
Size designation of clothes —

Part 1:

**Anthropometric definitions for body
measurement**

Désignation des tailles de vêtements —

Partie 1: Définitions anthropométriques pour la mesure du corps

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

ISO 8559-1:2017

<https://standards.iteh.ai/catalog/standards/sist/43b807b3-debe-47ba-83ee-9a6790516da6/iso-8559-1-2017>



iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 8559-1:2017

<https://standards.iteh.ai/catalog/standards/sist/43b807b3-debe-47ba-83ee-9a6790516da6/iso-8559-1-2017>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, 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
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

	Page
Foreword	vi
Introduction	vii
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 Landmark points and levels (Figures 1 to 26)	1
3.2 Lines and planes (Figures 27 to 31)	14
4 Measuring conditions and equipment	17
4.1 Conditions and apparatus	17
4.1.1 Clothing of subject	17
4.1.2 Support surfaces	17
4.1.3 Body symmetry	17
4.1.4 Posture	17
4.1.5 Other requirements	18
4.2 Equipment	18
4.2.1 Anthropometer	18
4.2.2 Tape measure	18
4.2.3 Chainette and narrow tape	18
4.2.4 Large sliding caliper, sliding caliper and spreading caliper	18
4.2.5 Weighing scale	18
4.2.6 Inclinator	18
5 Basic body measurements	19
5.1 Vertical measurements (Figures 32 to 49)	19
5.1.1 Stature	19
5.1.2 Recumbent length	19
5.1.3 Chin height	20
5.1.4 Front neck height	20
5.1.5 Back neck height	21
5.1.6 Chest height	21
5.1.7 Bust height	22
5.1.8 Under bust height	23
5.1.9 Midriff height	23
5.1.10 Waist height	24
5.1.11 Upper hip height	24
5.1.12 Top hip height	25
5.1.13 Hip height	26
5.1.14 Maximum hip girth height	26
5.1.15 Inside leg height	27
5.1.16 Knee height	27
5.1.17 Outer ankle height	28
5.1.18 Back neck height (sitting)	28
5.2 Breadths, widths and depths (Figures 50 to 56)	29
5.2.1 Hip breadth	29
5.2.2 Neck base width	29
5.2.3 Bust point width	30
5.2.4 Armscye front to back width	30
5.2.5 Chest depth	31
5.2.6 Bust depth	31
5.2.7 Abdomen/hip depth	32
5.3 Girth measurements (Figures 57 to 84)	32
5.3.1 Head girth	33
5.3.2 Neck girth	33

5.3.3	Neck base girth.....	33
5.3.4	Bust girth.....	34
5.3.5	Bust girth contoured.....	34
5.3.6	Chest girth (at axilla).....	35
5.3.7	Upper chest girth.....	35
5.3.8	Under bust girth.....	36
5.3.9	Midriff girth.....	36
5.3.10	Waist girth.....	37
5.3.11	Upper hip girth.....	37
5.3.12	Top hip girth.....	38
5.3.13	Hip girth.....	38
5.3.14	Maximum hip girth (seat measure girth).....	39
5.3.15	Armscye girth.....	40
5.3.16	Upper-arm girth.....	40
5.3.17	Elbow girth.....	40
5.3.18	Elbow girth, arm bent.....	41
5.3.19	Wrist girth.....	41
5.3.20	Thigh girth.....	42
5.3.21	Mid - thigh girth.....	42
5.3.22	Knee girth.....	43
5.3.23	Lower knee girth.....	43
5.3.24	Calf girth.....	44
5.3.25	Minimum leg girth.....	44
5.3.26	Ankle girth.....	45
5.3.27	Diagonal trunk girth.....	45
5.3.28	Centre trunk length.....	46
5.4	Distances measured following the surface of the body (Figures 85 to 107).....	47
5.4.1	Shoulder length.....	47
5.4.2	Back shoulder width.....	47
5.4.3	Across back shoulder width (through the back neck point).....	48
5.4.4	Across back width.....	48
5.4.5	Back neck point to waist.....	48
5.4.6	Scye depth length.....	49
5.4.7	Across front width.....	49
5.4.8	Front neck point to waist.....	50
5.4.9	Side waist length.....	50
5.4.10	Side neck point to bust point.....	51
5.4.11	Side neck point to waist level.....	51
5.4.12	Back neck point to bust point.....	52
5.4.13	Back neck point to waist level.....	52
5.4.14	Upper arm length (shoulder to elbow, elbow bent).....	53
5.4.15	Lower arm length (elbow to wrist – elbow bent).....	53
5.4.16	Underarm length.....	54
5.4.17	Back neck point to wrist length.....	54
5.4.18	Total crotch length.....	55
5.4.19	Front crotch length.....	55
5.4.20	Back crotch length.....	56
5.4.21	Side waist to hip.....	56
5.4.22	Outside leg length.....	57
5.4.23	Back neck point to ground (contoured).....	57
5.5	Hand and foot measurements (Figures 108 to 114).....	58
5.5.1	Hand girth.....	58
5.5.2	Hand length (wrist crease).....	58
5.5.3	Palm length perpendicular.....	59
5.5.4	Index finger length.....	59
5.5.5	Foot length.....	60
5.5.6	Foot width.....	60
5.5.7	Foot girth.....	61

5.6	Other measurements (Figure 115).....	61
5.6.1	Body mass.....	61
5.6.2	Shoulder slope.....	61
5.7	Calculated measurements (Figures 116 to 122).....	62
5.7.1	Contoured centre trunk length.....	62
5.7.2	Back neck point to knee.....	63
5.7.3	Torso height.....	63
5.7.4	Straight body rise.....	64
5.7.5	Thigh length.....	64
5.7.6	Inside leg length.....	65
5.7.7	Bust cup size.....	65
5.7.8	Outer arm length.....	65
Annex A (informative) Pictogram		67
Annex B (informative) Standing and seated postures with arm positions		74
Annex C (informative) Landmark and measurement mapping		76
Bibliography		80

iTeh STANDARD PREVIEW (standards.iteh.ai)

[ISO 8559-1:2017](#)

<https://standards.iteh.ai/catalog/standards/sist/43b807b3-debe-47ba-83ee-9a6790516da6/iso-8559-1-2017>

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).

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).

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 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

The committee responsible for this document is ISO/TC 133, *Clothing sizing systems — Size designation, size measurement methods and digital fittings*.

This first edition cancels and replaces ISO 3635:1981 and ISO 8559:1989, which have been technically revised.

A list of all parts in ISO 8559 can be found on the ISO website.

Introduction

This document is the first of a three-part International Standard (ISO 8559-1, ISO 8559-2 and ISO 8559-3). It comprises the definition and generation of anthropometric measurements that can be used for the creation of size and shape profiles and their application in the field of clothing. It forms a foundation for ISO 8559-2, *Primary and secondary dimension indicators*, and ISO 8559-3, *Methodology for creating body measurement tables and intervals*. Reference is made to measurements and procedures in ISO 7250-1.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[ISO 8559-1:2017](https://standards.iteh.ai/catalog/standards/sist/43b807b3-debe-47ba-83ee-9a6790516da6/iso-8559-1-2017)

<https://standards.iteh.ai/catalog/standards/sist/43b807b3-debe-47ba-83ee-9a6790516da6/iso-8559-1-2017>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 8559-1:2017

<https://standards.iteh.ai/catalog/standards/sist/43b807b3-debe-47ba-83ee-9a6790516da6/iso-8559-1-2017>

Size designation of clothes —

Part 1:

Anthropometric definitions for body measurement

1 Scope

This document provides a description of anthropometric measurements that can be used as a basis for the creation of physical and digital anthropometric databases. The list of measurements specified in this document is intended to serve as a guide for practitioners in the field of clothing who are required to apply their knowledge to select population market segments and to create size and shape profiles for the development of all garment types and their equivalent fit mannequins. The list provides a guide for how to take anthropometric measurements, as well as give information to clothing product development teams and fit mannequin manufacturers on the principles of measurement and their underlying anatomical and anthropometrical bases.

[Annex A](#) describes the use of the pictogram (standardized and modified) based on the selection of most usual body dimensions used for clothing size designation.

This document is intended to be used in conjunction with national, regional or international regulations or agreements to ensure harmony in defining population groups and to allow comparison of anthropometric data sets.

2 Normative references

ISO 8559-1:2017

<https://standards.iteh.ai/catalog/standards/sist/43b807b3-debe-47ba-83ee-9a6790516da6/iso-8559-1-2017>

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 terminological databases for use in standardization at the following addresses:

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

NOTE [Annex C](#) summarizes the mapping of the terms related to body landmark points, levels (3.1) and lines and planes (3.2) with listed measurements:

- [Table C.1](#) — Vertical measurements (5.1), breadths, widths and depths (5.2);
- [Table C.2](#) — Girth measurements (5.3);
- [Table C.3](#) — Distances measured following the surface of the body (5.4);
- [Table C.4](#) — Other measurements (5.6), calculated measurements (5.7).

3.1 Landmark points and levels (Figures 1 to 26)

NOTE See [Annex C](#) for mapping of points and levels to measurements.

3.1.1

shoulder point

most lateral point of the lateral edge of the spine (acromial process) of the scapula, projected vertically to the surface of the skin

Note 1 to entry: See [Figure 1](#).

Note 2 to entry: Identical to acromion in ISO 7250-1.

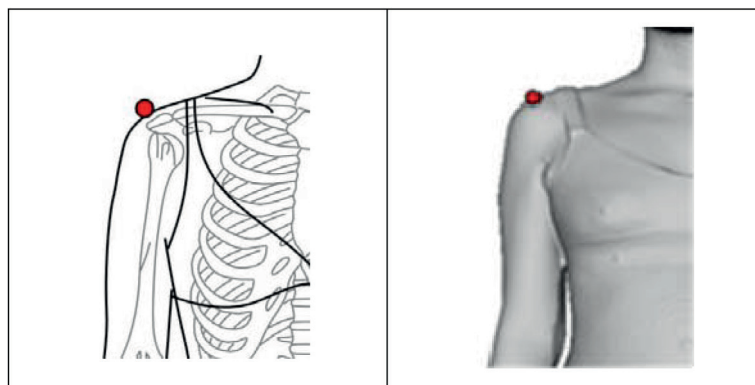


Figure 1 — Shoulder point

3.1.2

centre point of brow ridge

most anterior point of the forehead between the brow ridges in the mid-sagittal plane

Note 1 to entry: See [Figure 2](#).

Note 2 to entry: Identical to Glabella in ISO 7250-1.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 8559-1:2017

<https://standards.iteh.ai/catalog/standards/sist/43b807b3-debe-47ba-83ce-9a6790516da6/iso-8559-1-2017>

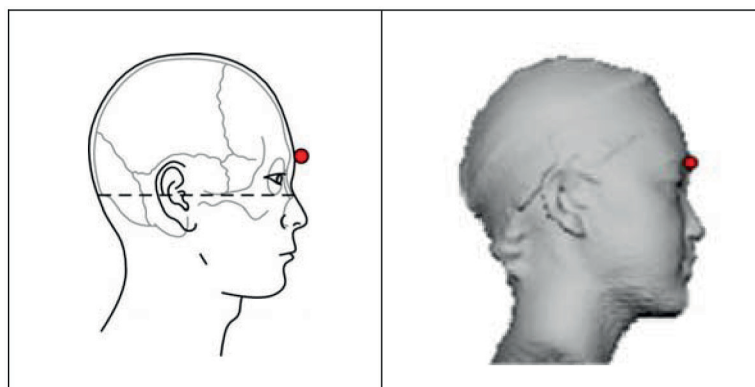


Figure 2 — Centre point of brow ridge

3.1.3

tragion

point of the notch just above the tragus (the small cartilaginous flap in front of the ear hole)

Note 1 to entry: See [Figure 3](#).

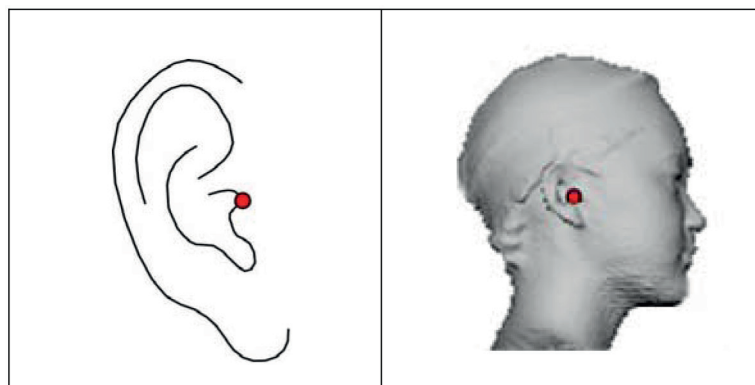


Figure 3 — Tragion

**3.1.4
orbitale**

lowest point of the lower border of the orbital margin (lower edge of the eye socket)

Note 1 to entry: See [Figure 4](#).

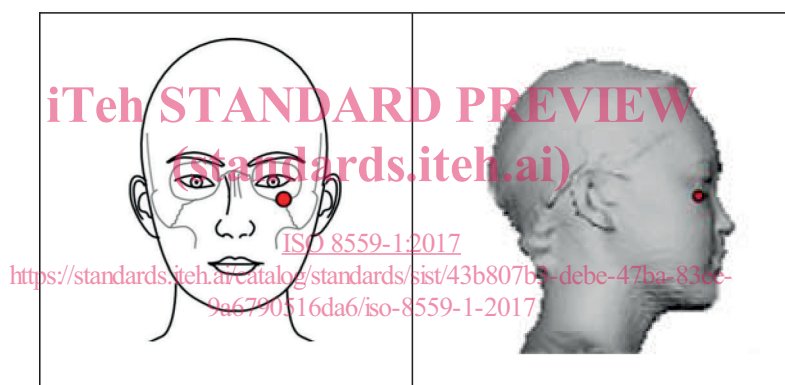


Figure 4 — Orbitale

**3.1.5
lowest point of chin**

lowest point of the tip of the chin in the midsagittal plane, projected anteriorly when the head is held in the Frankfurt plane

Note 1 to entry: See [Figure 5](#).

Note 2 to entry: Identical to menton in ISO 7250-1.

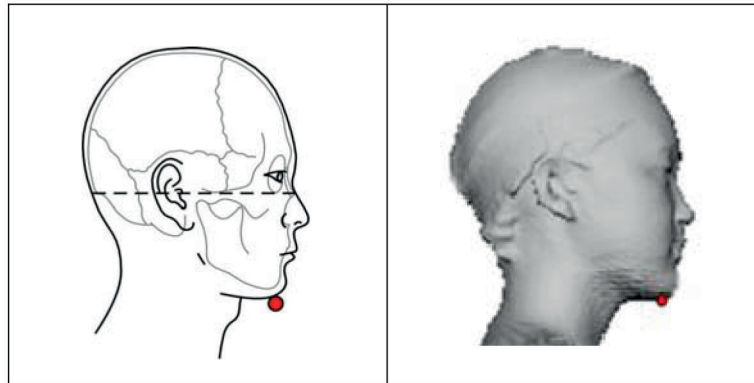


Figure 5 — Lowest point of chin

3.1.6

back neck point

tip of the prominent bone at the base of the back of the neck (spinous process of the seventh cervical vertebra) in the mid-sagittal plane, and projected posteriorly to the surface of the skin

Note 1 to entry: See [Figure 6](#).

Note 2 to entry: Identical to cervicale in ISO 7250-1.

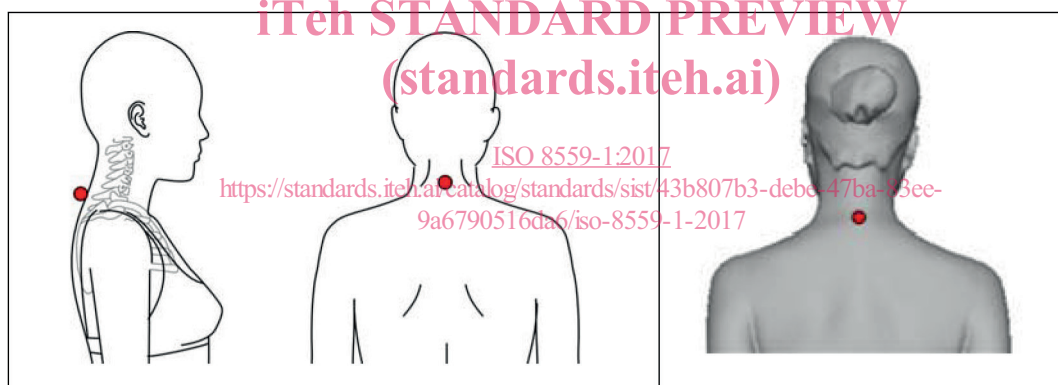


Figure 6 — Back neck point

3.1.7

side neck point

crossing point of the neck base line and the anterior border of the trapezius muscle

Note 1 to entry: See [Figure 7](#).

Note 2 to entry: Side neck points are determined when locating neck base line ([3.2.1](#)).

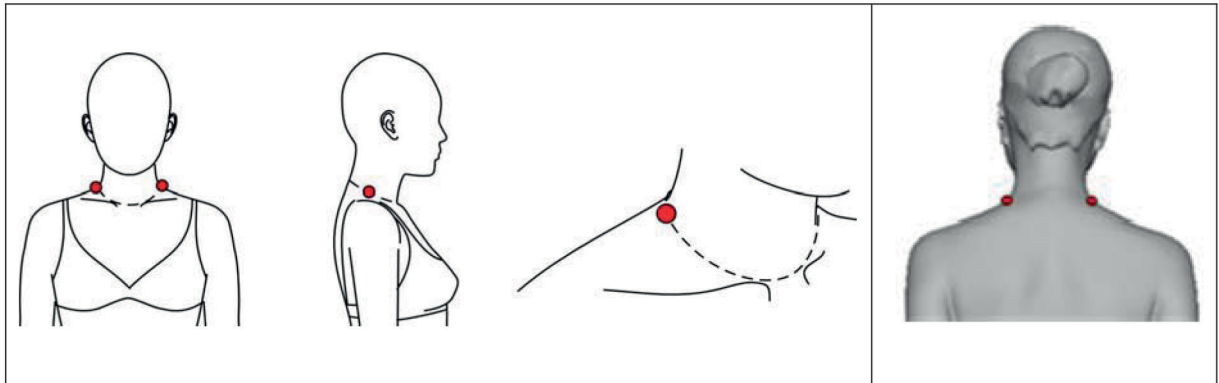


Figure 7 — Side neck point

3.1.8**front neck point**

crossing point of the line connecting medial superior borders of the left and right clavicles and front median line

Note 1 to entry: See [Figure 8](#).



Figure 8 — Front neck point

3.1.9**'Adam's apple' point**

most anterior point of the thyroid cartilage

Note 1 to entry: See [Figure 9](#).

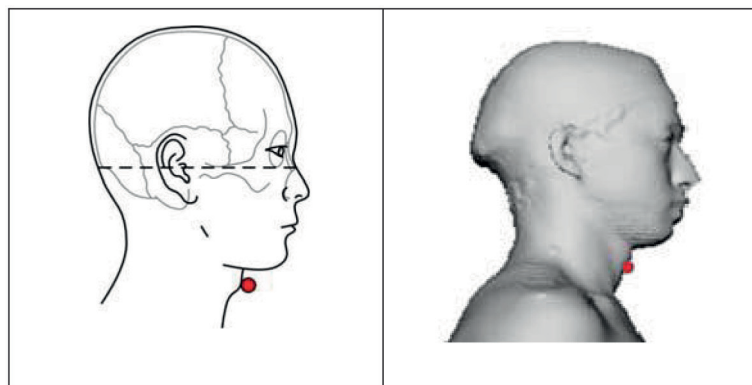


Figure 9 — 'Adam's apple' point

3.1.10

elbow point

most prominent point of the olecranon of ulna

Note 1 to entry: See [Figure 10](#).



Figure 10 — Elbow point

3.1.11

bust point

most anterior point of the bust when wearing bra

Note 1 to entry: See [Figure 11](#).

Note 2 to entry: For information relating to type of bra to be worn, see [4.1.1](#).

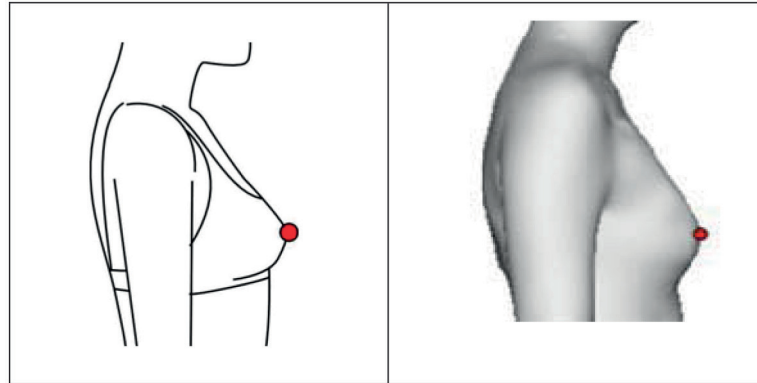


Figure 11 — Bust point

**3.1.12
centre chest point**

point on the union of the third and fourth sternebrae, in the midsagittal plane

Note 1 to entry: See [Figure 12](#).

Note 2 to entry: Identical to mesosternale in ISO 7250-1.

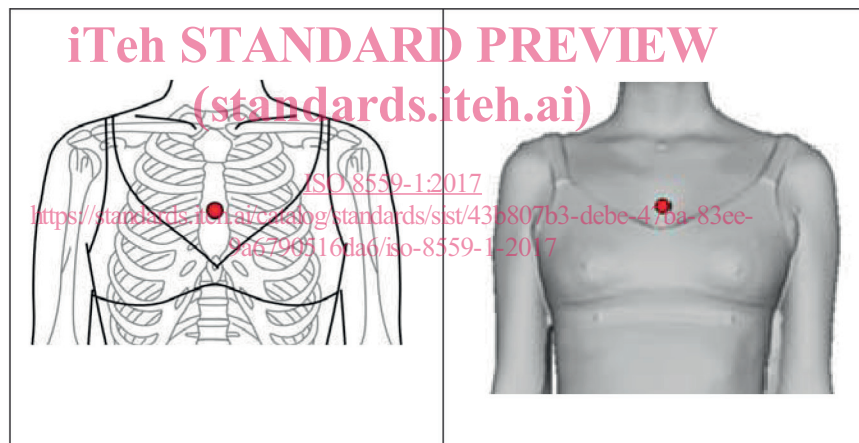


Figure 12 — Centre chest point

**3.1.13
armpit front fold point**

front fold point of the armpit on arm scye line determined using a scale placed under arm

Note 1 to entry: The level is decided as the upper edge of a rule placed under the armpit.

Note 2 to entry: See [Figure 13](#).