



Designation: D8521 – 23

Standard Tables of Body Measurements for Little Kids Type, Regular Size Range 2-6¹

This standard is issued under the fixed designation D8521; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

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 current U.S. industry; and studies, scans, and documentation from Alvanon Inc.² These tables take into consideration little kids at each stage of development. Previously, toddlers (little kids) and big kids were combined in one standard. The decision to separate them into two distinct standards is based on several factors, including common industry best practices in merchandising and technical considerations in grading sizes across a range that involves significant changes in size and shape. Major evaluation was done and reviewing the incremental growth at different major body points has been addressed and defined identifying increase and decrease at different rates in specific areas: chest/bust, waist, high hip, and hip/seat. Additionally, to serve the industry better, 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 little kids regular size range 2-6 by Alvanon Inc. for a visual reference. See Figs. 1–4.

1. Scope

1.1 These tables list body measurements of little kids' figure type regular sizes 2-6. Although these are body measurements, they can be used as a baseline in designing apparel for little kids 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 little kids regular 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 are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the*

responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.

1.5 *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:*³

D123 Terminology Relating to Textiles

D5219 Terminology Relating to Body Dimensions for Apparel Sizing

2.2 *ISO Standards:*⁴

ISO 3635:1981 Size Designation of Clothes, Definitions, and Body Measurement Procedures

¹ This standard 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.

Current edition approved Aug. 1, 2023. Published August 2023. DOI: 10.1520/D8521-23

² 2014 CDC Growth Charts for the United States: Methods and Development, National Center for Health Statistics, Vital Health Stat, Series 11, No. 246, 2002; CDC Advance Data No. 361, 7/5/2005; and Anthropometry of Infants, Children and Youths to Age 18 for Product Safety Design, May 31, 1977.

³ 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.

⁴ Available from International Organization for Standardization (ISO), ISO Central Secretariat, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland, <https://www.iso.org>.

3. Terminology

3.1 Definitions:

3.1.1 For definitions relating to body dimensions, refer to Terminology **D5219**.

3.1.2 For definitions of other textile terms used in this standard, refer to Terminology **D123**.

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 Size Designation Procedures).

5. Apparatus

5.1 Tape Measure, dimensionally stable, double coated and approximately 1.5 cm ($\frac{1}{2}$ in.) wide and graduated accurately in centimeters or inches.

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

5.3 Scale, standard, calibrated, body weight type.

5.4 Ruler, metal.

6. Procedure

6.1 For body dimensions, refer to Terminology **D5219**.

7. Keywords

7.1 apparel; body measurements; garment sizes; little kids; tables

TABLE 1 Little Kids Regular Sizes 2-6 Body Measurements, Inch Unit

Size	2	3	4	5	6
Body Weight (Mean), lb	27.3	34.9	40.6	45.8	52.6
Body Weight (Range), lb	22.5-33.7	28.8-42.5	31.4-54.4	35.5-62.8	39.3-72.7
Girth Measurements, in.					
Head Girth	19 1/8	19 1/2	19 3/4	20	20 1/4
Neck Base Girth	10 1/2	10 3/4	11 1/8	11 1/2	11 7/8
Mid-Neck Girth	9 5/8	10	10 1/4	10 1/2	10 3/8
Shoulder Girth	24 3/4	25 3/4	26 7/8	28 1/8	29 1/8
Upper-Chest Girth	21 5/8	22 1/4	23 1/8	24	24 1/2
Chest-Bust Girth	21	21 1/2	22 1/4	23	23 3/4
Upper-Chest/Bust Girth	20	20 1/2	21 3/8	22 1/8	22 7/8
Waist Girth	19 1/4	19 7/8	20 1/2	21 1/4	22
Preferred Waist Girth	19 1/2	20 1/4	21	21 7/8	22 5/8
High-Hip Girth	20	20 3/4	21 5/8	22 1/2	23 3/8
Hip/Seat Girth	20 3/4	21 1/2	22 5/8	23 3/4	24 7/8
Thigh Girth	12	12 1/2	13 1/4	14	14 7/8
Mid-Thigh Girth	10 3/4	11 3/8	12 1/8	12 3/4	13 1/2
Knee Girth	8 1/8	8 1/2	8 7/8	9 1/4	9 3/4
Calf Girth	7 1/8	7 5/8	8 1/8	8 5/8	9 1/8
Ankle Girth	5 1/2	5 7/8	6 1/4	6 5/8	7
Armscye Girth	9 5/8	10 1/8	10 5/8	11 1/4	11 5/8
Upper-Arm Girth	6 1/2	6 5/8	6 7/8	7 1/8	7 3/8
Elbow Girth	5 7/8	6 1/8	6 1/2	6 3/4	7 1/8
Forearm Girth	5 5/8	5 7/8	6	6 3/8	6 5/8
Wrist Girth	4 1/2	4 5/8	4 7/8	5	5 1/4
Hand Girth	5 7/8	6 1/8	6 3/8	6 5/8	7
Trunk Length (total vertical girth)	34 1/8	36 1/4	38 1/2	40 7/8	42 1/2
Vertical Measurements, in.					
Height, in.	36	39	42	45	47 1/2
Head and Neck Height	7 1/8	7 1/2	7 3/4	8	8 1/8
Scye Depth	3 3/4	4	4 1/4	4 5/8	4 5/8
Cervicale Height	28 7/8	31 1/2	34 1/4	36 7/8	39 3/8
Cervicale to Crotch Height	14 5/8	15 5/8	16 3/4	17 7/8	18 3/8
Cervicale to Knee Height	20	21 3/4	23 3/8	25 1/4	26 1/2
Waist to Hip/Seat Height	4	4 1/4	4 5/8	4 7/8	5
Waist to Knee Height	11 1/4	12 1/4	13 3/8	14 1/2	15 1/2
Waist Height	20	22 1/8	24 1/8	26 1/8	28 1/4
Front Preferred Waist Height	18 5/8	20 5/8	22 3/4	24 5/8	26 3/4
Back Preferred Waist Height	19 7/8	21 3/4	23 3/4	25 5/8	28
High-Hip Height	18 1/8	20 1/8	22	23 7/8	25 7/8
Hip/Seat Height	16	17 3/4	19 5/8	21 3/8	23 3/8
Crotch Height	14 1/4	15 7/8	17 1/2	19 1/8	20 7/8
Rise Height	5 3/4	6 1/4	6 5/8	7 1/8	7 3/8
Knee Height	8 7/8	9 7/8	10 3/4	11 3/4	12 7/8
Ankle Height	1 5/8	1 3/4	2	2 1/8	2 3/8
Length Measurements, in.					
Center Front Waist Length	7 7/8	8 3/8	9	9 1/2	9 3/4
Center Back Waist Length	9	9 5/8	10 1/4	10 7/8	11 1/4
Crotch Length (total)	14 1/2	15 1/2	16 5/8	17 3/4	18 5/8
Shoulder Length	2 1/2	2 3/4	3	3 1/4	3 1/2
Shoulder Slope	25 1/2	25	24	23 1/4	24 1/4
Shoulder Drop	1 1/8	1 1/4	1 1/4	1 1/4	1 1/2
Across Front Shoulder Width	8 3/4	9 1/4	9 3/4	10 3/8	10 7/8
Across Back Shoulder Width	9 1/2	10	10 5/8	11 1/8	11 3/4
Upper Front Chest Width	7 7/8	8 1/4	8 5/8	9	9 3/8
Upper Back Width	8 5/8	9 1/8	9 5/8	10 1/8	10 5/8
Front Chest Width	8	8 1/4	8 5/8	9	9 1/4
Back Width	8 5/8	9	9 3/8	9 3/4	10 1/4
Chest/Bust Point to Bust Point	4 5/8	4 3/4	5	5 1/8	5 3/8
Neck to Chest/Bust Point	5 5/8	6	6 3/8	6 5/8	6 7/8
Chest/Bust Point to Bust Point (Halter)	16 1/8	16 7/8	17 5/8	18 3/8	18 7/8
Cervicale to Wrist Length	17 1/4	18 1/2	19 7/8	21 1/4	22 3/8
Side Waist Length	4 1/4	4 5/8	4 7/8	5 1/4	5 1/2
Shoulder and Arm Length	15 1/8	16 3/8	17 3/4	19	20 1/8
Arm Length	12 5/8	13 5/8	14 3/4	15 3/4	16 5/8
Underarm Length	8 5/8	9 1/2	10 1/2	11 3/8	12 1/4
Hand Length	4	4 1/4	4 1/2	4 3/4	5
Hand Width	3 3/8	3 1/2	3 3/4	3 7/8	3 7/8
Foot Length	5 3/8	5 3/4	6 1/8	6 1/2	7
Foot Width	2 1/4	2 3/8	2 1/2	2 5/8	2 3/4