

Risk Assessment - Vinyl cutter #302

Risk Assessment performed on behalf of Leicester Hackspace Ltd 08833126

This risk assessment is intended to provide guidance on the risk associated with the above equipment and activities in normal use. Please also check general risk assessments for the space as a whole. Any discrepancies, errors or concerns should be raised with the document maintainers or trustees - do not edit this assessment directly. For responsible persons and last update, see below.

Activity

The JK870 cutting plotter is used to cut sheet or roll materials into programmed shapes and lettering. The machine incorporates a sharp cutting blade, moving carriage, pinch/drive rollers, electrical components and computer/software controls. The machine must only be operated by persons who have received suitable instruction and are familiar with the manufacturer's operating instructions.



Read Instruction Manual



Induction Required



No Loose Clothing or Gloves



Keep Hands Away from Blade

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Date released	Last reviewed	Next review
23/09/26	-	Sep 2027

#	Identify Hazards	Risks	Who maybe Harmed	Severity	Control Measures	Likelihood	Risk Rating
1	Electricity	Electric shock	User	High	All electrical equipment should be checked for electrical safety prior to use. Equipment must not be used unless they have a PAT test label on. It is the users responsibility to do a visual check of the equipment. If any defects are found (i.e. cracked casing, defect in lead etc) the equipment is not to be used, to be quarantined, the safety officer informed, and a defect label attached. Induction covers inspection of equipment before usage.	Low	Med
2	Misuse of equipment	Damage to user or equipment	User, Bystander	High	Members are inducted into the correct use of the equipment and understand associated risks. Members found to be deliberately misusing equipment may have their use of the machine restricted or revoked altogether.	Low	Med
3	Sharp cutting blade	Cuts, lacerations	Operators	High	Do not touch the blade directly. Switch off and isolate the machine before changing, removing or adjusting the blade. Use the blade holder correctly and keep spare blades secured. Only trained personnel to replace blades. The induction covers safe handling of the machine.	Low	Med
4	Moving cutting carriage	Trapping / crushing	Operators	High	Keep hands, fingers, hair and loose clothing away from the moving carriage and rollers while operating. Never reach into the machine while it is running. Do not manually move the carriage during operation. Stop the machine before clearing material. The induction covers safe handling of the machine.	Low	Med
5	Pinch/drive rollers	Trapping fingers	Operators	High	Keep hands clear of pinch rollers and feed mechanism. Load material only with the machine stopped. Do not attempt to pull material through the machine manually. The induction covers safe handling of the machine.	Low	Med
6	Unexpected machine movement	Injury to user or damage to the machine	Operators / bystanders	Low	Check the work area before starting. Keep the machine under control during operation. Stop the machine before adjustments or maintenance. Investigate abnormal noises or movement immediately and isolate the equipment if necessary. The induction covers when and how the machine operates and moves	Low	Low
7	Electrical overheating	Fire	Operators / bystanders	High	Do not overload electrical sockets. Keep ventilation areas clear. Do not operate with damaged electrical components. Switch off and isolate the machine if overheating, burning smells, smoke or abnormal electrical behaviour occurs.	Low	Med
8	Material movement	Uncontrolled feed	Operators	High	Correctly position and secure the material using the pinch rollers. Ensure sufficient space is available for material to feed through the machine. Check that the material is suitable for the plotter. The induction covers correct material usage	Low	Med
9	Damaged cutting tool	Blade breakage	Operators	Med	Inspect the blade before use. Use the correct blade and holder. Set blade exposure and cutting force correctly. Replace worn or damaged blades. Do not use damaged tooling. The Induction covers correct blade setup	Low	Med
10	Trips from cables / materials	Injury from fall, damage to equipment	Operators / bystanders	Med	Keep electrical cables and loose material away from walkways. Maintain a tidy work area. Store rolls and unused materials safely.	Low	Low
11	Manual handling of machine/ material rolls	Injury to user or damage to the machine	Operators	Med	Assess heavier rolls/material before lifting. Use suitable lifting techniques and assistance where necessary. Do not attempt to move the machine by inappropriate parts.	Low	Low
12	Debris from materials	Interference in normal operation of the machine	Operators	Low	Keep the cutting area clean. Remove waste material regularly.	Low	Low

13	Cleaning and maintenance	Damage to the machine, incorrect set up	Operators	High	Switch off and disconnect/isolate electrical power before maintenance, blade replacement or cleaning around moving parts. Only competent persons should undertake repairs.	Low	Low
14	Unauthorised/ inexperienced use	Damage to the machine or users	Operators	High	Restrict operation to trained and authorised users. Provide instruction covering safe operation, blade handling, loading material, emergency stopping and isolation. Covered in induction.	Low	Low
15	Software / control error causing incorrect cutting	Damage to the machine or users	Operators	Low	Check the programmed design, material position, cutting speed and force before starting. Carry out a test cut where appropriate. Stop the machine if the cutting operation behaves unexpectedly.	Low	Low