

Drafting a Sleeve Cap

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This draft will allow you to make any basic, straight sleeve, that will fit most armholes.

Before beginning this sleeve draft, make any and all shape and design corrections to both the front and back armholes. Equalize the front and back armhole measurements to within ¼ inch of each other. When correct and equalized, measure each armhole and record the measurements on the respective pattern pieces.

Vocabulary

Armhole: The completed shape of the front and back armholes constructed together. Armholes can yield sleeveless or sleeved garments, depending on the design draft.

Armhole: The curved shape drafted on a pattern that allows a sleeve to be sewn to a garment. There are front and back armholes.

Bicep line - the part of the sleeve that measures around your fully flexed bicep. To determine this measurement, wrap a measuring tape around a fully flexed bicep, at the widest part of the extended muscle. The measuring tape should be slightly loose, never tight, so that the drafted sleeve does not restrict bicep movement. You can add as much ease as needed to complete the draft for the design – usually from ½” to 1” of ease. An average bicep line, with included ease, for ready-to-wear is 13” to 14” long.

Cap height –The distance from the bicep line to apex of the sleeve cap. There are three generalized categories: Low, Average, and High. **Low caps** yield the most mobility, have shallow sleeve caps, and wide bicep lines. Examples of clothing low caps can be found in include: kimonos, casual shirts and blouses, and T-shirts. Low caps are usually 4” or less up from the bicep line.

Average caps are basic sleeves that fit in a wide variety of designs. They offer general mobility, have obvious curves and a more defined/controlled bicep line. Average caps are around 6” up from the bicep line.

High caps are the most restrictive of all the caps. These are often reserved for very strict silhouettes where arm movement is not a major requirement. More often than not, these are custom design sleeve caps that are needed for specific costume details. High caps have small bicep lines. High caps are 8” or more up from the bicep line.

Ease – An extra allotment of fabric that is built into a pattern to allow for extra mobility when worn. Ease is subjective, and is determined by the designer for the required fit. This draft builds around 1” of sleeve cap ease as it is completed. Follow the instructions included to add or take away extra sleeve cap ease.

Grain line – The line drawn on a pattern that dictates the direction the pattern piece is laid on fabric when cut.

Sleeve cap – The curved angle at the top of the sleeve that allows the sleeve to be sewn into an armhole. The front curve of the cap will always be slightly deeper than the back curve.

Sleeve length – Measured from the top of the drafted sleeve cap to where the sleeve hem will finish on the arm. This measurement is subjective and determined by the designer; however, an average sleeve length for ready to wear is around 22”.

Under Seam – This seam is sewn to complete the sleeve. It is typically located at the intersection of the side seam.

Wrist measurement – There are two basic ways a sleeve can be worn at the wrist: over-the-hand (no opening needed), and fitted to the wrist (opening needed). To determine the over-the-wrist measurement, lay a measuring tape around the widest part of a flat hand. The measuring tape should be slightly loose, never tight, so that the drafted wrist does not restrict movement. For an at the wrist measurement, lay a measuring tape around the wrist. As this type of sleeve

requires an opening to get through, the measurement can be a true measurement without ease. An average over-the-hand wrist measurement is around 10".

You will need the following measurements to draft a sleeve:

Front armscye measurement = _____

Back armscye measurement = _____

Bicep measurement + ease = _____

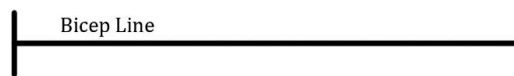
Sleeve Length = _____

Wrist measurement = _____

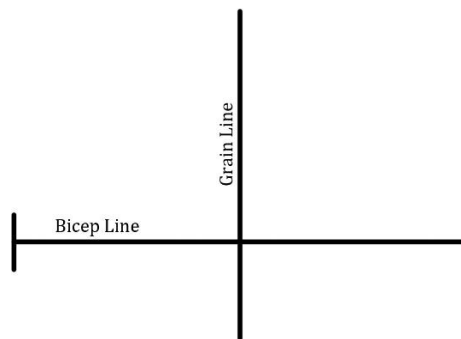
Sleeve Draft

The following illustrations are for the placement of marks, and the shape of the draft only. They are not to scale.

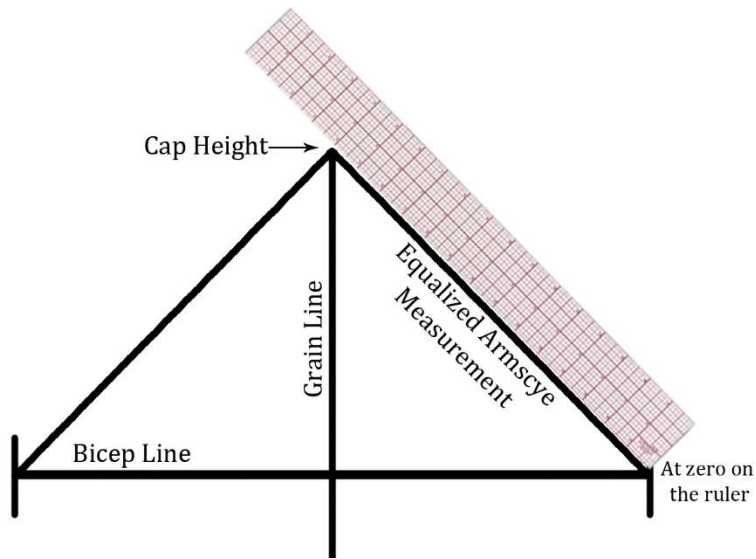
1 - Draw the bicep line on your paper (leave plenty of room around the draft to complete the sleeve). Draw small termination lines on the ends of the bicep line.



2 - Draw a grainline squared to the bicep line, exactly in the center of the bicep line. Label Grain Line.



3 - Find the measurement of the equalized armscye on a ruler. Starting at the small termination line at one end of the bicep line, place the ruler on the termination line, at zero on the ruler, and swing the ruler until the ruler, at the measurement, touches the grain line. Make a small pencil mark at this point, then draw a straight line from the bicep line to the pencil mark. Repeat for the other side forming a triangle.



4 – Measure the distance from the top of the triangle to the bicep line – this is the cap height. Record this measurement, and check to see if it is a low, average or high cap.

Cap Height = _____

This cap is a(n) _____ cap

Plotting the sleeve cap curve

For all cap heights:

Label the apex of the triangle X.

Label the right end of the bicep line F for Front

Label the left end of the bicep line B for Back

The Back:

Divide line B to X into thirds. Mark points 1 and 2 as seen in the diagram.

Divide line X to 2 in half and mark it 3

Divide line B to 1 in half and mark 4

From point 3 measure OUT, perpendicularly:

3/8" if a Low Cap

3/4" if an Average Cap

7/8" if a High Cap

... and label A

From point 4, measure IN, perpendicularly:

1/8" if a Low Cap

1/4" if an Average or High Cap

... and label C

The Front:

Divide line X to F into quarters. Mark points 5, 6, 7 as seen in the diagram.

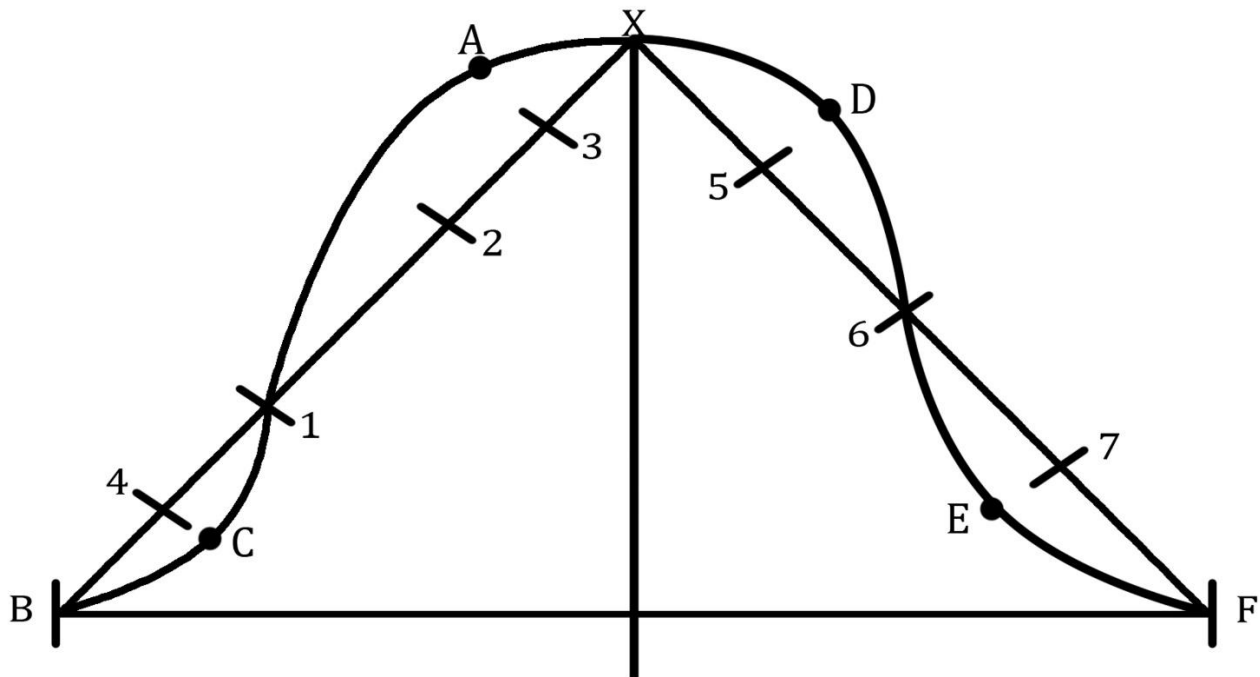
From point 5 measure OUT, perpendicularly:

1/4" if a Low Cap
5/8" if an Average Cap
3/4" if a High Cap ... and label D

From point 7 measure IN, perpendicularly:

1/4" if a Low Cap
5/8" if an Average or High Cap ... and label E

Draw a smooth curve by connecting B, C, 1, A, X, D, 6, E, F. This is your new sleeve cap. Measure it and compare its measurement to the armhole. If drafted correctly, it should be about 1" larger. If you need to add or take away ease, see next section.

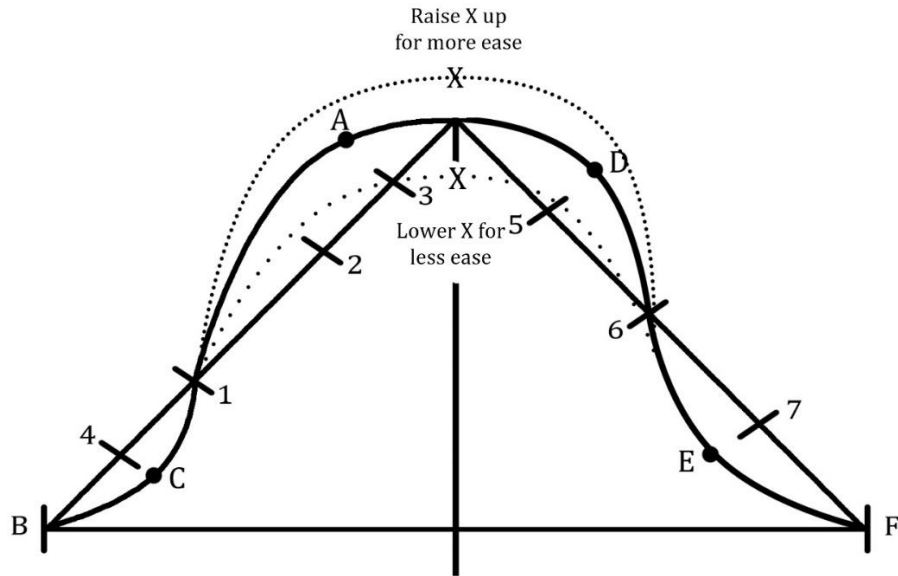


Adding and subtracting ease

Ease should be added AFTER the sleeve cap has been drafted. This gives you the most control over the amount of ease you want to add or take out. Low caps have from 0" to 1/2" of ease. Average caps have from around 1" to 2" of ease. High caps can have as much as 4" to 6" of ease depending on the design. Ease is subjective and at the discretion of the designer and the design.

To add ease, raise X by a small amount. 1/4" is a good starting point. Raise it up incrementally so it doesn't get away from you. Re draw the top of the arc blending into the middle of the sleeve cap on both sides. Measure the new sleeve cap and compare it to the armhole. Keep sliding X up and redrawing your sleeve cap until the amount of desired ease has been reached.

To subtract ease, lower X by a small amount. ¼" is a good starting point. lower it incrementally so it doesn't get away from you. Redraw the top of the arc blending into the middle of the sleeve cap on both sides. Measure the new sleeve cap and compare it to the armhole. Keep sliding X down and redrawing your sleeve cap until the amount of desired ease has been reached.



To complete the sleeve

- 1 -Extend the grain line down to the sleeve length measurement. If you adjusted for ease, measure from new X.
- 2 -At the base of the sleeve length grain line, draw a perpendicular line, half the wrist measurement, to the front. Label R. Repeat for the back and label it Q.
- 3 – Draw a straight line connecting B to Q, and another connecting F to R. These lines make the under seam.
- 4 – Notch the front of the sleeve cap with 1 notch, 3 inches from the under seam, and notch the back with 2 notches, 3 inches from the under seam. This completes the draft for the basic straight sleeve.

