

Australian Standard™

Safety of machinery

**Part 1701: Human body
measurements—Basic human body
measurements for technological design**



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 11 May 2006.
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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
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PREFACE

This Standard was prepared by the Standards Australia Committee SF-041, General Principles for the Guarding of Machinery to supersede, in part, AS 4024.1—1996, *Safeguarding of machinery, Part 1: General principles*.

It is now well recognized that the wellbeing of people is greatly affected by their physical relationship with various factors such as clothing, places of work, transportation, homes and recreational activities. To ensure harmony between people and their environments, it is necessary to quantify the size and shape of people for optimization of the technological design of the workplace and the home environment. This Standard provides a set of dimensions that forms the basis for facilitating this quantification.

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.

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STANDARDS AUSTRALIA

Australian Standard
Safety of machinery

**Part 1701: Human body measurements—Basic human body measurements
for technological design**

1 SCOPE

This Standard provides a description of anthropometric measurements which may be used as a basis for comparison of population groups.

The basic list specified in this Standard is intended to serve as a guide for ergonomists who are required to define population groups and apply their knowledge to the geometric design of the places where people work and live.

This list is not intended to serve as a guide for how to take anthropometric measurements, but it gives information to the ergonomist and designer on the anatomical and anthropometrical bases and principles of measurement which are applied in the solution of design tasks.

2 OBJECTIVE

The objective of this Standard is to enable designers, manufacturers, suppliers, employers and users of machinery to minimize the risks to the health and safety of employees working with or otherwise near machinery by providing descriptions of anthropometric measurements for use in the geometric design of places where people work.

3 DEFINITIONS

For the purposes of this Standard, the definitions below apply.

3.1 Population group

Group of people having some common environment or activity.

NOTE: These groups may be as diverse as geographically defined populations or specified age groups.

3.2 Anthropometric terms**3.2.1 *Acromion***

Most lateral point of the lateral edge of the spine of the scapula.

NOTE: The height of the acromion is usually equated with shoulder height.

3.2.2 *Anterior; ventral*

Towards the front of the body.

3.2.3 *Bi*

Prefix denoting connection with or relation to each of two symmetrical paired parts.

NOTE: For example, biacromial, bitragion.

3.2.4 *Biceps femoris*

One of the large posterior muscles in the thigh of the leg.