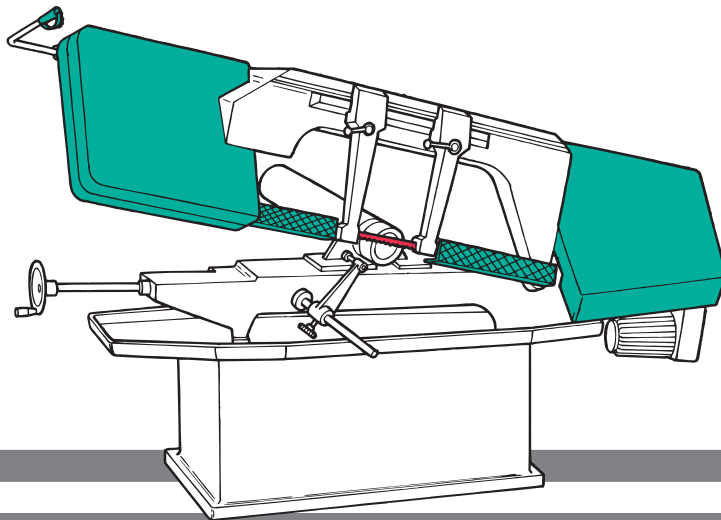


2.4.5 Band saw

Legislative Decree 81/08 App. V and VI, Presidential Decree 459/96 App. I, UNI EN 13898:2007



HAZARD

PROTECTION

Machine tool for cold-cutting metals using a tool that is a band of toothed metal (blade). The workpiece is clamped to the machine table whereas the head, in which the toothed band runs, is lowered manually or automatically, to do the cutting. Machining is done with abundant use of cutting fluid.

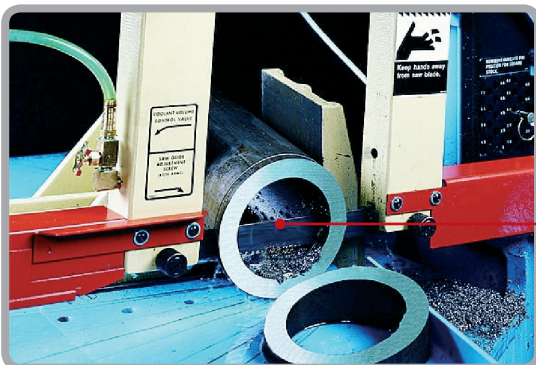
2.4.5.1 HAZARDS

Entanglement, dragging and contract with the moving band

The toothed band runs between two pulleys and the entire length has to be protected. The only section of toothed band that can be uncovered and unprotected is that strictly needed for the machining (working portion).

The rest must be protected as follows:

- **Return flywheels and top of the band path:** Fixed guards (see “Fixed guards” in 2.2.3.2), movable interlocked guard (see “Movable guards” in 2.2.3.2) with guard-locking (see “Movable interlocked guards with guard-locking” in 2.2.3.2) if the machine inertia is high.
- **Bottom part of band path:** the non-working portions of the band must be protected with fixed guards (see “Fixed guards” in 2.2.3.2) and adjustable guards (see “Adjustable guards” in 2.2.3.2).



WORKING PORTION OF TOOTHED BAND

Crushing from automatic workpiece feed and tensioning system

Machines with an automatic workpiece feed and/or tensioning system must be fitted with fixed guards (see “Fixed guards” in 2.2.3.2) and movable interlocked guards (see “Movable guards” in 2.2.3.2) capable of preventing access to this area during automated movements.

Impact, injuries and dragging by the workpiece rotating

The workpiece must be firmly clamped to the table with clamps, jaws or other clamping systems. Never hold the workpiece in position with your hands.

2.4.5.2 CONTROL EQUIPMENT**Starting**

The only way to start the machine is to use specific control devices (see 2.2.6.1 “Starting”) that are easy to recognise and are protected against the risk of being accidentally activated (e.g. pushbuttons with guard ring, shrouded pedals, etc.).

Machines with a balance head, which can be lowered manually, must have the start pushbutton on the lowering handle. This pushbutton must also be of the hold-to-run type (see 2.2.6.2 “Hold-to-run”).

Unexpected restart

Spontaneous restarts (see 2.3 “Machine electrical systems”) of the machine after power is restored must be prevented using a specific device.

Stopping

The machine must have a control device (see 2.2.6.3 “Stopping”) to stop it safely.

Emergency stop

All machines must have at least one emergency stop device (see 2.2.6.4 “Emergency stop”) placed within easy reach of the operator.

2.4.5.3 ERGONOMICS**Positioning**

Machines must be installed so that there is free access to the work area even when setting, loading and unloading devices, etc. are being used (for example, lifting devices).

Platform

The operator should stand on a wooden or plastic platform with a grating through which chips can fall and which is strong enough to walk on. Ergonomic aspects should be considered when choosing the platform height.

2.4.5.4 OCCUPATIONAL HEALTH AND SAFETY

Noise

Find out the noise level to which staff are exposed when using the machine and follow the employer's instructions.

2.4.5.5 PERSONAL PROTECTIVE EQUIPMENT

The machining work must be assessed carefully so that the use of PPE can be defined:



Gloves ([see 5.6.4 "Gloves giving protection from mechanical risks"](#)) protecting against mechanical risks and which are waterproof when cutting fluid is used; gloves cannot be worn near the moving band.



Safety shoes ([see 5.7 "Foot protection"](#)) with protective toe cap (S1).



Hearing protectors ([see 5.3 "Hearing protection"](#)).

2.4.5.6 OPERATING INSTRUCTIONS

The machine must come with a manual, in Italian, explaining correct use and maintenance, including a programme of periodic inspections.

2.4.5.7 OCCUPATIONAL HEALTH AND SAFETY ACTIONS

Before use

- Read the Operating Instructions and be trained on using the machine.
- Check that the guards ([see 2.2.3 "Guards"](#)) and safety devices ([see 2.2.5 "Safety devices"](#)) are present and positioned correctly.
- Check that the adjustable guard ([see "Adjustable guards" in 2.2.3.2](#)), on the non-working portion of the toothed band, is positioned so that only the portion needed for the machining is uncovered.
- Check that the guard interlock systems work ([see 2.2.5.1 "Interlock systems"](#)).
- Check that the emergency stop button works ([see 2.2.6.4 "Emergency stop"](#)).
- Clamp the workpiece (do not hold it with your hands) and check that it is properly secured.
- Direct the cutting fluid nozzle correctly.
- Wear clothes that cannot become entangled with the moving band (e.g. scarves, overalls or shirts with cuffs not fastened); tie back long hair.
- Wear the PPE indicated in this data sheet.

During use

- Put workpieces in place and remove them only when the machine is stopped.
- Lower the blade slowly to avoid any abrupt contact with the workpiece.
- If the blade gets locked in the workpiece, activate the emergency stop.
- Remove chips only when the machine is stopped.
- Avoid using compressed air (for example, to clean workpieces, etc.).
- Report any malfunctions or faults promptly to the supervisor.
- Avoid getting cutting fluid on your hands or clothes (do not wear dirty overalls or canvas shoes, do not clean your hands on your overalls, do not keep dirty cloths in your pocket); wash your hands often (after finishing work and before eating, going to the bathroom and putting on gloves).
- Contain any cutting-fluid spills with special materials or substances provided by the employer.

After use

- Switch off the machine.
- Leave the area around the machine (especially the workstation) clean and tidy.