



Standard Table of Body Measurements for Adult Female Misses Figure Type, Sizes 2–20¹

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INTRODUCTION

This body measurement table was developed from body measurements used currently by apparel manufacturers and retail organizations and from anthropometric surveys conducted by the U.S. Army (Gordon, et al., 1988²) and by the U.S. Navy (Mellian, et al., 1990³ and Robinette, 1990⁴). The measurements were derived originally from the PS 42-70 database,⁵ which was developed from anthropometric research conducted in 1941 by O'Brien and Shelton.⁶ It is important to note that the body measurements herein have been derived from designer experience and market observations and crosschecked with available databases in the attempt to identify current customer characteristics and changing proportions and not from new nationwide anthropometric research.

1. Scope

1.1 This table lists body measurements of the adult female misses figure type, sizes 2 through 20. Although these are body measurements, they can be used as a baseline in designing apparel for misses figures in this size range when considering such factors as fabric type, desired ease for body movement, styling, and fit.

1.2 The values stated in either acceptable SI units or inch-pound units shall be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system must be used independently of the other,

without combining values in any way.

2. Referenced Documents

2.1 ASTM Standards:

D 123 Terminology Relating to Textiles⁷

D 5219 Terminology Relating to Body Dimensions for Apparel Sizing⁸

2.2 ISO Standards:⁹

ISO 3635-1981 Size Designation of Clothes, Definition and Body Measurement Procedures

ISO 8559 Garment Construction and Anthropometric Surveys—Body Dimensions

3. Terminology

3.1 *Definitions*—For definitions relating to body dimensions, refer to Terminology D 5219. For definitions of other textile terms used in this table, refer to Terminology D 123.

4. Significance and Use

4.1 The use of the body measurement information given in Table 1 will enable manufacturers to develop patterns and garments that are consistent with the current anthropometric characteristics of the population of interest.

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 Measurement.

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² Gordon, C., Churchill, T., Clauser, C., Bradtmiller, B., and McConville, J., 1988 *Anthropometric Survey of the U.S. Army Natick R&D Center, Technical Report Natick/TR-89/044, 1988.*

³ Mellian, S., Ervin, C., and Robinette, K., *Sizing Evaluation of Navy Women's Uniforms, Navy Clothing and Textile Research Facility Technical Report No. NCTRF 182, 1990.*

⁴ Robinette, K., Mellian, S., and Ervin, C., *Development of Sizing Systems for Navy Women's Uniforms, Navy Clothing and Textile Research Facility Technical Report No. NCTRF 182, 1990.*

⁵ U.S. Department of Commerce, *Voluntary Product Standard: Body Measurements for the Sizing of Women's Patterns and Apparel*, NIST Publication No. PS 42-70, Washington, DC, 1971.

⁶ O'Brien, R., and Shelton, W. C., *Women's Measurements for Garment and Pattern Construction*, Miscellaneous Publication No. 454, U.S. Department of Agriculture, 1941.

⁷ *Annual Book of ASTM Standards*, Vol 07.01.

⁸ *Annual Book of ASTM Standards*, Vol 07.02.

⁹ Available from American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, NY 10036.

TABLE 1 Standard Table of Body Measurements for Adult Female Misses Figure Type, Sizes 2–20

Girth Measurements in in.										
Size	2	4	6	8	10	12	14	16	18	20
Bust	32	33	34	35	36	37½	39	40½	42½	44½
Waist	24	25	26	27	28	29½	31	32½	34½	36½
High hip	31½	32½	33½	34½	35½	37	38½	40	42	44
Hip	34½	35½	36½	37½	38½	40	41½	43	45	47
Mid-neck	13	13¼	13½	13¾	14	14¾	14¾	15½	15½	16½
Neck base	13½	13¾	14	14¼	14½	14¾	15¼	15½	16½	16½
Armhole	14¼	14¾	15	15¾	15¾	16¾	17	17¾	18¾	19½
Upper arm	10	10¼	10½	10¾	11	11½	11¾	12½	12¾	13¾
Elbow	9¾	9½	9¾	9¾	9¾	10½	10¾	10¾	11	11¾
Wrist	5½	5¾	5¾	6	6½	6¼	6¾	6½	6¾	6¾
Thigh, max	19½	20¼	21	21¾	22½	23½	24½	25½	26¾	28
Thigh, mid	18¼	18¾	19¼	19¾	20¼	21	21¾	22½	23½	24½
Knee	13	13¾	13¾	14½	14½	15	15½	16	16½	17
Calf	12½	12¾	13¼	13¾	14	14½	15	15½	16	16½
Ankle	8¾	8¾	8¾	9½	9½	9½	9¾	10½	10¾	10¾
Vertical trunk	56	57½	59	60½	62	63½	65	66½	68	69½
Total crotch	25	25¾	26½	27¼	28	28¾	29½	30¼	31	31¾
Vertical Measurements in in.										
Stature	63½	64	64½	65	65½	66	66½	67	67½	68
Cervical height	54½	55	55½	56	56½	57	57½	58	58½	59
Waist height	39¼	39½	39¾	40	40¼	40½	40¾	41	41¼	41½
High hip height	35¼	35½	35¾	36	36¼	36½	36¾	37	37¼	37½
Hip height	31¼	31½	31¾	32	32¼	32½	32¾	33	33¼	33½
Crotch height	29½	29½	29½	29½	29½	29½	29½	29½	29½	29½
Knee height	17½	17¾	17¾	18	18½	18¼	18¾	18½	18¾	18¾
Ankle height	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾
Waist length (front)	13½	13¾	14	14¼	14½	14¾	15	15¼	15½	15¾
Waist length (back) (on Curve)	15½	15¾	16	16¼	16½	16¾	17	17¼	17½	17¾
True rise	9¾	10	10¼	10½	10¾	11	11¼	11½	11¾	12
Width and Length Measurements in in.										
Across shoulder	14¾	14¾	14¾	15½	15¾	15¾	16½	16½	17	17½
Cross-back width	13¾	14½	14¾	14¾	14¾	15¼	15¾	16	16½	17
Cross-chest width	12¾	13½	13¾	13¾	13¾	14¼	14¾	15	15½	16
Shoulder length	4¼	5	5¼	5½	5¾	5¾	5¾	5¾	5¾	5¾
Shoulder slope (degrees)	23	23	23	23	23	23	23	23	23	23
Arm length shoulder to wrist	22½	23½	23½	23½	23½	23½	24¼	24¼	24¼	24½
Arm length shoulder to elbow	13¼	13¾	13½	13¾	13¾	13¾	14	14½	14¼	14¾
Arm length center back neck to wrist	30½	30¾	30¾	31¼	31¾	31¾	32½	32½	32½	33¾
Bust point to bust point	7	7¼	7½	7¾	8	8¼	8¼	8¼	9	9¼
Neck to bust point	9¼	9½	9¾	10	10¼	10¾	11	11¾	11¾	12¾
Scye depth	7½	7¼	7¾	7½	7¾	7¾	7¾	8	8½	8¼
Girth Measurements in cm										
Size	2	4	6	8	10	12	14	16	18	20
Bust	81.3	83.8	86.4	89.0	91.4	95.2	99.1	102.9	107.9	113
Waist	61.0	63.5	66.0	68.5	71.1	74.9	78.7	82.6	87.6	92.7
High hip	80.0	82.5	85.1	87.6	90.2	94.0	97.7	101.6	106.7	111.8
Hip	86.4	90.2	92.7	95.2	97.8	101.6	105.4	109.2	114.3	119.4
Mid-neck	33.0	33.7	34.3	34.9	35.6	36.5	37.5	38.4	39.7	40.1
Neck base	34.3	34.9	35.6	36.2	36.8	37.8	38.7	39.7	40.9	42.2
Armhole	36.2	37.1	38.1	39.1	40.0	41.2	42.2	44.8	46.7	48.6
Upper arm	25.4	26.0	26.7	27.3	27.9	28.9	29.8	30.8	32.4	34.0
Elbow	23.8	24.1	24.4	24.8	25.1	25.7	26.4	27.0	27.9	28.9
Wrist	14.3	14.6	14.9	15.2	15.6	15.9	16.2	16.5	16.8	17.1
Thigh, max	49.5	51.4	53.3	55.2	57.2	59.7	62.2	64.5	67.9	71.1
Thigh, mid	46.4	47.6	48.9	50.2	51.4	53.3	55.2	57.1	59.7	62.2
Knee	33.0	34.0	34.9	35.9	36.8	38.1	39.4	40.6	41.9	43.2
Calf	31.8	32.7	33.6	34.6	35.6	36.8	38.1	39.4	40.6	41.9
Ankle	21.3	21.9	22.5	23.2	23.8	24.4	25.1	26.7	26.4	27.0
Vertical trunk	142.2	146.0	149.9	153.7	157.5	161.3	165.1	167.6	172.7	176.5
Total crotch	63.5	65.4	67.3	69.2	71.1	73.0	75.0	76.8	78.7	80.6
Vertical Measurements in cm										
Stature	161.3	162.6	163.8	165.1	166.4	167.6	169.0	170.2	171.5	172.7
Cervical height	138.4	139.7	141.7	142.2	143.5	144.8	146.1	147.3	148.6	149.9
Waist height	99.7	100.3	101.0	101.6	102.2	102.9	103.5	104.1	104.8	105.4
High hip height	89.5	90.2	90.8	91.4	92.1	92.7	93.3	94.0	94.6	95.2

TABLE 1 *Continued*

Hip height	79.4	80.0	80.6	81.3	82.0	82.6	83.2	83.8	84.5	85.1
Crotch height	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.9	74.9
Knee height	44.8	45.1	45.4	45.7	46.0	46.4	46.7	47.0	47.3	47.6
Ankle height	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Waist length (front)	34.3	34.9	35.6	36.2	36.8	37.5	38.1	38.7	39.4	40.0
Girth Measurements in cm										
Size	2	4	6	8	10	12	14	16	18	20
Waist length (back) (on Curve)	38.8	40.0	40.6	41.3	41.9	42.5	43.2	43.8	44.5	45.1
True Rise	24.8	25.4	26.0	26.7	27.3	28.0	28.6	29.2	29.8	30.5
Width and Length Measurements in cm										
Across shoulder	36.5	37.1	37.8	38.4	39.1	40.0	41.0	42.0	43.2	44.5
Cross-back width	35.2	35.9	36.5	37.1	37.8	38.7	39.7	40.6	42.0	43.2
Cross-chest width	32.7	33.3	34.0	34.6	35.2	36.2	37.1	38.1	39.4	40.6
Shoulder length	12.5	12.7	12.9	13.0	13.2	13.5	13.8	14.1	14.6	15.1
Shoulder slope, degrees	23	23	23	23	23	23	23	23	23	23
Arm length shoulder to wrist	58.3	58.7	59.2	59.7	60.2	60.6	61.1	61.6	62.1	62.5
Arm length shoulder to elbow	33.7	34.0	34.3	34.6	34.9	35.2	35.6	35.9	36.2	36.5
Arm length center back neck to wrist	76.5	77.3	78.1	78.9	79.7	80.6	81.6	82.6	83.7	84.8
Bust point to bust point	17.78	18.4	19.1	19.7	20.3	21.0	21.6	22.2	22.9	23.5
Neck to bust point	23.5	24.1	24.8	25.4	26.0	27.0	28.0	28.9	30.2	31.4
Scye depth	18.1	18.4	18.7	19.0	19.4	19.7	20.0	20.3	20.6	21.0

4.2 This table should in turn reduce or minimize consumer confusion and dissatisfaction related to apparel sizing.

4.3 For further information, refer to ISO 3635 and ISO 8559.

5. Apparatus

5.1 All apparatus are calibrated for accuracy.

5.2 *Tape Measure*, dimensionally stable and approximately 15 mm (1/2-in.) wide and graduated accurately in mm (1/16 in.) increments.

5.3 *Plastic Goniometer*, to measure the degree of shoulder slope.

5.4 *Plastic L-Square*.

5.5 *Standard Body-Weight Scale*.

6. Procedure

6.1 *General Procedure:*

6.1.1 Verify that measuring devices and scales are within calibration.

6.1.2 For all vertical and most horizontal measurements, measure the body while standing erect without shoes and with feet approximately 15 cm (6 in.) apart.

6.1.3 Take measurements over regular undergarments normally worn when shopping for well-fitted apparel.

6.1.4 For bust-related dimensions, measure over an unpadded brassiere that fits exactly, is made of thin material, and does not contain metal or other supports.

6.1.5 Take all measurements except torso circumferences, height, and weight from the same side of the body for consistency.

6.1.6 Refer to Terminology D 5219 for the location of all points to be measured (See Section 2).

6.2 *Body Measurements:*

6.2.1 *Bust*—Measure the bust circumference horizontally around the body under the arms, across the nipples, and parallel to the floor.

6.2.2 *Waist*—Measure the waist circumference horizontally around the body at the waist level.

6.2.3 *High-Hip*—Measure the high hip circumference of the body at high-hip level, approximately 7.5 cm (3 in.) below the waist level and parallel to the floor.

6.2.4 *Hip*—Measure the maximum hip circumference of the body at the hip level and parallel to the floor.

6.2.5 *Mid-Neck*—Measure the mid neck circumference of the neck approximately 25 cm (1 in.) above the neck base.

6.2.6 *Neck Base*—With tape measure standing on edge, measure the circumference of the neck base crossing the cervicale at the back, shoulder line/neck base at side, and hollow at center front.

6.2.7 *Armscye*—With the arm hanging down, measure from the shoulder joint down through the front-break point, the armpit, up to the back-break point, and up to the starting point.

6.2.8 *Upper Arm*—With the arm down, measure the maximum upper arm circumference parallel to the floor between the shoulder joint and the elbow.

6.2.9 *Elbow*—With the arm bent, measure the elbow circumference.

6.2.10 *Wrist*—Measure the wrist circumference over the inner and outer prominence at the lower end of the forearm.

6.2.11 *Thigh, Maximum*—Measure the circumference of the upper leg close to the crotch.

6.2.12 *Thigh, Mid*—Measure the circumference of the upper leg midway between the hip and the knee.

6.2.13 *Knee*—With the leg straight, measure the knee circumference over the knee cap and parallel to the floor.

6.2.14 *Calf*—Measure the maximum circumference of the lower leg between the knee and the ankle and parallel to the floor.

6.2.15 *Ankle*—Measure the ankle circumference over the inner and outer bony prominence at the lower end of the lower leg.

6.2.16 *Vertical Trunk*—Measure from a point on the right shoulder midway between the neck base and shoulder joint, down the back, through the crotch, and up over the prominence of the right breast to the starting point, taking care to avoid constriction at the crotch.

6.2.17 *Total Crotch Length*—Measure from the center front waist level through the crotch to the center back waist level.

6.2.18 *Height*—In a standing position, measure from the top of the head to the soles of the feet.

6.2.19 *Stature*—Measure from the top of the head to the soles of the feet.

6.2.20 *Cervicale Height*—Measure from the cervicale following the contour of the spinal column to the level of the hips, then vertically to the soles of the feet.

6.2.21 *Waist Height*—Measure from the waist level at the side of the body following the contour of the body to hip level, then vertically to the soles of the feet.

6.2.22 *High-Hip Height*—At the side of the body, measure from the level of the prominent high-hip (abdominal extension) following the contour of the body to the soles of the feet.

6.2.23 *Hip Height*—At the side of the body, measure from the full hip level to the soles of the feet.

6.2.24 *Crotch Height*—While standing erect without shoes and with feet slightly apart, measure from the crotch straight down to the soles of the feet.

6.2.25 *Knee Height*—Measure from the crease in the back of the knee to the soles of the feet.

6.2.26 *Ankle Height*—Measure from the middle of the outer ankle bone to the soles of the feet.

6.2.27 *Waist Length (Front)*—Measure from the center front neck base line to the center front waist level.

6.2.28 *Waist Length (Back)*—Measure from the cervicale following the contour of the spinal column to the center back waist level.

6.2.29 *True Rise*—While sitting on a hard, flat surface, measure straight down from the waist level at the side of the body to the flat surface.

6.2.30 *Across Shoulder*—While standing erect with the arms hanging down, measure across the back from one shoulder joint to the other.

6.2.31 *Cross-Back Width*—Measure across the back from armscye to armscye at the back-break point level.

6.2.32 *Cross-Chest Width*—Measure across the chest from armscye to armscye at the front-break point level.

6.2.33 *Shoulder Length*—With the arm hanging down, measure from the side of the neck base to the armscye line at the shoulder joint.

6.2.34 *Shoulder Slope*—Using a goniometer, position the measure on the shoulder and move the baseline until it is parallel to the floor; identify on the dial the degrees of difference between the shoulder slant and the horizontal measure of the goniometer.

6.2.35 *Arm Length (Shoulder to Wrist)*—With the arm bent at 90 degrees and the hand placed on the hip, measure from the shoulder joint down along the outside of the arm over the elbow to the prominent wrist bone.

6.2.36 *Arm Length (Shoulder to Elbow)*—With the arm bent at 90 degrees and the hand placed on the hip, measure from the shoulder joint along the outside of the arm to the center elbow bone.

6.2.37 *Arm Length (Center Back Neck to Wrist)*—With the arm bent at 90 degrees, measure from the cervicale over the top of the shoulder to the shoulder joint, then along the outside of the arm over the elbow to the prominent wrist bone.

6.2.38 *Bust Point to Bust Point*—Measure horizontally from one bust apex to the other.

6.2.39 *Neck to Bust Point*—Measure from the intersection of shoulder and front neck base to the bust apex.

6.2.40 *Scye Depth*—Measure vertically on the body from the cervicale to the upper edge of a tape passed horizontally under the armpits.

7. Keywords

7.1 adult female; apparel; body measurements; garment sizes; misses

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