

Instruction handbook content example according to EN ISO 20607:

Section	Content
Basic parts of an instruction handbook	Title page, table of contents, introduction to/purpose of this instruction handbook
Safety	General safety information and general safety instructions
Machine overview	Machine description, intended use, key machine specifications, controls and displays descriptions, floor plan/layout
Transportation, handling and storage	Transporting, handling and storing the machine and/or the components
Assembly, installation and commissioning	Assembly/integration of the machine, positioning of the machine, mechanical, pneumatic, hydraulic and electrical installation, check and test of safety systems, installation check, commissioning
Original equipment manufacturer settings	Mechanical settings and synchronisation, safety-related (setting) parameters, pneumatic, hydraulic, electrical and vacuum settings, other settings
Operation	Operating modes, machine start-up and shut-down Sequence or chronology of operations, other operating instructions, if applicable
Product or capacity changeover	General product or capacity changeover information, product-specific set-up information
Inspection, testing and maintenance	Maintenance instructions
Cleaning and sanitising	Cleaning and/or sanitising of the machine
Fault-finding/ troubleshooting and repair	General fault-finding/troubleshooting and repair information, troubleshooting chart (electrical engineering), troubleshooting of electrical sensors, vacuum systems, pneumatic systems and hydraulic systems
Dismantling, disabling and scrapping	Dismantling, disabling and scrapping instructions
Documents and drawings	Documents, drawings and parts list
Index, glossary, annexes	

Source: EN ISO 20607, Chapter 5.1, Table 1

The specific minimum requirements for the contents are defined in Chapter 5.2.1 - 5.2.16. An instruction handbook for a user/operator need not contain all the sections of this table.

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Accredited Certification Body SCESp 0008
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technik@suva.ch
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Safety of machinery - Instruction handbook

General drafting principles



This **publication** is aimed at **manufacturers** and **integrators** of **machines and equipment**.

The Machinery Directive 2006/42/CE, the Type A standard EN ISO 12100, the Type B standard EN ISO 20607 and Type C standards provide information relating to the contents of an instruction handbook (also called instructions or instruction manual in the Machinery Directive). The requirements of the Type C standard take precedence for machines that fall within its scope of application and have been built according to its requirements.

Annex I, Chapter 1.7.4 of the Machinery Directive describes the general principles and the contents of instructions.

General principles for the drafting of instructions (Machinery Directive, Annex I, Chapter 1.7.4.1)

- a) The instructions must be drafted in one or more official Community languages. The words 'Original instructions' must appear on the language version(s) verified by the manufacturer or his authorised representative.
- b) Where no 'Original instructions' exist in the official language(s) of the country where the machinery is to be used, a translation into that/those language(s) must be provided by the manufacturer or his authorised representative or by the person bringing the machinery into the language area in question. The translations must bear the words 'Translation of the original instructions'.
- c) The contents of the instructions must cover not only the intended use of the machinery but also take into account any reasonably foreseeable misuse thereof.
- d) In the case of machinery intended for use by non-professional operators, the wording and layout of the instructions for use must take into account the level of general education and acumen that can reasonably be expected from such operators.

Contents of the instructions (Machinery Directive, Annex I, Chapter 1.7.4.2)

Each instruction manual must contain, where applicable, at least the following information:

- a) the business name and full address of the manufacturer and of his authorised representative;
- b) the designation of the machinery as marked on the machinery itself;
- c) the contents of the EC declaration of conformity, not necessarily including the serial number and the signature;
- d) a general description of the machinery;
- e) required information necessary for the use, maintenance and repair of the machinery (diagrams, drawings, descriptions, etc.);
- f) a description of the workstation(s) likely to be occupied by operators;
- g) a description of the intended use of the machinery;
- h) warnings concerning ways in which the machinery must not be used that experience has shown might occur;

- i) assembly, installation and connection instructions, with the required documents (drawings, diagrams);
- j) instructions relating to installation and assembly for reducing noise or vibration;
- k) instructions for the putting into service and use of the machinery and instructions for the training of operators;
- l) information about the residual risks that remain despite the safeguarding protective measures adopted;
- m) instructions on the protective measures to be taken by the user and the personal protective equipment to be provided;
- n) the essential characteristics of tools which may be fitted to the machinery;
- o) the conditions in which the machinery meets the requirement of stability;
- p) the mass of the machinery and instructions with a view to ensuring that transport, handling and storage operations can be made safely;
- q) the operating method to be followed in the event of accident or breakdown, for example the method to be followed so as to enable the equipment to be safely unblocked;
- r) the description of the maintenance operations that should be carried out;
- s) instructions designed to enable adjustment and maintenance to be carried out safely, including the protective measures that should be taken during these operations;
- t) the specifications of the spare parts to be used;
- u) the information on airborne noise emissions;
- v) where machinery is likely to emit non-ionising radiation which may cause harm to persons, information concerning the radiation.

EN ISO 12100 (Type A standard) requirements

This standard confirms the Machinery Directive requirements in Chapter 6.4.5, with details relating to the following areas in particular:

- a) information relating to transport, handling and storage of the machine;
- b) information relating to installation and commissioning of the machine;
- c) information relating to the machine itself;
- d) information relating to the use of the machine;
- e) information for maintenance with distinction between skilled and unskilled persons;
- f) information relating to dismantling, disabling and scrapping;
- g) information for emergency situations.

EN ISO 20607 (Type B standard) requirements

Presentation of the instruction handbook

Purpose: to provide the user with such information that the machinery concerned can be effectively and safely used during the life cycle of the machine, also considering foreseeable misuse.

The communication process "read – think – use" should be followed in order to achieve the maximum effect for the reader.

The instruction handbook shall follow sequential operations.

Target groups (installers, operators, maintenance personnel, cleaning personnel etc.) shall be provided with information on:

- intended use of the machine and, as appropriate, its parts and components;
- relevant phases of the life cycle of the machine;
- hazards that have been identified and risk reduction measures in conjunction with human machine interaction;
- description of signals and warning devices provided with the machine.

Comprehensibility of the instruction handbook

The target group shall be taken into account (specific needs, foreseeable knowledge and technical vocabulary):

- use standardised terms or well recognised technical terms;
- explain special terms/expressions.

Phrasing should be as simple and as brief as possible, with:

- pictures, drawings etc. to support the text;
- short and simple sentences;
- tables, listings, diagrams;
- chronological, logical and sequential writing;
- repetition, where necessary.

Warnings, hazard and safety symbols:

- explain their meaning;
- ensure that they are distinguishable from other content.

General remarks:

- use consistent terms and units;
- use the active voice;
- separate information when provided for different target groups;
- legibility: text font sizes and graphical symbols heights.