

# The Quest for “The Best”...Gutter Protection

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What’s the best way to keep my gutters from clogging up? That is a question I hear all the time and I’m frankly amazed at how much interest there is in this subject. It is, I suppose, a testament to how hungry property owners are for a solution. After all, keeping most gutters working is a messy, pervasive and dangerous problem. As a custom home builder I have been confronted with, and had to answer this question many times. I believe that the answer lays in fully understanding the problem, its causes and the goal of the homeowner. Here is my take on finding the right solution after 30 years of experience.

Let’s start by learning how a structure is designed to deal with rain. The critical rain water control system includes the following basic components: a collection surface (roof), conveyance system (gutters), transmission system (downspouts and drains) and a storage system (the earth or optional-tanks, rain barrels, cisterns). If you collect the water you will also have a distribution system (drains, pumps, irrigation systems and other uses). For our purposes here, I will limit the topics of discussion to the gutter components.

The gutter system is there to catch water shedding off the roof and convey it to the downspouts where it will then be safely carried away from the structure. This is an extremely important function. According to insurance industry statistics, structural damage from uncontrolled rainwater, primarily from defective gutters, results in flooding, erosion, dry rot, mold as well as foundation, eave, window, siding and paint damage. These cause enormous financial losses every year and solutions should be taken seriously.

Unfortunately, gutters are not taken as seriously as they should. Many gutters suffer from poor installation and even poorer maintenance. Leaking joints, standing water, improper flashing, misplaced or non-existent downspouts and missing support attachments. Gutters need to flow and fully drain. Standing water is heavy and strains the structure. It also creates a breeding ground for mosquitoes and allows debris in the water to settle out, build up as muck and prematurely rusts the gutter.

Even properly installed and maintained, gutters are always in one of two states: they are either clogged up, or they will soon be clogged up. Neither state is acceptable. You need to be able to count on gutters to perform at the critical time...when it rains. Gutters that have been cleaned today can be clogged tomorrow. Stray leaves, balls, animals, bird nests, pine cones, plastic bags etc. can clog the downspout and make the gutter instantly inoperable. So although controlling rainwater is vitally important to the life and health of the structure, gutters are only half the solution. In order make gutters truly reliable, they need protection. Bottom line, unprotected gutters don't work and ALL gutters need protection.

My definition of the properly designed gutter protection system is one that will, for the longest period of time without maintenance, ensure that the gutters can collect all of the water during a storm yet prevent material from entering that would clog or impede the flow of the system. In essence gutter protectors are filters and filters should be designed for their intended purpose. Filtration levels that are too fine are expensive and result in higher levels of maintenance to keep them working. Too low and all sorts of unwanted debris will enter the system. Proper filtration levels for gutters should keep out debris that would either clog the downspouts or not be washed out in a reasonable storm. It is not necessary to filter out tiny bits of material at the gutter level. In a properly draining gutter, this small material will remain in suspension and flow harmlessly out the downspout. If higher filtration is needed (for a cistern or rain barrel) it can be more cheaply and easily performed downstream at the transmission level of the system (downspout).

Contrary to what many might wish, the primary purpose of a gutter protection system is to ensure the function of the gutter, NOT to eliminate maintenance. Therefore an important aspect of installing a gutter protection system is to make sure the existing gutters are rehabbed and repaired so that they are fully functional first. After the installation, maintenance will ALWAYS be required from time to time depending on the design of the total system and the natural conditions that it is subjected to. We may as well accept that and get over it. Here are a few reasons why: 1) unseen and costly damage can happen to the roof and gutters so prudence requires that they be inspected and maintained at least annually, and 2) most all roofing manufacturers require maintenance.

As a rule, flat surfaces require more maintenance than curved or sloped surfaces. Because of wind and gravity, debris will gather on the flat surfaces, and slough off of the sloped surfaces. For instance, given the same natural exposures, a steeply sloped roof combined with well drained gutters and a curved or sloping gutter protection component will need little maintenance where as a flat or low-sloped roof combined with flat gutters and a flat protection system will need service more frequently. Good systems should be designed for easy maintenance including cleaning, removal and replacement as the need arises. Going to extreme efforts and expense to find a “maintenance free” gutter protection solution is counter productive and fruitless because, as we discussed above, most roofs are going to collect debris and require maintenance anyway. Even the most expensive gutter protection system can’t jump out of the gutter to inspect and clean the roof...although some of the better gutter protection companies will do that for you.

In conclusion, DO YOUR HOMEWORK. There is NO best solution for every situation...but there is a best for your situation. Get a gutter protection system that fits the design and exposure of your home. Find the solution that requires the LEAST and EASIEST maintenance at the lowest possible price. And, as with any product, you owe it to future generations to do some research and select the products that are both effective and “green.” These are products that have the least environmental impact and are usually the most durable too. The most important thing is that you do it. Your home deserves it and you’ll love seeing the water flowing out your downspout.

Now, what shall we do with all that water???