

SLOVENSKI STANDARD
SIST EN ISO 28927-6:2010

01-februar-2010

BUXca Yý U
 SIST EN ISO 8662-9:2000

Fc bUdfYbcgbUY_Y_f] bUcfcX'U!'DfYg_i gbY'a YfcXY'nUj fYXbcHb'Y'cXXUUb'U
 j]VfUM'!'* "XY.'Hc`_U]fIGC`&, - &+!* .&\$\$- Ł

Hand-held portable power tools - Test methods for evaluation of vibration emission - Part 6: Rammers (ISO 28927-6:2009)

Handgehaltene motorbetriebene Maschinen - Messverfahren zur Ermittlung der Schwingungsemission - Teil 6: Stampfer (ISO 28927-6:2009)

Machines à moteur portatives - Méthodes d'essai pour l'évaluation de l'émission de vibrations - Partie 6: Marteaux fouloirs (ISO 28927-6:2009)

Ta slovenski standard je istoveten z: EN ISO 28927-6:2009

ICS:

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

SIST EN ISO 28927-6:2010 en,fr

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 28927-6:2010

<https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 28927-6

December 2009

ICS 13.160; 25.140.10

Supersedes EN ISO 8662-9:1996

English Version

Hand-held portable power tools - Test methods for evaluation of vibration emission - Part 6: Rammers (ISO 28927-6:2009)

Machines à moteur portatives - Méthodes d'essai pour l'évaluation de l'émission de vibrations - Partie 6: Marteaux fouloirs (ISO 28927-6:2009)

Handgehaltene motorbetriebene Maschinen - Messverfahren zur Ermittlung der Schwingungsemission - Teil 6: Stampfer (ISO 28927-6:2009)

This European Standard was approved by CEN on 14 December 2009.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN ISO 28927-6:2010](https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010)

<https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010>



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
Foreword	3
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC, amended by Directive 98/79/EC	4
Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	5

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 28927-6:2010](https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010)

<https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010>

Foreword

This document (EN ISO 28927-6:2009) has been prepared by Technical Committee ISO/TC 118 "Compressors and pneumatic tools, machines and equipment" 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 June 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 8662-9:1996.

This document 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 Directives.

For relationship with EU Directives, see informative Annex ZA and ZB, which are integral parts of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010>

Endorsement notice

The text of ISO 28927-6:2009 has been approved by CEN as a EN ISO 28927-6:2009 without any modification.

Annex ZA (informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC, amended by Directive 98/79/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 98/37/EC, Machinery, amended by Directive 98/79/EC.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive, except ER 1.7.4 d) and 2.2, and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the products falling within the scope of this standard.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 28927-6:2010](https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010)

<https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010>

Annex ZB (informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide one means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC on machinery.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirement of that Directive, except ER 2.2.1.1, and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 28927-6:2010](https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010)

<https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 28927-6:2010

<https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010>

INTERNATIONAL
STANDARD

ISO
28927-6

First edition
2009-12-15

**Hand-held portable power tools — Test
methods for evaluation of vibration
emission —**

**Part 6:
Rammers**

iTeh STANDARD PREVIEW
*Machines à moteur portatives — Méthodes d'essai pour l'évaluation de
l'émission de vibrations —
(standards.iteh.ai)*
Partie 6: Marteaux fouloirs

SIST EN ISO 28927-6:2010

<https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010>



Reference number
ISO 28927-6:2009(E)

© ISO 2009

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 28927-6:2010](https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010)

<https://standards.iteh.ai/catalog/standards/sist/7809e842-0323-49fb-86c7-45c18e7930ed/sist-en-iso-28927-6-2010>

**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2009

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 either ISO at the address below or ISO's member body in the country of the requester.

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.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction.....	vi
1 Scope	1
2 Normative references	1
3 Terms, definitions and symbols	2
3.1 Terms and definitions	2
3.2 Symbols.....	2
4 Basic standards and vibration test codes	2
5 Description of the family of machines	2
6 Characterization of vibration.....	4
6.1 Direction of measurement	4
6.2 Location of measurements.....	4
6.3 Magnitude of vibration	5
6.4 Combination of vibration directions.....	5
7 Instrumentation requirements.....	5
7.1 General	5
7.2 Mounting of transducers	5
7.3 Frequency weighting filter.....	6
7.4 Integration time.....	6
7.5 Auxiliary equipment.....	6
7.6 Calibration	6
8 Testing and operating conditions of the machinery.....	6
8.1 General	6
8.2 Operating conditions	7
8.3 Other quantities to be specified.....	7
8.4 Attached equipment, work piece and task.....	7
8.5 Operators.....	9
9 Measurement procedure and validity.....	9
9.1 Reported vibration values	9
9.2 Declaration and verification of the vibration emission value	9
10 Measurement report	10
Annex A (informative) Model test report for vibration emission of rammers	11
Annex B (normative) Determination of uncertainty.....	13
Annex C (normative) Design of energy absorbers for rammers.....	15
Bibliography.....	16

ISO 28927-6:2009(E)

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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 28927-6 was prepared by Technical Committee ISO/TC 118, *Compressors and pneumatic tools, machines and equipment*, Subcommittee SC 3, *Pneumatic tools and machines*.

This first edition of ISO 28927-6 cancels and replaces ISO 8662-9:1996, of which it constitutes a technical revision. The most important changes are (standards.iteh.ai)

- vibration measurement in three axes and at both hand positions,
- new transducer positions, and
- improved definition of transducer positions and orientation.

ISO 28927 consists of the following parts, under the general title *Hand-held portable power tools — Test methods for evaluation of vibration emission*:

- *Part 1: Angle and vertical grinders*¹⁾
- *Part 2: Wrenches, nutrunners and screwdrivers*²⁾
- *Part 3: Polishers and rotary, orbital and random orbital sanders*³⁾
- *Part 4: Straight grinders*⁴⁾

1) Together with Part 4, replaces ISO 8662-4, *Hand-held portable power tools — Measurement of vibrations at the handle — Part 4: Grinders*.

2) Replaces ISO 8662-7, *Hand-held portable power tools — Measurement of vibrations at the handle — Part 7: Wrenches, screwdrivers nut runners with impact, impulse and ratcheting action*. All screwdrivers and nutrunners except for one-shot tools now covered.

3) Replaces ISO 8662-8, *Hand-held portable power tools — Measurement of vibrations at the handle — Part 8: Polishers and rotary, orbital and random orbital sanders*.

4) Together with Part 1, replaces ISO 8662-4, *Hand-held portable power tools — Measurement of vibrations at the handle — Part 4: Grinders*.