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Info No. 901

Notes on Preparing the Operating Instructions

For each machine, an original operating manual and a translation of this manual into the language(s) of the country of use must be supplied at the time of commissioning (EC Machinery Directive 2006/42/EC).

The operating instructions must contain all necessary safety instructions for the intended use of the machine. The content 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," Sections 6.4.1 and 6.4.5.

Further details on the safety-related components of operating instructions are contained in the European standard DIN EN ISO 20607 "Safety of machinery – Operating instructions – General design principles."

Both standards can be obtained from DIN Media GmbH, Burggrafenstr. 6, 10787 Berlin (<http://www.dinmedia.de>).

Note:

As of January 20, 2027, the EU Machinery Regulation will be mandatory. The new Regulation (EU) 2023/1230 on machinery retains the basic structure of the previous Directive 2006/42/EC but expands the requirements for operating instructions in several areas. Most of the previous minimum requirements remain in place; in particular, new requirements regarding digitization, cybersecurity, and emissions have been added.

A new feature is the option to provide the instruction manual in digital form (see Article 10, paragraph 7). The user must have access to the manual throughout the machine's expected service life. Upon request, a paper version must still be provided in some cases.

The required content of the instruction manual is specified in more detail in Section 1.7.4.

*The new content required by the EU Machinery Regulation is highlighted **in color** below.*

Essentially, the operating instructions must contain the following information:

1 Information about the machine

- 1.1 Company name and full address of the manufacturer and, if applicable, its authorized representative;
- 1.2 Description of the machine and the model designation as indicated on the machine (see nameplate);
- 1.3 The EC/EU Declaration of Conformity, or the website address, or a machine-readable code under which the EC/EU Declaration of Conformity is available;

- 1.4 Description of the intended scope of application for the machine (intended use), specification of the materials to be used (thickness, size), inks, cleaning agents, etc., including, where applicable, information on the areas of use for which the machine is not approved (e.g., use of flammable solvents, flash point of the solvents used, prohibition on the use of certain hazardous substances);

Example: "The machine is suitable for printing on paper with a weight of max. ... g/m² and a size of The machine is not suitable for use with printing inks having a flash point below ... °C";

Warnings regarding misuse of the machine or the associated product, which experience has shown may occur;

- 1.5 An overview or cross-sectional drawing of the machine showing the safety-related functions and protective devices (e.g., interlocked protective devices, bolted protective devices, safety edges, emergency stop devices). The safety-related functions can be found in our test report on the machine. All safety-related devices must be described in terms of their mode of operation (e.g., maximum permissible speed in jog mode with open, interlocked guards);
- 1.6 The drawings, circuit diagrams, descriptions, and explanations necessary for the use, maintenance, and repair of the machine or the associated product, and for verifying its proper functioning;
- 1.7 Identification of the workstations that may be occupied by the employee (including setup, maintenance, and repair, e.g., for cleaning work or for feeding the web on web offset printing presses);
- 1.8 The following information regarding airborne noise emissions:
- 1.8.1 The A-weighted emission sound pressure level at the workstations, provided it exceeds 70 dB(A); if this level is less than or equal to 70 dB(A), this must be stated;
- 1.8.2 The A-weighted sound power level of the machine, if the A-weighted emission sound pressure level at workstations exceeds 80 dB(A);
For machines of very large dimensions, the A-weighted emission sound pressure levels at specific locations in the machine's vicinity may be specified instead of the A-weighted sound power level.
- 1.9 Information on emissions, such as radiation, gases, vapors, dust, etc., emitted by the machine;
- 1.9.1 If, due to the machine's design, hazardous substances may be emitted, the operating instructions must include information on the necessary collection, filtration, or discharge of these emissions (if the corresponding equipment is not supplied). In addition, at least one suitable parameter for the emission must be specified.
- 1.9.2 The following information is required:
- the characteristics of the necessary extraction, filtration, or discharge equipment,
 - and at least one of the following parameters:
 - mass flow rate or throughput of the released hazardous substances,
 - concentration of hazardous substances in the vicinity of the machine,
 - the effectiveness of the filtration or capture system, including the conditions for maintaining this effectiveness over the long term;
- 1.10 Data on the electrical equipment (voltage, frequency, rated operating current)

- 1.11 Equipment-specific information, to the extent required by the standards (e.g., specification of the total response time, object detection capability, and minimum distance between photoelectric sensors on flatbed cutters)
- 1.12 All electrical circuits that are not de-energized by the main switch and remain energized must be listed in the operating instructions.

2 Information on the transport and handling of the machine

Instructions for handling during machine installation (attachment points for lifting devices, load-bearing points for forklifts), dimensions and weight of the machine (e.g., for selecting lifting equipment), and, if necessary, the location of the center of gravity

If applicable, a note must be included stating that assembly/disassembly may only be performed by the manufacturer's qualified personnel or that corresponding instructions can be requested from the manufacturer.

3 Information on Commissioning the Machine

- 3.1 Requirements for securing or anchoring the machine (e.g. to ensure stability);
- 3.2 Conditions for installation and assembly (e.g., foundation requirements, use of vibration-damping materials);
- 3.3 Space requirements for operation, maintenance, and servicing (e.g., accessibility of control cabinets);
- 3.4 Permissible environmental conditions (to the extent necessary for the machine's use: information on temperature ranges, permissible humidity, electromagnetic radiation, etc., to which the machine may be exposed);
- 3.5 Information on connections to the power supply, consideration of the motor's direction of rotation for three-phase connections, and, if applicable, information on the required qualifications of the installer (e.g., certified electrician);
- 3.6 Specification of safety measures that must be taken by the user (in particular, user-specific safety devices, consideration of safety clearances between moving parts of the machine and the surrounding area, affixing of safety labels, etc.);
- 3.7 When used in a potentially explosive atmosphere, a summary of the necessary requirements for the machine's environment (explosion protection zone classification, ventilation measures, measures to prevent static electricity buildup, floor conductivity, etc.);

4 Information on the use of the machine

- 4.1 Description of the function of the control devices;
- 4.2 Instructions for setup and preparation, operation of protective devices, adjustment of separating protective devices, and blade replacement for cutting devices;
- 4.3 Information on residual risks that cannot be eliminated by technical measures and instructions for avoiding hazards (e.g., instructions for handling hazardous substances during cleaning, refilling, and disposal; health-hazardous emissions from working substances; technologically induced residual risks in the area of the suction head, the ink pans, or the delivery section of sheet-fed printing presses; warnings regarding hot surfaces behind protective devices that can be opened; and a warning regarding high voltage). Possibly a note that the main switch does not shut off all electrical circuits (see DIN EN 60204-1), e.g., if external interlock voltages are present in the control cabinet.

A new requirement in the EU Machinery Regulation is that, for complex or networked machines, residual risks arising from

- *software,*
- *communication interfaces,*
- *remote access,*
- *automated decision-making processes*

must be taken into account to a greater extent.

- 4.4 Information on improper use and operating errors, including a description of the resulting hazards;
- 4.5 Instructions for fault detection and troubleshooting;
- 4.6 Where necessary, instructions on the use of personal protective equipment (e.g., when handling hazardous substances) and on required training and instruction;
- 4.7 If the machine is part of a production line (interlinked system) and the emergency stop does not affect the entire line, the operating instructions must describe the emergency stop zones and specify that operators must receive regular training on them.

5 Maintenance Information

- 5.1 Type and frequency of inspections, particularly for safety-related functions (e.g., brakes, clutches, operation of protective devices—especially safety edges, safety mats, and light curtains—as well as locking devices for the blade carrier on cardboard shears and lever cutters, among others);
- 5.2 Instructions for maintenance work for the user and, if applicable, for qualified personnel (in particular, instructions for replacing safety-related components, such as the use of filter protection screens for UV exposure units, conductive V-belts and toothed belts in hazardous areas, and conductive hoses when using flammable liquids; Use of additional protective devices, e.g., blade guard strips when changing blades);
- 5.3 To the extent necessary for machine maintenance, the importer's address and the addresses of service workshops must be provided.

6 Safety-related information regarding the decommissioning and dismantling of the machine (e.g., disposal of chemicals, venting of pressure vessels)

7 Emergency Information

- 7.1 Type of fire extinguishing equipment to be used, if required
- 7.2 If applicable, instructions for rescuing persons from hazardous situations (e.g., turning the machine by hand after releasing the motor brake, initiating a reversal of motion, dismantling machine parts, unlocking interlock devices with mechanical interlocks from a safe area)

8 Requirements for IT Security and Networking

Additional information on:

- secure configuration procedures,
- software updates,
- the impact of software changes,
- protection against tampering,
- security features implemented digitally or via a network.

9 Safety-Related Software

The operating instructions must include frequent updates regarding:

- software versions,

- parameterization,
- update procedures,
- validation of safety-related changes

10 Miscellaneous

- 10.1 The Declaration of Conformity must be included in the operating instructions. The Declaration of Conformity must also include the name and address of the person or company authorized to compile the technical documentation (the person or company must be based in the EU).
- 10.2 For machines with lifting devices (e.g., loaders, booms, stacking lifts), information on static and dynamic tests must be included (test report in accordance with 4.1.2.3 of the EC Machinery Directive 2006/42/EC).

11 Other Safety-Related Notes

(See, if applicable, notes in the test report regarding residual hazards that must be described in the operating instructions.)

Please send this document to the testing agency along with the latest version of the operating instructions. The “Item” numbering refers to the “Guidelines for Preparing Operating Instructions” (Information Sheet 901) with the same issue date. Please enter the page number(s) of your operating instructions where the corresponding notes are found after each item. If the information does not apply to your machine, please strike through the relevant line. Additional explanations can be provided in the “Remarks” column.

The “Declaration Regarding the Operating Instructions” form can be downloaded from the website:

<https://www.bgetem.de> webcode: 13331112

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Item	Page number(s)	Remarks
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Item	Page number(s)	Remarks
10		
10.1		
10.2		
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When the machine is put into service, the original operating instructions and a translation of these instructions into the language(s) of the country of use are provided. The labels on the machine (function of the controls and any safety instructions) are also provided in one of the languages of the country of use, unless they are represented by pictograms without text. The sales materials in which the machine is presented do not contradict the operating instructions. The sales materials contain information regarding the airborne noise emitted by the machine (see Section 1.6)

Company _____

Machine Type _____

City, Date _____

Name / Signature _____