



# Machine Guard & Cover Co.

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## OSHA Standards on Machine Guarding

The OSHA standards on general guarding of machinery and mechanical power transmission apparatus (29 CFR 1910.212 and 1910.219) are very broad and generally minimum guarding standards. One standard was predicated on the 1970's version of the ANSI/ASME B15.1 standard, which itself had undergone several revisions (with 2000 as the most recent) before transfer to another ANSI-accredited Standards Developing Organization. The current and most authoritative standard on the broad subject of safeguarding for machinery is ANSI B11.19-2010; this modern and significantly revised version of the B11.19-2003 standard also incorporates (and updated) the requirements of the ASME B15.1-2000 standard, which was formally withdrawn in 2011.

The ANSI B11.19-2010 standard specifies requirements for both safeguarding suppliers and users, and includes detailed requirements on general safeguarding concepts (e.g., safe distance safeguarding), guards (fixed, adjustable and interlocked), safeguarding devices, awareness barriers/signals/signs, safeguarding methods, safe work procedures, and on safeguarding inspection, maintenance and training. Nine informative annexes provide much additional and useful guidance.

Example requirements found in ANSI B11.19-2010 about guards:

- a) Material used in the construction of guards shall be of such design and strength as to protect individuals from identified hazards;
- b) Guards shall be free of sharp edges, burrs, slag welds, fasteners, or other hazards that may injure individuals when handling, removing or using the guards or equipment;
- c) Handles placed on guards shall be secured to the guard so as not to create a pinch point between the handles and the guard, frame or machine;
- d) The design and construction of the guard shall ensure that individuals cannot reach the hazard by reaching over, under, around, or through the guard;
- e) Guards shall be designed and constructed so as to ensure ease of use;
- f) The guard shall be designed and constructed to provide visibility of the hazard zone appropriate to the particular operation;
- g) Transparent guards shall provide the appropriate level of protection as determined by the risk assessment;
- h) The supplier shall provide a maintenance or replacement schedule or criteria to determine transparent guard replacement in their information for use;
- i) Interlocked guards shall be designed and constructed to meet the following additional requirements:
  - i. Interlock devices used in conjunction with guards shall be specifically designed and constructed for use in safeguarding applications;
  - ii. Guard locking devices, when used, shall prevent the guard from being opened and shall prevent access to the hazard until the command has been given to release the guard. The risk assessment shall determine the need for a means to unlock the guard locking device or otherwise provide a means of egress from inside the safeguarded area;
  - iii. Interlock blocking devices, when used, shall prevent energizing the safety related circuit by securing or locking in an open position.

