



SLOVENSKI STANDARD SIST EN ISO 8662-7:2000

01-april-2000

; bUbUfc bUcfcX^U!`AYf]h Yj]VfUW^bUfc U\ '!'+"XY.'J]U]ž]nj]U]]b'dfj]^UUn
i XUfb]a ž]a di `nb]a `U]ncVb]y_]a `dc[cbca `fIGC', ** &]+.% - +L

Hand-held portable power tools - Measurement of vibrations at the handle - Part 7:
Wrenches, screwdrivers and nut runners with impact, impulse or ratchet action (ISO
8662-7:1997)

iTeh STANDARD PREVIEW

Handgehaltene motorbetriebene Maschinen Messung mechanischer Schwingungen am
Handgriff - Teil 7: Schrauber, Schraubendreher und Mutterndreher mit Schlag-, Impuls-
oder Ratschenantrieb

[SIST EN ISO 8662-7:2000](https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

[https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-](https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

[7a970a7008d4/sist-en-iso-8662-7-2000](https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

Machines a moteur portatives - Mesurage des vibrations au niveau des poignées - Partie
7: Clés, tournevis et serreuses a percussion, a impulsion ou a cliquet (ISO 8662-7:1997)

Ta slovenski standard je istoveten z: EN ISO 8662-7:1997

ICS:

13.160	Vpliv vibracij in udarcev na ljudi	Vibration and shock with respect to human beings
25.140.01	Ü[} aÁ [ába) aÁ] [z} [Hand-held tools in general

SIST EN ISO 8662-7:2000

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 8662-7:2000

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000>

ÉUROPEAN STANDARD

EN ISO 8662-7

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 1997

ICS 13.160; 25.140.01

CORRECTED 1997-07-31

Descriptors: See ISO document

English version

Hand-held portable power tools - Measurement of vibrations at the handle - Part 7: Wrenches, screwdrivers and nut runners with impact, impulse or ratchet action (ISO 8662-7:1997)

Machines à moteur portatives - Mesurage des vibrations au niveau des poignées - Partie 7: Clés, tournevis et serreuses à percussion, à impulsion ou à cliquet (ISO 8662-7:1997)

Handgehaltene motorbetriebene Maschinen - Messung mechanischer Schwingungen am Handgriff - Teil 7: Schrauber, Schraubendreher und Mutterndreher mit Schlag-, Impuls- oder Ratschenantrieb (ISO 8662-7:1997)

This European Standard was approved by CEN on 1997-06-01. 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.

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.

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

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-0e-8662-7-2000>

CEN

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

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

© 1997 CEN - All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 8662-7:1997 E

Foreword

The text of the International Standard ISO 8662-7:1997 has been prepared by Technical Committee ISO/TC 118 "Compressors, pneumatic tools and pneumatic machines" in collaboration with Technical Committee CEN/TC 231 "Mechanical vibration and shock", the secretariat of which is held by DIN.

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 January 1998, and conflicting national standards shall be withdrawn at the latest by January 1998.

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 EU Directive(s).

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 International Standard ISO 8662-7:1997 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 8662-7:2000](https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000>

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 8662-7:2000](https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 8662-7:2000](#)

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000>

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

Part 7:

**Wrenches, screwdrivers and nut runners with
impact, impulse or ratchet action**

*Machines à moteur portatives — Mesurage des vibrations au niveau des
poignées —*

*Partie 7: Clés, tournevis et serreuses à percussion, à impulsion ou à
cliquet*

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

[SIST EN ISO 8662-7:2000](https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000>



Reference number
ISO 8662-7:1997(E)

Contents	Page
1 Scope	1
2 Normative references	1
3 Quantities to be measured	2
4 Instrumentation	2
5 Measurement direction and measurement location.....	3
6 Determination of working procedure	5
7 Measurement procedure and validity of measurements	9
8 Test report	10
 Annexes	
A Model test report for impact, impulse and ratchet wrenches, screwdrivers and nut runners	11
B Brake devices — Assembly drawings and specifications of parts.....	14

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 8662-7:2000](https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000>

© ISO 1997

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 [c=ch; a=400net; p=iso; o=iso; s=central](mailto:central@iso.ch)

Printed in Switzerland



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.

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.

International Standard ISO 8662-7 was prepared by Technical Committee ISO/TC 118, *Compressors, pneumatic tools and pneumatic machines*, subcommittee SC 3, *Pneumatic tools and machines*.

ISO 8662 consists of the following parts, under the general title *Hand-held portable power tools — Measurement of vibrations at the handle*:

- *Part 1: General*
- *Part 2: Chipping hammers and riveting hammers*
- *Part 3: Rock drills and rotary hammers*
- *Part 4: Grinders*
- *Part 5: Pavement breakers and hammers for construction work*
- *Part 6: Impact drills*
- *Part 7: Wrenches, screwdrivers and nut runners with impact, impulse or ratchet action*
- *Part 8: Polishers and rotary, orbital or random sanders*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7066d7/sist-en-iso-8662-7-2000>

SIST EN ISO 8662-7:2000

- *Part 9: Rammers*
- *Part 10: Nibblers and shears*
- *Part 11: Fastener driving tools (nailers)*
- *Part 12: Saws and files with reciprocating action and saws with oscillating or rotating action*
- *Part 13: Die grinders*
- *Part 14: Stone-working tools and needle scalers*

Annexes A and B of this part of ISO 8662 are for information only.

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

[SIST EN ISO 8662-7:2000](https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000>

Introduction

This part of ISO 8662 specifies how a type test for the measurement of vibrations at the handles of wrenches, screwdrivers and nut runners with impact, impulse or ratchet action shall be performed. It supplements ISO 8662-1, which gives the general specifications for the measurement of vibrations at the handle of portable hand-held power tools. It specifies the operation of the power tool under type test and other requirements for the performance of the type test.

The power tools described in this part of ISO 8662 are used for tightening and untightening threaded fasteners, i.e. nuts and screws. The principle of the operation of these power tools is that the energy from the driving medium causes a rotor to transmit energy incrementally by impact or impulse from a rotary or oscillatory action to the output shaft. The clutch mechanisms and power tool geometry differ among different power tool types, and therefore give different types of force reaction and vibration to the operator's hand.

In impact and ratchet power tools, the clutches are generally all metallic. In impact power tools, the number of impacts on the output shaft per revolution of the motor is typically one or two, whereas in ratchet power tools this number is greater. The clutches of impulse power tools generally contain a fluid which is forced through one or more restrictive passageways each time the motor rotates relative to the output shaft.

The reproducibility determined from a great number of tests in which the power tools were operated in typical work situations was found to be poor, and the possibility of improving it is small. It was therefore concluded that the type test must be carried out using an artificial load, so chosen that the values measured correspond to those found in typical work situations. The reproducibility of the proposed method has been found to be good.

iTeh STANDARD PREVIEW
Higher vibration magnitudes can easily occur in real work situations, caused either by misalignment between the power tool and fastener, or by the use of universal joints or angle heads.

[SIST EN ISO 8662-7:2000](https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

<https://standards.iteh.ai/catalog/standards/sist/545f0a5e-d0d9-4eb0-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000>

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

Part 7:

Wrenches, screwdrivers and nut runners with impact, impulse or ratchet action

1 Scope

This part of ISO 8662 specifies a laboratory method for measuring vibrations at the handles of wrenches, screwdrivers and nut runners with impact, impulse, rapping or ratchet action. It is a type-test procedure for establishing the vibration value at the handles of the power tools when operating on a specified load.

This part of ISO 8662 mainly covers power tools with 6,3 mm to 40 mm (1/4 in to 1 1/2 in) male or female square-drive output shafts; other drive geometries are also included. One-shot tools and stall-torque-type ratchet wrenches are excluded from this part of ISO 8662.

The power tools covered by this part of ISO 8662 may be pneumatically or hydraulically driven.

It is intended that the results be used to compare different power tools or different models of the same power tool. With the operation specified for the power tools, the values obtained will give an indication of those found in real work situations when the power tool and the head of the fastener are well aligned.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 8662. All standards are subject to revision, and parties to agreements based on this part of ISO 8662 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 691:—1), *Assembly tools for screws and nuts — Wrench and socket openings — Tolerances for general use.*

[SIST EN ISO 8662-7:2000](http://www.iso.org/standards/std/691/503/69101-1-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000)

ISO 2787:1984, *Rotary and percussive pneumatic tools — Performance tests.*

<http://www.iso.org/standards/std/2787/503/278701-8c9f-7a970a7008d4/sist-en-iso-8662-7-2000>

ISO 8662-1:1988, *Hand-held portable power tools — Measurement of vibrations at the handle — Part 1: General.*

1) To be published. (Revision of ISO 691:1983)