

Tekstiilimasinad. Mürakatsekood. Osa 1: Ühtsed nõuded

Textile machinery - Noise test code - Part 1:
Common requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 9902-1:2001 sisaldab Euroopa standardi EN ISO 9902-1:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 19.12.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 9902-1:2001 consists of the English text of the European standard EN ISO 9902-1:2001.</p> <p>This document is endorsed on 19.12.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard gives requirements for carrying out efficiently and under standardized conditions the determination, declaration and verification of basic noise emission quantities common to the types of textile machinery dealt with in EN ISO 9902-2 to EN ISO 9902-7. It specifies noise measurement methods, as well as the mounting and operation conditions, to be used for the test code.</p>	<p>Scope:</p> <p>This standard gives requirements for carrying out efficiently and under standardized conditions the determination, declaration and verification of basic noise emission quantities common to the types of textile machinery dealt with in EN ISO 9902-2 to EN ISO 9902-7. It specifies noise measurement methods, as well as the mounting and operation conditions, to be used for the test code.</p>
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Võtmesõnad: acoustic measurement, acoustic testing, acoustics, determination, noise emissions, noise measurements, sound intensity, sound levels, sound sources, specification (approval), specifications, testing, tests, textile machinery

English version

Textile machinery – Noise test code

**Part 1: Common requirements
(ISO 9902-1 : 2001)**

Matériel pour l'industrie textile –
Code d'essai acoustique – Partie 1:
Exigences communes
(ISO 9902-1 : 2001)

Textilmaschinen –
Geräuschmessverfahren – Teil 1:
Gemeinsame Anforderungen
(ISO 9902-1 : 2001)

This European Standard was approved by CEN on 2001-03-15.

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 Management Centre or to any CEN member.

The European Standards exist 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

International Standard

ISO 9902-1 : 2001 Textile machinery – Noise test code – Part 1: Common requirements, which was prepared by ISO/TC 72 'Textile machinery and machinery for dry-cleaning and industrial laundering' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 214 'Textile machinery and machinery for dry-cleaning and industrial laundry', the Secretariat of which is held by SNV, as a European Standard.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the relevant EU Directive.

For relationship with this directive, see Annex ZB.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by September 2001 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 9902-1 : 2001 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

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

This edition of ISO 9902-1, together with ISO 9902-2, ISO 9902-3, ISO 9902-4, ISO 9902-5, ISO 9902-6 and ISO 9902-7, supersedes ISO 9902:1993, which has been technically revised.

ISO 9902 comprises the following parts, under the general title 'Textile machinery – Noise test code':

Part 1: Common requirements

Part 2: Spinning preparatory and spinning machinery

Part 3: Nonwoven machinery

Part 4: Yarn processing, cordage and rope manufacturing machinery

Part 5: Weaving and knitting preparatory machinery

Part 6: Fabric manufacturing machinery

Part 7: Dyeing and finishing machinery

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Introduction

Basic noise emission quantities for textile machinery include emission sound pressure levels at work stations and the sound power level. The determination of these quantities (i.e. the test) is necessary for:

- manufacturers to be able to declare the noise emitted,
- machine users to be able to compare the noise emitted by machines in the group concerned,
- experimental verification of the noise control measures taken at the design stage, and
- estimation of noise immission (exposure) in the workplace or at the work station.

ISO 9902 constitutes a comprehensive noise test code for textile machinery. Its use will ensure the reproducibility of the determination of the noise emission quantities within specified limits determined by the grade of accuracy.

1 Scope

This part of ISO 9902 gives requirements for carrying out, efficiently and under standardized conditions, the determination, declaration and verification of basic noise emission quantities common to the types of textile machinery dealt with in ISO 9902-2 to ISO 9902-7. It specifies noise measurement methods, as well as the mounting and operating conditions, to be used for this noise test code.

This part of ISO 9902 is applicable to all machinery, plant and equipment given according to ISO 11111, including equipment enabling the automated operation of machines and processes for single machines or complex installations, but excluding equipment for transportation between the machine interfaces.

NOTE 1 The measurement of the peak, C-weighted, instantaneous sound pressure value at workstations is not dealt with in this part of ISO 9902, since peak sound pressures sufficient to require such measurement are not to be expected from textile machines.

NOTE 2 For each textile machine, two parts of ISO 9902 will normally need to be used: this part and the relevant, specific part of ISO 9902.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 9902. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 9902 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3740:2000, *Acoustics — Determination of sound power levels of noise sources — Guidelines for the use of basic standards.*

ISO 3743-1:1994, *Acoustics — Determination of sound power levels of noise sources — Engineering methods for small, movable sources in reverberant fields — Part 1: Comparison method for hard-walled test rooms.*

ISO 3744:1994, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Engineering method in an essentially free field over a reflecting plane.*

ISO 3746:1995, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Survey method using an enveloping measurement surface over a reflecting plane.*

ISO 3747:2000, *Acoustics — Determination of sound power levels of noise sources using sound pressure — Comparison method in situ.*

ISO 4871:1996, *Acoustics — Declaration and verification of noise emission values of machinery and equipment.*

ISO 7574-1:1985, *Acoustics — Statistical methods for determining and verifying stated noise emission values of machinery and equipment — Part 1: General considerations and definitions.*

ISO 9614-1:1993, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 1: Measurement at discrete points.*

ISO 9614-2:1996, *Acoustics — Determination of sound power levels of noise sources using sound intensity — Part 2: Measurement by scanning.*

ISO 9902 (parts 2 to 7), *Textile machinery — Noise test code.*

ISO 11111:1995, *Safety requirements for textile machinery.*

ISO 11200:1995, *Acoustics — Noise emitted by machinery and equipment — Guidelines for the use of basic standards for the determination of emission sound pressure levels at a work station and at other specified positions.*

ISO 11201:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Engineering method in an essentially free field over a reflecting plane.*

ISO 11202:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Survey method in situ.*

ISO 11203:1995, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions from the sound power level.*

ISO 11204:1995, *Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Method requiring environmental corrections.*

EN 292-2:1991/A.1:1995, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles and specifications.*

3 Terms and definitions

For the purposes of this part of ISO 9902, the terms and definitions given in ISO 4871 and the following apply.

3.1

A-weighted sound power level

L_{WA}

ten times the logarithm to the base 10 of the ratio of the A-weighted sound power radiated by the source under test to the reference sound power [$W_0 = 1 \text{ pW}$ (10^{-12} W)]

NOTE 1 Adapted from ISO 3740:2000.

NOTE 2 It is expressed in decibels.

NOTE 3 Time-averaged values of sound pressure levels are the basis for calculation of sound power levels. This is not the case for ISO 9614-1 and ISO 9614-2.

3.2

A-weighted emission sound pressure level

L_{pA}

ten times the logarithm to the base 10 of the ratio of the square of the A-weighted emission sound pressure to the square of the reference sound pressure [$p_0 = 20 \text{ } \mu\text{Pa}$ ($2 \times 10^{-5} \text{ Pa}$)]

NOTE 1 Adapted from ISO 3740:2000.

NOTE 2 It is expressed in decibels.