



MIOSHA Fact Sheet

General Industry Safety & Health Division

Press Brakes:

Operator Protection

What is a press brake and what standards and rules apply?

A press brake is a machine used primarily to punch, form, and/or bend metal.

[Part 1. General Provisions](#) R4081.0034(4) and (5).

When is operator protection required while operating a press brake?

Protection is required when the operator has to hold the material within four inches of the point of operation when running more than 25 pieces of a specific bend (i.e., making bends of 90° without changing the setup). This means operators cannot run less than 25 pieces, leave the press brake, and come back an hour later and run another 25 pieces of the same 90° bend. Also protection is still required if the operator runs 25 pieces of one order and then runs 25 pieces of another order with the same 90° bend it is still the same specific bend. (See Table 1)

When a press brake is used in conjunction with unitized tooling or die sets and there is an opening of more than a ¼ inch between the ram and the unitized tooling or the die set, this is considered a pinch point. The pinch point would have to be guarded or point of operation guards would have to be provided.

If the press brake is being used as a power press, with die sets, point of operation guarding would be required.

When are hand tools required while operating a press brake?

Hand tools are required when the operator is placing material within four inches or less of the point of operation and running 25 pieces or less of a specific bend and the press brake has no point of operation guarding. Hand tools shall be designed so that the operator is not required to place a hand within the point of operation. A conspicuous sign is required to be posted on the machine stating “Hand tools shall be used to hold stock.”

What type of point of operation guards are acceptable?

Acceptable point of operation guards are, but not limited to, two hand controls, restraints, pullbacks, light curtains, and full barrier guarding.

Point of operation guards are not required if the operator is more than four inches away from the point of operation no matter how many pieces are run for bending operations.

What are the employer's responsibilities?

An employer shall:

- Provide training to each newly assigned employee regarding the operating procedures, hazards, and safeguards of the job.
- Not knowingly authorize a process, machine, or equipment to be used which does not meet applicable state safety standards.

- Report to the supervisor any recognized hazard.
- Use required personal protective equipment.
- Not remove a guard or other safety device except for authorized servicing purposes.
- The guard or other safety device shall be replaced or equivalent guarding provided before the machine or equipment is returned to normal operation.

What are the employee's responsibilities?

An employee shall:

- Not operate a machine or equipment until trained in the operating procedures, hazards, and safeguards and has been assigned to do so by the employer.

Additional Information

Please visit the MIOSHA website at www.michigan.gov/mioshapublications where additional information may be available; or contact the Consultation, Education & Training Division at (517) 322-1809.

Table 1

Press Brake Safeguarding

Hand to Point of Operation	# Pieces	# Bends	Guarding
≤ 4 inches	≤ 25	1	Guard or Use Hand Tool & Sign
≤ 4 inches	≤ 25	> 1	Guard or Device (as hand tool allowed)
≤ 4 inches	≤ 25	1 or more	Guard or Device (as hand tool allowed)
> 4 inches	Any #	Any #	No Guard Required

DELEG is an equal opportunity employer/program.
Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.



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