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I.S. EN 547-2:1996+A1:2008

# Safety of machinery - Human body measurements - Part 2: Principles for determining the dimensions required for access openings

## I.S. EN 547-2:1996+A1:2008

*Incorporating amendments/corrigenda issued since publication:*

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English Version

**Safety of machinery - Human body measurements - Part 2:  
Principles for determining the dimensions required for access  
openings**

Sécurité des machines - Mesures du corps humain - Partie  
2: Principes de détermination des dimensions requises  
pour les orifices d'accès

Sicherheit von Maschinen - Körpermaße des Menschen -  
Teil 2: Grundlagen für die Bemessung von  
Zugangsöffnungen

This European Standard was approved by CEN on 15 November 1996 and includes Amendment 1 approved by CEN on 14 August 2008.

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## Foreword

This document (EN 547-2:1996+A1:2008) has been prepared by Technical Committee CEN/TC 122 "Ergonomics", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by March 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document includes Amendment 1, approved by CEN on 2008-08-14.

This document supersedes EN 547-2:1996.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

**A1** For relationship with EU Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. **A1**

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## **Introduction**

This European Standard is one of several ergonomics standards for the safety of machinery. EN 614-1 "Safety of machinery – Ergonomic design principles – Part 1: Terminology and general principles" describes the principles designers should adopt in order to take account of ergonomic factors.

This European Standard describes how these principles should be applied to the design of access openings.

This standard has been prepared to be a harmonized standard in the sense of the Machinery Directive and associated EFTA regulations.

## **1 Scope**

This European Standard specifies the dimensions of openings for access as applied to machinery as defined in EN 292-1. It provides the dimensions to which the values given in EN 547-3 are applicable. Values for additional space requirements are given in annex A. This European Standard has been prepared primarily for non-mobile machinery, there may be additional specific requirements for mobile machinery.

Dimensions for access openings are based on the values for the 95<sup>th</sup> percentile, whereas reach distances are based on the values for the 5<sup>th</sup> percentile, in each case the least favourable body dimension of the expected user population being used as a basis. The same considerations apply to the location of access openings.

The anthropometric data given in EN 547-3 originate from static measurements of nude persons and do not take into account body movements, clothing, equipment, machinery operating conditions or environmental conditions.

This European Standard shows how to combine the anthropometric data with suitable allowances to take these factors into account.

Situations where people are to be prevented from reaching a hazard are dealt with in EN 294.

## **2 Normative references**

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.

EN 292-1, *Safety of Machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology.*

EN 294, *Safety of Machinery - Safety distances to prevent danger zones being reached by the upper limbs.*

EN 547-3, *Safety of Machinery – Human body measurements – Part 3: Anthropometric data.*

EN 614-1, *Safety of Machinery - Ergonomic design principles – Part 1: Terminology and general principles.*

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