



Designation: D5585 – 21

Standard Tables of Body Measurements for Adult Female Misses Figure Type, Size Range 00–20¹

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INTRODUCTION

These body measurement tables were developed from evaluation of data currently used in the apparel industry. These tables were developed from data published by the U.S. Department of Commerce,² Caesar Study³, Size USA Study,⁴ Current USA industry and studies, and scans and documentation from Alvanon Inc.⁵ This standard takes into consideration Misses figure at a standard height of 5 ft 5 in. (65 % of average USA population) taking into account the decrease and increase in body weight that shift a person from one size to another, while this person does not gain in height. Also included is a definition of body type, Curvy or Straight as applied to waist, high hip, hip seat, thigh and mid-thigh girths that result in a different body shape (silhouette). Major review and evaluation was done. The incremental growth at different key body points has been addressed and defined, which resulted in identifying increases and decreases at different rates in specific areas; bust, waist, high hip and hip/seat. Standard points of measure for hand length, hand width, foot length, and foot width were added to benefit users of ASTM 3D Missy Avatars. Additionally, to better serve the industry, incremental movement between sizes was reviewed ensuring smooth transition between sizes. To verify the proposed body measurements, a three-dimensional Avatar was created in the Misses size range 00 through 20 (Curvy and Straight) by Alvanon Inc. for a visual reference and is also attached in the documentation.

1. Scope

1.1 These tables list body measurements of adult female misses figure Type sizes 00 through 20. Although these are body measurements, they can be used as a baseline in designing apparel for Missy in this size range when considering such factors as fabric type, ease for body movement, styling, and fit.

1.2 These tables list body measurements for the complete range of Missy sizing.

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each

system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*⁶

D 123 Terminology Relating to Textile Materials

D 5219 Terminology Relating to a Body Dimension for Apparel Sizing

2.2 *ISO Standards:*⁷

ISO 3635 Size Designation of Clothes, Definitions, and Body Measurement Procedures

¹ This table is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.55 on Body Measurement for Apparel Sizing.

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² U.S. Department of Commerce, Voluntary Product Standard: Body Measurements for Sizing of Girls' Apparel, NIST Publication No. PS 54-172, Washington DC.

³ Caesar: Summary Statistics for the Adult population (Ages 18-65) of the United States of America, 2002.

⁴ Available from: <http://www.tc2.com/sizeusa.html>

⁵ Alvanon, Inc., 145 W. 30th Street, Suite 1000, New York, NY 10001.

⁶ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

⁷ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

3. Terminology

3.1 Definitions:

3.1.1 For definitions relating to body dimensions, refer to Terminology **D 5219**.

3.1.2 For definitions of other textile terms used in this standard, refer to Terminology **D 123**.

4. Significance and Use

4.1 The use of the body measurement information in **Table 1** and **Table 2** will assist manufacturers in developing patterns and garments that are consistent with the current anthropometric characteristics of the population of interest. This practice should in turn reduce or minimize consumer confusion and dissatisfaction related to apparel sizing. (Also refer to ISO 3635.)

4.2 Three-dimensional avatars depicting each of the missy sizes and sub category curvy and straight on certain measures, were created by Alvanon, Inc. and included in this standard to assist manufacturers in visualizing the posture, shape, and proportions generated by the measurements charts in the accompanying tables. (Avatar 1-6) See **Fig. 1** and **Fig. 2**.

5. Apparatus

5.1 *Tape Measure*, dimensionally stable and approximately 1.5 cm (1/2-in.) wide and graduated accurately in cm (1/16 in.).

5.2 *Plastic Goniometry*, to measure the radian (degree) of shoulder slope.

5.3 *Scale*, standard, calibrated, body weight type.

5.4 *Metal Ruler*.

6. Procedure

6.1 General:

6.1.1 For all vertical and most horizontal measurements, subject is to be standing erect without shoes and with feet approximately 15 cm (6 in.) apart. (for Infant special cases) For all vertical and most horizontal measurements, subject is to be lying down flat with legs extended and foot positioned at 1.57 rad (90°) to the leg.

6.1.2 Take measurements over regular undergarments normally worn.

6.1.3 Take all measurements from the same side of the body for consistency.

6.1.4 Refer to Terminology **D 5219** for the location of all points to be measured.

6.2 *Body Measurements*—Refer to Terminology **D 5219** for definitions of body measurements.

7. Keywords

7.1 apparel; body measurements; garment sizes; size range; tables