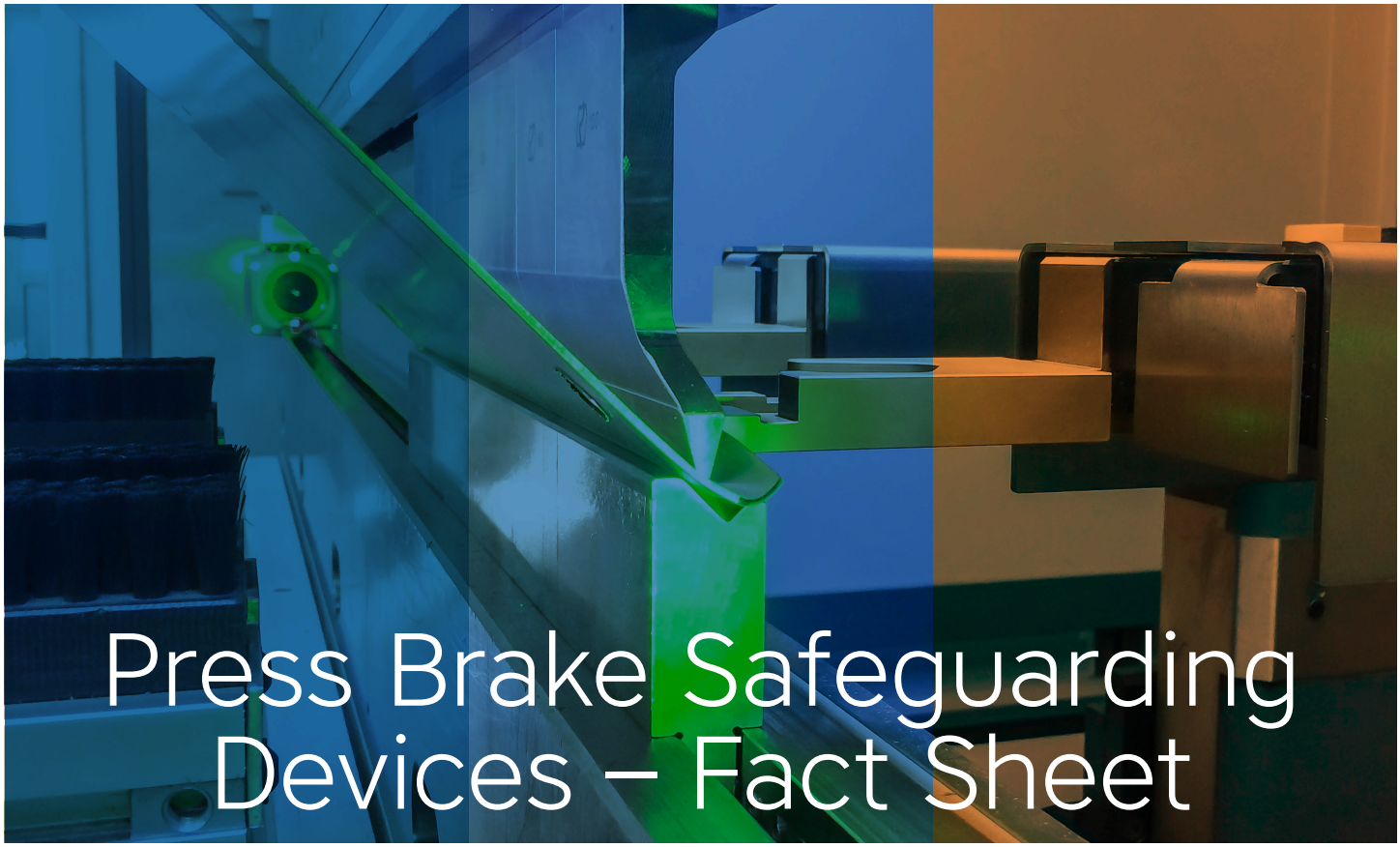

Press Brake Safeguarding Devices – Fact Sheet

Safeguarding devices between the operator and the point-of-operation must be designed to prevent the operator from reaching under the ram during the downward stroke. If not used or not working correctly, an accident or injury is likely to occur.

Ensuring that your press brake has the appropriate safeguarding device is very important. Due to the complexity and variability of the equipment, a reputable machine guarding company should be consulted.

Some of the more common devices and their general requirements include the following:

Presence Sensing Devices (PSD)

PSDs are designed to automatically stop the machine stroke if the sensing field is interrupted. Operator resistance to these types of safety devices is minimized due to their nonrestrictive design. These are commonly referred to as light curtains and cannot be used on machines using full revolution clutches.

- PSDs must protect the operator by preventing or stopping normal stroking of the press if the operator's hands are inadvertently placed in the point-of-operation.
- The PSD must also be interlocked into the control circuit so that the slide motion will stop the downstroke from continuing if any part of the operator's body is within the sensing field at that time.
- PSDs may require muting, or blanking, to allow the bending of material. Always ensure that these safety devices are properly installed and used in accordance with the manufacturer's guidelines for specific stock and task to be performed.
- Guards need to protect all areas of the point-of-operation not protected by PSDs.
- Documented testing of light curtains and PSDs prior to each shift is required.

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Two-Hand Control Device

This device keeps the operator's hands away from the point-of-operation during the entire machine stroke. Two-hand controls are a safeguarding device that can be used in the single-stroke mode on part revolution clutch presses. Two-hand trips are safeguarding devices on full revolution clutch press brakes.

- Each hand control must be protected against unintended operation, such as collars around the controls.
- They must be arranged by design and separation so that concurrent use of both hands is required to trip the press.
- The safety distance must be such that the operator cannot activate the device and reach into the point-of-operation (Refer to Cal/OSHA 4208 for calculation formula).
- Two-hand controls must be fixed so that the operator is not capable of relocating them.
- For more than one press operator, each operator must be provided separate two-hand controls.
- The removal of a hand from any control button will stop the slide.

Pullback Device

These are designed to automatically pull the operator's hands away from the closing dies during each power press stroke. They allow the freedom of movement for loading and unloading parts without interference and can be used on both full and part revolution power presses.

- Wrist bands and straps are secured around both wrists of the operator. The pullback is adjusted for the specific operator and the particular die installed within the press.
- Attachments must be connected to and operated only by the press slide or upper die.
- When handling small metal stock, hand-feeding tools should be used.
- Pullback devices must be inspected for proper adjustment at the start of each operator shift, following a new die set-up and when operators are changed.
- Die protrusions must not interfere with the pulling action.
- Repairs on the pullout devices must be completed before the press is operated.
- All maintenance and inspection records should be retained.

Restraint Device

Often referred to as holdouts, these are similar to pullback devices. When properly anchored, restraints are adjusted so that the operator can never reach the point-of-operation. These are typically applied on press brakes that perform long-run jobs and can be used for both full and partial revolution mechanical power presses.

- Holdout or restraint devices consist of attachments for each of the operator's hands and are securely anchored and adjusted to prevent the operator from reaching into the point of operation.
- Attachments need to be securely anchored and adjusted to restrain the operator from reaching into the point-of-operation.
- Restraint devices must be inspected for proper adjustment at the start of each operator shift, following a new die set-up and when operators are changed.
- Repairs on the pullout devices must be completed before the press is operated.
- All maintenance and inspection records should be retained.

Feed Table or other material support allow the controls to be operated remotely. With this, the controls must be positioned so that the operator cannot activate them while simultaneously reaching into the point-of-operation.

In operations where stock is automatically fed into a progressive die and it is not necessary for the operator to reach under the ram, a **fixed barrier guard** can be used.

Often, manufacturers will ship press brakes without the proper guarding. It is the employer's responsibility to ensure that the appropriate guarding or safeguarding devices (or both) are installed on prior to operation.

For complete regulatory information on press brake guarding, inspection and training requirements, refer to Cal/OSHA Title 8 Article 55 and Fed OSHA 29 CFR Part 1910, Subpart O.