

**Tööstuspesumasinade ohutusnõuded. Osa 1:  
Ühtsed nõuded**

Safety requirements for industrial laundry machinery -  
Part 1: Common requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 10472-1:2008 sisaldab Euroopa standardi EN ISO 10472-1:2008 ingliskeelset teksti.

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English Version

Safety requirements for industrial laundry machinery - Part 1:  
Common requirements (ISO 10472-1:1997)

Exigences de sécurité pour les machines de blanchisserie  
industrielle - Partie 1: Prescriptions communes (ISO 10472-  
1:1997)

Sicherheitsanforderungen für industrielle  
Wäschereimaschinen - Teil 1: Gemeinsame Anforderungen  
(ISO 10472-1:1997)

This European Standard was approved by CEN on 12 October 2008.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

The text of ISO 10472-1:1997 has been prepared by Technical Committee ISO/TC 72 "Textile machinery and machinery for dry-cleaning and industrial laundering" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10472-1:2008 by Technical Committee CEN/TC 214 "Textile machinery and accessories" the secretariat of which is held by SNV.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 10472-1:1997.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directives.

For relationship with EC Directives, see informative Annexes ZA and ZB, which are integral parts of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

### Endorsement notice

The text of ISO 10472-1:1997 has been approved by CEN as a EN ISO 10472-1:2008 without any modification.

## **Annex ZA (informative)**

### **Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC**

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive Machinery 98/37/EC, amended by 98/79/EC.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements (except 1.7.4. (f)) of that Directive and associated EFTA regulations.

**WARNING** — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

## **Annex ZB (informative)**

### **Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC**

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive Machinery 2006/42/EC.

Once this standard is cited in the Official Journal of the European Communities under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements (except 1.4.2.1 § 2, 1.7.3, 1.7.4.2 t) and u)) of that Directive and associated EFTA regulations.

**WARNING —** Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10472-1 was prepared by Technical Committee ISO/TC 72, *Textile machinery and machinery for dry-cleaning and industrial laundering*, Subcommittee SC 5, *Industrial laundry and dry-cleaning machinery*.

ISO 10472 consists of the following parts, under the general title *Safety requirements for industrial laundry machinery*:

- *Part 1: Common requirements*
- *Part 2: Washing machines and washer-extractors*
- *Part 3: Washing tunnel lines including component machines*
- *Part 4: Air dryers*
- *Part 5: Flatwork ironers, feeders and folders*
- *Part 6: Ironing and fusing presses*

Annex A forms an integral part of this part of ISO 10472. Annexes B and C are for information only.



## Introduction

ISO 10472 is intended to instruct the designer of industrial laundry machinery in a systematic manner, focusing on his particular type of machine, regarding the relevant essential safety requirements, and to suggest possible state-of-the-art safety solutions.

The extent to which hazards are covered is indicated in the scope of this part of ISO 10472. The manufacturer's attention is drawn to the fact that machinery should comply as appropriate with ISO/TR 12100-1 and ISO/TR 12100-2 for hazards which are not specifically referred to in this part of ISO 10472.

All examples given in ISO 10472 represent the state of the art. Equivalent solutions are acceptable, provided they attain at least the same safety level.

# Safety requirements for industrial laundry machinery —

## Part 1: Common requirements

### 1 Scope

The individual parts of ISO 10472 identify all significant hazards associated with laundry machinery designed for use in industrial laundry premises, which includes hotels, hospitals, nursing homes, prisons and similar premises, as well as machines designed for use in self-service establishments subject to the minimum capacities stated in the separate parts of ISO 10472. Dry-cleaning presses and garment presses are also included.

Certain specialized finishing machines used for shaped items are excluded.

Household and similar electrical appliances (see IEC 335) are not covered by ISO 10472.

The individual parts of ISO 10472 complement the basic requirements laid down in ISO/TR 12100-1 and ISO/TR 12100-2. They give guidance to the designer on assessing the risks associated with the hazards (see EN 1050) and on selecting measures to attain the required safety level. "Use of machinery" comprises both intended use and reasonably foreseeable misuse.

The individual parts of ISO 10472 do not give specific technical advice about:

- the phases of life of the machine other than use;
- noise;
- laser;
- maintenance operations and elimination of process faults;
- ergonomics;
- explosions;
- isolation of energy sources;
- pressure vessels;
- hot surfaces necessarily exposed for production purposes [but see ISO 10472-6 (press head surface)].

The individual parts of ISO 10472 do not cover electromagnetic compatibility.

Hazards due to the use of gas within a machine which is not included in the range described in 5.5.2 of this part of ISO 10472 are not covered by the individual parts of ISO 10472.

Examples of layouts of a large- and a medium-size plant which show the machines of parts 2 to 6 of ISO 10472 are given in annex B.

The individual parts of ISO 10472 apply to machines which are manufactured after the date of issue of the relevant parts.

NOTE — For significant hazards concerned with construction, transport, commissioning, decommissioning, dismantling and disposal of the machine, see ISO/TR 12100-1:1992, 3.11, 3.12 and ISO/TR 12100-2:1992, 5.5.

The guidance contained in the individual parts of ISO 10472 is based on the assumption that the designer has completed a risk analysis of the machine under consideration. This will enable him to identify and fulfil the significant requirements for the machine as stipulated by the individual parts of ISO 10472.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10472. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreement based on this part of ISO 10472 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5232:—<sup>1)</sup>, *Graphical symbols for textile machinery*.

ISO 9398-1:1993, *Specifications for industrial laundry machines — Definitions and testing of capacity and consumption characteristics — Part 1: Flatwork ironing machines*.

ISO 9398-2:1993, *Specifications for industrial laundry machines — Definitions and testing of capacity and consumption characteristics — Part 2: Batch drying tumblers*.

ISO 9398-3:1993, *Specifications for industrial laundry machines — Definitions and testing of capacity and consumption characteristics — Part 3: Washing tunnels*.

ISO 9398-4:1993, *Specifications for industrial laundry machines — Definitions and testing of capacity and consumption characteristics — Part 4: Washer-extractors*.

ISO 10472-2:1997, *Safety requirements for industrial laundry machinery — Part 2: Washing machines and washer-extractors*.

ISO 10472-3:1997, *Safety requirements for industrial laundry machinery — Part 3: Washing tunnel lines including component machines*.

ISO 10472-4:1997, *Safety requirements for industrial laundry machinery — Part 4: Air dryers*.

ISO 10472-5:1997, *Safety requirements for industrial laundry machinery — Part 5: Flatwork ironers, feeders and folders*.

ISO 10472-6:1997, *Safety requirements for industrial laundry machinery — Part 6: Ironing and fusing presses*.

ISO/TR 12100-1:1992, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology*.

ISO/TR 12100-2:1992, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles and specifications*.

ISO 13849-1:—<sup>2)</sup>, *Safety of machinery — Safety related parts of control systems — Part 1: General principles for design*.

ISO 13850:1996, *Safety of machinery — Emergency stop — Principles for design*.

ISO 13851:—<sup>2)</sup>, *Safety of machinery — Two-hand control devices — Functional aspects and design principles*.

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1) To be published. (Revision of ISO 5232:1988)

2) To be published.

ISO 13852:1996, *Safety of machinery — Safety distances to prevent danger zones being reached by the upper limbs.*

ISO 13853:—<sup>2)</sup>, *Safety of machinery — Safety distances to prevent danger zones being reached by the lower limbs.*

ISO 14119:—<sup>2)</sup>, *Safety of machinery — Interlocking devices associated with guards — Principles for design and selection.*

IEC 335-1:1991, *Safety of household and similar electrical appliances — Part 1: General requirements.*

IEC 335-2-7:1993, *Safety of household and similar electrical appliances — Part 2: Particular requirements for washing machines.*

IEC 335-2-11:1993, *Safety of household and similar electrical appliances — Part 2: Particular requirements for tumble dryers.*

IEC 335-2-44:1987, *Safety of household and similar electrical appliances — Part 2: Particular requirements for electric ironers.*

EN 563:1994, *Safety of machinery — Temperatures of touchable surfaces — Ergonomics data to establish temperature limit values for hot surfaces.*

EN 614-1:1995, *Safety of machinery — Ergonomic design principles — Part 1: Terminology and general principles.*

EN 746-2:1997, *Industrial thermoprocessing equipment — Part 2: Safety requirements for combustion and fuel handling systems.*

EN 953:1997, *Safety of machinery — General requirements for the design and construction of fixed and movable guards.*

EN 999:—<sup>2)</sup>, *Safety of machinery — Hand/arm speed — Approach speed of parts of the body for the positioning of safety devices.*

EN 1037:1995, *Safety of machinery — Prevention of unexpected start-up.*

EN 1760-1:1997, *Safety of machinery — Pressure sensitive protective devices — Part 1: General principles for the design and testing of pressure sensitive mats and sensitive floors.*

EN 1760-2:—<sup>2)</sup>, *Safety of machinery — Pressure sensitive protective devices — Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars.*

EN 50100-1:—<sup>2)</sup>, *Safety of machinery — Electro-sensitive protective devices — Part 1: General requirements and tests.*

EN 60204-1:1992, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements.* [IEC 204-1:1992, modified]

### 3 Definitions

For the purposes of this part of ISO 10472, the definitions given in ISO 10472-2 to ISO 10472-6 and the following definition apply.

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2) To be published.