Moving machinery can cause injuries in many ways:

* People can be struck and injured by moving parts of machinery or ejected material. Parts of the body can also be drawn in or trapped between rollers, belts and pulley drives
* Sharp edges can cause cuts and severing injuries, sharp-pointed parts can cause stabbing or puncture the skin, and rough surface parts can cause friction or abrasion
* People can be crushed, both between parts moving together or towards a fixed part of the machine, wall or other object, and two parts moving past one another can cause shearing
* Parts of the machine, materials and emissions (such as steam or water) can be hot or cold enough to cause burns or scalds and electricity can cause electrical shock and burns
* Injuries can also occur due to machinery becoming unreliable and developing faults or when machines are used improperly through inexperience or lack of training

What do I have to do?

**Before you start**

Before you start using any machine you need to think about what risks may occur and how these can be managed. You should therefore do the following:

* Check that the machine is complete, with all safeguards fitted, and free from defects. The term ‘safeguarding’ includes guards, interlocks, two-hand controls, light guards, pressure-sensitive mats etc. By law, the supplier must provide the right safeguards and inform buyers of any risks ('residual risks') that users need to be aware of and manage because they could not be designed out
* Produce a safe system of work for using and maintaining the machine. Maintenance may require the inspection of critical features where deterioration would cause a risk. Also look at the residual risks identified by the manufacturer in the information/ instructions provided with the machine and make sure they are included in the safe system of work
* Ensure every static machine has been installed properly and is stable (usually fixed down)
* Choose the right machine for the job and do not put machines where customers or visitors may be exposed to risk
* Note that new machines should be CE marked and supplied with a Declaration of Conformity and instructions in English

Make sure the machine is:

* safe for any work that has to be done when setting up, during normal use, when clearing blockages, when carrying out repairs for breakdowns, and during planned maintenance
* properly switched off, isolated or locked-off before taking any action to remove blockages, clean or adjust the machine

Also, make sure you identify and deal with the risks from:

* electrical, hydraulic or pneumatic power supplies
* badly designed safeguards. These may be inconvenient to use or easily overridden, which could encourage your workers to risk injury and break the law. If they are, find out why they are doing it and take appropriate action to deal with the reasons/causes

**Preventing access to dangerous parts**

Think about how you can make a machine safe. The measures you use to prevent access to dangerous parts should be in the following order. In some cases it may be necessary to use a combination of these measures:

* Use fixed guards (eg secured with screws or nuts and bolts) to enclose the dangerous parts, whenever practical. Use the best material for these guards – plastic may be easy to see through but may easily be damaged. Where you use wire mesh or similar materials, make sure the holes are not large enough to allow access to moving parts
* If fixed guards are not practical, use other methods, eg interlock the guard so that the machine cannot start before the guard is closed and cannot be opened while the machine is still moving. In some cases, trip systems such as photoelectric devices, pressure-sensitive mats or automatic guards may be used if other guards are not practical
* Where guards cannot give full protection, use jigs, holders, push sticks etc if it is practical to do so
* Control any remaining risk by providing the operator with the necessary information, instruction, training, supervision and appropriate safety equipment