

# Medium Size RTW Measurement Comparisons

by Don McCunn

The book *Fashion & Costume Design in Quarter Scale* compares the body shapes of 13 models I have personally fitted and were within 2" of the Bust, Waist, and Hips of my PGM commercial dress form.

This information is intended to help independent designers who want to create garments they can sell as Ready-to-Wear, RTW. The book shows how to create quarter-scale dress forms called Mini-Mes. These Mini-Mes can be used as "fitting models" to evaluate whether a given design is appropriate for RTW or is better suited to be a Bespoke garment intended to fit a specific individual.

In working with the independent designer Lindsey Watson to create RTW patterns for her one-of-a-kind wearable art I realized that it could also be helpful to be able to compare the measurements of these models. The following charts are a summary of these measurements described in my book *How to Make Sewing Patterns*.

## Body Circumferences and Widths

The most important measurements are the Bust, Waist, & Hips. Range indicates which have the most variation: the Bust and Hips, and which has the least: Bust to Bust.



Name	1. Neck	2. Neck Width	3. Shoulder Width	6. Bust	9. Bust To Bust	10. Rib Cage	11. Waist	15. Hips
Alex	14"	4½"	15½"	35"	7"	27½"	27"	37½"
Bonnie	14"	4½"	14"	36"	8"	27½"	28"	38"
Christina	15½"	5½"	17½"	37"	7"	31½"	28"	39"
Erin	14½"	5"	16½"	34"	7½"	28½"	26½"	38"
Fallon	13½"	4½"	15"	33½"	7"	29"	26"	37"
Jain	14"	4½"	16½"	34"	7"	27¾"	26"	37"
Jenifer	14"	5"	15½"	37"	8"	29"	27"	39"
Leah	13"	4½"	15"	36½"	7½"	27½"	27"	38"
Masha	14"	4½"	15"	35½"	8"	30"	28½"	37½"
Olga	14½"	5"	15½"	35"	7"	28"	25"	35"
Ruby	14"	4½"	14"	34½"	7"	27½"	27"	35"
Sharon	14"	4¼"	14½"	34"	7"	31"	27"	36"
Vanessa	14"	4½"	15"	33"	7"	27½"	25"	37"
<b>Largest</b>	15½"	5½"	17½"	37"	8"	31½"	28½"	39"
<b>Smallest</b>	13"	4¼"	14"	33"	7"	27½"	25"	35"
<b>Range</b>	2½"	1¼"	3½"	4"	1"	4"	3½"	4"
<b>Modified Range*</b>	1"	0.5	2½"	3½"	1"	3½"	3"	4"
<b>Average</b>	14.08"	4.67"	15.35"	35"	7.31"	28.63"	26.77"	37.23"
* Modified Range is less the largest and smallest when there is only one person in that size.								

## Body Lengths

The most reliable measurement for the length of the upper torso is the Center Back or CB because it follows the spine from the bottom of the neck to the waist. While the range of the length of the CB can vary as much as 4" the side seam, as determined by the Armpit to Waist measurement, only varies by 2" and the Center Front to Waist, CF, varies by 1".

Another important measurement is the Side Front to Bust as this establishes the location for the apex of the bust. This location is important for creating darts and styling seams such as a Princess Seam. However, relying on this measurement must be used with caution as it can vary based on the bra that is being worn as shown on page 18 of *Fashion & Costume Design in Quarter Scale*.

The most extreme range of lengths are the CF to Knee and CF to Floor as these show what is required for full length garments.

Name	20. CF To Waist	21. CF To Rib Cage	22. CF To Knee	23. CF To Floor	24. SF To Bust	SF To Rib Cage	25. SF To Waist	27. Bust To Shoulder	29. CB	30. SB	31. Armpit To Waist
Alex	13"	10 <sup>3</sup> / <sub>4</sub> "	36"	54"	11 <sup>1</sup> / <sub>2</sub> "	14"	16 <sup>1</sup> / <sub>2</sub> "	9 <sup>1</sup> / <sub>4</sub> "	16"	16 <sup>3</sup> / <sub>4</sub> "	7"
Bonnie	13"	11"	36"	52"	11"		16"	11"	14 <sup>1</sup> / <sub>2</sub> "	15"	7"
Christina	14"	9 <sup>1</sup> / <sub>4</sub> "	27"	57"	9 <sup>1</sup> / <sub>2</sub> "	12 <sup>3</sup> / <sub>4</sub> "	18"	8 <sup>1</sup> / <sub>2</sub> "	15 <sup>1</sup> / <sub>2</sub> "	16 <sup>1</sup> / <sub>2</sub> "	8"
Erin	13"	9 <sup>1</sup> / <sub>2</sub> "	37"	56"	11 <sup>1</sup> / <sub>2</sub> "	14"	17"	9"	16"	17"	8 <sup>1</sup> / <sub>2</sub> "
Fallon	13"	8 <sup>1</sup> / <sub>2</sub> "	36"	56"	9"	12"		9"	17 <sup>1</sup> / <sub>2</sub> "	17 <sup>1</sup> / <sub>2</sub> "	9"
Jain	13"	9"	35"	53"	10"	13"	16"	9 <sup>1</sup> / <sub>2</sub> "	15"	16"	8"
Jenifer	13 <sup>1</sup> / <sub>2</sub> "	9"	36"	56"	12"	15"	18 <sup>1</sup> / <sub>2</sub> "	11"	15 <sup>1</sup> / <sub>2</sub> "	17"	8"
Leah	13 <sup>1</sup> / <sub>2</sub> "	10 <sup>1</sup> / <sub>2</sub> "	37"		11"	14"	16"		15"	16"	8"
Marsha	12 <sup>1</sup> / <sub>2</sub> "	9 <sup>1</sup> / <sub>2</sub> "	36 <sup>1</sup> / <sub>2</sub> "	55"	10"	13 <sup>1</sup> / <sub>2</sub> "	16"	10"	15"	16"	7"
Olga	13"	9"	37"	54"	10"	14 <sup>1</sup> / <sub>2</sub> "	17"	10"	16"	16 <sup>1</sup> / <sub>2</sub> "	8"
Ruby	13"	8 <sup>1</sup> / <sub>2</sub> "	36 <sup>1</sup> / <sub>2</sub> "	51 <sup>1</sup> / <sub>2</sub> "	10"	12 <sup>1</sup> / <sub>2</sub> "	16 <sup>1</sup> / <sub>2</sub> "	8 <sup>1</sup> / <sub>2</sub> "	13 <sup>1</sup> / <sub>2</sub> "	14 <sup>1</sup> / <sub>2</sub> "	7"
Sharon	13 <sup>1</sup> / <sub>2</sub> "	9 <sup>1</sup> / <sub>2</sub> "	36"	55"	11"	12 <sup>1</sup> / <sub>2</sub> "	17"	10"	15 <sup>1</sup> / <sub>2</sub> "	16"	7 <sup>1</sup> / <sub>2</sub> "
Vanessa	13"	9"	37 <sup>1</sup> / <sub>2</sub> "	55"	10"	13"	17"	9"	15 <sup>1</sup> / <sub>2</sub> "	16 <sup>1</sup> / <sub>2</sub> "	8"
<b>Largest</b>	14"	11"	37"	57"	12"	15"	18 <sup>1</sup> / <sub>2</sub> "	11"	17 <sup>1</sup> / <sub>2</sub> "	17 <sup>1</sup> / <sub>2</sub> "	9"
<b>Smallest</b>	13"	8 <sup>1</sup> / <sub>2</sub> "	27"	51 <sup>1</sup> / <sub>2</sub> "	9"	12 <sup>1</sup> / <sub>2</sub> "	16"	8 <sup>1</sup> / <sub>2</sub> "	13 <sup>1</sup> / <sub>2</sub> "	14 <sup>1</sup> / <sub>2</sub> "	7"
<b>Range</b>	1"	2 <sup>1</sup> / <sub>2</sub> "	10"	5 <sup>1</sup> / <sub>2</sub> "	3"	2 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>2</sub> "	4"	3"	2"
<b>Modified Range*</b>	<sup>1</sup> / <sub>2</sub> "	2 <sup>1</sup> / <sub>4</sub> "	9"	5"	2"	1 <sup>1</sup> / <sub>4</sub> "	2"	2 <sup>1</sup> / <sub>2</sub> "	2"	2"	1 <sup>1</sup> / <sub>2</sub> "
<b>Average</b>	13.15"	9.46"	35.65"	54.54"	10 <sup>1</sup> / <sub>2</sub> "	13.40"	16.79"	9.56"	15.42"	16 <sup>1</sup> / <sub>4</sub> "	7.77"

\* Modified Range is less the largest and smallest when there is only one person in that size.

## Arm Circumferences and Lengths

Arm circumferences and lengths don't vary that much as indicated by the Range values. I have consistently used a 5" Sleeve Cap as the fit under the arm cannot be too tight as it will impeded movement. The Arm Length should always be taken with the arm bent at a right angle at the elbow. In my experience the difference between a straight arm and an arm bent is always 2".

Name	12. Biceps	13. Wrist	14. Palm	Arm Length	32. Arm Length	33. Shoulder To Elbow	34. Sleeve Cap
Alex	10½"	5½"	8"		25"	14½"	5"
Bonnie	10½"	5¾"	7½"		23"	14"	5"
Christina	11"	6½"	8"		25"	15"	
Erin	9½"	6"	8"		24½"	14"	5"
Fallon	9¼"	6"	8"		25½"	13"	5"
Jain	9"	5½"	7½"		23"	13"	5"
Jenifer	10½"	6"	7½"		25"	14½"	5"
Leah	10½"	6"	8"		23½"	12"	
Marsha	9"	5½"	7"		25"	14"	5"
Olga	10"	6"	7"		24"	13"	5"
Ruby	9½"	6"	8"		23"	13"	5"
Sharon	10"	6"	8"		24½"	14"	5"
Vanessa	10"	6"	8"		25"	13½"	
<b>Largest</b>	11"	6½"	8"		25"	15"	5"
<b>Smallest</b>	9"	5½"	7"		23"	12"	5"
<b>Range</b>	2"	1"	1"		2"	3"	0"
<b>Modified Range*</b>	1½"	½"	1"		2"	1½"	0"
<b>Average</b>	9.94"	5.90"	7.73"		24.31"	13.65"	5"

\* Modified Range is less the largest and smallest when there is only one person in that size.

## Lower Torso & Leg Circumferences and Lengths

Leg circumferences and lengths are primarily important for pants and determining the lengths of skirts and dresses. The smallest Range is for Leg Widths. This is a measurement I developed to adjust the crotch curve when creating patterns for pants. The other measurements are pretty clear cut.

Name	11. Waist	15. Hips	16. Thigh	17. Leg Width	18. Knee	Leg Length	35. Waist To Hips	36. Waist To Knee	Waist To Calf	Waist To Ankle	37. Waist To Floor	38. Inseam	39. Crotch Depth
Alex	27"	37½"	22"	6½"	14"		7"	21"	28½"	39"	41½"	30½"	11"
Bonnie	28"	38"	21½"	7"	14½"		8"	22½"	27"	37"	39½"	28½"	12"
Christina	28"	39"	21"	7"	14½"		8½"	25"	30"	40"	43"	31½"	11½"
Erin	26½"	38"	22"	7"	14"		9"	25"	30½"	40½"	41"	30"	11"
Fallon	26"	37"	21"	7"	13½"		8½"	25"	29"	41"	44"	32"	12"
Jain	26"	37"	22"	6"	13"		8"	22"	28½"	38"	41"	31"	10"
Jenifer	27"	39"	21"	7"	14"		8"	26"	29"	40½"	42½"	31½"	11"
Leah	27"	38"	20"	7"	13"		8"	22"	26"	37"	39"	28"	11"
Masha	28½"	37½"	21"	6"	13½"		7½"	24"	29"	40"	43½"	33½"	10"
Olga	25"	35"	20"	6"	13"		8½"	24"	28"	38½"	41"	30"	11"
Ruby	27"	35"	20"	7"	14"		9"	22"	28"	37"	39"	28"	11"
Sharon	27"	36"	19"	6"	14"		8"	24"	29"	39"	42"	31"	11"
Vanessa	25"	37"	20"	7"	13½"		7"	24"	30"	40½"	42½"	31½"	11"
<b>Largest</b>	28½"	39"	22"	7"	14½"		9"	26"	30½"	41"	44"	33½"	12"
<b>Smallest</b>	25"	35"	20"	6"	13"		7"	21"	26"	37"	39"	28"	10"
<b>Range</b>	3½"	4"	2"	1"	1½"		2"	5"	4½"	4"	5"	5½"	2"
<b>Modified Range*</b>	3"	4"	2"	1"	1½"		2"	3"	3"	3½"	4"	4"	2"
<b>Average</b>	26.77"	37.23"	20.81"	6.65"	13.73"		8.08"	23.58"	28.65"	39.08"	41½"	30.54"	11.04"

\* Modified Range is less the largest and smallest when there is only one person in that size.