

**BUREAU OF INDIAN STANDARDS**  
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**Doc No.: PGD 15 (25336) WC**

**April 2024**

*भारतीय मानक मसौदा*

**एंथ्रोपोमेट्रिक डेटाबेस स्थापित करने के लिए सामान्य अपेक्षाएँ**

*(IS 16573 का पहला पुनरीक्षण)*

*Draft Indian Standard*

**General Requirements for Establishing Anthropometric  
Databases**

*(First Revision of IS 16573)*

ICS 13.180

Ergonomics Sectional Committee, PGD 15

Last date of comment: 25-06-2024

**NATIONAL FOREWORD**

*(Formal Clause in the national foreword shall be added later)*

The well-being of people is very much dependent on their proportional and geometric relationship with several factors, such as growth, design principles for clothing, transportation, workplace and homes, as well as, sporting and recreational activities. Implementation of databases on body dimensions of a population supports essential health and safety requirements, as well as, standards in the field of machinery safety and personal protective equipment, and has acquired importance in the devising of computer-generated manikins of the human body.

One of the major difficulties in formulating databases on anthropometry is, that the numerous existing studies are rarely comparable in the strictest sense. Difficulties arise in comparing one study with another because either the methods used differ or they are not sufficiently well described. The anthropometric standards used for the data collection are fundamental to setting up any anthropometric databases.

This document is intended to be used in close conjunction with IS 13214 (Part 1)/ ISO 7250-1. The ultimate goal is that a database developed by one researcher can be easily used by other researchers. This would be in a form that is readily accessible by those responsible for developing standards in support of good design and health and safety requirements (for example the IS 15836/ ISO 15534 series and IS 16572/ ISO 14738). To achieve this goal, it is necessary to develop an appropriate Indian Standard to ensure that anthropometric databases and their associated reports are internationally compatible.

This standard was originally published in 2017 based on ISO 15535 : 2012. First revision of this standard is undertaken to align it with the latest version of ISO 15535.

The major changes are as follows:

- a) Recommendation of tabulation for sex combined statistics in 9.4 has been removed;
- b) Term “sex” has been replaced with “gender”;
- c) Term “subject” has been replaced with “participant”;
- d) Term “examination” has been replaced with “measurement”;
- e) Annex A has been revised to add another method for estimating a necessary sample size;
- f) Table C.1 has been revised to correspond with dimension numbers in IS 13214 (Part 1) / ISO 7250-1 and minor technical revisions have been made; and
- g) Former Annexes G and H have been removed.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, references appear to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 3166-1 Codes for the representation of names of countries and their subdivisions — Part 1: Country Code	IS 14836 (Part 1) : 2020/ ISO 3166-1 : 2013 Codes for the representation of names of countries and their subdivisions: Part 1 Country codes ( <i>second revision</i> )	Identical
ISO 7250-1 Basic human body measurements for technological design — Part 1 : Body measurement definitions and landmarks	IS 13214 (Part 1) : 2020/ ISO 7250-1 : 2017 Basic human body measurements for technological design : Part 1 Body measurement definitions and landmarks ( <i>second revision</i> )	Identical
ISO 8601-1 Date and time — Representations for information interchange — Part 1: Basic rules	IS/ISO 8601-1 : 2019 Date and time — Representations for information interchange : Part 1 Basic rules	Identical

The technical committee has reviewed the provisions of the following International Standard referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard:

International Standard

*Title*

ISO/IEC 8859-1

Information Technology — 8-bit single-byte coded graphic character sets — Part 1: Latin alphabet No. 1

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (*second revision*)’.

**NOTE:** The technical content of the draft standard is not available on the website. For details, please refer to ISO 15535 : 2023 or contact:

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