

SLOVENSKI STANDARD SIST EN ISO 11111-1:2005

01-maj-2005

Tekstilni stroji – Varnostne zahteve - 1. del: Splošne zahteve (ISO 11111-1:2005)

Textile machinery - Safety requirements - Part 1: Common requirements (ISO 11111-1:2005)

Textilmaschinen - Sicherheitsanforderungen - Teil 1: Gemeinsame Anforderungen (ISO 11111-1:2005)

iTeh STANDARD PREVIEW

Matériel pour l'industrie textile - Exigences de sécurité - Partie 1: Exigences communes (ISO 11111-1:2005)

SIST EN ISO 11111-1:2005

Ta slovenski standard je istoveten zi za zastalog standards sist /53 70 c07 - 39ac - 4373 - 9c3 zastalog standards i standard je istoveten zi za 7/sist - EN ISO 171711-11:2005

ICS:

59.120.01 Tekstilni stroji na splošno Textile machinery in general

SIST EN ISO 11111-1:2005 en

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 11111-1:2005 https://standards.iteh.ai/catalog/standards/sist/f3a70c07-39ae-4373-9c38ba9bff376e87/sist-en-iso-11111-1-2005

EUROPEAN STANDARD

EN ISO 11111-1

NORME EUROPÉENNE EUROPÄISCHE NORM

February 2005

ICS 59.120.01

Supersedes EN ISO 11111:1995

English version

Textile machinery - Safety requirements - Part 1: Common requirements (ISO 11111-1:2005)

Matériel pour l'industrie textile - Exigences de sécurité - Partie 1: Exigences communes (ISO 11111-1:2005)

Textilmaschinen - Sicherheitsanforderungen - Teil 1: Gemeinsame Anforderungen (ISO 11111-1:2005)

This European Standard was approved by CEN on 21 January 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

SIST EN ISO 11111-1:2005

https://standards.iteh.ai/catalog/standards/sist/f3a70c07-39ae-4373-9c38-ba9bff376e87/sist-en-iso-11111-1-2005



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

This document (EN ISO 11111-1:2005) has been prepared by Technical Committee ISO/TC 72 "Textile machinery and machinery for dry-cleaning and industrial laundering" in collaboration with Technical Committee CEN/TC 214 "Textile machinery and machinery for dry-cleaning and industrial laundry", 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 August 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

This document supersedes EN ISO 11111:1995.

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 EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZB, which is an integral part 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

SIST EN ISO 11111-1:2005 https://standards.iteh.ai/caEndgrsement.notice</mark>07-39ae-4373-9c38-

The text of ISO 11111-1:2005 has been approved by CEN as EN ISO 11111-1:2005 without any modifications.

NOTE Normative references to International Standards are listed in annex ZA (normative).

ANNEX ZA

(normative)

List of ISO and IEC standards and corresponding EN Standards

ISO or IEC Standard	Corresponding to
ISO 5232	_
ISO 9902-1	EN ISO 9902-1
ISO 9902-2	EN ISO 9902-2
ISO 9902-3	EN ISO 9902-3
ISO 9902-4	EN ISO 9902-4
ISO 9902-5	EN ISO 9902-4
ISO 9902-6	EN ISO 9902-6
ISO 9902-7	EN ISO 9902-7
ISO 10218:1992 AND A	RD PRE VEN 775 1992
ISO 11111-2:2005	EN ISO 11111-2:2005
ISO 11111-3:2005	EN ISO 11111-3:2005
ISO 11111-4:2005 <u>SIST EN ISO 1</u>	1111-1:2005 EN ISO 11111-4:2005
1 01 00 = 6 0 = 7 1	ls/sist/f3a70c07EN 4SO3711194-5:2005
ISO 11111-6:2005	EN ISO 11111-6:2005
ISO 11111-7:2005	EN ISO 11111-7:2005
ISO/TR 11688-1:1995	EN ISO 11688-1:1998
ISO 11691	EN ISO 11691
ISO 11821	EN ISO 11821
ISO 12100-1:2003	EN ISO 12100-1:2003
ISO 12100-2:2003	EN ISO 12100-2:2003
ISO 13849-1:1999	EN 954-1:1996
ISO 13489-2:2003	EN ISO 13849-2:2003
ISO 13850:1996	EN 418:1992
ISO 13851:2002	EN 574:1996
ISO 13852:1996	EN 294:1992
ISO 13853:1998	EN 811:1996
ISO 13854:1996	EN 349:1993
ISO 14118:2000	EN 1037:1995
ISO 14119:1998	EN 1088:1995
ISO 14121:1999	EN 1050:1996

ISO 14122-1	EN ISO 14122-1
ISO 14122-2	EN ISO 14122-2
ISO 14122-3	EN ISO 14122-3
ISO 14122-4	EN ISO 14122-4
ISO 14123-1:1998	EN 626-1:1994
ISO 14123-2:1998	EN 626-2:1996
ISO 14163	EN ISO 14163
ISO 15667	EN ISO 15667
CEI 60204-1:2000	EN 60204-1:1997
CEI 60447:1993	EN 60447:1993
CEI 60947-5-1:1997	EN 60947-5-1:1997
CEI 61310-1:1995	EN 61310-1 :1995
CEI 61496-1:1997	EN 61496-1:1997
CEI 61496-3:2001	EN 61496-3:2001
_	EN 563:1994+AC:1994+A1:1999
_	EN 614-1
ITAL STANDAI	EN 953:1997
II ell STANDAL	EN 982:1996
_ (standard	s.iteh.ai) EN 983:1996
— SISTEN ISO 1	EN 999:1998
https://standards.iteh.ai/catalog/standar	ds/sist/f3a70c07-39ae=4375-9538-
_ ba9bff376e87/sist-en-	iso-11111-1-2005EN 1005-2:2003
_	EN 1005-3
_	prEN 1005-4:2002
_	EN 1127-1:1997
ISO 13856-1:2001	EN 1760-1:1997
_	EN 1760-2:2001
_	EN 12198-1
_	EN 12198-3
_	EN 12464-1
IEC 60825-1:1993/A2:2001	EN 60825-1:1994/A2 :2001
·	

ANNEX ZB

(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 to conforming to Essential Requirements of the New Approach Directive Machinery Directive 98/37/EC amended by Directive 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 corresponding Essential Requirements 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.

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN ISO 11111-1:2005</u> https://standards.iteh.ai/catalog/standards/sist/f3a70c07-39ae-4373-9c38-ba9bff376e87/sist-en-iso-11111-1-2005

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 11111-1:2005 https://standards.iteh.ai/catalog/standards/sist/f3a70c07-39ae-4373-9c38ba9bff376e87/sist-en-iso-11111-1-2005

INTERNATIONAL STANDARD

ISO 11111-1

First edition 2005-02-15

Textile machinery — Safety requirements —

Part 1: Common requirements

Matériel pour l'industrie textile — Exigences de sécurité —

iTeh STPartie 1. Exigences communes IEW (standards.iteh.ai)

<u>SIST EN ISO 11111-1:2005</u> https://standards.iteh.ai/catalog/standards/sist/f3a70c07-39ae-4373-9c38-ba9bff376e87/sist-en-iso-11111-1-2005



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN ISO 11111-1:2005</u> https://standards.iteh.ai/catalog/standards/sist/f3a70c07-39ae-4373-9c38-ba9bff376e87/sist-en-iso-11111-1-2005

© ISO 2005

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Forewo	Forewordv		
Introdu	ıction	v	
1	Scope	1	
2	Normative references	2	
3	Terms and definitions	5	
4	List of significant hazards	6	
5	Safety requirements and/or measures for frequently occurring hazards		
5.1	General	6	
5.2 5.3	Safety requirements for the different phases of "life" of a machine		
5.3 5.3.1	General		
5.3.2	Reduction of risks by design		
5.3.3	Reduction of risks by safeguarding		
5.4	Safety requirements for various hazards	g	
5.4.1	General Electrical hazards en STANDARD PREVIEW	9	
5.4.2	Electrical hazards en S. I. A. N. D. A. R. D. P. R. F. V. I. F. W.	9	
5.4.3	Mechanical hazards	13	
5.4.4	Static electricity	16	
5.4.5	Fluid power systems and components		
5.4.6	Extreme temperaturesSIST EN 180-11111-12005		
5.4.7	Noise reduction/standards.iteh.ai/catalog/standards/sist/i3a70c07=39ae-4973-9c38-	17	
5.4.8	Lasers	18	
5.4.9 5.4.10	Radiation		
5.4.11	Fire		
5.4.12	Explosion		
5.4.13	Ergonomics		
5.5	Devices for special operation		
5.6	Access to elevated operating positions and servicing points		
5.7	Measures for the escape and rescue of trapped persons		
5.8	Fitting of parts		
6	Significant hazards and corresponding safety requirements and/or measures for certain		
•	machine elements and their combinations	22	
6.1	General		
6.2	Drive and transmission enclosures		
6.3	Particularly dangerous machine elements	23	
6.4	Machine elements which normally do not require safeguarding	24	
6.4.1	Low risk machine elements		
6.4.2	Machine elements out of reach		
6.5	Rollers		
6.6	Rotating shafts		
6.7	Wheels		
6.7.1	Running wheels		
6.7.2	Handwheels	_	
6.8 6.8.1	Doors and lids	_	
6.8.2	Opening and closing		
6.8.3	Locking and unlocking of doors or lids under pressure		
6.8.4	Entry into machines, vessels or items of plant		
	•		

ISO 11111-1:2005(E)

6.9	Observation windows	34
6.10	Conveyors	35
6.11	Fans fitted to machines	35
6.12	Cutting devices	36
6.13	Working platforms and walkways on machines, work areas adjacent to tanks and pits	37
6.14	Radiators or burners for the direct heat treatment of yarn and fabric	
6.15	Devices for steam heating of liquors	
6.16	Liquor preparatory machinery incorporating stirrers	
6.17	Dancing rollers	40
6.18	Batchers	
6.19	Mangles	
6.20	Pilers and plaiters	
6.21	Automatic machines and equipment	
6.21.1	General	
6.21.2	Automatic guards	
6.21.3	Mobile machines, handling devices, operational parts	
6.21.4	Mobile machines and handling devices which could leave their defined path	
6.21.5	Floor-mounted and overhead rails (tracks)	
6.21.6	Overhead transport of process material	
6.22	Complex installations	51
7	Verification of the safety requirements and/or measures	51
8	Information concerning machine use	51
8.1	Signals and warning devices	51
8.2	Instruction handbook	51
8.3	Marking	52
Annex	A (normative) Specifications	53
•	A (normative) Specifications (Standards.iteh.ai) B (normative) Surface temperatures	
Annex	B (normative) Surface temperatures	55
	C (normative) Verification SIST-EN-ISO-1-1-1-1-2005	
Annex	D (normative) Nip between roller and fabric/standards/sist/f3a70c07-39ae-4373-9c38-	68
Annex	ba9bff376e87/sist-en-iso-11111-1-2005 E (informative) List of machines and equipment used in the textile industry but not within	
J A	the scope of this part of ISO 11111	69
	·	
Riplio	yraphy	70

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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

ISO 11111-1 was prepared by Technical Committee ISO/TC 72, Textile machinery and machinery for drycleaning and industrial laundering, Subcommittee SC 8, Safety requirements for textile machinery.

This first edition of ISO 11111-1, together with ISO 11111-2, ISO 11111-3, ISO 11111-4, ISO 11111-5, ISO 11111-6 and ISO 11111-7, cancels and replaces ISO 11111:1995, which has been technically revised.

ISO 11111 consists of the following parts, under the general title *Textile machinery* — *Safety requirements*:

- Part 1: Common requirements iteh.ai/catalog/standards/sist/f3a70c07-39ae-4373-9c38-ba9bff376e87/sist-en-iso-11111-1-2005
- Part 2: Spinning preparatory and spinning machines
- Part 3: Nonwoven machinery
- Part 4: Yarn processing, cordage and rope manufacturing machinery
- Part 5: Preparatory machinery to weaving and knitting
- Part 6: Fabric manufacturing machinery
- Part 7: Dyeing and finishing machinery

Introduction

ISO 11111-1 to ISO 11111-7 were prepared simultaneously by ISO/TC 72 and CEN/TC 214 and adopted under the Vienna Agreement in order to obtain identical standards on technical safety requirements for the design and construction of textile machinery.

ISO 11111 as a whole is intended for use by any person concerned with the safety of textile machinery, for example, textile machinery designers, manufacturers and systems integrators. It is also of interest to users of textile machines and safety experts.

This document is a type C standard as stated in ISO 12100-1. The various parts of ISO 11111 deal with significant hazards generated by machines used in the textile industry. The machinery concerned and the extent to which hazards are covered are indicated in the scope of this standard.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence.

For machines or machine elements not dealt with in the relevant parts of ISO 11111, the designer is to perform a risk assessment according to ISO 14121 and evolve means for reducing the risk from significant hazards.

This part of ISO 11111 contains a summary of safety requirements and/or measures for frequently occurring hazards of textile machinery (see Clause 5) which apply whenever referred to in this, or the other parts, of ISO 11111.

Significant hazards and corresponding safety requirements and/or measures for certain machine elements (e.g. rollers) and their combination of textile machines are also described (see Clause 6).

The various parts of ISO 11111 address significant hazards and corresponding safety requirements and/or measures for specific types of textile machines. As far as possible, these are treated by way of reference to Clauses 5 and 6 of this part of ISO 11111 and other cross-references (see general safety requirements), thus reducing considerably the volume by avoiding many repetitions. The standard for a specific textile machine will normally consist of this part of ISO 11111 and the specific part relevant to that machine. ISO 11111-2 to ISO 11111-7 may also contain exceptions or additions to the requirements given in this part of ISO 11111 (see specific safety requirements).

Textile machinery — Safety requirements —

Part 1:

Common requirements

1 Scope

- **1.1** This part of ISO 11111 specifies safety requirements for frequently occurring hazards common to the types of textile machinery and the hazards of certain machine elements covered by ISO 11111-2 to ISO 11111-7.
- **1.2** It is applicable to machinery plant and related equipment intended to be used in the textile industry for the following:
- the opening, cleaning, blending, carding, preparation subsequent to carding, spinning and other processing of fibres (staple and filament) and other materials to form yarn or nonwoven material (including felts);
- the winding, doubling, twisting, texturing, etc. of yarns and the processing of yarns preparatory to weaving and knitting;

SIST EN ISO 11111-1:2005

- the weaving, knitting/lace-making and similar utilization of yarn, etc!; to form fabric; ba9bff376e87/sist-en-iso-11111-1-2005
- the formation of braid, cord, strand, rope, twine, net, etc., except take-up reels of stranding and laying machinery;
- processes including the pretreatment, bleaching, dyeing, printing and finishing of fibre, yarn, fabric, braid, cord, etc., and final assembly for despatch;
- the piece dyeing of made-up goods;
- finishing of warp and weft knitting, including hosiery, other than assembly of the finished product (e.g. sewing);
- carpet manufacture, by weaving, tufting and other processes.

This part of ISO 11111 applies to all machinery, plant and equipment used during the processes listed above, including equipment to enable automated operation of the machines and processes in either free-standing or complex installations, such as pneumatic fibre transportation, but excluding other transportation between the interfaces of the machines.

NOTE 1 The standard for a specific textile machine will normally consist of two parts: this part of ISO 11111 and the specific part of ISO 11111 relevant to that machine. However, in the case of nonwoven lines, which is covered by ISO 11111-3, ISO 11111-2, ISO 11111-6, and ISO 11111-7 are also to be taken into account.

This ISO 11111 does not deal with specific requirements for pressure containment.

NOTE 2 In the EU and EFTA specific Directives for pressure vessels and electromagnetic compatibility among others exist.