

Status: 2023/03

Order Nr. 901e

Notes on the preparation of the operating instructions

For each machine, original operating instructions (Instruction handbook/manual) and a translation of these operating instructions in the language(s) of the country of use must be supplied when the machine is commissioned (see EC Machinery Directive 2006/42/EC).

The operating instructions must contain all necessary safety information for the intended use. The contents of the operating instructions must comply with the European standard DIN EN ISO 12100 "Safety of machinery - General principles for design - Risk assessment and risk reduction", Chap. 6.4.1 and Chap. 6.4.5.

More detailed explanations of the safety-related components of instruction handbooks are contained in the European standard DIN EN ISO 20607 "Safety of machinery - Instruction handbook - General drafting principles".

Both standards can be obtained from Beuth-Verlag GmbH, Burggrafenstrasse 6, 10787 Berlin (<https://www.beuth.de/de/>).

Basically, the instruction handbook shall contain the following information:

1 Information relating to the machine

1.1 Manufacturer's address

1.2 Designation of type or series of machinery for which the instruction handbook applies (see marking on machinery - nameplate)

1.3 Description of area of application for which the machinery is intended (intended use), specification of materials to be used (thickness, size), inks, solvents etc., where necessary, designation of prohibited areas of application (for example, use of explosive solvents, flash points of solvents used, exclusion of specific hazardous substances).
Example: "The machinery is intended for printing paper with a maximum weight of g/m² and a size of The machine is not suitable for use of inks with a flash point of below ... °C."

1.4 General drawings or cross sections resp. of the machinery showing all safety-related measures (for example interlocking guards, fixed guards, trip bars, Emergency stop devices). Information on the safety-related functions may be taken from our test report. All safety-related devices must be described with a view to their operational characteristics (for example max. permissible speed in hold-to-run control operation admissible with interlocking guards in open position)

- 1.5 Designation of workstations likely to be occupied by operating personnel (this includes setting-up, maintenance and repair, for example cleaning, web threading on rotary printing presses)
- 1.6 Sound pressure levels for **any** workplace (workplace-related continuous A-weighted sound pressure level identified by the noise test code which is part of the testing procedure of the machinery) and indication of the standard, according to which the noise emission is determined (EN 13023). Sound power levels shall be specified where the sound pressure level is above 80 db(A). On large machines, the A-weighted sound power level may be replaced by the A-weighted emission sound pressure level measured at certain positions on the machinery.
- 1.7 Where applicable, information concerning radiation, gases, vapours, dust etc. emitted by the machinery
- 1.8 Information relating to power supply (voltage, frequency, rated working current)
- 1.9 Information specific to any type of equipment if required by relevant standards (for example designation of overall response time, object detection capability, minimum distance of light beams on guillotines)
- 1.10 All control circuits which remain alive after disconnecting power supply must be mentioned in the manual.

2 Information relating to transport and handling of the machine

For example, instructions for handling the machine during assembly (attachment points for lifting equipment, load lifting points for fork trucks), dimensions and weight of the machine (for example for determining the appropriate lifting equipment), where necessary position of centre of gravity

Where applicable, information that assembly and dismantling has to be done by the manufacturer's personnel, instructions are provided by the manufacturer

3 Information relating to commissioning of the machine

- 3.1 Where necessary, requirements for fixing/anchoring the machine (for example in order to ensure safe positioning of the machine).
- 3.2 Assembly and mounting conditions (for example foundation requirements, use of vibration dampening materials)
- 3.3 Space needed for use and maintenance (for example access to switch cabinets)
- 3.4 Permissible environmental conditions (as far as required for use of the machine: temperature ranges, admissible moisture, electromagnetic radiation etc.)
- 3.5 Instructions for connecting the machine to power supply, direction of rotation of motor connected to three-phase current supply, where applicable, specification of qualification of commissioning personnel (for example electrician)
- 3.6 Where necessary, description of safety measures which have to be taken by the user (special safety devices, safety distances between moving part of the machine and stationary surrounding, safety signs and signals etc.)
- 3.7 Where machines are used in explosive atmospheres, a summary of environmental conditions required (explosive area zone classification, ventilation requirements, measures for avoiding building up of static loads, floor conductivity etc.)

4 Information relating to the use of the machine

- 4.1 Description of function of controls
- 4.2 Instructions for setting and adjustment, make ready operations, handling of safety devices, adjustment of guards, knife changing on cutting equipment
- 4.3 Information about residual risks which cannot be eliminated by design measures and instructions as how to avoid hazards (for example instructions for safe handling of dangerous substances when cleaning, refilling, removing waste, hazardous radiation of substances, residual risks that cannot be designed out existing at the suction head, ink ducts and delivery of sheet-fed printing presses, warnings of hot surfaces existing behind guards that can be opened, high voltage warnings). Possibly note that not all circuits are switched off by the main switch (see DIN EN 60204-1), e.g. if external interlock voltages are present in the control cabinet.
- 4.4 Information about prohibited use and operating faults with a description of the subsequent hazards
- 4.5 Information about fault identification and respective operator intervention
- 4.6 If necessary, instructions relating to personal protective equipment (for example when handling hazardous substances) and to training required.
- 4.7 Where machines are mounted in lines (interlinked machinery) and the emergency stop does not act on the entire line, the instruction handbook shall specify the emergency stop sections and inform the user about the need of regular training of the operating personnel.

5 Information relating to maintenance

- 5.1 Nature and frequency of inspections, especially for safety-related functions (brakes, clutches, function of safety devices, especially trip bars, pressure-sensitive mats and photoelectric curtains, holding devices of knife carriers on board cutters and lever-operated cutting machines etc.)
- 5.2 Instructions relating to maintenance actions for the user and respective skilled personnel (instructions for replacement of safety-relevant parts such as use of filter screens for UV driers, use of conductive gear and V-belts in explosive areas, use of conductive hosing for combustible liquids, draw attention to use of safety devices such as application of knife guards when changing knives)
- 5.3 Pneumatics:

Air quality, type of filter, change interval of the filter, recommendations for the maintenance of pneumatic hoses, all necessary instructions to depressurize the system, the designation of the parts of the system that are not depressurized by the normal pressure-relief device

Hydraulics:

Type, characteristic variable and the required purity class of hydraulic fluid in accordance with EN ISO 4406; instructions for test and replacements of accumulators and hoses; all necessary instructions to depressurize the system, the designation of the parts of the system that are not depressurized by the normal pressure-relief device

- 5.4 As far as required for carrying out maintenance operations, addresses of importer and service shops

6 Information relating to de-commissioning and dismantling of the machine

(for example, removal of chemical substances, depressurizing of pressure reservoirs)

7 Information for emergency situations

- 7.1 Type of fire-fighting equipment, if applicable
- 7.2 If necessary, instructions for setting free persons in dangerous situations (for example hand-controlled movement of the machine after releasing the motor brake, starting a reversing movement, dismantling of machine parts, unlocking interlocking devices with guard locking from the secured area)

8 Other information

- 8.1 The Declaration of Conformity shall be contained in the instruction handbook. The Declaration of Conformity shall also indicate the name and address of the person in charge of compiling technical documentation.
- 8.2 For machines with lifting devices (for example feeders, delivery units, lifting stackers), the results of static and dynamic testing shall be indicated (test reports in accordance with 4.1.2.3 of the Machinery Directive 2006/42/EU).

9 Other safety warnings

(If necessary, see notes in the test report on residual hazards that must be described in the operating instructions).

Declaration on the operating instructions

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Please send this document to the Test and Certification Body together with the latest version of the instruction handbook. The numbering under "position" refers to the numbers in the "Instructions for drafting the instruction handbook". Under "Page number" you fill in the page number(s) of your instruction handbook where the relevant point is covered. If information or instructions are not applicable to the machine manufactured by you just cross out the column in question. Additional comments may be given under "Remarks".

The "Declaration for Instruction Handbook" form can be downloaded from the web site:
<https://www.bgetem.de> webcode: 13331112

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For every machine, an Instruction handbook in the original language and a translation in one of the languages of the country where it is to be used must be supplied. Unless pictograms are used, markings on the machine (function of controls, safety warnings) shall also be made in one of the languages of the country. The information in the brochure, in which the machine is offered, are not contrary to the information in the instruction handbook. The prospectus contains the information concerning noise emitted by the machinery (s. Position 1.6).

Manufacturer: _____

Type of machine: _____

Place, date _____

Name / Signature _____