ETHIOPIAN STANDARD

ES ISO 8559-3:2021

First edition
24-04-2021

Size designation of clothes — Part 3: Methodology for the creation of body measurement tables and intervals

(Identical with ISO 8559-3:2018)

ICS: 61.020

Published by Ethiopian Standards Agency

ESA
የኢትዮጵያ የደረጃዎች ኤጀንሲ
ETHIOPIAN STANDARDS AGENCY

Contents

Page

Foreword

This Ethiopian Standard has been prepared under the direction of Technical Committee for Made-up-Textiles & Ready-Made Garments (TC 72) and published by the Ethiopian Standards Agency (ESA).

The standard is identical with ISO 8559-3:2018 *Size designation of clothes- Part 3: Methodology for the creation of body measurement tables and intervals,* published by the International Organization for Standardization(ISO).

For the purpose of this Ethiopian Standard , the adopted ISO text shall be modified as follows:

- The phrase “International Standard” shall be read as “Ethiopian Standard” and
- A full stop (.) shall substitute comma (,) as decimal maker.

Size designation of clothes —

Part 3:
Methodology for the creation of body measurement tables and intervals

1 Scope

This document describes the principles of the establishment of tables for body measurements, defines the categories of tables (related to intervals), and lists the population groups (infants, girls, boys, children, women, men) and sub-groups to be used for developing ready-to-wear garments. The body measurement tables and intervals are mainly used by the clothing sector to make the development of well-fitting products easier and more accurate.

The described methodology is mainly based on the application of statistical analysis, using body dimension data. The statistical level has deliberately been kept to a low level in order for the content to be made readily comprehensible to the widest possible readership.

This methodology is applicable to various sets of body dimensions. It can be useful to determine intervals for the size designation as described in ISO 8559-2. Values in the tables in this document are examples.

Garment dimensions are not included in this document.

It is necessary to use a general approach providing inbuilt flexibility, in order to keep the whole sizing system capable of adapting to changes (e.g. demographic criteria), because body shape and proportions for any one targeted population group differ significantly.

NOTE ISO 15535 can be convenient for recording and organizing the population data.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8559-1, *Size designation of clothes — Part 1: Anthropometric definitions for body measurement*

ISO 8559-2, *Size designation of clothes — Part 2: Primary and secondary dimension indicators*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8559-1 and ISO 8559-2 and the following apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
explanatory variable
input data that is used to calculate simple or multiple linear regression

Annex B
(informative)

Example of a body measurement table content

Selected explanatory variables: height and chest girth (intended for a targeted "men" group, upper body garments).

The following body measurement table, Table B.1, is based on the following explanatory variables: height (X_1) and chest girth (X_2). The body measurement table contains data only based on one value of height. Consequently, different tables have to be determined for each selected height. All values of the body dimensions are usually given in centimetres [13].

NOTE The letters in Table B.1 could refer to body landmarks and might be given with the body drawing (see example Figure B.1). Not all body measurements listed in Table B.1 or body measurement positions indicated on Figure B.1 are from ISO 8559-1.

Bibliography

[1] ISO 15535, *General requirements for establishing anthropometric databases*

[2] ISO 3534 (all parts), *Statistics — Vocabulary and symbols*

[3] ISO 5479, *Statistical interpretation of data — Tests for departure from the normal distribution*

[4] ISO 5725-1, *Accuracy (trueness and precision) of measurement methods and results — Part 1: General principles and definitions*

[5] ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*

[6] ISO 16269-4, *Statistical interpretation of data — Part 4: Detection and treatment of outliers*

[7] ISO/TS 17503, *Statistical methods of uncertainty evaluation — Guidance on evaluation of uncertainty using two-factor crossed designs*

[8] ISO/TR 10652:1991[1)], *Standard sizing systems for clothes*

[9] ISO/TR 12845, *Selected illustrations of fractional factorial screening experiments*

[10] ISO/TR 13195, *Selected illustrations of response surface method — Central composite design*

[11] ISO/TR 29901, *Selected illustrations of full factorial experiments with four factors*

[12] EN 13402-3:2017, *Size designation of clothes — Part 3: Body measurements and intervals*

[13] Institut Français Textile Habillement (IFTH). 2011, Ready-made men sector, with Drop evolution, an application of the French National Survey carried out on 2006

የኢትዮጵያ የደረጃዎች ኤጀንሲ
Ethiopian Standards Agency

Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010.ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1998.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitat the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational institutions, research institutes, government organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/ or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes. Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed in from our website.

International Involvement

ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the international Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM).It is a founding member of the African Regional Organization for standardization (ARSO).

<u>More Information</u>?
Contact us at the following address.
The Head Office of ESA is at Addis Ababa.

☎ *011- 646 06 85, 011- 646 05 65*
🖷 *011-646 08 80*
✉ *2310 Addis Ababa, Ethiopia*
E-mail: info@ethiostandards.org,
Website: www.ethiostandards.org

ESA
የኢትዮጵያ የደረጃዎች ኤጀንሲ
ETHIOPIAN STANDARDS AGENCY

Standard Mark