



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 547-1:1997

ICS 13.110

13.180

**SAFETY OF MACHINERY - HUMAN BODY
MEASUREMENTS - PART 1: PRINCIPLES
FOR DETERMINING THE DIMENSIONS
REQUIRED FOR OPENINGS FOR WHOLE
BODY ACCESS INTO MACHINERY**

National Standards
Authority of Ireland
Dublin 9
Ireland

Tel: (01) 807 3800

Tel: (01) 807 3838

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Descriptors: safety of machines, human factors engineering, accident prevention, operators (personnel), human body, passages, access openings, dimensions

English version

**Safety of machinery - Human body measurements
- Part 1: Principles for determining the dimensions
required for openings for whole body access into
machinery**

Sécurité des machines - Mesures du corps humain
- Partie 1: Principes de détermination des
dimensions requises pour les ouvertures
destinées au passage de l'ensemble du corps
dans les machines

Sicherheit von Maschinen - Körpermaße des
Menschen - Teil 1: Grundlagen zur Bestimmung
von Abmessungen für Ganzkörper-Zugänge an
Maschinenarbeitsplätzen

This European Standard was approved by CEN on 1996-11-15. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

	Page
Foreword	3
0 Introduction	4
1 Scope	4
2 Normative references	4
3 General requirements	5
4 Passage openings	6
4.1 Opening for horizontal forward movement in upright posture	7
4.2 Opening for horizontal sideways movement over short distances in upright posture	8
4.3 Vertical movement through a duct, using a ladder	9
4.4 Manhole through which rapid active movement needs to be possible	10
4.5 Opening for entry in kneeling posture	10
Annex A (normative): Application of the measurements in practice	11
Annex B (informative): Notations for dimensions and anthropometric body measurements	14
Annex C (informative): Bibliography.....	15
Annex ZA (informative): Relationship between this European Standard and the EU Directive for Machinery..	16

Foreword

This European Standard 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 June 1997, and conflicting national standards shall be withdrawn at the latest by June 1997.

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).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

0 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 openings which will allow whole body access. 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 whole body 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 passages are based on the values for either the 95th or the 99th percentiles of the expected user population. Values for the 99th percentile apply to emergency egress routes.

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.

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| 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 |

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