

MACHINE SAFETY CHECKLIST



Machine safety continues to rank in OSHA's Top 10 violations for manufacturing. Taking a proactive step to evaluate your current machinery, whether legacy or new, will begin the process of lowering your risk and hazard levels. Polytron's complimentary Machine Safety Checklist is easy to follow.

Getting started:

What type of machines can this checklist be used for:

This checklist can be used for any type of machine where there is potential for personnel to come in physical contact with the machine.

Who should complete this checklist?

1. Anyone who has knowledge of the machine's operation and its functions, OR
2. Anyone who is capable and comfortable identifying unsafe conditions.

Recommendation: Involving a combination of operators and/or maintenance personnel will be beneficial to the process.

How to use the checklist:

1. Use one (1) Checklist per machine. Select a machine by identifying any or all of the following criteria:
 - Machine seems unsafe and lacking in guarding
 - Machine has known safety incidents, i.e., near misses, lost time, etc.
 - Machine has frequent, unexplained downtime
2. Take a print-out of the safety checklist to the machine to begin the evaluation.
3. Answer each question as accurately as possible. Most of the questions listed pertain to specific safety standards set by governing bodies including OSHA, NFPA, ISO, etc. A Safety Standards Ready Reference guide is provided.



MACHINE SAFETY CHECKLIST

Company Name:		Machine Function:	
Company Address:		Machine Manufacturer:	
Completed By:		Model Number:	
Title:		Install Date:	
Date:		Last Safety Check Date:	

SAFETY CHECKPOINTS		Yes	No	Don't Know	ADDITIONAL DETAILS				
1.	Is Company Safety Standards documentation available?								
2.	Have there been any safety incidents or OSHA fines associated with this machine?				DATE: INCIDENT/FINE				
3.	Are control systems or safety devices in use?				AB	OMRON	PILZ	OTHER	
4.	What are the machine's energy sources?				ELECTRIC	HYDRAULIC	PNEUMATIC	STEAM	WATER
5.	Has a Risk Assessment been completed for this machine?				DATE:		STANDARD THAT APPLIES: OSHA 29 CFR 1910.132(d)(2); ANSI/RIA R15.06		
6.	Are Electrical Safety Inspections performed regularly by plant personnel (e.g. test the E-stop)?				DATE:		STANDARD THAT APPLIES: OSHA 29 CFR 1910.218		
7.	Are there clear warning notices or markings where appropriate (e.g. PPE to wear, restriction on use, list of authorized users)?				STANDARD THAT APPLIES: ANSI/RIA 15.06-1999, Clause 7.5				
8.	Are Standard Operating Procedures (SOPs) available for all operator interaction points of the machine?				STANDARD THAT APPLIES: OSHA 29 CFR 1910.332				
9.	Have all users of the equipment been given adequate training in correct use, risks and precautions?				STANDARD THAT APPLIES: OSHA 29 CFR 1910.9(b)				
10.	Is the equipment stable by bolting, clamping, or tying to a fixed location?				STANDARD THAT APPLIES: OSHA 29 CFR 1910.212(B)				
11.	Does perimeter guarding meet the minimum height requirements and safe distances from hazards?				STANDARD THAT APPLIES: ANSI B15.1-2000 (R2006), Clause E3.2.3 (a)				
12.	Do Emergency Stops meet standard requirements (Stop category, safe stop time, location, dual channel, labeling)?				STANDARD THAT APPLIES: NFPA 79-2012 Clause 7.5.3				
13.	Do safety devices meet specific level of safety per ISO 13849 (e.g. CAT3, PL'd)?				STANDARD THAT APPLIES: ISO 13849-1, Clause 6.2.4				
14.	Is there electrical drop-out protection for the machine?				STANDARD THAT APPLIES: NFPA 79-2012 Clause 7.5.3				
15.	Does Lock Out Tag Out Isolation meet standard requirements (Properly Labeled, Complete Power isolation, location close to equipment)?				STANDARD THAT APPLIES: OSHA 1910.147; NFPA 79 CHAPTER 5				

NOTES/COMMENTS

Disclaimer: This is a Discovery Document and the results of this form do not certify compliance or non-compliance of safety standards.

Putting Performance in the Hands of Your People

The Industry Standards citations below are for your convenience when completing the Polytron Machine Safety Checklist form. The purpose is to provide clarification of relevant Standards for each of the corresponding questions. The clarification is to enable you to enter the best response relative to the scope of the Standards. **Note:** Questions 1 - 4 do not have corresponding Standards.

SAFETY STANDARDS READY REFERENCE	
5.	<p>Standard- OSHA 29 CFR 1910.132(d)(2): "The employer shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment; and, which identifies the document as a certification of hazard assessment."</p> <p>ANSI/RIA 15.06-1999: American National Standard for Industrial Robots and Robot Systems – Safety Requirements: Clause 7.5 Safeguarding methodology selection -A safeguarding strategy shall be developed for identifying and controlling hazards, including process-specific hazards (7.4), and either:</p> <p>a) Installing the safeguards required in clause 8, and installing them in accordance with clause 10; or</p> <p>b) Conducting a comprehensive risk assessment per clause 9, and installing the safeguards determined to be appropriate in accordance with clause 10</p>
6.	<p>OSHA 29 CFR 1910.218: "Scheduling and recording the inspection of guards and point of operation protection devices at frequent and regular intervals. Recording of inspections shall be in the form of a certification record which includes the date the inspection was performed, the signature of the person who performed the inspection and the serial number, or other identifier, of the equipment inspected."</p>
7.	<p>OSHA 29 CFR 1910.145(a)(1): "These specifications apply to the design, application, and use of signs or symbols (as included in paragraphs (c) through (e) of this section) that indicate and, insofar as possible, define specific hazards that could harm workers or the public, or both, or to property damage. These specifications are intended to cover all safety signs except those designed for streets, highways, and railroads. These specifications do not apply to plant bulletin boards or to safety posters."</p>
8.	<p>OSHA 29 CFR 1910.332: "Note: Employees in occupations listed in Table S-4 [See https://www.osha.gov/pls/oshaweb/owa-disp.show_document?p_table=STANDARDS&p_id=9909] face such a risk and are required to be trained. Other employees who also may reasonably be expected to face comparable risk of injury due to electric shock or other electrical hazards must also be trained."</p>
9	<p>OSHA 29 CFR 1910.9(b): "Training. Standards in this part requiring training on hazards and related matters, such as standards requiring that employees receive training or that the employer train employees, provide training to employees, or institute or implement a training program, impose a separate compliance duty with respect to each employee covered by the requirement. The employer must train each affected employee in the manner required by the standard, and each failure to train an employee may be considered a separate violation."</p>
10.	<p>OSHA 29 CFR 1910.212(b): "Anchoring fixed machinery. Machines designed for a fixed location shall be securely anchored to prevent walking or moving."</p>
11.	<p>ANSI B15.1-2000 (R2006), Clause E3.2.3(a) (Safe Distance): "The mechanical power transmission apparatus should be at least 2,440 mm (96 in.) above the surface to be considered as safeguarded by safe vertical distance (or location)."</p>
12.	<p>NFPA 79-2012 Clause 7.5.3: "Actuators of emergency stop devices shall be colored RED. The background immediately around pushbuttons and disconnect switch actuators used as emergency stop devices shall be colored YELLOW. The actuator of a pushbutton-operated device shall be of the palm or mushroom-head type and shall effect an emergency stop when depressed. The RED/YELLOW color combination shall be reserved exclusively for emergency stop applications."</p>
13.	<p>ISO 13849-1 Clause 6.2.4: "A "well-tried component" for a safety-related application is a component which has been either:</p> <p>a) widely used in the past with successful results in similar applications, or</p> <p>b) made and verified using principles which demonstrate its suitability and reliability for safety-related applications."</p>
14.	<p>NFPA 79-2012 Clause 7.5.3: "Upon restoration of the voltage or upon switching on the incoming supply, automatic or unintentional restarting of the machine shall be prevented when such a restart causes a hazardous condition."</p>
15.	<p>OSHA 29 CFR 1910.147(c)(1): "The employer shall establish a program consisting of energy control procedures, employee training and periodic inspections to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, startup or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from the energy source and rendered inoperative."</p>



How to assess the outcome of the checklist:

1. If there are any checks in the “NO” column for questions 5 - 14: The machine may not be compliant according to OSHA and other standards. Actions should be performed to bring the machine into compliance. This can be done internally or by a third party.
2. If there are checks in the “Don’t Know” column for questions 5 - 14: Additional information is needed. Involve others that might know how to answer the question appropriately, or involve a third party to help evaluate.
3. If all check boxes are checked “YES”: The machine is potentially OSHA compliant. Next steps are to ensure all documentation is filed and regular safety inspections are performed.

What are your next steps?

Polytron offers you complete machine safety project delivery from functional specification to remediation; validation and start-up; through training for operators and maintenance to ensure that your workforce is able to safely operate the newly upgraded machine. **Call today to discuss your next steps. 1-855-794-7659.**

