







Homeowners Guide to Gutter Protection

What Every Homeowner Should Know About Gutters, and How They Protect You and Your Home









Your Gutters Are an Important Protector of Your House

Most homeowners don't think about their gutters very much. Too often the first thought about them occurs after a moisture issue arises in their home costing them money and inconvenience.

Faulty or Clogged Gutters can Cause Directly or Indirectly the Following Problems

- Basement flooding and water damage.
- Increased allergens in air from moldy interior walls, and mildewed basements and the gutters themselves.
- Breeding pools for house mosquitoes, and other pests.
- Homeowner Ladder Falls (from do-it-yourself maintenance).

A Couple of Facts you may not know:

- Two inches of rain can send 1,000 gallons of water down your drains and spouts.
- Rainwater runoff is the #1 cause of basement flooding.
- Downspouts should extend 6 ft. from your basement wall
- Most homeowners insurance does not cover flood damage.
- The National Association of Certified Inspectors suggests the key to mold control is moisture control.
- A Virginia Tech study listed properly flowing gutter and downspouts as key tools to prevent moisture problems.
- The Illinois Department of Public Health suggests cleaning clogged gutters to control mosquito populations near your home.
- There are more than 164,000 ER-treated injuries from ladder falls in the US each year.



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Why You Need Gutter Protection

Purchasing gutter protection should be an easy and comfortable process, one that you as the buyer feel in control of. To do this I need to explain some of the most common reasons to look into the purchase of gutter protection.

What Gutters do for you is control moisture around your home. Here is a brief run through on problems most commonly associated with moisture problems, problems easily avoided with a functioning gutter system.

Clogged gutters are one of the leading causes of basement flooding.

Clogged gutters can cause serious issues with your drainage system. If the gutters are clogged, water will overflow next to the foundation instead of being shunted away from the home through the downspout system. The grading next to the home may not slope enough to drain the water away from the home, or worse, the water may flow towards the house. Houses over time do sink somewhat, so with older homes there is going to be a backward grade going towards the home. A common problem is excess water collecting next to the foundation and seeping through cracks in concrete. Water can also build up in the window well and burst through the basement windows. Either problem is going to cause significant damage and a major inconvenience to the homeowner.

Debris falls throughout the course of the year. In order to keep a gutter system free flowing, you need to clean out the system at least four times a year to account for the cycle of debris falling.

Bottom Line: Whether you elect to install gutter protection or clean your gutters four times a year, a clean free-flowing gutter system will prevent expensive damage to your home from basement flooding.

The FEMA National Flood Insurance
Guide lists keeping your gutters
maintained and debris free as the leading
option to reduce the risk of potential
flood damage to your home.







How to Prevent Flood Problems Caused By Poor or Clogged Gutters.

- 1. Make sure that your home's downspouts are disconnected from the drain tiles, and land far away. Generally, a solid rule of thumb is that downspouts should extend 6 feet from your basement wall (depending on the grade of your property) to make sure that water doesn't drain back towards your home and basement walls.
- 2. Make sure that your downspouts are not connected to your home's sewer system or drain tile.
- 3. Make sure that there is not any debris in your gutter causing the overflow.
- 4. If your gutters check out and they are clean, and you still have a problem, we suggest that you replace your gutters with larger gutters which can better handle the volume of water coming down from your house.

A Quick Note about Flood Insurance

According to the National Flood Insurance Program's (NFIP), most homeowners insurance does not cover flood damage. Further, not all losses associated with basement flooding are covered by flood insurance.

Flood insurance will cover your home's foundation elements and what they call "building elements", such as your furnace, hot water heater, and circuit breaker. Flood insurance won't cover your washer/dryers, freezers, and so on unless you make the additional coverage option of "contents coverage". The NFIP suggests that homeowners purchase both. You can contact the NFIP to see just how much you can pay in flood insurance premiums.

A Virginia Tech study, "How to Prevent and Remove Mildew In Relation to the House and Household Furnishings", co-authored by Kathleen Parrot, Extension Housing Specialist, said the following about keeping moisture away from your house:

ON BASEMENTS

Dampness in the basement is often caused by condensation of warm, moist air on cooler interior wall and floor surfaces... Runoff from gutters and downspouts should be directed away from the house.

ON EXTERIOR WALLS AND SIDING

Moisture, and therefore mildew, can be controlled to a degree by arranging landscaping so that natural breezes can flow near the house and dry the siding if it becomes wet from rain or dew. Keep shrubs away from the walls.

GUTTERS AND DOWNSPOUTS, AS WELL AS A MODERATE ROOF OVERHANG, WILL HELP.

Speaking in a 1997 article, Andrew Streifel, a hospital environment specialist at the University of Minnesota, commented on the health problems associated with mildew growth in homes:

"The body reacts to mold particles which are airborne, spread and breathed into our lungs." Streifel went on to say that continued exposure to mold can put inhabitants at risk of numerous illnesses.

Moisture and Physical Integrity

The exterior of your home is susceptible to damage from clogged gutters. The water will not overflow to the ground but typically overflows on to the fascia board (area that gutter is attached to) and rots out that area. Additional damage happens when water gets into the soffit area from holes in the fascia or from water draining and adhering to the soffit.

You may not see the damage until it's too late, such as soffit panels falling off, or the gutters breaking away from the home. Either way, these issues are very expensive to fix.

Bottom Line: Besides interior damage, clogged gutters can cause exterior damage to areas around the gutter system. Typically, this problem isn't apparent until extensive damage has been done.

Moisture Problems and the Health Threat of Mold and Mildew

When you hear about common issues with home building, you hear a lot about preventing the potential of mold and mildew. Not only will mold break down the wood, in your home, but it also poses serious health risks with toxins associated with by products generated by the mold. Least of the problems may be irritants that can cause allergic reactions, hay fever, asthmatic reactions, sneezing, etc. Some molds produce dangerous toxins which are a severe health risk.



Moist debris sitting in your gutter is a perfect breeding ground for various types of mold. The mold may be introduced into your home through seepage in the basement or by rotted wood in the fascia and soffit. From there it's very easy to spread through the rest of the home. Once the mold gets into the walls and insulation, it is a very expensive problem to resolve because of the labor and care that has to be taken for removal.

Bottom Line: Moist debris sitting in your gutters can be a dangerous breeding ground for mold. Damage associated with a clogged gutter helps to encourage growth and spread mold throughout the house.



Clogged Gutters Attract Insect Pests

Up until recently gutters were not very popular in the south due to lack of basements and foundations. Now the south is one of the most lucrative areas for gutter sales. Why, because homeowners have realized that water next to a home on a slab will cause problems with moisture. There is some issues with rotted wood and mold, but the biggest problem is insect pests. Moisture attracts termites and carpenter ants. These pests can wreak havoc on a wood home. Consumer awareness has made gutters a necessity.

Gutters do carry a cost with them and that is they get clogged and attract another insect pest, the mosquito. Mosquitoes only need a thimble full of water to breed. Mosquitoes don't migrate more than 200 feet away from breeding grounds. Hence if you have standing water in your clogged gutters, you are creating a favorable habitat for a very irritating pest. Not only are mosquito bites irritating, but there is also the threat of West Nile which can be very serious to young children and older adults.

Bottom line: Clogged gutters will create a safe haven for various insect pests that can do extensive damage to your home or cause a serious health threat. Least of the problems will be creating a habitat for mosquitoes to chase you into the house when you'd rather be relaxing outside.





In 2003 over 9,000 people were infected during the West Nile Virus Epidemic, and 264 died. Soon after, the CDC (Center for Disease Control) in Atlanta stated that clogged gutters and downspouts contributed significantly to the West Nile Epidemic because stagnant water in a clogged gutter is an ideal breeding ground for mosquito larvae.



A 2004 Illinois Department of Public
Health report on mosquitoes,
recommended that checking clogged
gutters and flat roofs for poor
drainage is an important step to
control mosquito populations in and
around your home.



Cleaning the Gutters is an Undesirable Chore

The unpleasant task of cleaning the gutters is the most popular reason that homeowners elect to purchase gutter protection. In order to keep the gutters free-flowing, they need to be cleaned a minimum of four times a year to account for the cycles of falling debris.

The homeowner needs to either stand on the roof, which if steep may pose a serious health risk, or move a ladder along the run of the gutters. You need to have a long heavy ladder to reach upper stories. Talk about a strain on the physique.

Scooping out the gutters is messy to the person cleaning, and you have the issue with the gutter debris on the ground. Then you have to hose everything down while trying not to get wet. It just isn't a pleasant job, especially with a cool spring or fall.

Accumulated debris in the gutters also make a great home for wasps. Cleaning out the gutters can cause an unpleasant surprise when you chance upon a hidden wasp nest. Getting stung on a roof or on a ladder is a very dangerous situation to be in.

You can pay someone to perform this task, but then you face liabilities if the person gets hurt while doing the work. Gutter cleaning contractors typically aren't insured, so guess who picks up the tab if there is an injury.

Consider the damage to the roof while cleaning out the gutters. Roof damage is very common from repeated walking on the shingles. The flint layer is scraped off. Shingles become loose. You get leaks on your roof. You will not get the maximum life out of your roof if it is constantly being walked on.

Bottom line: You may not want to clean your gutters as often as needed, and it is an unpleasant if not dangerous task. Roof damage may occur while the gutters are being cleaned.

Health Concerns Maintaining Your Gutters

We have already covered the importance of preventing gutter overflow, by keeping your gutters free of leaves, and debris. So you may be telling yourself, ok I'll make sure to clean them out. Yet nearly all over-the-counter gutter solutions require that you get out that ladder in the garage and climb up there with a hose to clean your gutter.

According to the US Consumer Product Safety Commission, there are more than 164,000 emergency room-treated injuries in the US relating to ladders each year.

Safe Gutter Maintenance

Now consider your own situation for a moment. How many times every fall and spring do you climb up on some shaky ladder to muck out some grimy gutters? Have you ever missed a step and barely caught yourself? Ever lost your balance and felt your heart rate increase for just a minute?

With good gutter protection you can leave the ladder in the garage where it belongs, or better yet never buy one in the first place. It will be explained later how to tell good from bad when it comes to gutter protection but for now all you need to know is that any gutter protection that keeps you off ladders is a good thing.

In early 2005 the U.S. Consumer Product Safety Commission released a study that shows that emergency room visits are up 73% by the elderly - primarily due to falls.

The second largest cause of falls listed was falls from step stool or ladder.

Most frightening of all is the fact that the leading cause of injury related death for both males and females over the age of 75 is falls.

Do You Have a Gutter Problem? Two simple tests you can perform.

You can't always witness an overflow problem while it is occurring. Therefore, you should educate yourself on prevention of the problem, and that means learning how to look for tale tell signs of gutter problems and water overflow. First you should look low. Is the landscaping around your house affected? After it rains do you see pools of water, or craters in flower beds? Does your siding have dirt or mulch clinging to it at about a foot off the ground that looks as if it was splashed up? If you see this, your gutters are most likely overflowing, and need maintenance or are beginning to fail.





The same house after getting gutter protection.

Another quick test is to, look up to the gutters on your house. Look for dirt water marks on the outside (see above). If your gutters look dirty, it's another sign that you have a gutter problem.

These water marks occur when dirty water overflows the gutter, and then the surface tension carries the dirty water down the outside of the gutter.

Finally, if you identify these problems you should take action sooner than later. In the next section, we will consider the options you have available to you to take care of your gutter problem.

Types of Gutter Protection on the Market Today

SCREEN GUTTER COVERS

Simply put, gutter screens are typically metal or polymer plastic coverings that are cut to fit and applied to the opening on top of your existing gutters. Again, this makes them another very inexpensive option. However, this type of cover usually lets in the most debris and material.

The real problem with screen gutters is that because of the design (sort of a concave lens) leaves can build up and basically clog up the screens in the same way as they would in a normal gutter. Cleaning the screens consists of hauling out the same ladder as you used before, pull the screen out, hose them down, - and hose down the gutters and downspouts and then replace the screens.

Bottom Line – The best thing about screen gutter covers is that you won't have spent much money to find out they don't work.

FILTER GUTTER COVERS

The entire logic behind filter gutter covers is to place a piece of foam in the actual hollow part of the gutter. This filter prevents (simply by occupying the space) any leaves or other debris from collecting in the trough of the gutter, but is supposed to allow water to flow through.

As you might imagine, these foam filters end up brittle, dry, and can even blow out of the gutter and down the street. After just one summer of baking in the hot sun in a literal oven (your gutters are 3 sided heat reflectors that can and often do reach temperatures of 165 degrees on the surface in direct sunlight) they often resemble old chalky Styrofoam.

The manufacturers claim that the fungicides and other chemicals will keep these foam inserts pliable and problem free for years. The truth is they often times don't last much more than 1 or 2 years and then they need full replacement. Most commonly, their tops get clogged with leaves that need to be brushed or washed off and underneath the filter is usually a black moldy mess.

However, a major consideration is what happens to

the capacity of the gutter. Gutters are designed to hold a certain volume of water. If you had a sponge that takes up 1/3 to 1/2 of the volume of the gutter, what is going to happen in a heavy rain? The water is going to cascade over the gutter and you might as well not have gutters in that case.

Bottom Line – These are a short term solution and will limit the capacity of your gutters to handle a heavy.

VINYL GUTTER COVERS

Whatever the brand name, vinyl gutter covers are the generic knock offs of the original metal dome systems.

Typically, these knock offs cost much less than the more quality options on the market and typically there is only a material warranty for five years and is covered at the manufacturer level. Meaning that should the local dealer go out of business in your area and you get a clog (very likely over a period of 2 years or so) you will have to try and track down the manufacturer.

Vinyl covers in some cases are worse than screen and filter gutter covers due to a single line of vertical openings for the water to run through. This single line fills up with debris. The slots in the trough system hold the debris in and the system becomes clogged. Water spills over the gutter. You now have a worse problem than you had before this product was installed.

It is up to the installer's discretion to close off the end caps. But even if the end caps are closed off, squirrels can easily chew through the plastic, create a home, and cause a major clog. Birds will join the squirrels in building nests once there is a hole made.

There usually isn't a very strong warranty with these kinds of products because what manufacturer would want to be liable for the multitude of service issues that will happen with this type of design and material.

Bottom Line – Costs more than screen systems and performs worse.

BRUSH GUTTER COVERS

Brush gutter covers or protection are relatively new to the market and one of the most interesting and overcomplicated ways of solving the problem. This type of protection looks like a big circular bristle brush that is just about the width of the gutter and has a metal or plastic rod running down the center to provide support.

This type of protection functions by the same means as the filter covers – instead of trying to keep debris and leaves out of the gutter, it simply occupies the space so the debris can't. The brush is fitted with hundreds of semi-flexible spines that are supposed to gently discourage leaves, burs, twigs, and other items from falling and making their way into the gutter.

Unfortunately, because of the spacing of the spines leaves often get lodged in between the spines and can work their way underneath the brush over time. This can cause some of the very same problems this product is supposed to fix.

The solution to this problem is to get the ladder out, pull the brush out... (you can see where this is going) clean the gutters, clean the brush, replace the brush and put the ladder away. This can be an even bigger cleaning hassle than usual.

Bottom Line- This is not a low maintenance solution and because it fills the space in the gutter, you will have problems with overflowing gutters. However, the product is good for cleaning out large bottles.

METAL DOME SYSTEMS CHARACTERISTICS OF AN EFFECTIVE SYSTEM

Metal dome systems are the most effective systems available on the market. However, only a handful of systems work very well. Metal dome systems use the physical properties of water, specifically surface tension, so that water adheres to the dome of the cap and flows into your gutter. Some leaves and debris fall off during the rain, but the majority is blown off by the wind. Your existing gutters become a free-flowing roof drainage system, saving you the hassle and danger of cleaning gutters and saving you potentially thousand of dollars in damage each year.

Nose placement (rounded area of gutter cover mounted above lip of gutter) is a determining factor as to how well the system will work. Nose-back systems mount with the nose equal with the inside lip of the gutter. Debris tends to blow off the gutter cover and then bounce into the gutter.

Nose-forward systems mount with the nose 1/8" to 1/4" past the outside lip of the gutter to prevent debris from bouncing into the gutter. Unfortunately, water tends to fly over on these designs and end up next to the foundation.

Nose-flush systems mount with the nose flush with the outside of the gutter and this is the best of both worlds. Debris doesn't bounce into gutter and you don't get rainwater flyover.

All metal systems use end caps to keep birds and squirrels out of the gutter.

Some debris will become encapsulated in water and navigate the gutter cover. This is normal and is okay as long as debris can be flushed through the trough (area between the nose and gutter. The slots should be at least five inches or more. Most systems only have two inch slots and they eventually clog.

The effectiveness of a great design will be negated if the product is installed improperly. The better companies recognize this problem and will only allow companies to sell their products once their installers have been certified at their training facilities. A training facility should be a formal school in which every roof application can be mounted and the installers can practice for as long as it takes to become certified. You don't want your home to be somebody's learning curve as they go through training.

The warranty is the another important factor when choosing a gutter cover. A comprehensive warranty will cover performance, materials, and labor. Read the fine print. Many companies give value in regular print, and steal it back in the fine print. Ironically, some companies will guarantee that the gutters are free flowing, but don't cover clogs in the gutter cover. The investment for a gutter protection system should be just once, and should be guaranteed no maintenance. Many systems require routine maintenance which is counter to the reason a homeowner would have bought these systems in the first place. The warranty is only as good as the amount of time that the product has been around. A lifetime warranty is nebulous if the manufacturer has only been around for a couple of years and doesn't have a proven track record.

Bottom Line – While the metal dome system is the best option, some metal dome systems work better than others.

"ALL IN ONE" GUTTER COVERS

There are two types of All in One Systems that combine gutters and gutter covers; one piece or two piece systems. The one piece is extruded gutter and gutter cover as a continuous piece of gutter. With a two piece, the gutter is extruded separately from the gutter cover, and is fastened together during installation. Some of them work okay in certain parts of the country, while others fail miserably due to a design flaw.

You have to replace the gutters even if your gutters are in good shape. This tends to make them a little pricy. They are mounted to the fascia board and they tend to stick out. This is a serious problem in northern climates. Ice backs up on top of the gutter cover and gets in between the fascia board and the gutter cover. Worse, it may back up under the first row of shingles and cause extensive damage to the roof. (see picture on page 11 of gutter without heated gutter protection) If a section is damaged from a tree limb, the whole section has to be replaced. The finish is usually bakedon enamel, which being on the roof in the hot sun will bleach out within a few years and look unsightly on your home.

Bottom Line- There are less expensive options that will do a better job and maintain the curb appeal of your home.

BRACKET SYSTEMS

There are many systems available which use brackets to fasten the gutter cover to the roof and gutter. Some of these systems work well, while others fail miserably. The brackets are placed every two to five feet depending on the manufacturer. Nose placement is difficult because adjustments are made at the brackets. Brackets are hard to work with. One manufacturer in particular is going on their fifth bracket system because the others were problematic. Other issues include thin aluminum construction. The panels tend to warp in the hot sun or are crushed under a heavy snow or ice load. The distortion of the panels allows spaces for birds and squirrels to build nests. Thick aluminum ones tend to create shadow lines on the seams and look unsightly. Some bracket systems will advertise that they shore up the gutter system. This characteristic will be true of most gutter protections due to the presence of the mounting system for that gutter protection. They're really not providing anything extra to the home owner.

If the gutter system really needs "shoring up" then most likely it should be replaced. A gutter system

should be inspected for integrity of the system before a gutter protection is installed. All bracket systems are high profile due to the brackets, hence they stick out more. The baked enamel finish on many of these systems will look two-tone on your roof within a few years. Can you imagine how these systems will look on your home?

Bottom Line: There are a couple of effective bracket systems available, but these systems will stick out due to the nature of the bracket mount. These systems are difficult to install and the effectiveness of the product is contingent upon training of the installers.

LOW PROFILE MOUNT SYSTEMS

Low profile mount systems have many advantages over other metal dome systems and are the preferred system for many homeowners. These systems mount by fastening under the shingles and mounting directly to the lip of the gutter. Since the system follows the contour of the roof, it may be virtually invisible. These systems are easy to install and don't have the issues involved with "All In One" or "Bracket Systems".

High end systems typically have a nicer finish. No-fade finishes incorporating Kynar have become popular in the last few years. Kynar is used on high end roofs so that they don't have to be painted. Unlike baked enamel, Kynar won't fade and the color will last for several years.

A new exciting finish is the incorporation of roof granules into the finish. These systems blend in with the roof and have enhanced water surface tension due to increased surface area, rough texture slowing down water flow, and absorption. The crusting that is common on baked enamel will not be present on these systems.

High end systems usually require manufacture certification for installers in order to ensure the high quality product is effectively installed.

Systems that have a baked-on enamel finish fade within two to five years. Curb appeal of the home is lost relatively soon due to the two-tone effect from chalking and fading of the finish. These systems are prone to improper installation due to little or no training. The easy mount is a temptation to forgo training. The training usually occurs on your home at your expense.

Bottom Line: Low profile mounts are easy to install and are almost invisible on the home. Higher end products will use a protective flashing, incorporate a Kynar or roof granule finish, and require certified installers that have gone through training at the factory.

LOW PROFILE MOUNT SYSTEM





BEFORE AFTER

No gutter cover can guarantee you free flowing gutters all year round. Why, because frozen water doesn't flow. Heated Gutter Protection will keep your gutter system free of snow and ice preventing ice damage to your lower roof and gutter system. And it will eliminate the hazards associated with icicles hanging from your gutters.

Heated Gutter Protection

In the northern climates, ice can be just as much a problem as leaf and other organic debris in the gutters. In some areas of the country, gutters are not practical due to enormous snow and ice loads on the roofs that could tear off a gutter system. Heat tape is very dangerous and there have been numerous horror stories about these products catching the house on fire.

Ice can be a major hazard due to falling icicles and re-frozen ice melt on walkways. Who hasn't slipped on the ice?

Recent innovations have brought about heated gutter protection systems. These systems gently heated the gutter protection, gutters, and downspouts to keep the water draining away from the home all year round. For safety reasons, these systems are hardwired into the home and don't get above 40 degrees Fahrenheit.

The better systems can be retrofitted to the gutter protection. These same systems can be mounted in just the gutters and downspouts if there is no tree debris issues.

HEATED GUTTER PROTECTION



ALL IN ONE FASCIA MOUNT – NO ICE PROTECTION



WITH HEATED GUTTER PROTECTION

How to Choose the Proper Gutter Protection Contractor

Making a major home improvement purchase such as gutter protection can be a scary proposition. Unlike buying a washing machine or even a new car, most homeowners rarely make major home improvement purchases. The lack of experience can easily bring about fear of making the wrong decision, uncertainty, and general uneasiness.

Unless you have a trustworthy relative or a good friend in the business, it's going to be necessary for you to deal with a gutter protection company. Your success in finding a reliable, honest, and dependable contractor will probably dictate your ultimate happiness or disappointment in your project.

If you know just ten critical characteristics, you can eliminate 95% of the fly by night and disreputable contractors who give this industry a black eye.



A reputable contractor should be able to provide you with answers on the following:

- Numerous Customer References
- Location of Office and Showroom
- Pictures of Work Done (with homeowner in at least one picture of each job)
- Detailed Proposal of the Work That Will Be Done for a Specific Cost.
- Written Warranties for Product and Workmanship
- Proper Liability Insurance
- Long Term Reputation for Service
- Options for Financing
- Amount of Deposits Paid Up Front
- Standards for Installation and Installation Crews