



SLOVENSKI STANDARD
SIST EN 352-5:2003/A1:2006

01-maj-2006

Varovala sluha - Varnostne zahteve in preskušanje - 5. del: Naušniki za zmanjšanje delovnega hrupa

Hearing protectors - Safety requirements and testing - Part 5: Active noise reduction ear-muffs

Gehörschützer - Sicherheitstechnische Anforderungen und Prüfungen - Teil 5:
Kapselgehörschützer mit aktiver Geräuschkompensation

Protecteurs individuels contre le bruit - Exigences de sécurité et essais - Partie 5 : Serre-tête à atténuation active du bruit

[SIST EN 352-5:2003/A1:2006](https://standards.iteh.ai/catalog/standards/sist/e08a7e8c-c5c1-47e8-a496-ecda489009e6/sist-en-352-5-2003-a1-2006)

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Ta slovenski standard je istoveten z: EN 352-5:2002/A1:2005

ICS:

13.340.20 Varovalna oprema za glavo Head protective equipment

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 352-5:2002/A1

December 2005

ICS 13.340.20

English Version

Hearing protectors - Safety requirements and testing - Part 5: Active noise reduction ear-muffs

Protecteurs individuels contre le bruit - Exigences de
sécurité et essais - Partie 5 : Serre-tête à atténuation active
du bruit

Gehörschützer - Sicherheitstechnische Anforderungen und
Prüfungen - Teil 5: Kapselgehörschützer mit aktiver
Geräuschkompensation

This amendment A1 modifies the European Standard EN 352-5:2002; it was approved by CEN on 3 November 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant 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 amendment 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.

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

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

EN 352-5:2002/A1:2005 (E)

Foreword

This European Standard (EN 352-5:2002/A1:2005) has been prepared by Technical Committee CEN/TC 159 "Hearing protectors", the secretariat of which is held by SIS.

This Amendment to the European Standard EN 352-2:2002 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

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.

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Page 6, subclause 4.3.3

Replace the existing text of 4.3.3 with the following:

4.3.3 Maximum Sound Pressure Level for linear operation

The highest level of the external test noise for which the sound pressure level at the subject's ear remains linearly related to the external sound pressure level, for all subjects and samples tested, up to a maximum external sound pressure level of 110 dB, shall be determined in accordance with 5.3 and reported in wearer information (6.1).

Page 7, subclause 6.1

Replace the existing text of the first sentence of 6.1 with the following:

6.1 Wearer information

The following information for the wearer (in addition to that required by EN 352-1 or EN 352-3 as appropriate) shall be supplied with the ear-muffs:

Page 12, Annex B, subclauses B.2, B.3 and B.4

Replace the existing text of B.2, B.3 and B.4 with the following:

B.2 Test sound **iTeh STANDARD PREVIEW**

As test sound for determining the diffuse-field related sound pressure levels, a broad band noise spectrum should be used. An adequate electrical signal to noise ratio across the range of frequencies tested should be present, and some minor equalisation of the test sound may be necessary to achieve this.

B.3 Test method <https://standards.iteh.ai/catalog/standards/sist/e08a7e8c-c5c1-47e8-a496-ecda489009e6/sist-en-352-5-2003-a1-2006>

As an interim test procedure, the use of EN ISO 11904-1 is proposed. A general test procedure following this European Standard is described in EN 13819-2.

For the purposes of this European Standard, the active attenuation of the ear-muff, comprising the difference in diffuse-field related sound pressure level at the wearer's ear between the active mode and the passive mode, should be measured using the microphone in the real ear technique (MIRE) (open ear canal) described in EN ISO 11904-1. The measured sound levels should be corrected for the diffuse-field frequency response of the subject's ear canal to give the diffuse-field related sound pressure level.

Eight subjects, with measurements made on both ears, should be used.

For the test noise, set at an overall sound pressure level in the range 85 dB to 95 dB, determine the mean and standard deviation, for all the samples, of the active attenuation at third-octave centre frequencies between 125 Hz and 8 kHz (optionally, 63 Hz may be included).

If any subject reports sustained oscillation or acoustic malfunction when the ANR system is switched on, the subject shall be asked to switch the ANR system off, remove the ear-muffs and refit them, according to the manufacturer's instructions. If the oscillation persists when the ANR system is switched on again, the subject shall be withdrawn and the occurrence of sustained oscillation or acoustic malfunction shall be reported (see B.4 e)).

For each subject and each ear, starting at the overall sound pressure level set, and monitoring the sound pressure level at the subject's ear in the 125 Hz octave band, increase the external sound pressure level in 5 dB steps. Check that the sound pressure level at the ear also increases by 5 dB. If this linear relationship is still maintained at an external sound pressure level of 110 dB, stop the test.

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Report the highest external sound pressure level for which this linear relationship remains valid for all samples and subjects. If it remains valid at an external sound pressure level of 110 dB, state that this is the case.

B.4 Report

- a) Report the mean active attenuation for each test frequency, for all samples and subjects tested.
- b) Report the standard deviation of the active attenuation for each test frequency, for all samples and subjects tested.
- c) Report the assumed protection values of total (active plus passive) attenuation, for each test frequency, for all samples and subjects tested. Passive attenuation data for this purpose shall be that obtained in accordance with EN 352-1 (or EN 352-3, as appropriate). The standard deviation of the total (active and passive) attenuation at each test frequency shall be calculated using the "square root of the sum of the squares" procedure. Thus, at each test frequency, the assumed total protection value will be the sum of the mean values of passive and active attenuation, minus the combined ("square root of the sum of the squares") standard deviation.
- d) Report the highest external sound pressure level for which the sound pressure level at the ear remains linearly related, for all samples and subjects tested. If the test was stopped at 110 dB, state "...remained linearly related up to 110 dB, the highest level tested".
- e) Report whether any subjects has identified oscillation or acoustic malfunction in the course of testing.

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