

**Technologies (Metal Working Centre Lathe (manually operated) – Risk Assessment Template No.56 (List additional hazards, risks and controls particular to your school using Template No.74)**

Hazards	Is the hazard present? Y/N	What is the risk?	Risk rating H = High M = Medium L = Low	Control measures	Is this control in place? Y/N	If no, what actions are required to implement the control?	Person responsible	Date action completed
Contact with moving parts, spindles chucks and work pieces		Cuts Amputations Entanglement	H	The Drive mechanism is guarded. A fixed guard is in place (removable only with the use of a tool)				
			H	Stock bar should not project beyond the headstock. If this is unavoidable, the portion of stock bar projecting beyond the headstock should be guarded to prevent entanglement. The hole that allows a long stock bar to project should be covered by a metal plate secured with suitable screws or bolts when not in use				
			H	A chuck guard is fitted				
			H	A front chip guard provided to prevent direct ejection of coolant and chips (swarf) towards the operator's position				
			H	A rear chip guard provided at the rear of the machine to contain coolant and chips and direct them towards the collection area				
			H	Lead /Feed screws are guarded unless safe by position or the drive to these has been mechanically disconnected				
Contact by persons other than the operator with moving machinery		Entanglement, pinching, amputation of body parts	H	Safe operational areas are marked out clearly around machines				

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Contact with lathe during start/stop or emergency		Cuts / lacerations Amputations Entanglement	H	The stop control is more prominent than the start control to facilitate ease and speed of access when it is necessary to turn off the machine				
			H	Machine is fitted with an emergency stop control (usually red domed mushroom type head on yellow housing) in an appropriate location, which is easily accessible in an emergency The emergency stop works				
			H	The flap type <sup>[6]</sup> emergency stop control (flap-stop is a normal start and stop contact, which is equipped with a yellow flap and red mushroom-type push buttons, covering both the start and stop contacts) <b>is not acceptable</b> where there is a need for an emergency stop				

— [6] Flap Type Emergency Stop Control



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Contact with moving parts		Injuries due to contact with moving parts i.e. lacerations, amputations, bruising, fracture, burns	H	Before use a visual check should be carried out to ensure where applicable all guards and covers are fitted, in good order and there are no visible faults				
			H	Machine used in compliance with manufacturer's instructions				
			H	Dangling jewellery is prohibited. No gloves, rings or loose clothing is worn				
			H	Long hair is tied back				
			H	Files and abrasive tape should not be used on centre lathe operations				
			H	In the event of power supply interruption, automatic restart is prevented after restoration of the power supply				
Contact with metal working fluid		Absorption of fluids through skin or irritation etc.	H	Control use of cutting fluids  Metalworking fluids, if used, should be mixed and changed in accordance with the supplier's instructions				
Contact with swarf		Cuts / lacerations	H	Precautions are taken to remove swarf including the use of implements (dustpan and brush) to avoid handling swarf				
Use of turning tools		Entanglement and lacerations or amputation of fingers	H	Appropriate turning tools are used, which are maintained in a good condition				
Ejected material		Flying objects leading to injury, eye injury	H	Work piece is securely fixed in place and chuck key removed				
			H	Spring loaded chuck keys are used				
Flying debris		Being struck by flying debris leading to injury	M	Safeguards are in place and eye protection is worn				

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Electric shock, electrocution, burns, death		Electric shock/ fire/burns	H	A visual check is carried out prior to use				
			H	Machines are serviced by a competent person and service records kept as part of the maintenance schedule				
			H	Defective electrical equipment is clearly identified and labelled as out of use All faults are recorded in log book Previous faults have received attention Defects are reported to the designated person to ensure all items are repaired or replaced				
			H	The operation of the RCD (Residual Current Device) is checked by pressing the test button regularly and the RCD is tested periodically by a competent person to ensure that it operates at correct leakage current (leakage current not exceeding 30 mA in a time of not more than 0.3 seconds) (Applicable to plug and socket arrangements)				
			H	Cables are checked to ensure they are free from damage, do not have any non-standard joints or show any signs of overheating				
Accidental start -up			H	Equipment is disconnected or isolated when not in use				
Unsecured machine		Movement of machine leading to injury during use	H	Machine is securely fixed to the floor or bench				
Unsupervised use of machines		Unsupervised use leading to injury	H	Students are prohibited from using certain machinery				
			H	Students are supervised by their teacher when using any machine				
			H	Students are instructed by their teacher before using any machine				
			H	Machinery to be used by teachers only is clearly identified				

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Inadequate signage and instructions		Inadequate information and warnings leading to unsafe use of machine and injury	M	Warning signs are prominently located and maintained in good condition  The operator's manual is available				
Ingestion of contaminated material		Poisoning or ill health	M	Food and drink are prohibited in working area				
Contact with hazardous materials		Exposure to hazardous materials	M	Personal hygiene is promoted (washing of hands, use of barrier creams etc.)				

If there is one or more **High Risk (H)** actions needed, then the risk of injury could be high and immediate action should be taken. **Medium Risk (M)** actions should be dealt with as soon as possible. **Low Risk (L)** actions should be dealt with as soon as practicable.

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**Risk Assessment carried out by:** \_\_\_\_\_

**Date:**    /    /