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Guidance on safe use of machinery

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# Foreword

## Publishing information

This Published Document is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 December 2019. It was prepared by Technical Committee MCE/3, *Safeguarding of machinery*. A list of organizations represented on this committee can be obtained on request to its secretary.

## Supersession

This Published Document supersedes PD 5304:2014, which is withdrawn.

## Information about this document

BS 5304:1988 was withdrawn following publication of a series of harmonized European machinery safety standards. Recognizing that BS 5304 contained valuable practical advice, PD 5304:2000, followed by PD 5304:2005 and PD 5304:2014, was published to retain the advice contained in BS 5304, with the addition of references to those relevant harmonized European machinery safety standards.

This edition takes account of the requirements of the current harmonized European machinery safety standards, to help the user maintain those safety requirements when upgrading, refurbishing or changing the use of machinery.

*NOTE* The bibliography provides a link to an online list of harmonized European standards relevant to machinery safety.

Ensuring that risks associated with the use of machinery are eliminated or reduced is a task that requires unremitting and careful attention at all times. It is hoped that this Published Document will make a worthwhile contribution to the prevention of harm arising from the use of machinery. It is intended to serve as a useful guide to all those with responsibility for safe use of machinery and duties under the Health and Safety at Work etc. Act 1974 and the Provision and Use of Work Equipment Regulations 1998.

Figures are used to illustrate the general application of these principles. However, solutions other than those illustrated can be equally effective.

The safeguarding of machinery is continually being improved. Users of machinery need to make themselves aware of any new codes of practice, etc., which might be published from time to time and any other relevant new developments.

This Published Document can be withdrawn, revised, partially superseded or superseded. Information regarding the status of this Published Document can be found in the Standards Catalogue on the BSI website at [bsigroup.com/standards](https://bsigroup.com/standards), or by contacting the Customer Services team.

Where websites and webpages have been cited, they are provided for ease of reference and are correct at the time of publication. The location of a webpage or website, or its contents, cannot be guaranteed.

**Presentational conventions**

The guidance in this Published Document is presented in roman (i.e. upright) type. Any recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

The word “may” is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the Clause. The word “can” is used to express possibility, e.g. a consequence of an action or an event.

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

**Contractual and legal considerations**

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with a Published Document cannot confer immunity from legal obligations.**

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# Section 1: General

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## 1 Scope

This Published Document provides guidance on the safe use (see 3.21) of machinery, including that supplied prior to the implementation of the Supply of Machinery (Safety) Regulations 2008 [1].

It provides guidance on:

- a) the basic principles of safeguarding, with reference to current harmonized European machinery safety standards; and
- b) the continuing safe use of machinery manufactured in accordance with harmonized European machinery safety standards, in conjunction with the machine supplier's instructions for use.

This Published Document is intended to promote a high standard of machinery safety. It describes and illustrates a variety of protective measures and explains methods by which it is possible to assess which measure(s) it is reasonable to adopt in particular circumstances. It is necessary, however, to consult specific legislation in applying the principles set down. Although reference is made to particular types of machine, specific recommendations are not given for every type of machine.

The guidance can be applied to machinery during its modification, refurbishment, upgrading or change of use in order to satisfy the Provision and Use of Work Equipment Regulations (PUWER) 1998 [2].

*NOTE 1 See also HSE Approved Code of Practice L22: Safe use of work equipment [3].*

*NOTE 2 Significant modification, refurbishment, upgrading or change of use to existing machinery that results in, for example, changes in the measures used to reduce risk(s) or the introduction of a new hazard(s), can make it necessary to satisfy relevant requirements from the Supply of Machinery (Safety) Regulations 2008 [1], in particular Schedule 3.*

*NOTE 3 PD 5304 is not intended to be used as an alternative to the current harmonized European machinery safety standards for machinery supplied in accordance with the Supply of Machinery (Safety) Regulations 2008 [1].*

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## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document.<sup>1</sup> For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 6753, *Specification for shotbolts (solenoid operated) for guarding machinery*

BS EN 349, *Safety of machinery – Minimum gaps to avoid crushing of parts of the human body*

BS EN 981, *Safety of machinery – System of auditory and visual danger and information signals*

BS EN 1299, *Mechanical vibration and shock – Vibration isolation of machines – Information for the application of source isolation*

BS EN 1550, *Machine-tools safety – Safety requirements for the design and construction of work holding chucks*

BS EN 1672-2, *Food processing machinery – Basic concepts – Part 2: Hygiene requirements*

BS EN 1837, *Safety of machinery – Integral lighting of machines*

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<sup>1</sup> Documents that are referred to solely in an informative manner are listed in the Bibliography.