

**SLOVENSKI STANDARD**  
**SIST EN 28662-2:2000/A1:2000**  
**01-april-2000**

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**Hand-held portable tools - Measurement of vibrations at the handle - Part 2:  
Chipping hammers and riveting hammers - Amendment A1 (ISO 8662-2:1992)**

Hand-held portable tools - Measurement of vibrations at the handle - Part 2: Chipping hammers and riveting hammers - Amendment A1 (ISO 8662-2:1992)

Handgehaltene motorbetriebene Maschinen - Messung mechanischer Schwingungen am Handgriff - Teil 2: Meißelhämmer und Niethämmer (ISO 8662-2:1992)

Machines a moteur portatives - Mesurage des vibrations au niveau des poignées - Partie 2: Marteaux burineurs et marteaux riveurs (ISO 8662-2:1992)

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**Ta slovenski standard je istoveten z: EN 28662-2:1994/A1:1995**

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**ICS:**

13.160	Vpliv vibracij in udarcev na ljudi	Vibration and shock with respect to human beings
25.140.01	Ü[ } æ[ !; å æ[ æ[ ] [ z} [	Hand-held tools in general

**SIST EN 28662-2:2000/A1:2000**      **en**

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EUROPEAN STANDARD

EN 28662-2:1994/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 1995

ICS 13.160; 25.140.10

Descriptors: tools, power-operated tools, portable equipment, portable electric machine tools, pneumatic equipment, hydraulic equipment, hand tools, chipping hammers, riveting hammers, vibration, tests, vibration tests

English version

**Hand-held portable tools - Measurement of vibrations at the handle - Part 2: Chipping hammers and riveting hammers (ISO 8662-2:1992)**

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This amendment 1 modifies the European Standard EN 28662-2:1994. This amendment was approved by CEN on 1995-05-18. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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.

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 Central Secretariat has the same status as the official versions.

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<https://standards.iteh.ai/catalog/standards/sist/7e9cd4ff-7f3e-4de2-b41f-88c7ca6ca34b/sist-en-28662-2-1994-a1-2000>

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

## Foreword

The text of this Amendment EN 28662-2:1994/A1:1995 to the European Standard EN 28662-2:1994 has been prepared by the Technical Committee CEN/TC 231 "Mechanical vibration and chock" the secretariat of which is held by DIN.

This Amendment to the European Standard EN 28662-2:1994 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 Directive(s).

This Amendment to the European Standard EN 28662-2:1994 shall be given the status of a National Standard, either by publication of an identical text or by endorsement, at the latest by February 1996, and conflicting national standards shall be withdrawn at the latest by February 1996.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

## Endorsement Notice

The text of the International Standard ISO 8662-2:1992 has been approved by CEN as a European Standard with the following common modifications:

The following common modifications have to be made to EN 28662-2:1994.

- Scope, delete the end of the 2<sup>nd</sup> paragraph: *or driven by means of an internal combustion engine*
- Replace the last paragraph of the scope by the following:  
*It is intended that the results obtained can be used to compare different power tools or different models of the same type of power tools.*
- Subclause 5.1, delete the 2<sup>nd</sup> sentence, note 3 and the corresponding annex A.
- Figure 1, modify the title into: *Position and example of fastening of the transducer and measurement direction*
- Subclause 6.2, modify the 2<sup>nd</sup> paragraph as follows:  
*The energy absorber consists of a steel tube which is firmly mounted on a rigid base plate having a mass according to table 1 to prevent the tool from jumping, and filled with balls of hardened steel. At the top of the steel tube, resting on the balls, is inserted a test tool on which the power tool works. The test tool should be preferably made in one part but it is acceptable for vibration measurements to have this tool made of two parts as shown in figure 3. The steel tube shall have a hardness of 60 HRC  $\pm$  2 HRC, the anvil and test tool shall have a hardness of 55 HRC  $\pm$  2 HRC and the steel balls shall have a hardness of 62 HRC  $\pm$  3 HRC.*

- Table 1, replace by the following:

Nominal shank diameter $d$ mm	Steel tube diameter $D$ mm $\pm 1$	Nominal steel ball diameter mm	Ball column height $H$ mm $\pm 4$	Minimum mass of the base kg
$d \leq 13$	20	3,96 or 4	50	100
$d > 13$	40	3,96 or 4	100	200

- Replace figure 3 by the following:

Dimensions in millimetres

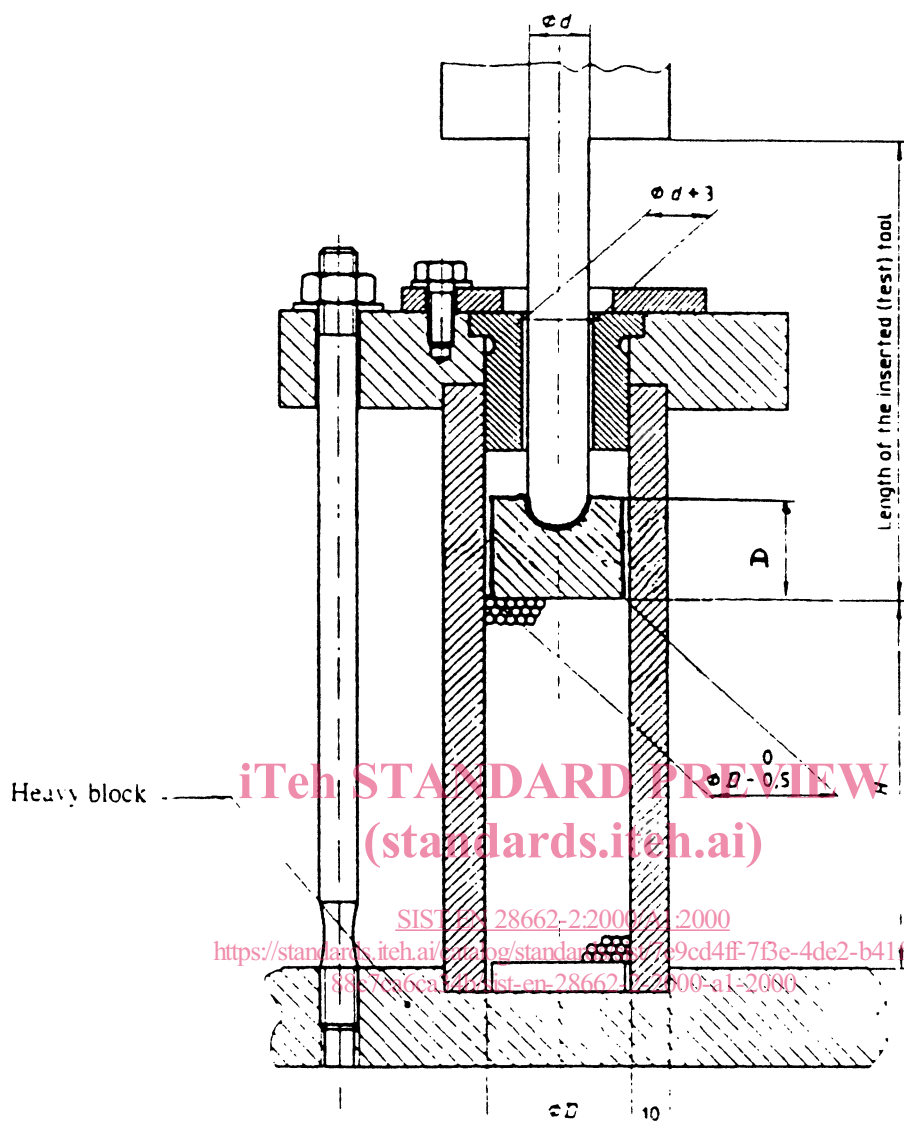


Figure 3 — Steel ball energy absorber

- Subclause 6.3, replace the 2<sup>nd</sup> paragraph by the following: *As a guide, this is generally achieved by using a feed force,  $F_A$ , to be applied vertically, expressed in newtons, approximately 40 times the value of the mass, in kilograms, of the power tool. The feed force should be chosen within the range 80 N to 200 N, and shall be maintained within a tolerance of  $\pm 10\%$  of the chosen value.*
- Subclause 6.3, note 4, correct the feed force from 105 N to 140 N.
- Subclause 7.1, delete the 4<sup>th</sup> paragraph.
- Subclause 7.2, 2<sup>nd</sup> paragraph, replace 8 s by 16 s.
- Add a new subclause 7.5 as follows:

#### **7.5 Evaluation of results**

*The base for declaration is the arithmetic mean of the mean value obtained for each of the three operators.*

#### **Annex ZA (normative)**

##### **Normative references to international publications with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 8662-1	1988	Hand-held portable power tools – Measurement of vibrations at the handle – Part 1: General	EN 28662-1	1992

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**Annex ZB (informative)** <https://standards.iteh.ai/catalog/standards/sist/7e9cd4ff-7f3e-4de2-b41f-88c7ca6ca34b/sist-en-28662-2-2000-a1-2000>

#### **Bibliography**

ENV 25349 Mechanical vibration – Guidelines for the measurement and the assessment of human exposure to hand-transmitted vibration (ISO 5349:1986)