
Mehanske vibracije - Preskušanje mobilnih strojev za ugotavljanje vrednosti oddajanja vibracij

Mechanical vibration - Testing of mobile machinery in order to determine the vibration emission value

Mechanische Schwingungen - Prüfverfahren für bewegliche Maschinen zum Zwecke der Bestimmung des Schwingungsemissionswertes

Vibrations mécaniques - Essai des machines mobiles pour en déterminer la valeur d'émission vibratoire

Ta slovenski standard je istoveten z: prEN 1032

ICS:

13.160

Vpliv vibracij in udarcev na ljudi

Vibration and shock with respect to human beings

oSIST prEN 1032:2026**en,fr,de**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 1032

August 2026

ICS 13.160

Will supersede EN 1032:2003+A1:2008

English Version

**Mechanical vibration - Testing of mobile machinery in
order to determine the vibration emission value**

Vibrations mécaniques - Essai des machines mobiles
pour en déterminer la valeur d'émission vibratoire

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bewegliche Maschinen zum Zwecke der Bestimmung
des Schwingungsemissionswertes

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prEN 1032:2026 (E)**European foreword**

This document (prEN 1032:2026) has been prepared by Technical Committee CEN/TC 231 “Mechanical vibration and shock”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 1032:2003+A1:2008.

This document includes the following significant technical changes with respect to EN 1032:2003+A1:2008:

- Updating the standard texts for B-type standards in the Introduction;
- clarifying the scope by moving pure information into the Introduction;
- updating Clause 4 to latest basic standards;
- restructuring of the standard by introducing a clear separation between whole-body vibration and hand-transmitted vibration;
- adding the value for repeated shock vibration for hand-transmitted vibration;
- changing informative Annex A to normative Annex A;
- deleting of Annex B, the frequency weighting curves are included in EN ISO 8041-1:2017;
- editorial changes.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Introduction

Exposure to mechanical vibration from mobile machinery can interfere with comfort, working efficiency and, in some circumstances, health and safety. The Machinery Regulation (EU) 2023/1230, supported by the basic safety standards EN ISO 12100, requires that machinery is designed and constructed so that the risks resulting from vibration emissions are minimized and that where risks remain, despite such measures, the machinery manufacturer supplies warnings. It also states that the information concerning vibrations generated by mobile machinery which are transmitted to the hand-arm system or to the whole body is given in the instructions for use. Knowledge of whole-body and hand-transmitted vibration emission values will aid the selection of low-vibration machinery.

The vibration emission determined by a test code should be in proportion to the magnitude of the vibration hazard. In some cases (for example, where the vibration emission at the seat contains shocks) the r.m.s. values determined by the test code cannot adequately represent the vibration hazard. Test codes should provide guidance on how to warn of vibration risk (residual risk) in these cases.

This document covers the vibration parameters required for declaration by the Machinery Regulation (EU) 2023/1230. Values of r.m.s. acceleration for both whole-body vibration and hand-transmitted vibration are given along with values representing the mean peak acceleration for repeated shock vibrations transmitted to the hand-arm system. This document also provides general requirements for testing and evaluating whole-body and hand-transmitted vibration emissions of mobile machinery as a basis for technical committees responsible for the preparation of vibration test codes.

The purpose of this document is to assist technical standardization committees responsible for specific types of machinery in preparing vibration test codes to ensure that such vibration test codes

- are as homogeneous as possible with each individual test code having the same basic structure,
- are in full accordance with basic standards on measurement of vibration emission,
- reflect the latest technical knowledge of methods of determining the vibration emission from the specific family of machinery under consideration,
- provide a standardized method for the determination and declaration of the vibration emission value(s) of machinery,
- to enable the vibration emission value(s) of different machines to be compared, and
- to verify the vibration emission value(s) of machinery.

Standardized vibration test codes are required for many purposes, e.g. to fulfil legal requirements, as well as for trade agreements, aspects of work environment, vibration control, planning of process and work.

In order to prepare a vibration test code for a specific family of machinery it is essential to establish additional requirements for that family, e.g. installation and mounting conditions, operating conditions, measurement positions, measurement directions, vibration declaration, information to be reported.

It is essential when developing a test code for declaration of vibration emission to define a procedure to collect representative vibration values for the machine, to identify causes of variability, to validate the test method and to evaluate the reproducibility of results.

Guidance or recommendations for determination of human exposure to vibration at the workplace are not in the scope of this document. For such information, see ISO 5349-1 and ISO 2631-1.

This document is a type-B standard as stated in EN ISO 12100.

This document is of relevance, in particular, for the following stakeholder groups representing the market players with regard to machinery safety:

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- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (regulators, accident prevention organizations, market surveillance etc.).

When the above-mentioned stakeholder groups use this document, other groups can be affected by the level of machinery safety achieved, including:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g. trade unions, organizations for people with special needs);
- service providers, e.g. for maintenance (small, medium and large enterprises);
- consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

In addition, this document is intended for standardization bodies elaborating type-C standards.

The requirements of this document can be supplemented or modified by a type-C standard.

For machines that are covered by the scope of a type-C standard and have been designed and built according to the requirements of that standard, the requirements of that type-C standard take precedence.

The obligations to control risks arising from exposures to vibration are specified in Europe by Directive 2002/44/EC which uses a daily vibration exposure value $A(8)$, that is not to be confused with the vibration emission used in this document.

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1 Scope

This document specifies the determination of whole-body and hand-transmitted vibration emissions at operator position(s) during testing of mobile machinery under regular operation, e.g. travelling, towing, lifting, excavating.

This document provides requirements for the preparation of vibration test codes (C-type standards), including guidelines and requirements for the conditions (e.g. operating conditions) for measurements.

This document applies to sitting and standing positions. It is applicable to all mobile machinery producing periodic or random vibration with or without shocks.

This document contains sufficient guidance for designing an appropriate test for machinery for which no vibration test codes exist. It can also be used for the determination of vibration emission values of individual machines.

This document is not applicable to rotational vibration and backrest vibration.

This document does not present limits or recommended vibration emission values.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12096:2026, *Mechanical vibration — Declaration and verification of vibration emission values*

EN ISO 5349-3:2025, *Mechanical vibration - Measurement and evaluation of human exposure to hand-transmitted vibration - Part 3: Isolated and repeated shocks using the frequency range of ISO 5349-1 (ISO 5349-3:2025)*

EN ISO 8041-1:2017, *Human response to vibration - Measuring instrumentation - Part 1: General purpose vibration meters (ISO 8041-1:2017)*

EN ISO 10326-1:2016, *Mechanical vibration - Laboratory method for evaluating vehicle seat vibration - Part 1: Basic requirements (ISO 10326-1:2016, Corrected version 2017-02)*

ISO 2041:2018, *Mechanical vibration, shock and condition monitoring — Vocabulary*

ISO 5805:1997, *Mechanical vibration and shock — Human exposure — Vocabulary*