## Measurements for a rhythmic gymnastics leotard construction

Perfect leotard fitting can be achieved only by creating a customized pattern using unique measurements of a particular gymnast. It is essential to be precise and accurate while taking measurements. If fitting sessions are scheduled, any inaccuracies can be fixed then. If it is a distant order and fitting is not possible, measurements are the only guides we can use, and it is best to ask a customer to photograph the process of taking measurements - this will allow you to correct any measurements which are taken improperly.

For the correct measurements a gymnast should only be in underwear or a tight, outfit. The fit of any measurements should be quite tight (sleek fit) but comfortable.

For the correct position of few measurements it is essential to define the correct waist line by tying a string or piece of elastic around a girls' waist. Please note it is impossible to take the correct measurements of the Back Waist Length (BWL) and Crotch Depth (CD) without the elastic. It is highly recommended not to ignore this step!

Please fill out the chart while taking measurements:

| No | Abbreviation | Meaning | Name | Name | Name |
| :---: | :---: | :--- | :--- | :--- | :--- |
| 1 | H | Gymnast's heigh |  |  |  |
| 2 | CS | Chest Size (above the chest) |  |  |  |
| 3 | WS | Waist Size |  |  |  |
| 4 | HS | Hips Size |  |  |  |
| 5 | NS | Neck Size |  |  |  |
| 6 | CH | Collar Height |  |  |  |
| 7 | BWL | Back to Waist Length |  |  |  |
| 8 | CL | Crotch Length |  |  |  |
| 9 | SL | Sleeve Length (to the wrist) |  |  |  |
| 10 | UAW | Under Arm Width |  |  |  |
| 11 | WrS | Wrist Size |  |  |  |
| 12 | LOtp | Leg Opening Top Point |  |  |  |
| 13 | PBD | Pants'Back Diagonals |  |  |  |
| 14 | SFL | Skirt Front Length |  |  |  |
| 15 | SBL | Skirt Back Length |  |  |  |
| 16 | FTW | Waist to the floor (side) |  |  |  |
| 17 | AS | Ankle Size |  |  |  |
| 18 | CD | Crotch Depth (sitting position) |  |  |  |

Мастерская Lana<br>Пошив купальников для художественной гимнастики +7 985 360-38-50, г. Москва, ЖК Соловьиная роща, ул. Соловьиная, д. 2-3

1. H Height. Height is not used in the construction of a rhythmic gymnastics leotard. It is used only for a reference.
2. CS Chest Size. Wrap a measuring tape under girl's arms. For older gymnasts with formed chest there are 3 measurements to take - above the chest, the fullest part of the chest and under the chest (for a chest smaller than size 2 measurements of the fullest part of the chest and under the chest are just a reference), use hyphen to write down 3 measurements. It is recommended for a gymnast to wear a leotard liner.
3. WS Waist Size. It is measured along the waistline, defined by elastic or a string.


Мастерская Lana<br>Пошив купальников для художественной гимнастики +7 985 360-38-50, г. Москва, ЖК Соловьиная роща, ул. Соловьиная, д. 2-3

4. HS Hips Size. It is measured horizontally by wrapping a tape straight and snug around the widest part of hips.
5. NS Neck Size. It is measured in the narrowest part of the neck. Please note - in the narrowest part, it is usually recommended taking measurement at the base on the neck, but it will not work for a gymnast. If we make a collar using those measurements, it will be too wide.


Мастерская Lana<br>Пошив купальников для художественной гимнастики

6. CH Collar Height. It is measured from the sternal notch to the correct height for a gymnast. It is usually $1-2 \mathrm{~cm}$ below the chin.
7. BWL Back to Waist Length. It is a very important measurement for pattern construction. It should be measured only with elastic tied around the waistline. It is measured along the spine line from the $7^{\text {th }}$ vertebrae to the waistline.
8. CL Crotch Length. This measurement is also called a "saddle". It is also a very important measurement for rhythmic leotard construction. It is measured with elastic tied around the waistline; otherwise this measurement will be incorrect. Measure from the center of the waist at the front down through the inseam and up to the center of the waist at the back.


Мастерская Lana<br>Пошив купальников для художественной гимнастики +7 985 360-38-50, г. Москва, ЖК Соловьиная роща, ул. Соловьиная, д. 2-3

9. SL Sleeve Length. It is measured from the protruding bone of the shoulder (it is right above the armpit) to the wrist. It is unnecessary to bend an arm because we are working with highly stretchable fabrics and they compensate for that.
10. UAW Under Arm Width. It is measured in the upper arm area.
11. WS Wrist Size. It is measured on the wrist bone.


Мастерская Lana<br>Пошив купальников для художественной гимнастики<br>+7 985 360-38-50, г. Москва, ЖК Соловьиная роща, ул. Соловьиная, д. 2-3

12. LOtp Leg Opening top point. Find the most aesthetic top point of leg opening; measure the distance between this point and the elastic on the waist line - as the first measurements, as for the second -take a measurement from the crossing point on the elastic to the center of the waist.
13. PBD Pants' Back Diagonals. Consequently, take 3 measurements from the center of the waist at the back to the most aesthetic points of the leg opening.


Мастерская Lana<br>Пошив купальников для художественной гимнастики +7 985 360-38-50, г. Москва, ЖК Соловьиная роща, ул. Соловьиная, д. 2-3

14. SFL Skirt Front Length. It is measured from the center of the elastic at the front to the visually aesthetic skirt front edge (usually $1-2 \mathrm{~cm}$ below the crotch area).
15. SBL Skirt Back Length. It is measured from the center of the elastic at the back to the skirt back edge (usually 1-2 cm below buttocks).


Мастерская Lana<br>Пошив купальников для художественной гимнастики<br>+7 985 360-38-50, г. Москва, ЖК Соловьиная роща, ул. Соловьиная, д. 2-3

16. FTW Waist to the Floor. It is measured on the side from the elastic on the waist to the floor.
17. AS Ankle Size. It is measured in the narrowest part of the ankle.

18. CD Crotch Depth. First a gymnast needs to be seated preferably on a hard surface chair. Take a vertical measurement from the waist line to the chair.

After taking the measurements, we can start a pattern construction.


