

Australian Standard™

Safety of machinery

**Part 1702: Human body
measurements—Principles for
determining the dimensions required for
openings for whole body access into
machinery**



This Australian Standard was prepared by Committee SF-041, General Principles for the Guarding of Machinery. It was approved on behalf of the Council of Standards Australia on 21 April 2006.
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The following are represented on Committee SF-041:

Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Department for Administration and Information Services, SA
Department of Consumer and Employment Protection, WorkSafe Division, WA
Department of Primary Industries, Mine Safety, NSW
Engineers Australia
Federal Chamber of Automotive Industries
Human Factors and Ergonomics Society of Australia
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PREFACE

This Standard was prepared by the Standards Australia Committee SF-041, General Principles for the Guarding of Machinery as a revision, in part, of AS 4024.1, *Safeguarding of machinery*, Part 1: *General principles*.

The purpose of this Standard is to provide guidance to designers when machines are identified as having hazardous substances as a significant risk.

During its work, the Committee considered a number of Standards originating within the European Community in the field of safety of machinery. Many of these European Standards are being adopted virtually unchanged as International Standards by the International Organization for Standardization (ISO) and the Committee has agreed to continue to use material emanating from both CEN and ISO in this new edition. This action will maintain consistency with previous editions of AS 4024.1 and other machine-specific Australian Standards.

This edition has been published as a series of Parts rather than the single Standard previously published as AS 4024.1. In doing this, the Committee has cleared the way for simple revisions in the future. When a new edition of a relevant Standard becomes available at the international level, it will be adopted and published within the framework of AS 4024 with a minimum delay, so ensuring continued international alignment.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard **Safety of machinery**

Part 1702: Human body measurements—Principles for determining the dimensions required for openings for whole body access into machinery

1 SCOPE

This Standard specifies the dimensions of openings for whole body access as applied to machinery as defined in AS 4024.1201. It provides the dimensions to which the values given in AS 4024.1703 are applicable. Values for additional space requirements are given in Appendix A. This 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 AS 4024.1703 originate from static measurements of nude persons and do not take into account body movements, clothing, equipment, machinery operating conditions or environmental conditions.

This 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 AS 4024.1801.

2 OBJECTIVE

The objective of this Standard is to enable designers, manufacturers, suppliers, employees and users of machinery to minimize risks to the health and safety of employees and others working with or otherwise near machinery, by providing principles for determining the size of openings to allow whole body access to machines.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard.

AS

4024 Safety of machinery

4024.1201 Part 1201: General principles—Basic terminology and methodology

4024.1703 Part 1703: Human body measurements—Principles for determining the dimensions required for access openings

4024.1704 Part 1704: Human body measurements—Anthropometric data

4024.1801 Part 1801: Safety distances and safety gaps—Safety distances to prevent danger zones being reached by the upper limbs

4 GENERAL REQUIREMENTS

This Standard specifies the relevant dimensions of openings with respect to different body positions.