
**Clothing — Standard method of
garment measurement**

Habillement — Méthode normalisée de mesurage des vêtements

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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).

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

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

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

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Introduction

This document is intended to serve as a global reference document for defining the key and common measurement points of a garment and the methodology to be used to measure garments, as well as to facilitate the maintenance of garment measurements and aid reduction of discrepancies in the product life cycle.

The points of garment measurements can be useful for (non exhaustive list):

- creation of table of measurements;
- developments of garment prototypes;
- stages of sample approval;
- production control;
- garment inspection and quality control;
- testing houses (e.g. determination of dimensional change of garments).

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Clothing — Standard method of garment measurement

1 Scope

This document defines the main measurement points and describes the method used to measure garment dimensions.

Additional measurement points can be determined between interested parties.

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 139, *Textiles — Standard atmospheres for conditioning and testing*

3 Terms and definitions

For the purposes of this document the following terms and definitions 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 <https://www.electropedia.org/>

3.1

side neck point

SNP

position on the garment where the garment body intersects with the side of the neck

Note 1 to entry: Side neck point does not include any neck trim, collar or hood.

Note 2 to entry: “Side neck point” is known also as High Point Shoulder, HPS.

3.2

from the invisible line

FIL

imaginary line taken between two points

Note 1 to entry: It is used to determine an exact position of a measurement to be taken.

3.3

centre front

CF

vertical intersection that is centrally positioned on the front of a garment

3.4

centre back

CB

vertical intersection that is centrally positioned on the back of a garment

3.5 required position

position of a point specified by the interested party, as input data, prior to measuring

Note 1 to entry: If a required position is not specified, the selected measurements cannot be carried out.

Note 2 to entry: A measurement based on a required position is identified by a code beginning with “Z” in Tables.

4 Measuring methodologies

4.1 General principle

The garment to be measured is laid on a flat surface, its measurement points identified and the measurements carried out between the relevant measurement points using a measurement device.

In some cases, other apparatus can be required for specific measurements when extended (see [Annex A](#)).

4.2 Apparatus

4.2.1 Measurement surface

Clean, flat and even surface, the dimensions of which are suitable for the garment to be laid flat with no overhang.

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4.2.2 Measurement tape

Flexible and non-stretchable measurement tape, graduated in millimetres.

The measurement tape should be regularly checked to ensure its ends and edges present no damage. Calibration is recommended.

Any measurement device which leads to the same results may be used. The use of such measurement device should be reported.

4.3 Procedures

4.3.1 Preparation of the garments or textile articles

Select garments or textile articles to be measured.

Ensure that each garment or textile article is flat, in an ambient environment and without mechanical tension.

This preparation is especially important for knitted garments which should be in a “relaxed state”.

When it is required by interested parties, if the garment conditioning and the garment measurements are carried out in a conditioned laboratory room, the standard atmosphere as specified in ISO 139 (i.e. 20 °C, 65 % RH) shall be used.

Lay down the garment or the textile article on the measurement surface ([4.2.1](#)), with any fasteners closed (e.g. buttons, slide fasteners, touch and close fasteners), unless otherwise stated. Place the garment or textile article as flat as possible, except the preformed garment or textile article (e.g. hat, bra cups).

Avoid any unattended folds, wrinkles and/or creases of the garment or textile article.

4.3.2 Garment or textile article measurement

Unless otherwise specified, measure in a straight line between two points as shown in the Figures and as instructed by measurement description.

For measurement without tension, ensure that the area being measured is not stretched.

For measurement under tension, ensure that the area being measured is stretched to the maximum without seam or stitch breakage, or tear of the fabrics (see [Annex A](#)).

5 Measurements of parts of garment or textile product

5.1 General

The area of measurement and measurement descriptions stated in this document can be used across different product types. For instance, measurements for a pair of shorts can be used for a woven formalwear short as well as a pair of cycling shorts or swimming trunks.

The area of measurement and measurement descriptions are uniquely identified by letter(s) and digit(s). Taking into account the actual garment to be measured, the combination of the selected measurements could mean different tables and figures in this document are applicable.

Depending on the garment style, measurements for different garment types or parts of different garment types could be combined, for example an all-in-one where the upper section is based on a shirt and the lower section is based on a pair of shorts.

On agreement between interested parties, measurements can refer partially or completely to those listed in the tables.

5.2 Upper garment body part

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5.2.1 Set in sleeves

The measurement points in [Table 1](#) and [Table 2](#) are shown in [Figure 1](#) (front) and [Figure 2](#) (back) for upper garment body part with set in sleeves.

[Figure 1](#) and [Figure 2](#) represent examples of upper garment body parts with set in sleeves [such as short sleeves (T-shirt), long sleeves (cardigan), long sleeves (buttoned through shirt), long sleeves (single breasted jacket)].

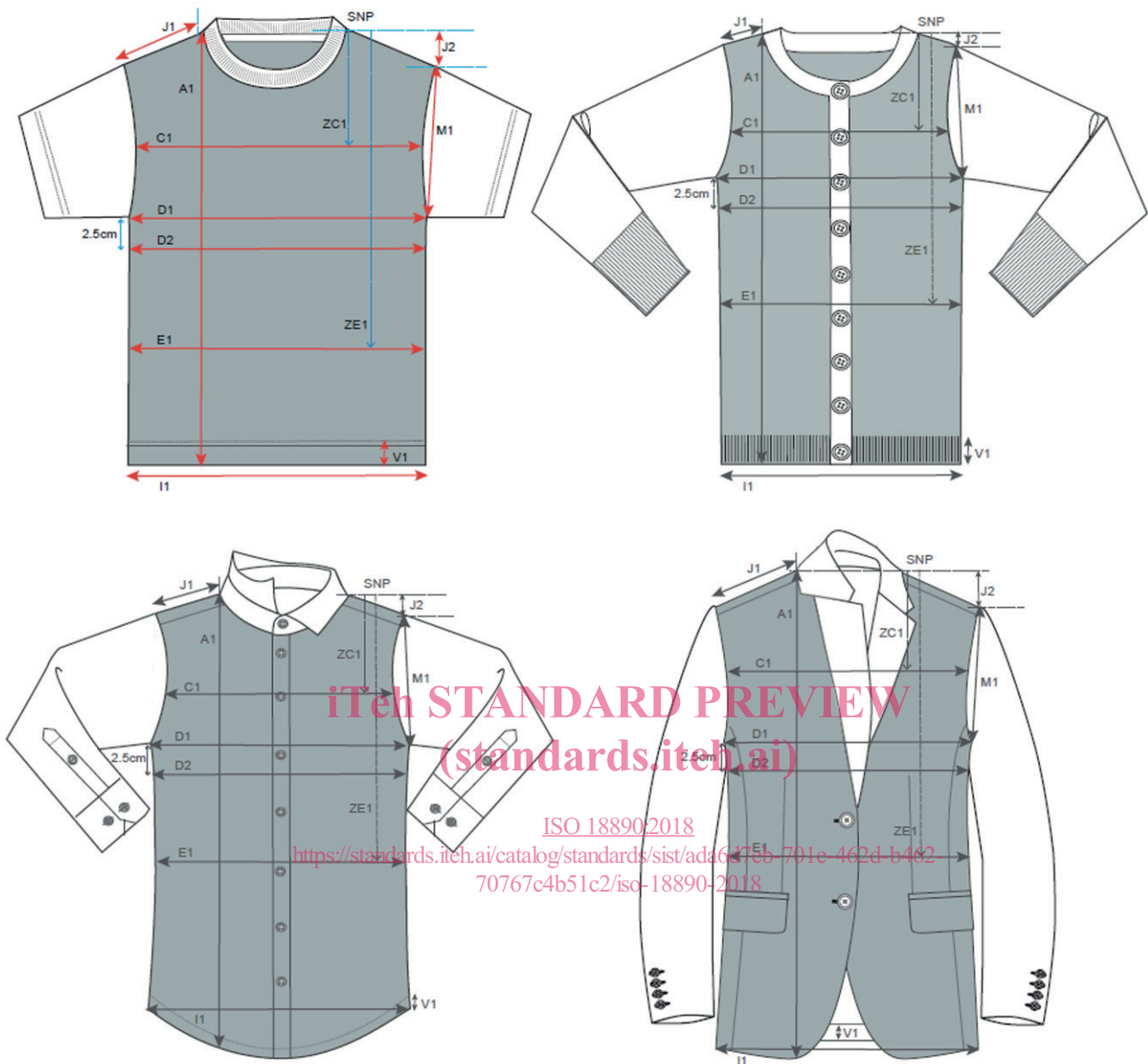


Figure 1 — Garment body length and width (set in sleeves) — Front

Table 1 — Key to measurement points indicated in Figure 1

Ref.	Area of measurement	Description of measurement
A1	Front length	SNP to hem edge
ZC1	Across front position from SNP	Distance from SNP to the across front required position
C1	Across front	Armhole seam to seam or edge to edge at position as indicated by ZC1
D1	Chest at armhole	Base of armhole to base of armhole
D2	Chest at 2,5 cm below armhole	At 2,5 cm below base of armhole measure from edge to edge
ZE1	Waist position from SNP	Distance from SNP to the waist required position
E1	Waist	At position as indicated by ZE1 measure from edge to edge
I1	Hem width (or lower edge width, when appropriate)	Measure along hem edge from edge to edge of garment. For garments with shaped hems/side vents: measure straight across at top of shaped hem/side vents from edge to edge.

Table 1 (continued)

Ref.	Area of measurement	Description of measurement
J1	Shoulder length/strap width	SNP to shoulder point seam to seam or edge to edge as agreed by interested parties
J2	Shoulder slope	Measure vertically FIL at SNP to shoulder point
M1	Armhole	Shoulder point to base of armhole seam to seam or edge to edge as indicated by design of garment
V1	Hem depth	Hem edge to seam or to top row of hem depth stitching

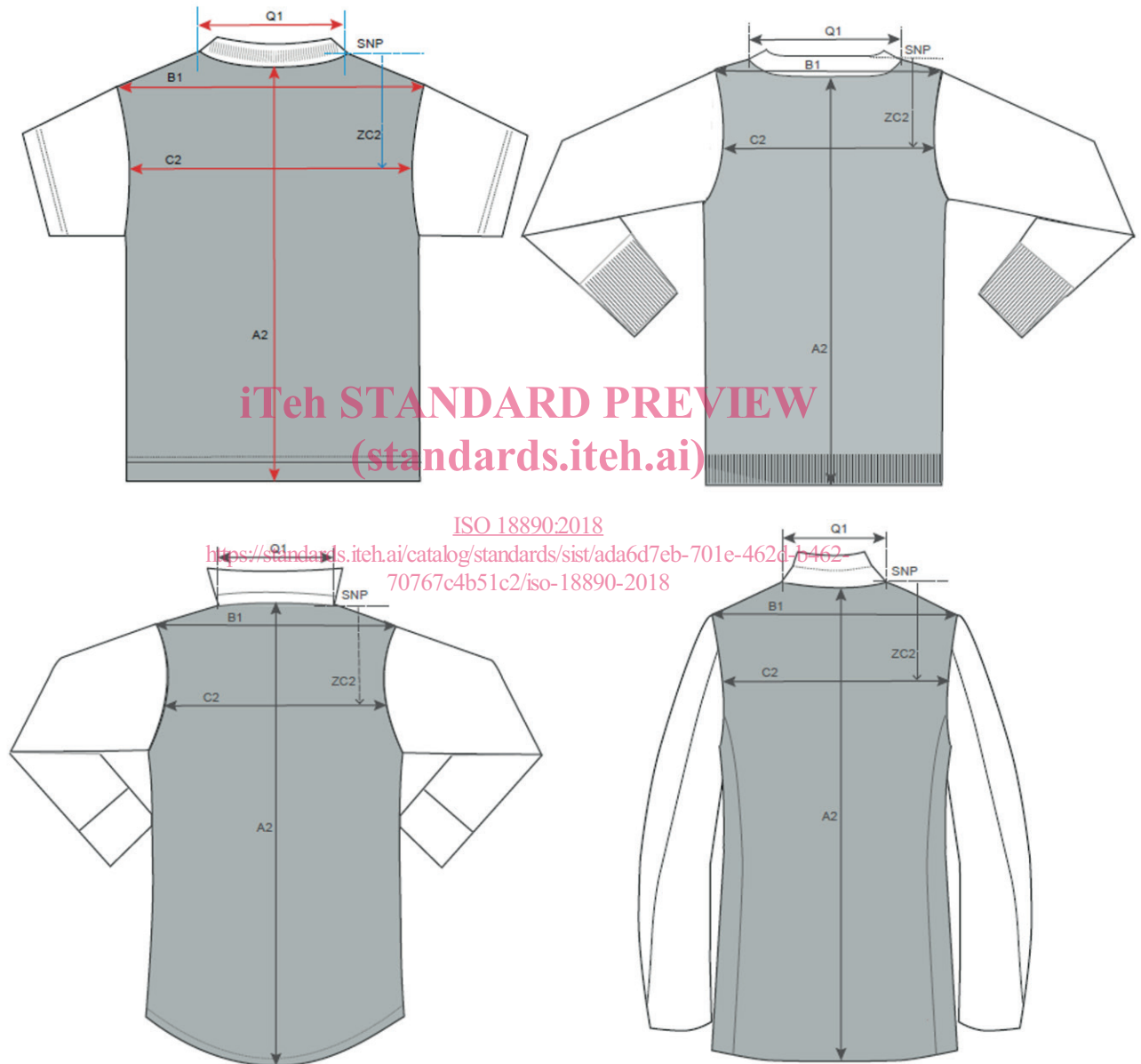


Figure 2 — Garment body length and width (set in sleeves) — Back

Table 2 — Key to measurement points indicated in Figure 2

Ref.	Area of measurement	Description of measurement
A2	Centre back length	CB neck seam to hem edge
B1	Across shoulder	Shoulder point to shoulder point
Q1	Back neck width	Measure SNP to SNP seam to seam (excluding any neck trim) or SNP to SNP edge to edge if there is no neck trim or as agreed by interested parties
ZC2	Across back position from SNP	Distance from SNP to the across back required position
C2	Across back	Armhole seam to seam or edge to edge at position as indicated by ZC2

5.2.2 Raglan sleeves

The measurement points in Table 3 and Table 4 are shown in Figure 3 (front) and Figure 4 (back) for an upper garment body part with raglan sleeves.

Figure 3 and Figure 4 show examples of an upper garment body part with raglan sleeves [such as short sleeves (T-shirt) and long sleeves (jumper)].

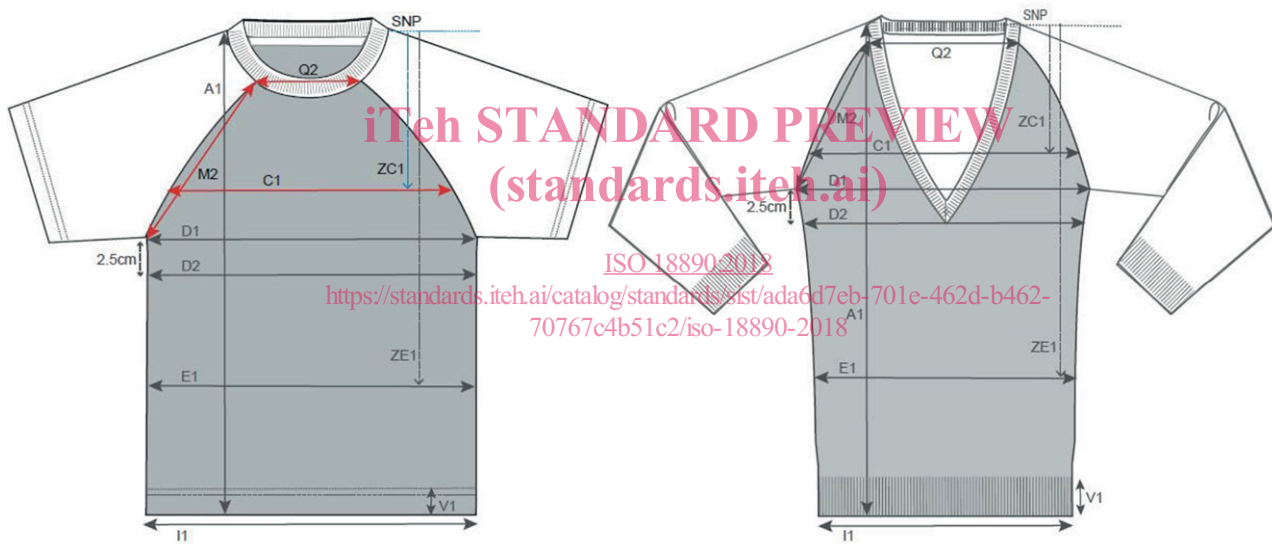


Figure 3 — Garment body length and width (raglan sleeves) — Front

Table 3 — Key to measurement points indicated in Figure 3

Ref.	Area of measurement	Description of measurement
ZC1	Across front position from SNP	Distance from SNP to the required across front position
C1	Across front	Armhole seam to seam or edge to edge at position as indicated by ZC1
M2	Front raglan length	From raglan point at front neck seam measure in a straight line to base of armhole.
Q2	Across front raglan at neck	Measure straight across front neck from raglan seam to seam.

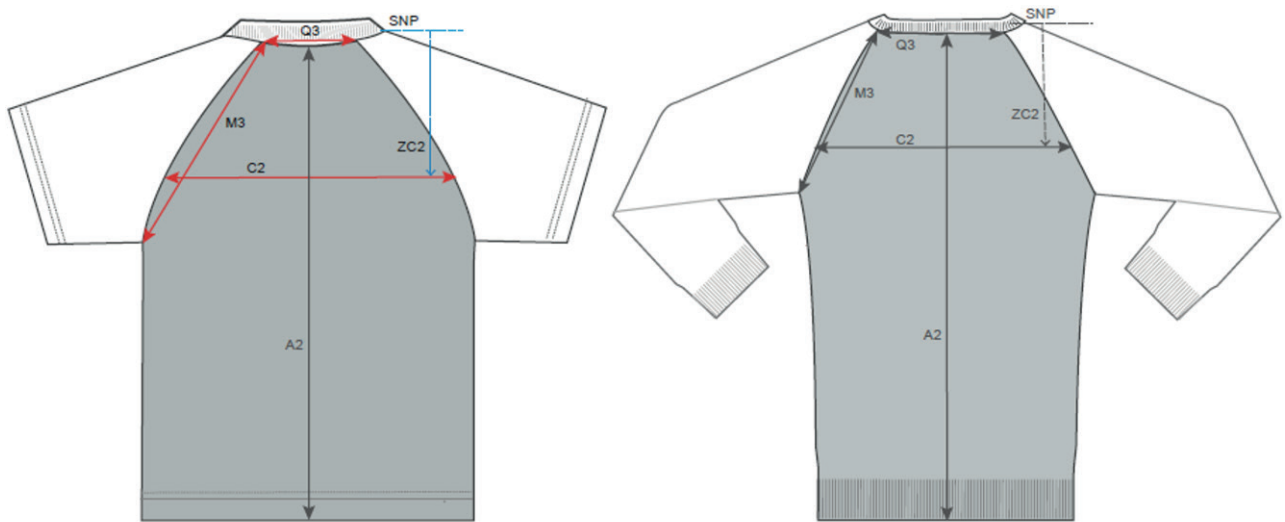


Figure 4 — Garment body length and width (raglan sleeves) — Back

Table 4 — Key to measurement points indicated in Figure 4

Ref.	Area of measurement	Description of measurement
ZC2	Across back position from SNP	Distance from SNP to required position of across back
C2	Across back	Armhole seam to seam or edge to edge at position as indicated by ZC2
Q3	Across back raglan at neck	Measure straight across back neck from raglan seam to seam.
M3	Back raglan length	From raglan point at back neck seam measure in a straight line to base of armhole.

5.2.3 Sleeveless

The measurement points in Table 5 and Table 6 are shown in Figure 5 (front) and Figure 6 (back) for upper garment body part without sleeves.

Figure 5 and Figure 6 show examples of an upper garment body part without sleeves (such as waistcoat, vest and camisole).

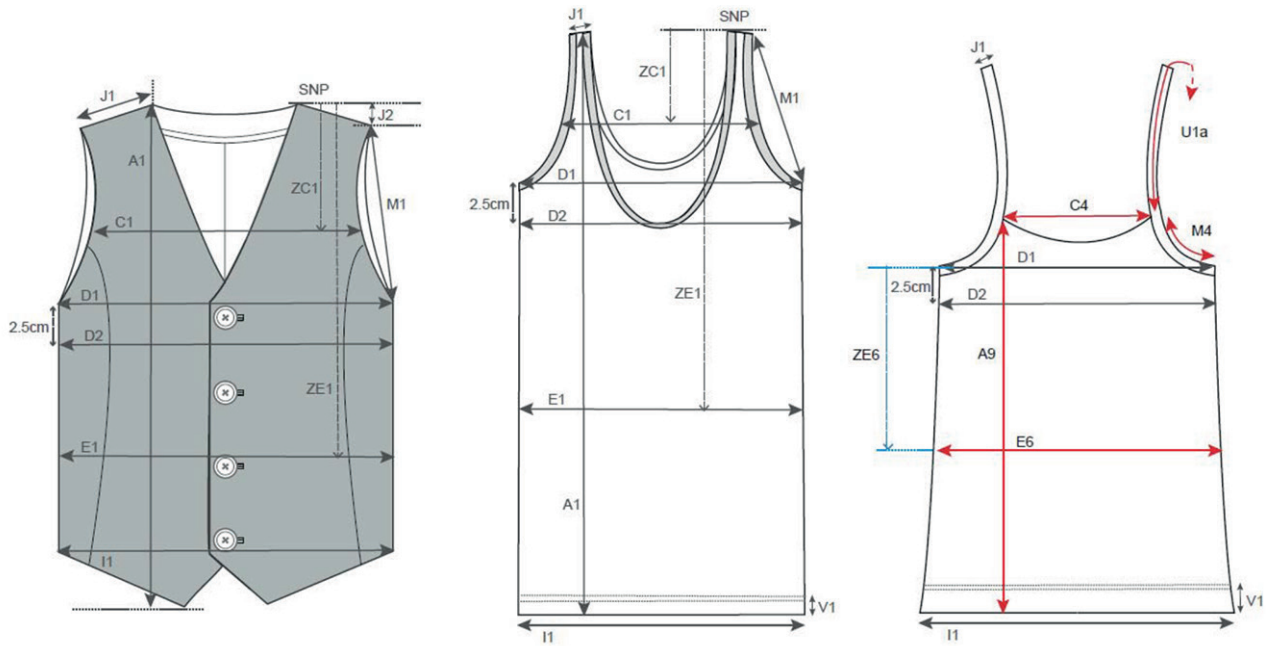


Figure 5 — Garment body length and width (sleeveless) — Front

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Table 5 — Key to measurement points indicated in Figure 5

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Ref.	Area of measurement	Description of measurement
A9	Front length	Apex (excluding any trims) to hem
C4	Across front	Apex to apex — i.e. between straps (excluding any trim)
ZE6	Waist position from underarm	Distance from underarm to required position of waist
E6	Waist	At position as indicated by ZE6 measure from edge to edge
U1a	Total strap length	Measure along centre of strap from apex/position where strap is attached at front to position where strap is attached at back
M4	Underarm at front	Apex to side seam/side seam fold — measure along the edge (excluding any trim)

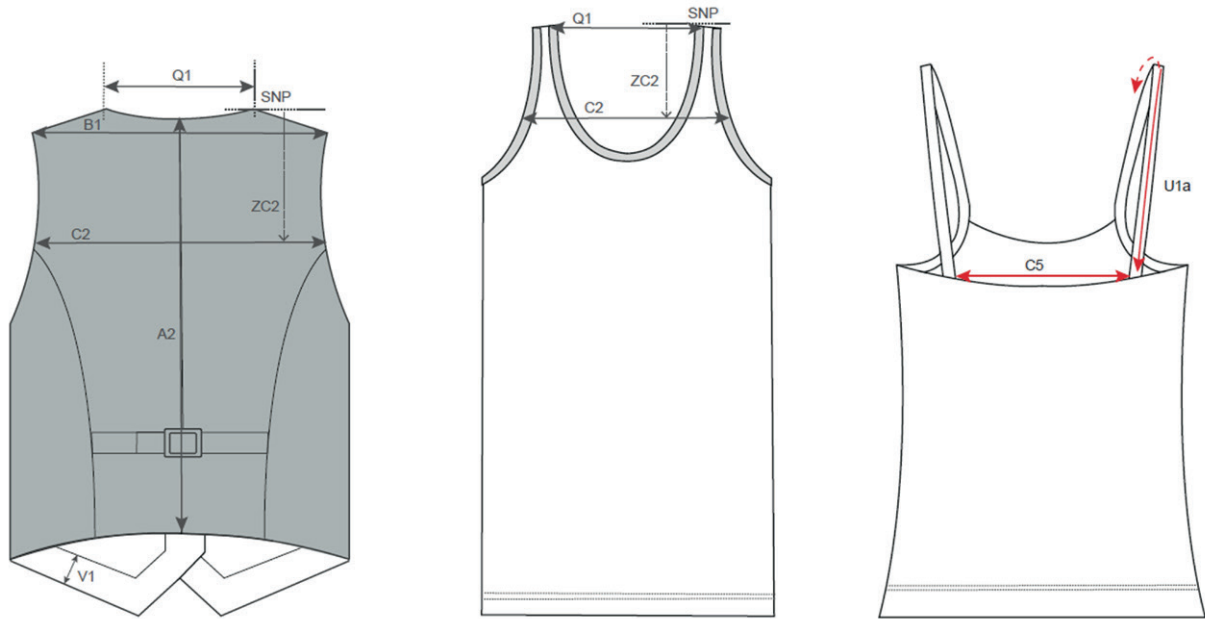


Figure 6 — Garment body length and width (sleeveless) — Back

Table 6 — Key to measurement points indicated in Figure 6

Ref.	Area of measurement	Description of measurement
C5	Across back	Apex to apex — i.e. between straps (edge to edge excluding any trim)

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5.3 Sleeve part

5.3.1 Set in sleeves

The measurement points in Table 7, complementary to 5.2.1, are shown in Figure 7 for set in sleeves.

Figure 7 shows examples of set in sleeves for long sleeves (T-shirt, and shirt) on the left and short sleeves on the right (T-shirt and shirt) of each diagram.