

## Thickneser Risk Assessment

“The woodworking industry has one of the highest rates of accidents caused by contact with moving machinery. The majority of these are because of operator’s hands or fingers making contact with the rotating cutters. Analysis of accidents investigated by HSE has found that the most common causes were:

- inadequate or missing guards;
- Inadequate or lack of operator training” from HSE risk assessment of CNC routers.

It is important that before any person uses the thickneser in any configuration that they are approved and inducted by a previously approved trainer or owner of the router.

## Procedure

The operator will first take the thickneser out of storage with the aid of a second person and place it on the bench with clear space on either side such that the wood being thickened will not interfere with other objects or people on entrance and exit. The thickneser should also be connected to the extraction system to clear up the dust and shavings generated without putting them over the workshop. The two guide shelves of the thickneser should be unfolded also before use to support the wood on entrance and exit of the machine.

Before feeding wood into the machine the height of the cutting surface should be set to just above the initial height. To do this the operator unlocks the cutting surface by releasing the lock arm and adjusting the height using the rotating handle on the top. Once at the initial height the operator will repeatedly feed the wood into the machine, where it will be drawn in and then out the other side with the top layer having been planed off by the lower side of the cutting surface. After each pass the operator will typically lower the cutting surface by a small amount (0.5mm) and repeat the process until the desired thickness is achieved.

Hazards Identified:

1. Using the machine without proper space could lead to accidents as the machine automatically draws through the wood being thickened and out the other side.
2. The operator should not let their hands enter the machine cavity as the wood is fed through - hands should remain outside the machine at all times whilst it is plugged in.
3. The blades are very sharp and should not be touched by the operator. Changing the blades is an owner-only operation.
4. Taking too deep a cut can cause wood to get stuck behind the blade causing it to cut poorly. Regular inspection is required.
5. The machine is heavy, and should only be lifted by two people.
6. Certain woods may splinter during thickening, causing them to be hard to handle.

Safety-gloves should be worn during operation.

7. Electrocution may result due to electrical contact from the interior electronics with the outside metal components. This hazard is mitigated by yearly PAT inspections for electrical compliance.
8. Loose hair, clothing and jewellery may be caught as the wood is fed in. To mitigate this risk the operator must keep long hair tied up, ensure they are wearing no dangling jewellery and that any loose sleeves or other clothes are held in place away from the router during operation.
9. The thicknesser during operation makes a lot of noise which might permanently damage the hearing of the operator and nearby people. To mitigate this risk the operator must wear ear protection and advise other users in the environment to do the same.
10. The thicknesser during operation makes a lot of chips and dust which might hit the operator or nearby users in the eyes. To mitigate this risk the operator must wear eye protection and advise other users in the environment to do the same. It should not be used without being connected to the workshop extraction system.
11. Wood **must** be free from foreign objects such as nails and staples to avoid them damaging the blades and/or being ejected at high speed.
12. Pieces of wood that are too short should not be thicknessed as it'll require the operators hands to get very close to the cutting surface and will not be properly fed by the roller mechanism.
13. Excessively long pieces of wood may cause the thicknesser to topple over.
14. Blunt blades and over cutting may result in the thicknesser stalling.

Risk	Severity (1-5)	Probability (1-5)	Risk factor/comment
1 – Lifting thicknesser (2 person)	2	2	4 - fine
2 – electrocution	4	1	4 - fine
3 – handling cutter	2	2	4 - fine
4 – over cutting	1	4	4 Requires training and regular inspection of the blades.
5 – drawing-in hands	4	2	8 – serious risk. Requires training and awareness
6 – loose hair etc. getting caught	4	2	8 – serious risk. Requires training and awareness
7 – ear damage	2	2	4 – same as with all workshop equipment more or less
8 – eye damage	3	2	6 – operator <b>must</b>

			use eye protection and bystanders should be made aware of risk.
9 – injury to fingers	2	2	4 – fine
10 – Dust Control	1	5	5 – moderate risk to other users of the workshop. Needs to be controlled using appropriate extraction.
11 – Use of incorrect material.	3	2	6 – operator must ensure clean and correct material and only thickness material that is long enough to pass through the thicknesser using the built-in feed system.
12 - Planing of material containing screws, nails and staples	4	2	8 - serious risk Only known clean and/or new wood to be used in the machine
13 - Thicknesser topples over	4	2	8 - serious risk Any wood that cannot be easily handled by a single person requires that 2 people operate the machine, one feeding and the other receiving the wood and supporting it as it emerges. Clamping of the router to the bench may be required.
14 - Thicknesser cutter stalls	3	2	6 - operator may only work on or clear the machine when it has been disconnected from the mains supply

Control measures:

Ear protection

Eye protection

Protective gloves

Dust extraction must be used at all times during operation unless this will result in unsafe operation – when alternative dust control measures must be arranged.

With good training and vigilance by the owners the risk should be made as low as is practicable but it is worth stressing that a thicknesser is potentially as dangerous as any of the other tools if not treated with respect.

The thicknesser is marked as a piece of RED equipment and may only be used once suitable safety and operating guidance has been provided by a suitably qualified Makespace equipment owner or trainer.