



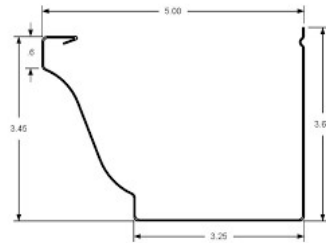
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Gutters

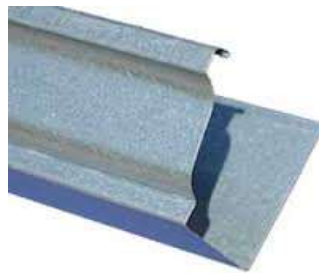
Minimum information needed to create estimate for gutter quote:

- Are there existing gutters and will we be taking them down?
- What type of materials will the gutters be made from?
- Will there be a need for additional gutter or down spouts?
- Are there any other structures that will be getting gutter at the same time? Such as: sheds, dog houses, etc.
- What size trough do you want to use?
- What size down spouts?
- What color for the gutter and down spouts? Will they be the same or different colors?
- Will we be installing gutter guards? What type?

At this time Acumen Renovations is only offering one type of guttering; K-Style in two different sizes, 5" and 6". K-Style gutters are flat on the bottom and back side and have a decorative front that resembles crown molding of the front face, as seen on the images to the left.



K-Style gutter is typically made from aluminum which comes in several different thickness (0.025 and 0.032 gauge) We recommend if going with a 6" gutter to go with the heavier gauge. The aluminum gutters come in many pre-finished colors but the K-style gutter can be crafted from other types of metals such as copper or galvalume as seen in the images to the left.



Galvalume



Copper

Equally as important as the material and style that you choose to have your gutter constructed from is the fasteners that you choose to hang your gutter and down spout with. Acumen only uses hidden hangers as shown in the image to the left and a minimum of two straps for down spout per 10' section.



Below I will list the factors and steps needed to calculate how to determine which size gutters are appropriate for a given roof section.

1. You will need to determine the pitch of the roof which can be done several different ways. The easiest way for most people is to use a 1' bubble level and lay one end on the roof and hold the other end up till you achieve level and measure down with a tape measure. If you have 4" between the end of the level and the roof, then you have 4/12 pitch, if you have 9" then you would have a 9/12 pitch. Once you know what your roof pitch is you will be able to multiply it by the figures shown below.

Roof Pitch	Roof-pitch factor
12/12 or higher	1.3
9/12 to 11/12	1.2
6/12 to 8/12	1.1
4/12 to 5/12	1.05

According to the U.S. Weather Bureau records the maximum rainfall that could possibly happen in a 5-minute period, in inches per hour, is 7.4" per hour (Kansas City, MO). Numbers could vary regionally or locally but this is a good number for a general base line.

K-Style

5-inch 5,520 square feet

6-inch 7,960 square feet

Now that you know what the variables are here is the formula to calculate what size guttering you will need based on the size and pitch of your roof.

A = square footage of the roof section

B = Roof pitch which will determine which factor to multiply your square footage with

C = Maximum amount of rain fall Per Hr which we know is 7.4

$A \times B$ (which will be determined by roof pitch) $\times 7.4$

The chart above explains how to figure for gutter the section below will explain how to figure for the appropriate size down spouts and how many you will need.

2 x 3 inch rectangular = 600 Square feet

3 x 4 inch rectangular = 1200 Square Feet

To calculate you will divide 600 or 1200 by the number you get from the formula determined above. If its close you should always error on the side of Bigger.

Gutter guards:

Gutter guards can be a great way to keep your gutter free of debris and flowing properly as they were intended. There are several different options for gutter guards and in the section below will review the pro and cons of the different types that we offer.

In the photo to the right is a basic screen type gutter guard they are effective for diverting larger objects that would easily cause down spouts to become blocked.



Pros:

- Inexpensive.
- Keeps out larger debris.
- Easy to install.
- Works with most roofing.

Con:

- Are susceptible to damage from branches, snow and ice.
- Can be clogged from needles and seeds.
- Can be difficult to clean.

In the photo, to the right is a modified screen type gutter guard that has the same attributes listed as the one above, but does better to divert seed type debris.



Pros:

- Holds up well to branches, ice, and snow.
- Keeps a greater amount of debris out the gutters.
- Works well with most roof systems.
- Easy to clean when needed.

Con:

- May need occasional maintenance/cleaning.
- Not ideal for areas that have trees that produce needles.

In the photo to the right is a Surface-tension style gutter guard. Out of all the gutter guards shown they handle all debris the best if installed correctly.



Pros:

- Holds up well to branches, ice, and snow.
- Needs little to no maintenance when installed correctly.

Cons:

- More difficult to install.
- Water can shoot past edge of the guard during heavy down pour.
- Doesn't work well with every roof system.

Other Considerations:

Replacing soffit and fascia as needed do to wood rot.

Ventilation: Gable vents, Soffit vents, or ridge vents.

Painting: Fascia and trim that tends to get overlooked during routine house painting.

Drainage: Splash blocks, underground drainage, gutter extensions.