

Hand-held portable power tools — Measurement of vibrations at the handle —

Part 5: Pavement breakers and pick hammers

The European Standard EN 28662-5:1994, with the incorporation of amendments A1:1995 and A2:2001, has the status of a British Standard

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Cooperating organizations

The European Committee for Standardization (CEN), under whose supervision this European Standard was prepared, comprises the national standards organizations of the following countries:

Austria	Oesterreichisches Normungsinstitut
Belgium	Institut belge de normalisation
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Finland	Suomen Standardisoimisliitto, r.y.
France	Association française de normalisation
Germany	Deutsches Institut für Normung e.V.
Greece	Hellenic Organization for Standardization
Iceland	Technological Institute of Iceland
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Portugal	Instituto Português da Qualidade
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Sweden	Standardiseringskommissionen i Sverige
Switzerland	Association suisse de normalisation
United Kingdom	British Standards Institution

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on 15 January 1995

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The following BSI references relate to the work on this standard:
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Amendments issued since publication

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8992	May 1996	Implementation of CEN amendment A1
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National foreword

This British Standard has been prepared under the direction of the Engineering Sector Board and is the English language version of EN 28662-5:1994, including amendments A1:1995 and A2:2001, published by the European Committee for Standardization (CEN). It is derived from ISO 8662-5:1992 including amendment 1:1999, published by the International Organization for Standardization (ISO). EN 28662-5:1994 was produced as a result of international discussion in which the United Kingdom took an active part.

CEN common modifications to ISO 8662-5:1992, introduced by CEN amendment A1:1995 have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by tags [C] [C]. As the common modification has been introduced by amendment, the tags carry the number of the amendment [C1] [C1].

The United Kingdom participation in the preparation of the International Standard (ISO 8662-5) was entrusted by the Engineering Sector Board to Technical Committee MCE/8.

Other Parts of ISO 8662 have been implemented as British Standards under the number BS EN ISO 8662.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards online.”

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 17 and a back cover.

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English version

Hand-held portable power tools — Measurement of vibrations at the handle — Part 5: Pavement breakers and pick hammers

(includes amendments A1:1995 and A2:2001)
(ISO 8662-5:1992 + A1:1999)

Machines à moteur portatives — Mesurage des vibrations au niveau des poignées —
Partie 5: Brise-béton, et Marteaux piqueurs
(inclut les amendements A1:1995 et A2:2001)
(ISO 8662-5:1992 + A1:1999)

Handgehaltene motorbetriebene Maschinen —
Messung mechanischer Schwingungen am
Handgriff —
Teil 5: Aufbruchhämmer und Spatenhämmer
(enthält Änderungen A1:1995 und A2:2001)
(ISO 8662-5:1992 + A1:1999)

This European Standard was approved by CEN on 20 May 1994. Amendment A1 was approved by CEN on 18 May 1995 and amendment A2 was approved by CEN on 11 August 2001.

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.

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CEN

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

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Foreword

According to Resolution 13/1992, taken in April 1992 at the third meeting of CEN/TC 231, Mechanical vibration and shock, the International Standard ISO 8662-5:1992 *Hand-held portable power tools — Measurement of vibrations at the handle — Part 5: Pavement breakers and hammers for construction work* was submitted under the Unique Acceptance Procedure for approval as a European Standard.

The result of the Formal Vote was positive.

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 EC Directive(s).

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 November 1994, and conflicting national standards shall be withdrawn at the latest by November 1994.

In accordance with 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 and United Kingdom.

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

Foreword to amendment A1

The text of this amendment EN 28662-5:1994/A1:1995 to the European Standard EN 28662-2:1994 has been prepared by the Technical Committee CEN/TC 231, Mechanical vibration and shock, the Secretariat of which is held by DIN.

This amendment to the European Standard EN 28662-5:1994 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 28662-5:1994 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 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 and the United Kingdom.

Endorsement Notice

The text of the International Standard ISO 8662-5:1992 has been approved by CEN as a European Standard with the following common modifications:

The following common modifications have to be made to EN 28662-5:1994.

— In the title and the text, replace “Hammers for construction work” by “Pick hammers”

— 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 2nd 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”

— Figure 2 and Figure 3, delete the drawing of the energy absorber.

— Subclause 6.2, modify the 2nd paragraph and note 4 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 4. 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.

NOTE 4 A cooling device may be provided with the energy absorber.

— Delete Figure 5 and any reference to that figure.

— Subclause 6.3, replace the 2nd sentence of the 2nd paragraph of the following: “The feed force shall not be greater than 200 N and shall be maintained within a tolerance of $\pm$ 10 % of the chosen value.”

— Subclause 7.2, 2nd 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.”

Foreword to amendment A2

The text of this amendment EN 28662-5:1994/A2:2001 to the EN 28662-5:1994 from Technical Committee ISO/TC 118, Compressors, pneumatic tools and pneumatic machines of the International Organization for standardization (ISO) has been taken over as an amendment to the European Standard by Technical Committee CEN/TC 231 Mechanical vibration and shock, the Secretariat of which is held by DIN.

This amendment to the European Standard EN 28662-5:1994 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2002, and conflicting national standards shall be withdrawn at the latest by April 2002.

This amendment to the European Standard EN 28662-5:1994 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZC, which is an integral part of this standard.

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

Endorsement Notice

The text of the amendment to the International Standard ISO 8662-5:1992/amendment 1:1999 has been approved by CEN as an amendment to the European Standard without any modification.