

SLOVENSKI STANDARD
SIST EN ISO 13753:2008**01-september-2008****Nadomešča:**
SIST EN ISO 13753:2000

Mehanske vibracije in udarci - Vibracije dlan-roka - Metoda za merjenje prenosov vibracij pri elastičnih materialih ob obremenitvi s sistemom dlan-roka (ISO 13753:1998)

Mechanical vibration and shock - Hand-arm vibration - Method for measuring the vibration transmissibility of resilient materials when loaded by the hand-arm system (ISO 13753:1998)

iTeh STANDARD PREVIEW**(standards.iteh.ai)**
Mechanische Schwingungen und Stöße - Hand-Arm-Schwingungen - Verfahren zur Messung der Schwingungsübertragung elastischer Materialien unter Belastung durch das Hand-Arm-System (ISO 13753:1998) **ISO 13753:2008**<https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008>

Vibrations et chocs mécaniques - Vibrations main-bras - Méthode pour mesurer le facteur de transmission des vibrations par les matériaux résilients chargés par le système main-bras (ISO 13753:1998)

Ta slovenski standard je istoveten z: EN ISO 13753:2008**ICS:**

13.160	Vpliv vibracij in udarcev na ljudi	Vibration and shock with respect to human beings
--------	------------------------------------	--

SIST EN ISO 13753:2008**en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 13753:2008](#)

<https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 13753

June 2008

ICS 13.160

Supersedes EN ISO 13753:1998

English Version

**Mechanical vibration and shock - Hand-arm vibration - Method
for measuring the vibration transmissibility of resilient materials
when loaded by the hand-arm system (ISO 13753:1998)**

Vibrations et chocs mécaniques - Vibrations main-bras -
Méthode pour mesurer le facteur de transmission des
vibrations par les matériaux résilients chargés par le
système main-bras (ISO 13753:1998)

Mechanische Schwingungen und Stöße - Hand-Arm-
Schwingungen - Verfahren zur Messung der
Schwingungsübertragung elastischer Materialien unter
Belastung durch das Hand-Arm-System (ISO 13753:1998)

This European Standard was approved by CEN on 25 May 2008.

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.



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

Management Centre: rue de Stassart, 36 B-1050 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 13753:2008](https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008)

<https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008>

Foreword

The text of ISO 13753:1998 has been prepared by Technical Committee ISO/TC 108 "Mechanical vibration and shock" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13753:2008 by 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 December 2008, and conflicting national standards shall be withdrawn at the latest by December 2008.

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 13753:1998.

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 EC Directive(s).

For relationship with EC Directive(s), see informative Annexes ZA and ZB, which are integral part 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.

Endorsement notice

The text of ISO 13753:1998 has been approved by CEN as a EN ISO 13753:2008 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 on machinery, amended by 98/79/EC.

Once this standard is cited in the Official Journal of the European Communities 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 Essential Requirement 1.5.9 of that Directive 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 13753:2008](https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008)

<https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008>

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 a 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 Communities 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 Essential Requirement 1.5.9 of that Directive 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 13753:2008](https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008)

<https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 13753:2008](#)

<https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008>

INTERNATIONAL STANDARD

ISO
13753

First edition
1998-07-01

Mechanical vibration and shock — Hand-arm vibration — Method for measuring the vibration transmissibility of resilient materials when loaded by the hand-arm system

iTeh STANDARD PREVIEW
*Vibrations et chocs mécaniques — Vibrations main-bras — Méthode pour
mesurer le facteur de transmission des vibrations par les matériaux
résilients chargés par le système main-bras*

[SIST EN ISO 13753:2008](https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008)

<https://standards.iteh.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0-56b7210f2b26/sist-en-iso-13753-2008>



Reference number
ISO 13753:1998(E)

ISO 13753:1998(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.

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.

iTeh STANDARD PREVIEW

International Standard ISO 13753 was prepared by Technical Committee ISO/TC 108, *Mechanical vibration and shock*, Subcommittee SC 4, *Human exposure to mechanical vibration and shock*, in close collaboration with CEN/TC 231, *Mechanical vibration and shock*. [SIST EN ISO 13753:2008](#)

<https://standards.itih.ai/catalog/standards/sist/43e981ec-96f9-4e12-a3d0->

Annex A forms an integral part of this International Standard. Annexes B to F are for information only.

© ISO 1998

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 iso@iso.ch

Printed in Switzerland

Introduction

This International Standard was developed in response to the growing demand to protect people from the risks of vibration damage caused by exposure to hand-transmitted vibration.

Various standards refer to measurement and assessment of risk to vibration exposure and to methods of type testing specific tools and processes.

Resilient materials are used to cover handles and make gloves. It is hoped that both of these will reduce the magnitude of the vibration exposure. This International Standard describes a method of measuring the vibration attenuation of a sample of the material in the form of a flat sheet or layer. In some cases the material may be of two or more layers forming a sheet. It is a laboratory measurement and offers a reproducible and reliable procedure.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

This International Standard assumes that the material behaves in a linear way and that it has negligible mass compared with the mass loading. (A correction could be made for the material mass if required.) The method determines the impedance of the material when loaded by a mass providing a compression force equivalent to that found when the material is gripped by the hand. This is done by measuring the transfer function of the mass-loaded material at all the required frequencies. The vibration transmission when loaded by the hand is computed using standard values of hand-arm impedance and the measured values of the material impedance. The impedances used in this International Standard are for the palm of the hand when gripping a circular handle. The resulting transmissibility may not be applicable to the fingers. The impedance for the z_h direction of the hand-arm system where the material is under compression is used. The mathematical basis of the method is contained in annex B.

If the results of this measurement procedure show transmissibilities greater than 0,6 at all frequencies up to 500 Hz, then the material would probably not provide greater attenuation in the practical situation in the same frequency range. In the practical situation, the transmissibility as a function of frequency should be appropriate to the frequency spectrum of the source.