Guards rank third in the risk reduction hierarchy, after inherently safe design and risk reduction. Guards must therefore be chosen only if the first two measures cannot reasonably be applied.

A guard must not create additional hazards (cutting, trapping, crushing, etc.) or cause the machine’s users to divert the guard from its use. The movable components of a guard must be designed so that their dimensions and their weight facilitate their manipulation.

A guard must be designed by taking into account all the environmental constraints or those operating constraints (possibilities of projections of solid or liquid matter) to which the guard is subjected during the machine’s entire service life. The guard must also be designed by taking into consideration, insofar as possible, all the intended uses and reasonably foreseeable incorrect uses of the machine and all the involuntary movements of the workers.

A guard must be designed and built in such as way as to offer good visibility of the process and the machine. This type of design limits the dismantling of the guard while allowing the machine to be checked for proper operation or a malfunction to be detected as soon as it appears. The guard can be made of a transparent, perforated or meshed material (see the permissible dimensions in point 5.3.1). It is suggested that the frame of the guard be painted a bright colour, and the perforated or meshed part a colour darker than the zone to be observed (flat black or charcoal grey).

**There are two types of guards**

**Fixed guards:**

* fixed enclosing guard;
* fixed distance guard;
* fixed nip guard.

**Movable guards:**

* interlocking guard;
* interlocking guard with guard locking;
* power-operated;
* automatic closing