

STANDARD OPERATING PROCEDURE

Laser Cutter

DO NOT use this equipment unless you have been trained and assessed to a competent level in its safe use and operation, and have been given permission to use this equipment.



Laser Safety glasses must be worn when operating this equipment.



Long and loose hair must be contained when operating this equipment.



Sturdy covered footwear must be worn when operating this equipment.

PRE-OPERATIONAL SAFETY CHECKS

1. Ensure that risk assessment has been read. **UQ risk assessment task ID # 37000.**
2. Ensure no slip/trip hazards are present in workspaces and walkways.
3. Locate and ensure you are familiar with the operation of the lockable ON/OFF starter and E-Stop.
4. Keep machine & room clean, free of clutter, combustibles, explosives, or volatile solvents.
5. Always keep a maintained & inspected CO2 Fire Extinguisher at hand.
6. Ensure air assist is switched on.
7. Ensure exhaust is switched on.
8. Where appropriate ensure water chiller is switched on (Approx. 25 °Celsius).
9. Check nozzle has no build-up of material on it.
10. Faulty equipment must not be used. Immediately report suspect machinery to workshop staff.

OPERATIONAL SAFETY CHECKS

In case of fire, push E-Stop

1. Never leave the laser system unsupervised when in operation.
2. Observe the general cutting machine safety operation, start the laser machine strictly in accordance with the set-up procedure.
3. Ensure that the top cover/lid is closed whilst machine is operating.
4. When operating the laser follow specific laser guidelines.
5. Always monitor cutting during operation.
6. Always use Air assist.
7. Only cut the following PERMISSIBLE MATERIALS – Organic based, wood, plywood, paper, cardboard, leather, acrylic PMMA.

If you are unsure if a material is suitable for laser cutting – DO NOT PROCEED

HOUSEKEEPING

1. Switch off the equipment, engage E-stop.
2. Remove all off-cuts & waste, sweep/vacuum table and floor area. Leave the machine and work area in a safe, clean and tidy state.
3. Return surplus material to stock & dispose of waste material in an appropriate recycling or waste bin

POTENTIAL HAZARDS

- Crush and pinch points
- Radiation burns to eyes or body
- Fire
- Fumes

FORBIDDEN

- Cutting NON-PERMISSIBLE MATERIALS including - Polypropylene, polyethylene, polycarbonate, polystyrene, PVC, nylon, PVDF, ECTFE, PFA, FEP, PTFE, glass fibre or any reflective materials.
- Removal or modification of safety devices
- Distracting operator
- Altering the safety constraints of the laser

This SOP does not necessarily cover all possible hazards associated with the machine and should be used in conjunction with other references. It is designed to be used as an adjunct to teaching Safety Procedures and to act as a reminder to users prior to machine use.