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**Code of practice leather garment  
sizing system**

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## Introduction

Garment sizing system consists of the number of sizes and intervals between sizes (i.e. the size roll), and a size designation or labeling system. Sizes are based on suitable control dimensions; thus, identifying these control dimensions around which the sizing roll is structured is critical. Internationally, a variety of sizing designations is used, such as sizes by age (especially for children), by code (e.g. S, M, L), by a generalized 'size' (e.g. small, medium, large), or a body dimension (e.g. waist and leg measurements for men's trousers).

Measurement is very important in garment production because it dictates accurate fit of a garment on the wearer. The shape and size of a person can be determined only through measurement. Body proportions can vary enormously. This is obvious from the variety of body shapes that can be seen in different people. It is essential that measurements are taken accurately; in the correct position and with an equal amount of tension on the tape.

This standard specifies general sizing system for leather garments. The primary aim of this standard is to establish a size designation system that can be used by manufacturers and retailers to indicate to consumers (in a simple, direct and meaningful manner) the body dimensions of the person that the leather garment is intended to fit. The size designation system is based on body measurements, not garment measurements. The choice of garment measurements is normally determined by the designer and the manufacturers who make appropriate allowances to accommodate the type and position of wear, style, cut and fashion elements of the garment

## Foreword

This Ethiopian Standard has been prepared under the direction of Technical Committee for Leather and Leather Products(TC 74) and published by the Ethiopian Standards Agency (ESA).

Draft of the standard has been presented by Ethiopian Leather Industry Development Institute.

Acknowledgment has been made for the organization for its concern to contribute to the effort of national standardization.

# Code of practice leather garment sizing system

## 1. Scope

This Ethiopian standard describes Code of Practice for Leather Garment Sizing System.

## 2. Normative references

The following referenced documents are indispensable for the application of this Ethiopian Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

ES ISO 8559- 3: Size designation of clothes — Part 3: Methodology for the creation of body measurement tables and intervals

## 3. Terms and definitions

For the purpose of this standard, the following definitions shall apply.

### 3.1.

#### **Size Code**

A system that relies on symbols (numerals, alphabetical letters, signs, or a combination of these) to denote body size.

### 3.2.

#### **Figure Type**

A brief description of the shape or structure of the intended wearer.

### 3.3.

#### **Control Dimensions**

Those body dimensions (in centimeters), on which a sizing system is built, and that are used to assign an appropriately sized garment to a wearer.

### 3.4.

#### **Secondary Dimension**

Body dimensions (in centimeters) other than control dimensions those are necessary to define completely each individual size for a particular type of garment.

### 3.5.

#### **Sizing system**

Defined as a table of numbers that contains the value of each body dimensions of different groups. Sizing system is a process used to establish a size chart consisting of key body measurements for a range of apparel

### 3.6.

#### **Anthropometry**

Focuses on linear body measurements, which are inadequate to describe and classify the human body-form for apparel pattern development.

### 3.7.

#### **Primary dimension**

This is the body measure according to which the product must be labeled. Where men's garments use the chest girth, women's clothes are designed for a certain bust girth.

## 3.8.

**Sizing System for clothes**

An arrangement of sizes composed of body measurements, usually in tabular form.

**4. Elements of Sizing System****4.1. Elements are categorized as follows:**

- a) Primary elements, and
- b) Supporting element

**4.2. Primary Elements****4.2.1.** Control Dimensions**4.2.2.** Figure Type**4.2.3.** Size Code**4.3. Supporting Elements****4.3.1.** Secondary Dimensions**5. Garment sizing Procedure**

The first part of the standard defines the list of body dimensions to be used for designating clothes sizes, together with an anatomical explanation and measurement guidelines. All body dimensions are measured, preferably without or as few as possible clothes, in centimeter.

The standard also defines a pictogram that can be used in language-neutral labels to indicate one or several of the following body dimensions.

**5.1 head girth** maximum horizontal girth (circumference) of the head measured above the ears

**5.2 neck girth** of the neck measured with the tape measure passed 2 cm below the Adam's apple and at the level of the 7th cervical vertebra

**5.3 chest girth ( men)** maximum horizontal girth measured during normal breathing with the subject standing erect and the tape-measure passed over the shoulder blades (scapulae), under the armpits (axillae), and across the chest

**5.4 bust girth (♀ women)** maximum horizontal girth measured during normal breathing with the subject standing erect and the tape-measure passed horizontally, under the armpits (axillae), and across the bust prominence (preferably measured with moderate tension over a brassiere that shall not deform the breast in an unnatural way and shall not displace its volume)

**5.5 under bust girth ( women)** horizontal girth of the body measured just below the breasts

**5.6 waist girth** of the natural waistline between the top of the hip bones (iliac crests) and the lower ribs, measured with the subject breathing normally and standing erect with the abdomen relaxed

**5.7 hip girth ( women)** horizontal girth measured round the buttocks at the level of maximum circumference

**5.8 height** vertical distance between the crown of the head and the soles of the feet, measured with the subject standing erect without shoes and with the feet together (for infants not yet able to stand upright: length of the body measured in a straight line from the crown of the head to the soles of the feet)

**5.9 inside leg length** distance between the crotch and the soles of the feet, measured in a straight vertical line with the subject erect, feet slightly apart, and the weight of the body equally distributed on both legs

**5.10 arm length** distance, measured using the tape-measure, from the armscye/shoulder line intersection (acromion), over the elbow, to the far end of the prominent wrist bone (ulna), with the subject's right fist clenched and placed on the hip, and with the arm bent at 90°

**5.11 hand girth** maximum girth measured over the knuckles (metacarpals) of the open right hand, fingers together and thumb excluded

**5.12 foot length** horizontal distance between perpendiculars in contact with the end of the most prominent toe and the most prominent part of the heel, measured with the subject standing barefoot and the weight of the body equally distributed on both feet

**5.13 body mass** measured with a suitable balance in kilograms

The second part of the standard defines for each type of garment one "primary dimension". This is the body measure according to which the product must be labeled. Where men's garments use the chest girth, women's clothes are designed for a certain bust girth.

For some types of garment, a single measure may not be sufficient to select the right product. In these cases, one or two "secondary dimensions" can be added to the label.

The following table shows the *primary* (in bold) and *secondary dimensions* listed in the standard, leaving out the redundant words *girth*, *length* and *size* for better overview.

| Garment                    | Men                              | Women                          | Boys                 | Girls                   |
|----------------------------|----------------------------------|--------------------------------|----------------------|-------------------------|
| Vest                       | chest, height                    | bust, height                   | height, chest        | height, bust            |
| Underpants                 | waist, height                    | waist, height, hip             | height, waist        | height, waist           |
| Trousers/shorts            | waist, height, inside leg        | waist, height, hip, inside leg | height, waist        | height, waist           |
| Swim-suits/wear and bodies | waist, height, chest             | bust, height, hip, underbust   | height, chest, waist | height, underbust, bust |
| Suits                      | chest, waist, height, inside leg | bust, height, hip              | height, chest        | height, bust            |
| Stockings                  | —                                | foot                           |                      |                         |
| Socks                      | foot                             |                                |                      |                         |

| Garment                              | Men                  | Women                          | Boys          | Girls                |
|--------------------------------------|----------------------|--------------------------------|---------------|----------------------|
| Skirts                               | —                    | waist, height, hip             | —             | height, waist        |
| Shirts (m), Blouses (f)              | neck, height, arm    | bust, height                   | height, neck  | height, bust         |
| Pyjamas, L<br>nightdresses           | chest, height, waist | bust, height, waist, hip       | height, chest | height, bust         |
| Pantyhose                            | —                    | height, waist, weight          | —             | height               |
| Overcoats                            | chest, height        | bust, height                   | height, chest | height, bust         |
| Knits: cardigans, sweaters, T-shirts | chest, height        | bust, height                   | height, chest | height, bust         |
| Jackets                              | chest, height, waist | bust, height, hip              | height, chest | height, bust         |
| Headwear                             | head                 |                                |               |                      |
| Gloves                               | hand                 |                                |               |                      |
| Dresses                              | —                    | bust, height, hip, waist       | —             | height, bust         |
| Corsetry/upper and full body         | —                    | Under bust, height, hip, waist | —             | —                    |
| Corsetry/lower body                  | —                    | waist, hip, height             | —             | —                    |
| Bras                                 | —                    | underbust, bust, cup           | —             | underbust, bust, cup |

The third part of the standard defines preferred numbers of primary and secondary body dimensions.

The product should not be labeled with the average body dimension for which the garment was designed (i.e., not "height: 176 cm."). Instead, the label should show the range of body dimensions from half the step size below to half the step size above the design size (e.g., "height: 172–180 cm.").

For heights, for example, the standard recommends generally to use the following design dimensions, with a step size of 8 cm:

|               |     |        |        |         |        |        |         |  |
|---------------|-----|--------|--------|---------|--------|--------|---------|--|
| <b>Height</b> | ... | 160    | 168    | 176     | 184    | 192    | 200     |  |
| <b>Range</b>  | ... | 56–164 | 64–172 | 172–180 | 80–188 | 88–196 | 196–204 |  |

For trousers, the recommended step size for height is 4 cm:

|               |  |        |        |        |        |        |        |        |        |        |        |        |        |  |
|---------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| <b>Height</b> |  | 156    | 160    | 164    | 168    | 172    | 176    | 180    | 184    | 188    | 192    | 196    | 200    |  |
| <b>Range</b>  |  | 54–158 | 58–162 | 62–166 | 66–170 | 70–174 | 74–178 | 78–182 | 82–186 | 86–190 | 90–194 | 94–198 | 98–202 |  |

The standard defines similar tables for other dimensions and garments, only some of which are shown here.

### Men

The standard sizes and ranges for chest and waist girth are defined in steps of 4 cm:

#### Men's standard sizes for drop = -12 cm

|                    |       |       |       |       |        |         |         |         |         |         |         |         |         |         |
|--------------------|-------|-------|-------|-------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>Chest girth</b> | 84    | 88    | 92    | 96    | 100    | 104     | 108     | 112     | 116     | 120     | 126     | 132     | 138     | 144     |
| <b>Range</b>       | 82–86 | 86–90 | 90–94 | 94–98 | 98–102 | 102–106 | 106–110 | 110–114 | 114–118 | 118–123 | 123–129 | 129–135 | 135–141 | 141–147 |
| <b>Waist girth</b> | 72    | 76    | 80    | 84    | 88     | 92      | 96      | 100     | 104     | 108     | 114     | 120     | 126     | 132     |
| <b>Range</b>       | 70–74 | 74–78 | 78–82 | 82–86 | 86–90  | 90–94   | 94–98   | 98–102  | 102–106 | 106–111 | 111–117 | 117–123 | 123–129 | 129–135 |

$\text{drop} = \text{waist girth} - \text{chest girth}$ .

Example: While manufacturers will typically design clothes for *chest girth* = 100 cm such that it fits *waist girth* = 88 cm, they may also want to combine that *chest girth* with neighboring *waist girth* step sizes 84 cm or 92 cm, to cover these drop types (–16 cm and –8 cm) as well.

The standard also suggests that neck girth can be associated with chest girth:



**Association of neck and chest girth**

|                    |           |           |           |           |           |           |           |           |           |           |           |           |           |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Neck girth</b>  | 37        | 38        | 39        | 40        | 41        | 42        | 43        | 44        | 45        | 46.5      | 48        | 49.5      | 51        |
| <b>Range</b>       | 36.5–37.5 | 37.5–38.5 | 38.5–39.5 | 39.5–40.5 | 40.5–41.5 | 41.5–42.5 | 42.5–43.5 | 43.5–44.5 | 44.5–45.8 | 45.8–47.3 | 47.3–48.8 | 48.8–50.3 | 50.3–51.1 |
| <b>Chest girth</b> | 88        | 92        | 96        | 100       | 104       | 108       | 112       | 116       | 120       | 126       | 132       | 138       | 144       |

The standard further suggests that arm length can be associated with height:

**Association of arm length and body height**

|                   |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Height</b>     | 156   | 160   | 164   | 168   | 172   | 176   | 180   | 184   | 188   | 192   | 196   | 200   |
| <b>Arm length</b> | 60    | 61    | 62    | 63    | 64    | 65    | 66    | 67    | 68    | 69    | 70    | 71    |
| <b>Range</b>      | 59–60 | 60–61 | 61–62 | 62–63 | 63–64 | 64–65 | 65–66 | 66–67 | 67–68 | 68–69 | 69–70 | 70–71 |

## 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,
- ❖ Facilitate 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.

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### 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).

### More Information?

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](mailto:info@ethiostandards.org),

Website: [www.ethiostandards.org](http://www.ethiostandards.org)



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