

Workplace
instruction



Working with machinery

Guidance for occupational instructions for employees

Working safely on machines

Facts

Serious injuries can occur (e.g. due to crushing, cuts or impact) when working with machinery. To avoid these injuries, all machine operating instructions and in-house instructions must be studied and understood

by every assigned employee. Of particular importance are the rules regarding set-up work and actions to be taken in case of a malfunction.



In the event of a major safety-related deficiency, it may be necessary to shut down the effected machine

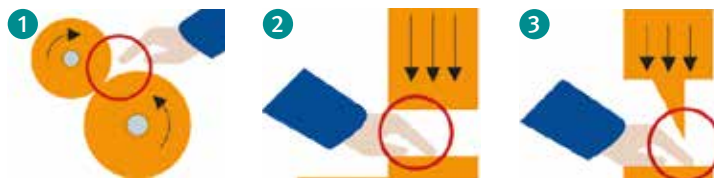
What are the risks?

The hazardous areas most commonly associated with machines are:

- Entanglement points (e.g. rollers or cylinders) ①
- Crushing points (e.g. pressing bar) ②
- Cutting points (e.g. cutting blades) ③
- Points exposed to impact forces (e.g. due to moving parts)

Additional hazards may be caused by:

- The spurting out of high-pressure liquids
- Electrical energy
- Static electricity
- Hydraulic, pneumatic or thermal energy
- Fire or explosion
- Noise
- The emission of dust, gasses, vapours or liquids
- High temperatures
- Faulty installations



Protective measures prior to beginning work

Instruction in the handling:

Workers may only operate machinery that they have been trained to use.

Use personal protective equipment:

Prescribed personal protective equipment (e.g. safety gloves, hearing protection, etc.) must be worn.

Wear suitable clothing: ④

Workers with long hair must wear a hair net when operating machinery with moving components. Close-fitting garments must be worn. Furthermore, all rings, necklaces, wristbands and bracelets must be removed.



Check all protection devices:

All available protection devices and safeguards must be checked for functionality and effectiveness on a regular basis.

Pay attention to warning devices:

Take notice of all warning devices on the machinery (e.g. start-up warning device).

4 WEAR SUITABLE CLOTHING



Do not work with long hair exposed – wear a hair net



No wristbands or bracelets



No rings



No watches

Protective measures when working on machinery

Protective measures during operations

Do not circumvent protection devices:

- Protection devices (e.g. safety switches) must not be bypassed or defeated in any manner

Never reach into operating machinery

- Never attempt to grasp a moving machine component during operation

Protective measures during set-up work and disruptions

Never attempt to rectify a fault with the machine still in operation

- Wait until the machine has come to a complete stop

For set-up work on operating machinery:

- The protective measures provided must remain in effect, or suitable alternative measures must be made available (e.g. inching or toggle mode).
- Consider all potential risks (refer to operating instructions in the operating manual).

Protective measures during servicing and maintenance work

- Servicing and maintenance work must only be carried out by qualified personnel. Upon completion of the servicing and maintenance work, the existing protection devices must be completely reassembled and checked for function.
- Measures must be taken to prevent unauthorized, accidental or unexpected start-up of the machinery **5** (e.g. lock the main switch, attach a sign “Maintenance in progress. Do not switch on!”).
- Any hazardous mechanical movement due to excess stored energy (e.g. after venting a pressure vessel or pneumatic cylinder) must be prevented.



If a ‘unsafe condition’ is found, the responsible supervisor shall be informed so that the deficiency can be rectified by a qualified person. In the event of a major safety-related deficiency, it may be necessary to **immediately shut down** the effected machinery.



Lock the main switch during service or maintenance work.

Picture credits:

Right column: Dagmar Brunk/BG ETEM
main switch: BG ETEM

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