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**Size designation of clothes —**

Part 4:

**Determination of the coverage ratios  
of body measurement tables**

*Désignation des tailles de vêtements —*

*Partie 4: Détermination des taux de couverture des barèmes de  
mesuration du corps*

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## 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 documents 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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 133, *Clothing sizing systems - size designation, size measurement methods and digital fittings*.

A list of all parts in the ISO 8559 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](http://www.iso.org/members.html).

## Introduction

The optimization of measurement tables is the final objective of a garment company in order to increase its coverage ratios (also termed as market share).

Usually, numerous coverage ratios are calculated in an iterative way in order to optimize the table of measurements.

One coverage ratio could be based on the values (minimum and maximum of an interval) of two body dimensions or of three body dimensions.

The two body dimensions can be easily represented in a two-dimensional chart while the three body dimensions can be correctly represented in a three-dimensional chart.

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# Size designation of clothes —

## Part 4:

# Determination of the coverage ratios of body measurement tables

## 1 Scope

This document describes the calculation of coverage ratios of body measurement tables in comparison with two or three selected body dimensions of the targeted population.

**NOTE** Theoretically, the calculation of the coverage ratios can be extended to further dimensions. Practically, carrying out calculations based on 4 or more dimensions, leading to low percentages, face difficulty in getting easy visual illustrations and has not been found relevant.

This document is applicable to body measurement tables only if a database of body dimensions of the targeted population is available.

## 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

#### interval

difference between the two adjoining values in a body measurement table

[SOURCE: ISO 8559-3:2018, 3.3]

### 3.2

#### coverage ratio

ratio of the number of cases within the values of the measurement tables for selected body dimensions in comparison to the number of the total cases

Note 1 to entry: The number of the total cases are related to the targeted population.

Note 2 to entry: The expression "market share" is also used in marketing to name the "coverage ratio".

## 4 General principle of the calculation of a coverage ratio

The calculation of a coverage ratio of a body measurement table is based on two or three body dimensions selected from the mentioned body measurement table in comparison with the data of the same two or three body dimensions extracted from a specified data base of the targeted population. The coverage ratio, expressed in percentage, is calculated from the number of the cases for which the

body dimension coordinates of a person falling within the area delimited by the intervals of the selected body dimensions in comparison with the number of the total cases of the specified targeted population of the data base.

A coverage ratio is calculated for each area (coverage ratio per area) and an overall coverage ratio is calculated for all the areas.

If  $N$  is the total cases of the specified targeted population of the data base and  $n_i$  is the number of the cases for which the body dimension coordinates of a person falling within area  $i$  delimited by the intervals of the selected body dimensions (lower limits of intervals are inclusive and upper limits of intervals are exclusive, except for the last one), the coverage ratio of area  $i$  is  $100 \times \frac{n_i}{N}$  expressed in percentage.

The overall coverage ratio is  $100 \times \frac{\sum n_i}{N}$  expressed in percentage.

When 3 body dimensions are selected, the three related intervals lead to identify an area as a box in a three-axis diagram, where each axis represents one of the selected body dimensions.

[Figure 1](#) illustrates a three-axis diagram with boxes based on the three selected body dimensions.

NOTE 1 The positions of the boxes are not systematically along a linear progression.

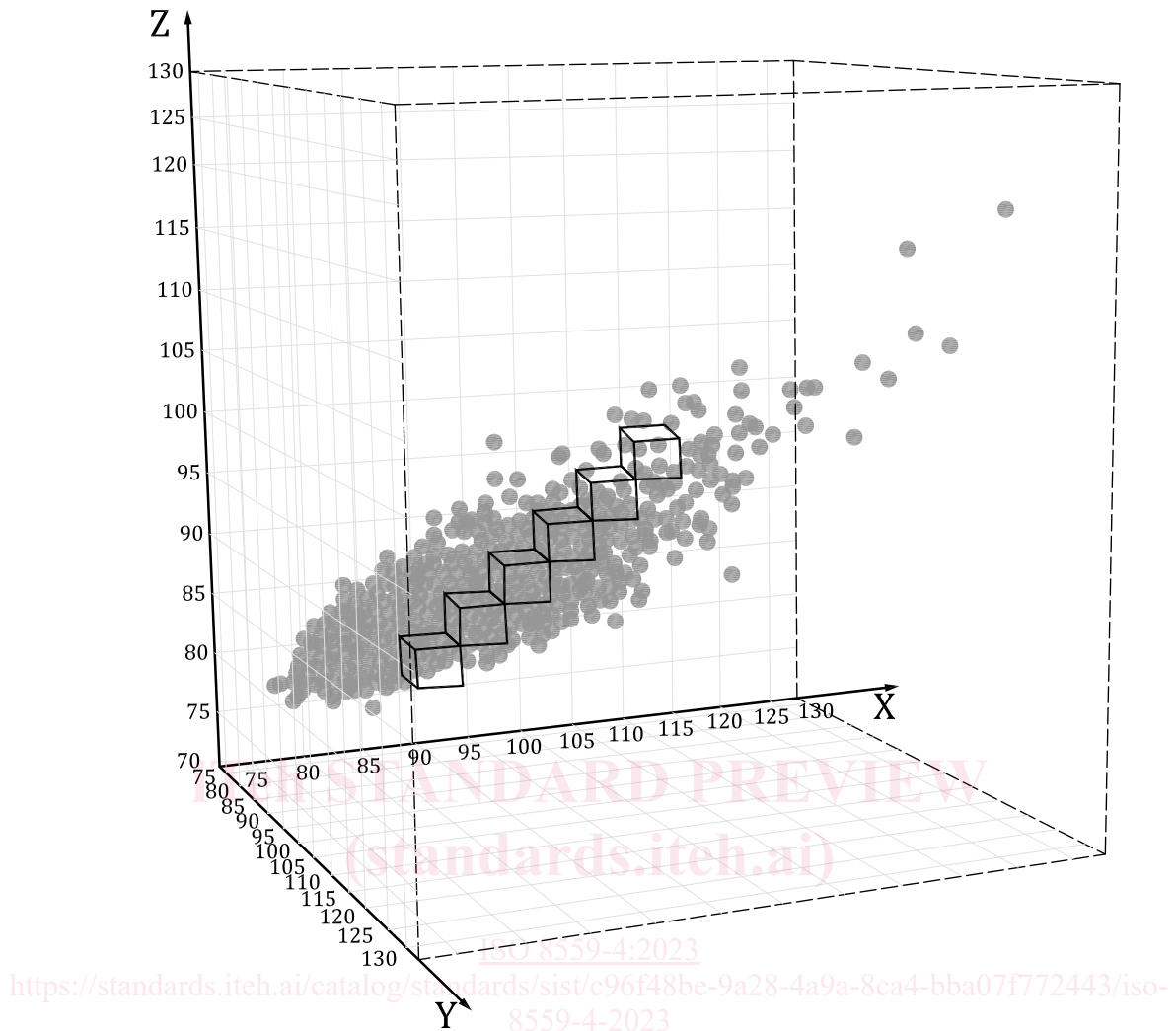
NOTE 2 A dot in chart represents a single subject or a group of subjects with the same coordinates. An example of a calculation of a coverage ratio based on three selected body dimensions is given in [Annex A](#).

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**Key**

- X first body dimension
- Y second body dimension
- Z third body dimension

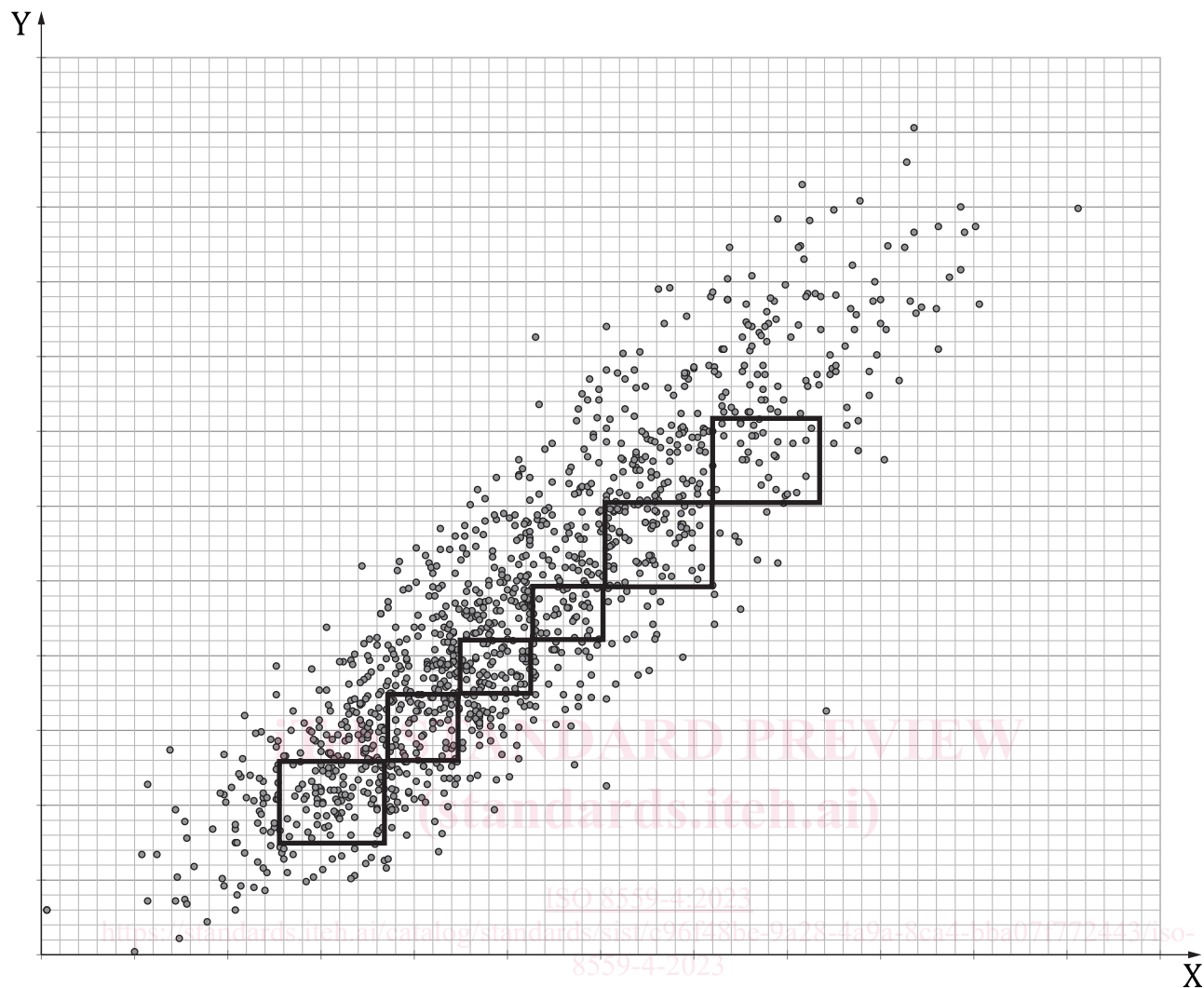
**Figure 1 — Box areas based on three selected body dimensions**

When two body dimensions are selected, the two related intervals lead to identifying an area as a rectangle in a two-axis diagram, where each axis represents one of the selected body dimensions.

[Figure 2](#) illustrates a two-axis diagram with rectangles based on the two selected body dimensions.

NOTE 3 The positions of the rectangles are not systematically along a linear progression.

An example of a calculation of a coverage ratio based on two selected body dimensions is given in [Annex B](#).



**Key**

- X first body dimension
- Y second body dimension
- body dimension coordinates of a person
- area delimited by the intervals of the two body dimensions from the body measurement table

**Figure 2 — Rectangle areas based on two selected body dimensions**

NOTE 4 An example of a simplified version of the coverage ratio calculation which is based on two body dimensions, is a starting point for a body measurement table optimization approach given in [Annex C](#).

## 5 Report

The report shall give the following information:

- a) reference to this document, i.e. ISO 8559-4:—;
- b) identification of the body measurement table for which the coverage ratios are calculated;
- c) identification of the data base used for the comparisons and list of the criteria applied to select body dimensions of the targeted population;

d) the number of the total cases (i.e. number of persons) of the specified targeted population;

**For each two or three body dimensions selected:**

e) coverage ratio for each area, expressed in %;

f) when areas are ordered, a cumulative coverage ratio when adding another coverage ratio of the subsequent area to the previous one, expressed in percentage;

g) overall coverage ratio, expressed in %.

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