INTERNATIONAL STANDARD

ISO 9902-7

First edition
2001-03-15

Textile machinery — Noise test code —

Part 7: Dyeing and finishing machinery

Matériel pour l'industrie textile — Code d'essai acoustique —

Partie 7: Machines de teinture et de finissage

Reference number
ISO 9902-7:2001(E)

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.ch
Web www.iso.ch

Printed in Switzerland

Contents

Page

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 3.

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 part of ISO 9902 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 9902-7 was prepared by Technical Committee ISO/TC 72, *Textile machinery and machinery for dry-cleaning and industrial laundering*, Subcommittee SC 8, *Safety requirements for textile machinery*.

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

ISO 9902 consists of 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*

Textile machinery — Noise test code —

Part 7: Dyeing and finishing machinery

1 Scope

This part of ISO 9902, taken together with ISO 9902-1, specifies the mounting, operating and measuring conditions required for the measurement, declaration and verification of noise emitted by dyeing and finishing machines.

It is applicable to engineering (grade 2) and survey (grade 3) methods, in accordance with the International Standards to which it makes normative reference, and to machines of different types used as defined in ISO 1506 for

— preparation,

— dyeing,

— printing,

— fixing, wetting and drying,

— finishing, and

— making-up or presentation.

It is not applicable to machines for hydro (centrifugal) extraction.

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 1506:1982, *Textile machinery — Dyeing, finishing and allied machinery — Classification and nomenclature.*

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 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 9902-1:2000, *Textile machinery — Noise test code — Part 1: Common requirements.*

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 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.*

3 Terms and definitions

For the purposes of this part of ISO 9902, the terms and definitions given in ISO 9902-1 apply.

4 Defining the test object

See Tables 1 to 6 of this part of ISO 9902 and clause 4 of ISO 9902-1:2001.

5 Sound power level determination

5.1 International Standards required for basic measurements

5.1.1 General

See 5.1 of ISO 9902-1:2001.

5.1.2 Determination by measuring sound intensity

Determination of the A-weighted sound power level, L_{WA}, using sound intensity measurements shall be in accordance with ISO 9614-1 (discrete points) or ISO 9614-2 (scanning).

5.1.3 Determination using emission sound pressure levels on a measurement surface

Determination of the A-weighted sound power level, L_{WA}, by measurement of A-weighted emission sound pressure levels on a prescribed measurement surface shall be in accordance with one of the following:

— ISO 3744,

— ISO 3747, or

— ISO 3746, but only where use of ISO 3744 or ISO 3747 is not practicable.

5.2 Very large machines

See 5.2 of ISO 9902-1:2001. Very large machines are designated by the letter “L” in Tables 1 to 6 of this part of ISO 9902.

6 Emission sound pressure level determination

6.1 International Standards required for basic measurements

See 6.1 of ISO 9902-1:2001.

The A-weighted emission sound pressure level, L_{pA}, shall be determined in accordance with one of the following:

— ISO 11201,

— ISO 11204, or

— ISO 11202, but only where use of ISO 11201 or 11204 is not practicable.

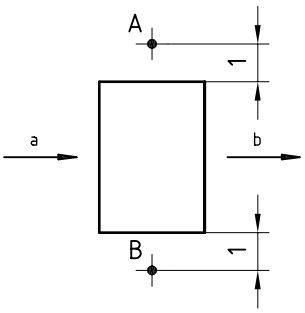
6.2 Selection of work station and other specified positions

See 6.2 of ISO 9902-1:2001.

There are 11 options, designated d) to n)[1], for defining a work station for dyeing and finishing machinery. For multi-tier machines it is sufficient to make the measurement at ground level, unless the machine is operated mainly from the upper tier. The options for particular machines are specified in Tables 1 to 6. All measurements shall be made at a height of 1,60 m above the floor or working platform (see 6.1 of ISO 9902-1:2001).

d) Two measurement positions, one on each side of the machine, in mid-position, as shown in Figure 1.

Dimensions in metres



A and B are the measurement positions.

a Cloth entry

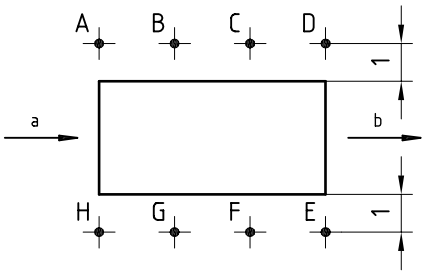
b Cloth exit

Figure 1 — Option d)

1) Continues the numeration begun in clause 4 of ISO 9902-1:2001.

e) Four measurement positions, each on a side of the machine and parallel to the cloth passage direction; the positions shall be equally spaced, as shown in Figure 2.

Dimensions in metres



A to E are the measurement positions.

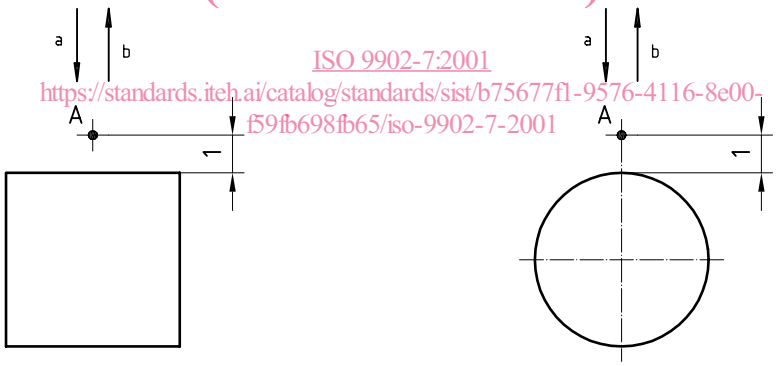
a Cloth entry

b Cloth exit

Figure 2 — Option e)

f) A single measurement position in the middle of the loading side, as shown in Figure 3.

Dimensions in metres



A is the measurement position.

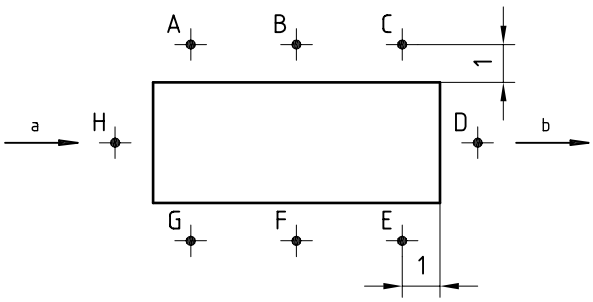
a Cloth entry

b Cloth exit

Figure 3 — Option f)

g) Eight measurement positions, in a line around the machine or plant, as shown in Figure 4.

Dimensions in metres



A to H are the measurement positions.

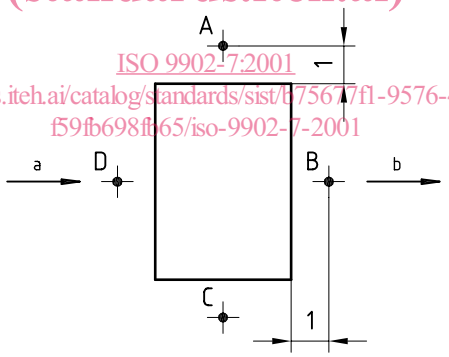
a Cloth entry

b Cloth exit

Figure 4 — Option g)

h) Four measurement positions, each in the middle of a side of the machine, as shown in Figure 5.

Dimensions in metres



A to D are the measurement positions.

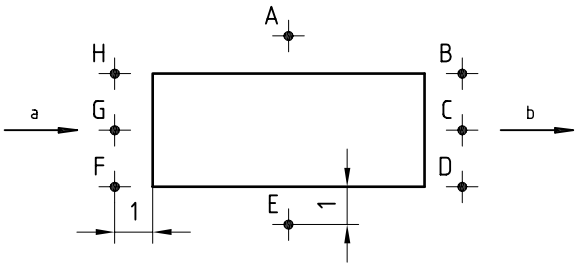
a Cloth entry

b Cloth exit

Figure 5 — Option h)

i) Eight measurement positions in a line around the machine, as shown in Figure 6.

Dimensions in metres



A to H are the measurement positions.

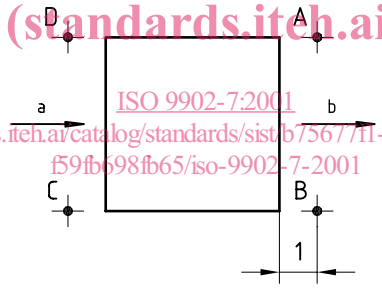
a Cloth entry

b Cloth exit

Figure 6 — Option i)

j) Four measurement positions, adjacent to the corner points of the machine, as shown in Figure 7.

Dimensions in metres



A to D are the measurement positions.

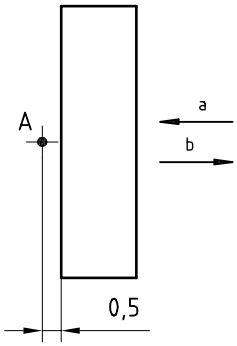
a Cloth entry

b Cloth exit

Figure 7 — Option j)

k) A single measurement position in the middle of the operating side and at a distance of 0,5 m, as shown in Figure 8.

Dimensions in metres



A is the measuring position.

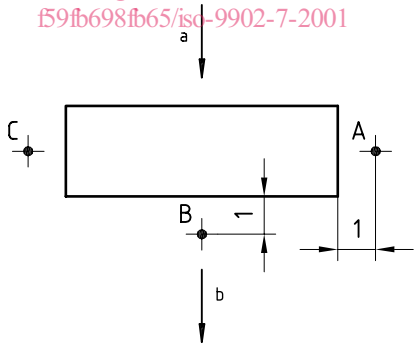
a Cloth entry

b Cloth exit

Figure 8 — Option k)

l) Three measurement positions, one in the middle of each side of the machine, parallel to the cloth passage direction, and the other in the middle of the doffing side, as shown in Figure 9.

Dimensions in metres



A, B and C are the measuring positions.

a Cloth entry

b Cloth exit

Figure 9 — Option l)