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## Human response to vibration — Measuring instrumentation

*Réponse des individus aux vibrations — Appareillage de mesure*



Reference number  
ISO 8041:2005(E)

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## 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 8041 was prepared by Technical Committee ISO/TC 108, *Mechanical vibration and shock*, Subcommittee SC 3, *Use and calibration of vibration and shock measuring instruments*.

This second edition cancels and replaces the first edition (ISO 8041:1990), which has been technically revised, and incorporates its Amendment, ISO 8041:1990/Amd.1:1999, and Technical Corrigendum ISO 8041:1990/Cor.1:1993.

The reasons for the main changes introduced in this edition are as follows:

- to improve the specifications for human response to vibration measuring instrumentation;
- to incorporate into one document the specifications introduced by the 1999 amendment to ISO 8041:1990, which themselves were required following the introduction of new frequency weightings in ISO 2631-1:1997;
- to recognise changes in the frequency weighting specification introduced in ISO 5349-1:2001 that allows frequencies outside the one-third octaves from 6,3 Hz to 1250 Hz to be excluded from the weighted acceleration calculation (this is achieved by changing the frequencies at which the tolerance is extended to –100 % to be the lower boundary of the 6,3 Hz one-third-octave bands and the upper boundary of the 1 250 Hz one-third-octave band);
- to introduce allowances for the uncertainties of testing the conformance of the human vibration measuring instruments;
- to introduce a hierarchy of testing requirements (pattern evaluation, periodic verification and *in-situ* check) with tests defined according to the needs of this hierarchy;
- to recognise the needs for the specification and testing of new parameters such as maximum transient vibration value (MTVV) and vibration dose value (VDV);
- to recognise the need to test multi-axis instrumentation and to test combined results from these multi-axis inputs;
- to introduce informative tests for mounting methods.