Risk Assessment

Workshop Machinery & Compressed Air Use

Operation of fixed workshop machinery (saws, welders, routers, milling machines, corner cleaners, croppers) and associated compressed-air systems within a manufacturing workshop.

The risk assessments contained in this document have been carried out in accordance with the method of Qualitative Risk assessment. This approach seeks to standardise the values given to risk in order to provide better comparisons.

A Hazard is a process or substance with the potential to cause harm, a Risk is the likelihood of that hazard causing injury and how serious it would be.

The “Risk” number is obtained by multiplying numbers seeking to quantify both the likelihood and severity of consequence of any particular risk. In the methodology used in this document the numbers are obtained from the matrix bellow and multiplied together to gain the final Risk number. So that;

Likelihood x Consequence = Risk

Risk numbers for both before and after the implementation of controls are provided for comparison.

Figure 1. Likelihood/Consequence Matrix

Likelihood		Consequence	
1	Rare - Unheard of	1	Insignificant – no lost time
2	Unlikely - Known within the industry but no history in the company	2	Minor –Return to work that day
3	Moderate – Known to have happened at least once within the company	3	Significant – Requiring treatment off site
4	Likely – Known to have happened many times in the company	4	Major - Fatality
5	Almost Certain – More likely than not to occur	5	Severe - Multiple Fatalities

The assessments provided in this document are intended as a generic assessment only and assumes that the machines are being used as designed in normal operating procedures.

Any additional risks arising from nonstandard practices, different terrain or other site specific considerations must be recorded on site specific risk assessments.

1 What is the works being undertaken

Generic Control measures;

The individual has demonstrated the necessary knowledge, skills, and experience to competently, safely, and effectively perform the required health and safety tasks as outlined within this risk assessment, ensuring compliance with all relevant standards and protocols.

Operation	Hazard	Persons at Risk	Risk Level (L x C = R)	Control Measures	Residual Risk (L x C = R)	Comments
Use of fixed machinery (saws, welders, routers, croppers)	Entanglement, contact with moving parts, crush injuries	Operators, maintenance	4 x 5 = 20	Machine guards in place; PPE, interlocks functional; emergency stops tested; only trained operators; SSoWs for each machine; no loose clothing; pre-use checks; LOTO for maintenance	1 x 5 = 5	Applies to all powered machinery
Flying debris / ejected material	Eye/face injuries	Operators, nearby staff	3 x 4 = 12	Mandatory safety glasses; guarding; extraction; correct tooling and speeds	1 x 4 = 4	Increased hazard during cutting and routing
Noise from machinery/compressors	Hearing damage	All workshop staff	4 x 3 = 12	Mandatory ear protection; maintenance of noisy equipment; rotation of staff	1 x 3 = 3	Spot checks by supervisors
Manual handling of long profiles, frames, tooling	Musculoskeletal strain	Operators	3 x 3 = 9	Team lifting; mechanical aids; handling training; clear walkways	1 x 3 = 3	Avoid twisting frames when warm from welding

Slips, trips & falls	Injuries from stepping on debris	All staff	3 x 3 = 9	Good housekeeping; remove swarf/offcuts regularly; anti-slip floor; cable management	1 x 3 = 3	Daily clean-down required
Air compressor operation	Overpressure, tank rupture, hot components	Operators	3 x 5 = 15	Daily tank drainage; PPE; no unauthorised access; relief valves functional; SSoW implemented	1 x 5 = 5	Check tank test date annually
Pneumatic hose use	Hose whip, bursting	Operators, bystanders	4 x 4 = 16	Inspect hoses daily; replace damaged hoses; whip-checks; proper routing of airlines	1 x 4 = 4	Highest risk when hoses are kinked
Dust/swarf generation	Respiratory and eye irritation	Operators	3 x 3 = 9	Extraction systems; RPE if needed; regular cleaning; avoid blowing with compressed air	1 x 3 = 3	Avoid using airlines to clean clothing
Hot surfaces on welding plates	Burns	Operators	3 x 4 = 12	Heat-resistant gloves; signage; wait for cooldown before access; guards fitted	1 x 4 = 4	Applies to welding stations

Electrical hazards	Shock, fire	All staff	3 x 5 = 15	PAT testing; visual inspections; no damaged cables; isolate faulty equipment	1 x 5 = 5	Report defects immediately
COSHH – lubricants, oils, cleaners	Skin/eye irritation	Operators	3 x 3 = 9	Gloves; safety data sheets available; correct storage; ventilation	1 x 3 = 3	Apply spill control procedures
Public/visitor access	Trip hazards, machinery contact	Visitors, contractors	2 x 4 = 8	Visitor escort; restrict access; signage; hi-vis / safety boots for visitors	1 x 4 = 4	Applies during site tours
Tooling changes & maintenance work	Crush injuries, trapped energy	Maintenance, operators	4 x 5 = 20	Strict LOTO; bleed-down of pneumatics; correct tools used; competent persons only	1 x 5 = 5	Supervisor authorisation required
Compressed air misuse	Injection injury	Operators	3 x 4 = 12	Prohibit use on skin/clothing; signage; supervision; low-pressure blow guns only	1 x 4 = 4	Reinforced in induction
Poor lighting	Reduced visibility, mistakes	All staff	2 x 3 = 6	Task lighting; replace failed tubes/bulbs; clean light covers	1 x 3 = 3	Routine workshop checks

RISK MATRIX 5X5

Consequence
How severe could outcomes be if the risk event occurred?

Likelihood
What's the chance of the risk occurring?

	Insignificant 1	Minor 2	Significant 3	Major 4	Severe 5
5 Almost certain	Medium 5	High 10	Very high 15	Extreme 20	Extreme 25
4 Likely	Medium 4	Medium 8	High 12	Very high 16	Extreme 20
3 Moderate	Low 3	Medium 6	Medium 9	High 12	Very high 15
2 Unlikely	Very low 2	Low 4	Medium 6	Medium 8	High 10
1 Rare	Very low 1	Very low 2	Low 3	Medium 4	Medium 5

	Name	Title / Company	Signature	Date
Assessor's Name	Craig Megson	Health and Safety Advisor - CDMM		18/11/2025
Authorised by	Katie Beet	Senior Health & Safety Advisor - CDMM		18/11/2025

Comments, observations, or additions to Risk Assessment by Operatives

cdmm

Risk Assessment Sign-Off Sheet

Risk Assessment Topic:
Date:
Presented by:
Location/Site:

Attendees
Please fill in your details below to confirm that you have attended the risk assessment and understood the safety information provided.

	Name	Job Title	Date
1			
2			
3			
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6			
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8			
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10			

Presenter's Signature:
I confirm that the attendees above have received and understood the risk assessment on the specified topic.
Presenter's Name:

Notes/Comments:

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