

Ergonomic Risk Factor Identification Checklist

1.0 Objective & Intent

The objective of this Standard Operating Procedure (SOP) is to establish a systematic process for identifying ergonomic risk factors in cabinet and millwork manufacturing operations. This procedure is designed to prevent work-related musculoskeletal injuries (WMSDs) by proactively identifying hazardous postures, repetitive motions, forceful exertions, and environmental conditions that contribute to worker strain. Compliance with WorkSafeBC's Ergonomics Requirements (OHS Regulation Part 4.46 to 4.50) is mandatory, and this SOP serves as a primary tool for meeting those regulatory obligations.

The specific risk this SOP mitigates is the cumulative trauma and acute injuries resulting from poorly designed workstations, improper lifting techniques, and repetitive tasks common in woodworking and assembly environments. By using this checklist, safety personnel and supervisors can identify and prioritize corrective actions before injuries occur, reducing lost-time claims and improving worker well-being.

2.0 Operational Scope

This procedure applies to all production areas within the cabinet and millwork facility, including but not limited to: panel saw stations, edge banding machines, CNC routers, assembly lines, sanding booths, finishing areas, and material handling zones. It covers all personnel involved in manual material handling, machine operation, assembly, and finishing tasks, including full-time employees, temporary workers, and contractors.

The checklist must be completed by a trained safety representative, supervisor, or ergonomic lead at least once per quarter, and additionally whenever a new process, workstation, or piece of equipment is introduced. This SOP does not replace a full ergonomic assessment by a certified professional but serves as a first-line screening tool to identify high-risk areas requiring further investigation.

3.0 Hazard Identification & Mandatory PPE

- **Awkward Postures:** Bending, twisting, reaching above shoulder height, kneeling, or squatting for extended periods during assembly or material handling.
- **Repetitive Motions:** Continuous gripping, pulling, pushing, or rotating motions performed more than once every 30 seconds without adequate rest breaks.
- **Forceful Exertions:** Lifting, carrying, or moving loads exceeding 25 kg manually, or using tools requiring high grip force (e.g., pneumatic nailers, sanders).
- **Contact Stress:** Leaning against hard edges, using knees or elbows as tools, or prolonged pressure on soft tissues from work surfaces.
- **Vibration Exposure:** Operating vibrating tools (e.g., orbital sanders, routers) for more than 2 hours cumulative per shift without anti-vibration gloves.
- **Environmental Factors:** Poor lighting causing eye strain and awkward postures, slippery floors increasing fall risk, and noise levels above 85 dBA requiring hearing protection.
- **Mandatory PPE:** CSA-approved steel-toed boots, safety glasses with side shields, hearing protection (earplugs or earmuffs) in designated zones, and cut-resistant gloves when handling sharp materials or tools.

4.0 Required Safety Equipment & Tools

- Ergonomic Risk Factor Checklist (printed or digital on SafeDesk)
- Clipboard and pen (if using paper version)
- Measuring tape (to measure work surface heights, reach distances, and load weights)
- Digital camera or smartphone (to document high-risk areas and postures)
- Stopwatch or timer (to assess repetition frequency and duration)
- Force gauge (optional, for measuring grip forces on tools)
- Light meter (to measure illumination levels at workstations)
- Sound level meter (to verify noise exposure levels)
- Anti-vibration gloves (for inspectors handling vibrating tools during assessment)

5.0 Step-by-Step Safety Procedure

1. Notify the area supervisor and all affected workers that an ergonomic risk factor identification check will be conducted. Explain the purpose and assure them that the goal is to improve safety, not to evaluate individual performance.
2. Review the Ergonomic Risk Factor Checklist to ensure all sections are understood. Confirm that the checklist includes categories for posture, repetition, force, contact stress, vibration, and environment.
3. Begin the observation at the first workstation. Observe the worker performing their normal tasks for at least 5 full work cycles or 10 minutes, whichever is longer. Do not interrupt the worker unless an immediate hazard is observed.
4. For each risk factor category, note the presence and severity of hazards. Use the measuring tape to verify work surface heights (should be between elbow height and 5 cm below elbow height for standing tasks). Record any deviations.
5. Assess repetition by timing the cycle. If a worker performs the same motion more than once every 30 seconds without a break of at least 10 seconds, mark this as a high repetition risk. Document the specific motion (e.g., gripping a pneumatic stapler).
6. Evaluate force requirements. Ask the worker to demonstrate the maximum force they exert during the task. If lifting or carrying loads over 25 kg manually, or if the worker reports that tool grip force causes hand fatigue within 30 minutes, mark as high force risk.
7. Check for contact stress by inspecting work surfaces and tools. Look for sharp edges, hard corners, or areas where the worker's body presses against equipment. Use the light meter to ensure illumination is at least 500 lux for fine assembly tasks.
8. Document all findings on the checklist. For each identified risk, note the workstation location, task description, and a brief description of the hazard. Take photographs of high-risk postures or conditions for the corrective action plan.
9. After completing the checklist, review the results with the area supervisor. Prioritize risks based on severity and frequency. Immediate corrective actions (e.g., adjusting work surface height, providing anti-fatigue mats) should be implemented within 24 hours.
10. Submit the completed checklist to the safety department for entry into the SafeDesk system. Schedule a follow-up assessment within 30 days to verify that corrective actions have been implemented and are effective.

Regulatory Disclaimer: This document is a generic safety template provided for educational and informational purposes only. It does not constitute professional engineering, legal, or regulatory compliance advice. The end-user assumes all liability for validating all safety protocols against specific machinery manufacturer manuals and local occupational health and safety regulations (e.g., WorkSafeBC, CSA standards) before deployment.