



SLOVENSKI STANDARD
SIST-TP CEN ISO/TR 7250-2:2025

01-februar-2025

Osnovne mere človeškega telesa za tehnološko načrtovanje - 2. del: Statistični povzetek telesnih mer prebivalstva posameznih narodnosti (ISO/TR 7250-2:2024)

Basic human body measurements for technological design - Part 2: Statistical summaries of body measurements from national populations (ISO/TR 7250-2:2024)

Grundlegende menschliche Körpermaße für die technische Planung - Teil 2: Statistische Zusammenfassungen von Körpermaßen nationaler Populationen. (ISO/TR 7250-2:2024)

Définitions des mesures de base du corps humain pour la conception technologique - Partie 2: Résumés statistiques des mesurages du corps de populations nationales (ISO/TR 7250-2:2024)

Ta slovenski standard je istoveten z: CEN ISO/TR 7250-2:2024

<https://standards.iteh.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025>

ICS:

13.180 Ergonomija Ergonomics

SIST-TP CEN ISO/TR 7250-2:2025 en,fr,de

TECHNICAL REPORT

CEN ISO/TR 7250-2

RAPPORT TECHNIQUE

TECHNISCHER REPORT

April 2024

ICS 13.180

Supersedes CEN ISO/TR 7250-2:2011, CEN ISO/TR
7250-2:2011/A1:2013

English Version

Basic human body measurements for technological design - Part 2: Statistical summaries of body measurements from national populations (ISO/TR 7250-2:2024)

Définitions des mesures de base du corps humain pour
la conception technologique - Partie 2: Résumés
statistiques des mesurages du corps de populations
nationales (ISO/TR 7250-2:2024)

Grundlegende menschliche Körpermaße für die
technische Planung - Teil 2: Statistische
Zusammenfassungen von Körpermaßen nationaler
Populationen (ISO/TR 7250-2:2024)

This Technical Report was approved by CEN on 9 March 2024. It has been drawn up by the Technical Committee CEN/TC 122.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

(<https://standards.iteh.ai>)
Document Preview

[SIST-TP CEN ISO/TR 7250-2:2025](https://standards.iteh.ai)

<https://standards.iteh.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

CEN ISO/TR 7250-2:2024 (E)

| Contents | Page |
|-------------------------------|-------------|
| European foreword..... | 3 |

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

[SIST-TP CEN ISO/TR 7250-2:2025](https://standards.itih.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025)

<https://standards.itih.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025>

European foreword

This document (CEN ISO/TR 7250-2:2024) has been prepared by Technical Committee ISO/TC 159 "Ergonomics" in collaboration with Technical Committee CEN/TC 122 "Ergonomics" the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN ISO/TR 7250-2:2011 and CEN ISO/TR 7250-2:2011/A1:2013.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

Endorsement notice

The text of ISO/TR 7250-2:2024 has been approved by CEN as CEN ISO/TR 7250-2:2024 without any modification.

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

[SIST-TP CEN ISO/TR 7250-2:2025](https://standards.itih.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025)

<https://standards.itih.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025>



Technical Report

ISO/TR 7250-2

Basic human body measurements for technological design —

Part 2: Statistical summaries of body measurements from national populations

*Définitions des mesures de base du corps humain pour la
conception technologique —*

*Partie 2: Résumés statistiques des mesurages du corps de
populations nationales*

**Second edition
2024-03**

ISO/TR 7250-2:2024(en)

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST-TP CEN ISO/TR 7250-2:2025](https://standards.iteh.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025)

<https://standards.iteh.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025>

**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

© ISO 2024 – All rights reserved

ISO/TR 7250-2:2024(en)

Contents

Page

| | |
|--|-----------|
| Foreword | v |
| Introduction | vi |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Anthropometric measurements | 1 |
| 5 Statistical procedures | 2 |
| 5.1 Data editing..... | 2 |
| 5.2 Statistics..... | 2 |
| 5.3 Population stratification..... | 2 |
| 5.4 Age stratification..... | 2 |
| 5.5 Body measurements for representative body forms..... | 2 |
| 6 Background information | 2 |
| 6.1 General..... | 2 |
| 6.2 Background of database..... | 2 |
| 6.2.1 Time period of measurement..... | 2 |
| 6.2.2 Location of measurement..... | 2 |
| 6.2.3 Demographic data..... | 3 |
| 6.2.4 Publication on the anthropometric research..... | 3 |
| 6.3 Representativeness of the sample..... | 3 |
| 6.3.1 Sampling method..... | 3 |
| 6.3.2 Information on secular change..... | 3 |
| 6.4 Accuracy and reliability of measurements..... | 3 |
| 6.4.1 Skill of measurers..... | 3 |
| 6.4.2 Measurements from 3D scanners..... | 3 |
| 7 Procedure for presenting member body statistics | 3 |
| 7.1 General..... | 3 |
| 7.2 Submission of data..... | 4 |
| 7.3 One data set from each member body..... | 4 |
| 7.4 Meeting the criteria outlined in 5.2 , 5.3 and 5.4 | 4 |
| 7.5 Measurement of possible errors..... | 4 |
| 7.5.1 General..... | 4 |
| 7.5.2 Minima and maxima..... | 4 |
| 7.5.3 Percentile values..... | 4 |
| 7.5.4 Standard deviation (SD)..... | 4 |
| 7.5.5 Comparison of mean or P50 values from member bodies..... | 4 |
| 7.6 Marks on values likely to be in error..... | 4 |
| 8 Statistics for ISO national members | 5 |
| 8.1 General..... | 5 |
| 8.2 Austria..... | 5 |
| 8.3 Germany..... | 5 |
| 8.4 Italy..... | 9 |
| 8.5 Japan..... | 15 |
| 8.6 Kenya..... | 20 |
| 8.7 The Republic of Korea..... | 24 |
| 8.8 The Netherlands..... | 29 |
| 8.9 Thailand..... | 33 |
| 8.10 The United States of America..... | 37 |
| 8.11 China..... | 42 |
| 8.12 India..... | 46 |
| 8.13 Sweden..... | 51 |
| 8.14 Brazil..... | 55 |

ISO/TR 7250-2:2024(en)

| | |
|--|-----------|
| Annex A (informative) Maximum allowable difference between values obtained by the method described in ISO 7250-1 and by other methods | 61 |
| Annex B (informative) Scan-derived data not evaluated for comparability with traditional manual measurements | 62 |
| Bibliography | 68 |

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST-TP CEN ISO/TR 7250-2:2025](https://standards.iteh.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025)

<https://standards.iteh.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025>

ISO/TR 7250-2:2024(en)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 3, *Anthropometry and biomechanics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 122, *Ergonomics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO/TR 7250-2:2010), which has been technically revised. It also incorporates the Amendment ISO/TR 7250-2:2010/Amd 1:2013.

The main changes are as follows:

- measurement item numbers have been updated to harmonize with ISO 7250-1;
- statistics for the male and female combined data have been deleted;
- data from the Republic of Korea have been updated;
- new data from Sweden and Brazil have been added;
- scan-derived data not evaluated for comparability with traditional manual measurements from Canada have been included in Annex B (informative).

A list of all parts in the ISO 7250 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

ISO/TR 7250-2:2024(en)

Introduction

Anthropometric data used for technological design have been included in many ISO product standards. However, different review cycles make it impossible for simultaneous revision of these product standards as new anthropometric data become available. This document is intended to serve as a continually updated repository of the most current national anthropometric data. It is intended to make current and updated anthropometric data available for inclusion by reference in the various ISO product standards requiring ISO 7250-1 body measurement input, wherever national specificity of design parameters is required.

Body dimensions of people have been increasing in many countries over the past few decades. The rate of increase differs from country to country. In areas experiencing significant secular change, the statistical summaries described in this document will become outdated sooner. Therefore, it is intended that statistical summaries of human body measurements described in this document be updated as new data become available.

This document provides body dimensions data for people of "working age". In order to provide practical data, the working age population is not defined and the decision is left to each country, because working age differs between countries. However, data for children under 16 years are not included.

To ensure the comparability of measurements, body dimensions in this document are measured according to ISO 7250-1. To ensure the reliability of statistical data, databases from which statistics are calculated adhere to ISO 15535:2012 and ISO 15535:2023.

iTeh Standards (<https://standards.iteh.ai>) Document Preview

[SIST-TP CEN ISO/TR 7250-2:2025](https://standards.iteh.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025)

<https://standards.iteh.ai/catalog/standards/sist/b723dda5-c11d-4448-a38a-8d0efbf46758/sist-tp-cen-iso-tr-7250-2-2025>

Basic human body measurements for technological design —

Part 2:

Statistical summaries of body measurements from national populations

1 Scope

This document provides statistical summaries of body measurements measured according to ISO 7250-1, together with database background information for working age people prepared according to ISO 15535:2012 in the national populations of individual ISO member bodies. This document also describes the process of the measurement and preparation of statistical summaries.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

secular change

change in mean body dimensions of a specific group over time

Note 1 to entry: The direction of change can be positive or negative.

4 Anthropometric measurements

Measuring conditions and definitions of measurements in this document are the same as those described in ISO 7250-1. Body measurements are described in millimetres (mm) or kilograms (kg).

Body measurements obtained from 3D systems or obtained using instruments different from those described in ISO 7250-1 are confirmed by member bodies to be sufficiently close to those produced by the traditional methods of ISO 7250-1 according to ISO 20685-1:2018, Clause 5. [Annex B](#) provides further information on scan-derived databases.

Sometimes a measurement is not performed exactly as described in ISO 7250-1, but is very similar. In such cases, the measurement may be substituted for the ISO 7250-1 measurement if its value is adequately close. To judge closeness, the method described in ISO 20685-1 is used. The criteria for the judgment are given in [Annex A](#).

The measured side (right or left) is described.

ISO/TR 7250-2:2024(en)

When measurements not described in ISO 7250-1 are also available, the number of these measurements and the reference are provided.

Age statistics are tabulated similarly and presented together with the anthropometric measurements.

5 Statistical procedures

5.1 Data editing

Before calculating statistical values, irregular values are detected and reviewed according to ISO 15535:2012, Annex F or ISO 15535:2023, Annex F.

5.2 Statistics

In this document, the following statistics are described for each measurement: sample size, mean, standard deviation (SD) and 1st, 5th, 50th, 95th and 99th percentile values.

5.3 Population stratification

Population can be stratified by gender, age, location, occupation or education. To keep this document at a reasonable size, statistics are presented for females and males, but not for other strata.

5.4 Age stratification

In order to provide practical data and to keep this document at a reasonable size, only one age group, including all working-age people, is considered.

5.5 Body measurements for representative body forms

Measurements for body forms representing large, medium and small types are useful for technological design. While the medium type can be represented by P50 values for all measurements, fixed percentile options are problematic for extreme body forms, such as those derived from all P5 or P95 values. When sitting height and leg length are P5, height is smaller than P5. Though such a problem is well recognized, there is no consensus on the method for obtaining measurements for body forms statistically representing the variation in a population. Considering this lack of consensus, such data is not presented in this document.

6 Background information

6.1 General

Statistics of body dimensions are described together with the following information for users to judge their reliability and context.

6.2 Background of database

6.2.1 Time period of measurement

Year(s) of measurement.

6.2.2 Location of measurement

Name of the country and city.