
Akustika in vibracije - Laboratorijsko merjenje vibro-akustičnih prenosnih lastnosti elastičnih elementov - 2. del: Dinamična togost elastičnih podpor za translatorno gibanje - Neposredna metoda (ISO 10846-2:1997)

Acoustics and vibration - Laboratory measurement of vibro-acoustic transfer properties of resilient elements - Part 2: Dynamic stiffness of elastic supports for translatory motion - Direct method (ISO 10846-2:1997)

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Akustik und Schwingungstechnik Laborverfahren zur Messung der vibro-akustischen Transfereigenschaften elastischer Elemente - Teil 2: Bestimmung der dynamischen Transfersteifigkeit elastischer Stützelemente für translatorische Schwingungen - Direktes Verfahren (ISO 10846-2:1997) [SIST EN ISO 10846-2:1999](https://standards.iteh.ai/catalog/standards/sist/6fb84c90-4b98-4d97-9e3d-50759eb3520d/sist-en-iso-10846-2-1999)

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Acoustique et vibrations - Mesurage en laboratoire des propriétés de transfert vibro-acoustique des éléments élastiques - Partie 2: Raideur dynamique en translation des supports élastiques - Méthode directe (ISO 10846-2:1997)

Ta slovenski standard je istoveten z: EN ISO 10846-2:1998

ICS:

17.140.01	Akustična merjenja in blaženje hrupa na splošno	Acoustic measurements and noise abatement in general
17.160	Vibracije, meritve udarcev in vibracij	Vibrations, shock and vibration measurements

SIST EN ISO 10846-2:1999**en**

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EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM

EN ISO 10846-2

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Descriptors: see ISO document

English version

Acoustics and vibration - Laboratory measurement of vibro-acoustic transfer properties of resilient elements - Part 2: Dynamic stiffness of elastic supports for translatory motion - Direct method (ISO 10846-2:1997)

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Akustik und Schwingungstechnik - Laborverfahren zur Messung der vibro-akustischen Transfereigenschaften elastischer Elemente - Teil 2: Bestimmung der dynamischen Transfersteifigkeit elastischer Stützelemente für translatorische Schwingungen - Direktes Verfahren (ISO 10846-2:1997)

This European Standard was approved by CEN on 8 November 1998.

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.

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.



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

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

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EN ISO 10846-2:1998

Foreword

The text of the International Standard from Technical Committee ISO/TC 43 "Acoustics" and ISO/TC 108 "Mechanical vibration and shock" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 211 "Acoustics", the secretariat of which is held by DS.

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 May 1999, and conflicting national standards shall be withdrawn at the latest by May 1999.

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 10846-2:1997 has been approved by CEN as a European Standard without any modification.

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

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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 266	1997	Acoustics - Preferred frequencies	EN ISO 266	1997

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INTERNATIONAL STANDARD

ISO
10846-2

First edition
1997-10-15

Acoustics and vibration — Laboratory measurement of vibro-acoustic transfer properties of resilient elements —

Part 2:

Dynamic stiffness of elastic supports for
translatory motion — Direct method

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*Acoustique et vibrations — Mesurage en laboratoire des propriétés
de transfert vibro-acoustique des éléments élastiques —*

SIST EN ISO 10846-2:1999

*Partie 2: Raideur dynamique en translation des supports élastiques —
Méthode directe*

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Reference number
ISO 10846-2:1997(E)

ISO 10846-2:1997(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.

International Standard ISO 10846-2 was prepared jointly by Technical Committees ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*, and ISO/TC 108, *Mechanical vibration and shock*.

Annexes A and B of this part of ISO 10846 are for information only.

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Introduction

Passive vibration isolators of various kinds are used to reduce the transmission of vibrations. Examples are automobile engine mounts, elastic supports for buildings, elastic mounts and flexible shaft couplings for shipboard machinery and small isolators in household appliances.

This part of ISO 10846 specifies a direct method for measuring the dynamic transfer stiffness function of linear elastic supports. This includes elastic supports with non-linear static load-deflection characteristics as long as the elements show an approximate linearity for vibrational behaviour for a given static preload. This part of ISO 10846 belongs to a series of International Standards on methods for the laboratory measurement of vibro-acoustic properties of resilient elements, which also includes documents on measurement principles, on an indirect method and on a driving point method. ISO 10846-1 provides guidance for the selection of the appropriate part of the series.

The laboratory conditions described in this part of ISO 10846 include the application of static preload. The results of the direct method are useful for isolators which are used to prevent low-frequency vibration problems and to attenuate structure-borne sound. The method is not sufficiently appropriate to characterize completely isolators which are used to attenuate shock excursions.

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Acoustics and vibration — Laboratory measurement of vibro-acoustic transfer properties of resilient elements —

Part 2:

Dynamic stiffness of elastic supports for translatory motion — Direct method

1 Scope

This part of ISO 10846 specifies a method for determining the dynamic transfer stiffness for translations of elastic supports, under specified preload. The method concerns the laboratory measurement of vibrations on the input side and blocking output forces and is called the direct method.

The method is applicable to elastic supports with parallel flanges (see figure 1).

NOTE 1 Vibration isolators which are the subject of this part of ISO 10846 are those which are used to reduce:

- a) the transmission of audio-frequency vibrations (structure-borne sound, 20 Hz to 20 kHz) to a structure which may, for example, radiate unwanted fluidborne sound (airborne, waterborne or other);
- b) the transmission of low-frequency vibrations (typically 1 Hz to 80 Hz) which may, for example, act upon human subjects or cause damage to structures of any size when vibration is too severe.

NOTE 2 In practice the size of the available test rig(s) may restrict the use of very small or very large elastic supports.

NOTE 3 When an elastic support has no parallel flanges, an auxiliary fixture should be included as part of the test element to arrange for parallel flanges.

NOTE 4 Portions of continuous supports of strips and mats are used as test samples in this method. Whether or not the portion describes the behaviour of the complex system sufficiently is the responsibility of the user of this part of ISO 10846.

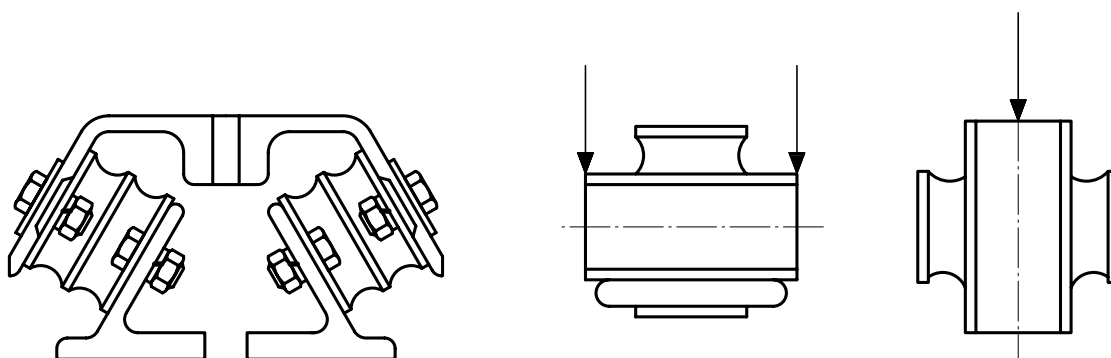


Figure 1 — Example of elastic supports with parallel flanges

Measurements for translations normal and transverse to the flanges are covered in this part of ISO 10846.

The method covers the frequency range from 1 Hz up to a frequency f_i , which is usually determined by the test rig.