

Through its alliance with OSHA, PMA has developed this checklist that either one person at a facility or a full safety committee can use to identify and think about potential safety issues in the plant.

For the user’s convenience, an “action notes” section is included at the bottom of the checklist so that any items that may need to be corrected or further explored can be recorded. A reference section is also included at the end of the checklist to offer additional helpful resources related to this topic.

Mechanical Power Press Guarding and Construction, General	Yes	No	N/A
1910.217(b)(1) Are machine components designed and secured to minimize hazards caused by breakage or release of mechanical energy (i.e. broken springs)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(2) Do friction brakes provided for stopping or holding a slide movement require power or force from an external source to cause disengagement?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(2) Is brake capacity sufficient to stop the motion of the slide quickly and hold the slide and its attachments at any point in its travel?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(3)(i) Do all full-revolution clutch machines incorporate a single-stroke mechanism?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(3)(ii) On a full-revolution clutch press, if the single-stroke mechanism is dependent on spring action, are springs the compression type designed to prevent interleaving of the spring coils in the event of breakage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(4)(i) Are foot treadles guarded against unintended operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(4)(ii) Is there a non-slip pad on all foot pedals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(4)(iii) Are pedal return springs of the compression type and designed to prevent interleaving of the spring coils in the event of breakage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(4)(iv) If pedal counterweights are provided, are the paths of travel for the weights enclosed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(5)(i) Are all hand lever operated presses equipped with a spring latch on the lever to prevent accidental tripping?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(5)(ii) If more than one operating station is used on hand-tripped presses, are all operating levers interlocked to prevent press tripping except by the concurrent use of all levers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(6)(i) Are two-hand trip controls protected against unintentional operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(6)(i) Are two-hand trip controls arranged and constructed so that concurrent operation is needed to trip the press?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Mechanical Power Press Guarding and Construction, General	Yes	No	N/A
1910.217(b)(6)(ii) On full-revolution clutch presses, do two-hand trip controls incorporate an anti-repeat feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(6)(iii) If two-hand trip controls are used on multiple operator presses, do all operators have a separate set of controls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(i) On part-revolution clutch presses, does the clutch release and the brake apply when the external clutch engaging means is removed, deactivated or de-energized?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(ii) Is a red-colored “STOP” control provided with the clutch/brake control?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(ii) Does momentary operation of the “STOP” control immediately deactivate the clutch and apply the brake?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(ii) Does the “STOP” control override all other controls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(iii) With a clutch brake control, is a means of selecting “Off,” “Inch,” “Single Stroke” and Continuous” (when the continuous function is furnished) provided to select the type of operation of the press?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(iii) Is the type of press operation (Off, Inch, etc.) capable of supervision by the employer (i.e. by a key switch selector lock)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(iv)(a, and b) Is the “Inch” operating mode designed to prevent hands in the point of operation by: <ul style="list-style-type: none"> • Requiring the concurrent use of both hands to actuate the clutch? • Being a single control protected against accidental actuation and located where the operator cannot reach into the point of operation while operating the control? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(v)(a, b, c, and d) Do two-hand controls for single stroke conform to the following requirements: <ul style="list-style-type: none"> • Each hand control is protected from unintended operation and designed to require the concurrent use of both hands to operate the press? • The control system permits an adjustment which will require the concurrent use of both hands during the die closing portion of the stroke? • The control system has an anti-repeat feature? • The control system is designed to require the release of all operators’ hand controls before an uninterrupted stroke can be resumed? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(vii) Are controls for more than one operating station designed to be activated and deactivated in complete sets of two operators’ hand controls per operating station and capable of being supervised by the employer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Mechanical Power Press Guarding and Construction, General	Yes	No	N/A
1910.217(b)(7)(vii) If all operating controls are bypassed, is the clutch/brake control system designed to prevent actuation of the clutch?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(viii) If the clutch/brake control system contains both the single and continuous function, is it designed so that completion of continuous circuits may be supervised by the employer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(viii) Does the initiation of a continuous run require a prior action or decision by the operator, such as the use of a key switch selector lock?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(ix) If foot control is provided, is the selection method between hand and foot control separate from the stroking selector and capable of being supervised by the employer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(xi) Is the control of air-clutch machines not running continuous, automatic feeding applications, designed to prevent a significant increase in the normal stopping time if the operating valve mechanism fails?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(xi) If such a failure does occur, is further operation of the press inhibited?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(xii) Does the clutch/brake control incorporate an automatic means to prevent initiation or continued activation of the single stroke or continuous functions unless the press drive motor is energized in the forward direction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(xiii) Does the clutch/brake control deactivate in the event of failed power or pressure supply for clutch-engaging means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(xiv) Does the clutch/brake control automatically deactivate if the counterbalance(s) air supply fails?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(xv) Is the selection of bar operation capable of being supervised by the employer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(7)(xvi) Is a separate push button employed to activate the clutch and capable of activation only if the driver motor is de-energized?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(8)(i) Does every power press control system have a main power disconnect switch capable of being locked in the “Off” position?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(8)(ii) Is the motor start button protected against accidental operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(8)(iii) Do all mechanical power press controls incorporate a type of drive motor starter that will disconnect the drive motor from the power source in the event of control voltage or power source failure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(8)(iv) Are all a.c. control circuits and solenoid valve coils powered by not more than a nominal 120-volt a.c. supply obtained from a transformer with an isolated secondary?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Mechanical Power Press Guarding and Construction, General	Yes	No	N/A
1910.217(b)(8)(iv) Are higher voltages (necessary for the operation of the machine or control mechanisms) isolated from any control mechanism handled by the operator?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(8)(iv) Are all d.c. control circuits powered by not more than a nominal 240-volt d.c. supply isolated from any higher voltages?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(8)(v) Are all clutch/brake control electrical circuits protected against the possibility of an accidental ground in the control circuit causing false operation of the press?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(8)(vi) Do electrical clutch/brake control circuits have features to minimize the possibility of an unintended stroke in the event of the failure of a control component to function properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(9)(i) When used, do spring counterbalance systems retain system parts in the event of breakage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(9)(ii) Do spring counterbalances have the capacity to hold the slide and its attachments at mid-stroke without the brake applied?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(9)(iii) Do air counterbalance cylinders retain the piston and rod in case of breakage or loosening?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(9)(v) Do air counterbalance cylinders incorporate means to prevent a sudden loss of pressure in event of air supply failure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(10) Is air-controlling equipment protected against foreign material and water entering the pneumatic system of the press?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(10) Is a means of air lubrication provided when needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(11) Is the maximum anticipated working pressure in any hydraulic system on a mechanical power press within the safe working pressure rating of any component used in that system?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(12) Are all pressure vessels used in conjunction with power presses in conformance with the American Society of Mechanical Engineers Code for Pressure Vessels, 1968 Edition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(13) If required, is the control system constructed so that a failure within the system does not prevent the normal stopping action from being applied to the press when required, but does prevent the initiation of a successive stroke until the failure is corrected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(b)(14)(i, ii, and iii) When required, does the brake monitor meet the following requirements: <ul style="list-style-type: none"> • Is the brake monitor constructed to automatically prevent the activation of a successive stroke if the stopping time or braking distance deteriorates to a point where the safety distance being utilized does not meet requirements? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> • Is a brake monitor used with the Type B gate or movable barrier device installed to detect slide top-stop overrun beyond the normal limit reasonably anticipated by the employer? • Is the brake monitor installed so that it indicates when the performance of the braking system has deteriorated to a point where the safety distance being utilized does not meet requirements? • Is the brake monitor constructed and installed to monitor brake system performance on each stroke? 			
Safeguarding the Point of Operation	Yes	No	N/A
1910.217(c)(2)(i, and ii) Are proper point-of-operation guards or devices provided and used for every job (with a point-of-operation opening of more than ¼ inch or more) performed on mechanical power presses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(2)(i)(a, b, c, d, and f) Do point-of-operation guards meet the following requirements: <ul style="list-style-type: none"> • Do guards prevent the entry of hands or fingers into the point-of-operation by reaching through, over, under or around the guard? • Do guards conform to the maximum permissible openings listed in Table O-10? • Are no additional pinch points between the guard and moving machine parts created by the guard? • Are guards securely fastened or interlocked, and not readily removable? • Do guards offer maximum visibility of the point of operation? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(2)(ii) Are die enclosure guards attached to the die shoe or stripper in a fixed position?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(2)(iii) Are fixed barrier guards attached securely to the frame of the press or to the bolster plate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(2)(iv) Are interlocked press barrier guards attached to the press frame or bolster and interlocked with the clutch control so that the clutch cannot be activated unless the guard itself, or the hinged or movable sections of the guard, conform to Table O-10?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(2)(v) Do interlocked press barrier guards prevent opening the interlocked section and reaching into the point of operation prior to die closure or the cessation of slide motion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(2)(vi) Are adjustable barrier guards securely attached to the press bed, bolster plate or die shoe, and adjusted and operated in accordance with Table O-10?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(2)(vii) Are adjustments to adjustable barrier guards made only by authorized personnel?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(2)(viii) Are point-of-operation guards that do not meet the requirements of Table O-10 used only in conjunction with point-of-operation devices?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Safeguarding the Point of Operation	Yes	No	N/A
<p>1910.217(c)(3)(i)(a, b, c, e, f, and g) Do point-of-operation devices:</p> <ul style="list-style-type: none"> • Prevent and/or stop the press if the operator’s hands are placed in the point of operation? Or, • Prevent the operator from inadvertently reaching into the point of operation or withdrawing his hands if they are located in the point of operation as the dies close? Or, • Prevent the operator from reaching into the point of operation at all times? Or, • Require application of both of the operator’s hands to the operating controls? Or, • Are operating controls located so that the slide completes the downward travel before the operator can reach into the point of operation? Or, • Enclose the point of operation before a press stroke can be initiated so an operator cannot reach into the point of operation? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iii) Are presence-sensing devices interlocked into the control circuit to prevent or stop slide motion if the operator is within the sensing field?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iii)(c) Are presence-sensing devices constructed so that a failure within the system does not prevent the normal stopping action from being applied to the press when required, but does prevent the initiation of a successive stroke until the failure is corrected?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iii)(f) When presence-sensing devices are used, are additional guards used to prevent entry into the point of operation not protected by presence-sensing devices?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iv)(a) Are operator hand pull-outs connected and operated only by the press slide or upper die?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iv)(b) Are hand pull-outs properly adjusted for individual operators?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iv)(c) If more than one operator is using a press, are separate pull-out devices provided for each operator?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iv)(d) Are pull-out devices visually inspected and checked for proper adjustment at:</p> <ul style="list-style-type: none"> • the start of each shift? • following a new die set up? • when operators are changed? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iv)(d) Is any necessary maintenance or repair performed on pull-out devices before the press is operated?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iv)(d) Are records of inspections and maintenance on pull-out devices kept?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>1910.217(c)(3)(iv)(d) Are records of pull-out adjustments made?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Safeguarding the Point of Operation	Yes	No	N/A
1910.217(c)(3)(vii)(c) Is the safety distance between the point of operation and the two-hand control devices properly calculated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(3)(vii)(d) Are two-hand controls fixed into position so that only a supervisor or safety engineer is capable of moving the controls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(3)(viii)(c) Is the safety distance between the point of operation and the two-hand trip controls properly calculated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(c)(3)(viii)(d) Are two-hand trips fixed into position so that only a supervisor or safety engineer is capable of moving the controls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Design, Construction, Setting and Feeding of Dies	Yes	No	N/A
1910.217(d)(1)(ii) Are hand tools provided for freeing and removing stuck work pieces or scrap?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.147 Are appropriate lockout procedures followed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(d)(9)(v) Are brushes, swabs or lubricating rolls provided so the operator will not need to reach into the point of operation to lubricate material, punches or dies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspection, Maintenance and Modifications of Presses	Yes	No	N/A
1910.217(e)(1)(i) Are power presses periodically and regularly inspected to ensure that all parts, auxiliary equipment and safeguards are adjusted properly and in safe operating condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1910.217(e)(1)(ii) Are records of inspections maintained that identify the inspector and the specific press inspected?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Action Notes: _____

Table O-10 [In inches]

Distance of opening from point of operation hazard	Maximum width of opening
1/2 to 1 1/2	1/4
1 1/2 to 2 1/2	3/8
2 1/2 to 3 1/2	1/2
3 1/2 to 5 1/2	5/8
5 1/2 to 6 1/2	3/4
6 1/2 to 7 1/2	7/8
7 1/2 to 12 1/2	1 1/4
12 1/2 to 15 1/2	1 1/2
15 1/2 to 17 1/2	1 7/8
17 1/2 to 31 1/2	2 1/8

This table shows the distances that guards shall be positioned from the danger line in accordance with the required openings.

References:

OSHA Standards:

- 29 CFR 1910.217 Mechanical Power Presses
- 29 CFR 1910.147 The Control of Hazardous Energy (Lockout/Tagout)
- www.osha.gov

National Consensus Standards:

- ANSI B11.1-2001 Mechanical Power Presses – Safety Requirements for Construction, Care and Use
- www.ansi.org