 per person Mild steel plate 3x50x100 4 per person Mild steel tubing, square, thick wall various off cuts	
Welding screen	
Safety Equipment Fire extinguisher Tongs Quenching trough	
PPE Welding visors for each person to enable demonstration Glass shade matched to output of machine (10,11 or 12) Welding gauntlets Leather aprons	