

REPORT RAPPORT BERICHT

CR 1030-2:1995

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English version

Hand-arm vibration - Guidelines for vibration
hazards reduction - Part 2: Management measures
at the workplace

Vibrations main-bras - Guide pour la
réduction des risques de vibrations -
Partie 2: Mesures de prévention sur
le lieu de travail

Hand-Arm-Schwingungen-Leitfaden
zur Verringerung der Gefährdung
durch Schwingungen - Teil 2:
Organisatorische Maßnahmen am
Arbeitsplatz

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Foreword

This CEN report has been drawn up by CEN/TC 231 "Mechanical vibration and shock", working group 2 "Hand-arm vibration".

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Introduction

The habitual and prolonged use of machinery which transmit vibration to the hand may cause disorders of the upper limbs.

European legislation requires firms to assess and take measures to prevent or reduce workplace risks to the health and safety of their employees. The basic strategy to be adopted is defined in the legislation and accompanying informative documents under the following broad headings:

- assessment of risks;
- identification of necessary preventative and/or protective measures;
- organisation for the effective implementation of preventative and protective measures;
- implementation of an adequate programme of measures to prevent or reduce risks.

This document is primarily concerned with the second item. Its purpose is to bridge the gap between the existing literature on vibration control and the practical implementation of vibration control measures. It will constitute brief guidance to managers, health and safety officers, engineers, planning and purchasing staff and others on the most important aspects of vibration effect reduction and control.

To reduce the vibration stress for the user it is essential to pay attention not only to the vibration intensity itself but also to the coupling of the machine to the hand-arm system and to the exposure duration. All three parameters can be influenced by technical measures.

Effective protection against vibration will generally require a combination of measures which can be categorised under the following headings:

- engineering measures;
- personal protection;
- management measures.

The application of these measures should take account of: the state of the art regarding technical progress, the availability of practicable vibration reduction and the compatibility of proposed vibration control measures with measures required to reduce or control other workplace hazards.

1 Scope

These guidelines outline practicable measures for the reduction and control of health hazards associated with exposure to hand-arm vibration at work in order to provide practical professional aid to managers and health and safety officers. The document covers four principal aspects, namely:

- identification of main sources of hand-arm vibration within the firm;
- vibration reduction by re-considering task, product, and process and re-design;
- how to select low vibration machinery, anti-vibration system and personal protection;
- management measures for the control of hand-arm vibration exposure.

2 Normative references

This CEN report 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 CEN report only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

CR 1030-1	Hand-arm vibration – Guidelines for vibration hazards reduction – Part 1: Engineering methods by design of machinery
CR (X)*)	Mechanical vibration – Guidelines to health effects of vibration on the human body
prEN 1033	Hand-arm vibration – Laboratory measurement of vibration at the grip surface of hand-guided machinery – General
EN 28662-1	Hand-held portable power tools – Measurement of vibrations at the handle – Part 1: General (ISO 8662-1:1988)
prEN 30819	Mechanical vibration and shock – Hand-arm vibration – Method for the measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand (ISO/DIS 10819:1993)
ISO 5805	Mechanical vibration and shock – Human exposure – Vocabulary

3 Definitions

Except where otherwise stated, technical terms used in this document are as defined in ISO 5805.

*) under preparation