

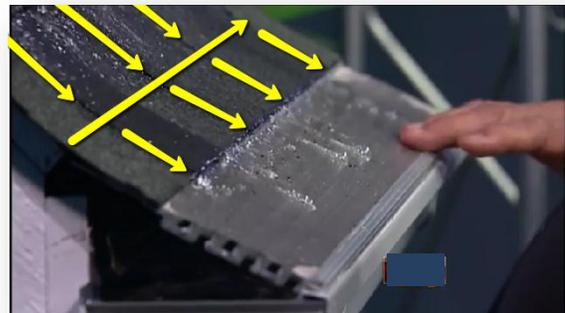


5 REASONS WHY YOU NEED MASTERSHIELD

With MasterShield's latest technological developments in micro mesh gutter guards, homeowners who install a MasterShield system are assured they are installing the most advanced and proven gutter guard technology available today.

What's different today from the MasterShield of just a few years ago? What sets it apart from other "stainless steel" gutter guards?

- First, we've moved a long way from Alex Higginbotham's original product design, used in other micromesh products. Other products are extruded, which means their frames must be thicker and very rigid, not a benefit for a gutter guard that has to expand and contract in tandem with the gutter below. Expansion and contraction are major issues when summer and winter temperatures can vary by more than 100 degrees, like they can in many parts of the country.**
 - MasterShield is roll formed just like the gutter it's installed upon. Over the years, Alex Higginbotham learned that mixing dissimilar materials caused problems with expansion and contraction: systems buckled and the filter (which could also be a dissimilar material in a plastic body) could pop out. By converting his technology to roll formed metal already used in the gutter industry, he could all but eliminate the issue.
 - This also allowed him to create the first interlocking gutter guard with MasterShield. Since the material was so similar, it could interlock and gaps to allow for expansion and contraction were not needed. This also helped to eliminate dripping at the seams, where water tends to track.
 - Roll formed metal also helped with roofing issues. Thicker products can cause shingle lift, and premature shingle aging. Many conditions exist at the roof edge that had to be dealt with: wavy fascia, gutters dropping towards the downspout and more. No panel was installed in exactly the same horizontal and vertical plane, so product flexibility was key. It was the very reason why roll formed metal has been used for gutters in the first place.
 - When it came to shingle lift, Alex Higginbotham realized that the roof shingles always had to "win" over the gutter cover; any metal installed under the shingle would have to give to the weight of the shingle so it continued to sit flat on the roof decking.
- We've moved away from sitting virtually flat on the gutter. It's actually much harder to make a micromesh gutter guard work to a high standard when it has to pitch with the roof, but it's better for the homeowner who wants to minimize maintenance. Gutter guards that sit flat create shelves for debris and that can encourage water to flow back towards the**



The horizontal arrow shows the point at which the gutter guard changes the way the shingles are lifted by the thickness of the gutter guard.

roof; issues can develop with the home that can't when the product is installed on a steeper angle.

- MasterShield is angled as closely as possible with the roof to use airflow more efficiently to help shed debris. When installed in this manner, debris reacts the same way it does when it gets pushed by wind and rain down the rest of your roof.
- For flat roofs or roofs with less than a 4/12 pitch, we can increase the pitch on MasterShield to shed debris better, other products can't be adapted like this.
- We can be adapted to fascia mount, just by bending our back fin on a break. Other systems can't be bent, the only thing you can do is to completely cut off their back, forcing the gutter guard to sit flat on the gutter.
- Our back fin is long enough to be adapted to the needs of the gutter. If the back fin were designed too short, it has to be cut off and the gutter guard then sits flat, creating a shelf.
- Gutter guards that are pitched can pull water through them better. Think of debris sitting on a gutter guard like a book sitting on its side. If water hits the cover of the book, which is a solid surface, it flows forward over the gutter or back towards the roofline; there are fewer places for water to travel and more of it will follow one of these paths. Tip the book on an angle with the pages faced up the roof so that water hits them (and then imagine someone crumpled the pages so they're not neatly stacked) and water finds its way in between all of their edges, giving it many paths and more ways to get to the filter below.
- When debris can pile on a shelf, water has a greater chance to make contact with the fascia, roof shingles, roof underlayment—parts of a roof and your home that shouldn't be wet. In many parts of the country, code does not require that the underlayment be a waterproofed material. When water wicks up under the shingle (which it will) conditions can lead to rot develop and, in a few short years, can lead to roof deck replacement.



This system is not just trapping debris, it's causing water to pool on the shingles, behind the gutter guard.



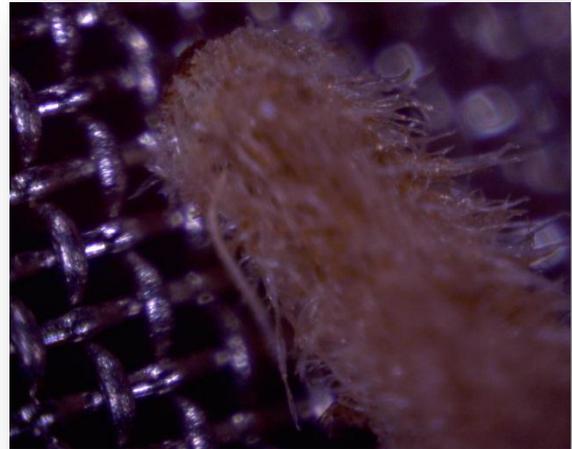
A gutter guard that sits flat will trap debris. This debris can cause water to flow over the system or flow backwards towards the roofline.

3. **We're the only gutter guard with HydroVortex technology and we tweaked and improved it in 2011. HydroVortex Action is how we redirect the forward flow of water down the roofline and cause it to change directions to flow through our filter using more than just the pull of gravity. Our improvements have led to a 25% increase in the amount of water MasterShield can handle in a rainstorm. This is on top of the fact that installing MasterShield in line with the roof means we need additional features to draw water into the gutter so the filter won't sheet over. We can handle more water than the 5" or 6" gutter below and more rain per hour than has been recorded in North America.**



- Most gutter guards start to overflow when the angle they are installed on gets too steep. Not so with MasterShield, it can take water vertically.
 - Capturing water on a curved surface works best, and that's what we do under the MicroVortex filter. It's a design that's been incorporated into most gutters guards for the past 100 years—and for good reason. Some systems try to capture water with a flat top, attempting to then drop water down a 90 degree angle; this design is a de-evolution of the technology. It doesn't take water as well and can cause splashing over the gutter, particularly when the product is not installed flat.
 - Our body design gives us double the area to pull water through the filter, both over and under our curved openings. This is a feature that other gutter guards don't possess; they typically rely on only one surface.
4. **We self-clean from roof oils ten times faster than before. This is a major advancement in microfiltration, and one we've just patent protected. No other cloth used for a gutter guard today has the same properties as our filtration membrane. We have it woven just for us to exacting specifications. No other gutter guard dares to mention the implications of roof oils on their product other than us. And roof oils typically cause gutter guards to fail since they heal over with this residue. With a tenfold improvement in our ability to self-clean, we set a performance standard several notches higher than anyone else.**
- Self-cleaning properties are a function of both the Higginbotham Ratio in our MicroVortex cloth and the ways in which the design of body below touches the cloth.
 - The Higginbotham ratio in the cloth helps it to self-clean. Water from above is forced down a specifically shaped thread in our design.

- Threads are tightly packed so that when water flows down the side of one, it joins with the water flowing down the side of the next; this creates more weight in the water which pulls it through faster and improves cleaning. If threads are not placed in the right place, with the right ratio, water tracks along the thread towards the front of the gutter or water will only flow down one side of a thread where minimum cleaning occurs.
- This filter design experiences less water overflow over the cloth. Other products can't get as much water through their cloth, which limits filter cleaning and water permeation. To better explain this, we have a video where you can see the differences in the micromesh used in different products [HERE](#).
- The fewer touch points from the body to the cloth, the less cleaning occurs. MasterShield maximizes these cleaning points relative to other gutter guards.
- Added cleaning occurs with how the body design incorporates HydroVortex action.
- Other gutter guards have tried to compensate for poorer cleaning by opening up the filter with bigger holes. Doing this only creates places for the barb like elements on organic debris to get trapped on the filter. Its surface is no longer smooth and virtually non-stick like you'll find with MasterShield.



An oak tassel on the stainless steel microfilter.

5. Only MasterShield can offer you all this patented technology.

- Alex Higginbotham's accomplishments come from years of discovery. They also come from trial and error. They take years of successes and failures to get to the point where they can get introduced to the public at a performance level that can meet the highest standards. They also take years to patent protect.
- Others see the benefits and choose to jump on the bandwagon. Many have taken short cuts and know little about the underlying principles of what really works; they are content with lower standards. They focus on unimportant features which, Alex Higginbotham says, take the technology backwards and not forwards.



Tiny fir needles can't get through.

- The person who gets hurt by this is the consumer. Not right away, but over time. Read their warranties, they imply that they don't understand their filter, so if there is a problem, it's the homeowner's issue. We acknowledge that situations like tar, moss or algae can impact any gutter guard, but in most cases we know how they can be mitigated and have solutions to help homeowners if they do occur.
- Not all patents achieve the same advancements. Only Alex Higginbotham has seven US patents with more than 45 unique claims in this field, all related to new, original technology. This represents more than 15% of the advances in gutter protection since the first patent was issued in 1880!



This is MasterShield. Our mission is to give you the best in gutter guard technology. To focus your attention on gutter guard features that lead to effective and efficient performance.

With the number of patents Higginbotham has achieved and the advancements we've just accomplished in MasterShield, you can rest assured that when you install MasterShield on your home, you have the most advanced gutter protection available today.

COMPARISON OF MICROFILTRATION

	The Systems of Inventor Edward Higginbotham			Gutter Glove
	MasterShield	Leaf Solution	LeafFilter	
Surgical Grade Stainless Steel	Yes	No Information	Yes	Yes
Custom Woven Filter	Yes	No	No	No
Keeps out organic debris: Straight runs	Yes	Yes	Yes	Yes
Manufacturer's Money-Back Warranty	Yes	No	Yes, but must register in 30 days or voided	No
	Offered by MasterShield Dealers	No information available	No information available	No information available
Dealer Money-Back Warranty (on Labor, etc.)	Yes	No	No	No
MicroVortex Technology MicroMesh	Yes	No	No	No
Designed to follow same pitch as roof	Yes	No	No	No
Maximizes airflow down roof to aid in shedding debris	Yes	No	No	No
Leaf Release in filter for added debris release	Yes	No	No	No
Front drip edge to minimize tiger striping from rain	Yes	No	Yes	No
Continuous filtration; no filter breaks at seams	Yes	No	No	No
Sufficient strength for heavy snow loads	Yes	Yes	Yes	Yes
Long back fin so shingles remain flat over subroof	Yes	No	N/A, mounts on gutter	No
Patent on microfilter's self-cleaning properties	Yes	No	Yes	No
Roll formed aluminum body to reduce warping	Yes	Yes	No	No
Patented HydroVortex Technology for Water Siphoning	Yes	No	No	No
	5 patents licensed from E. Higginbotham	Not Produced under license from Higginbotham	1 patent licensed from E. Higginbotham	Not Produced under license from Higginbotham
US Original Technology Patent				R. Lenney/R. Lewis, Relys on Higginbotham patents
US Improvement Patent	N/A	N/A	N/A	
		Not Produced under license from Higginbotham	7 claims in licensed technology	1
Patent claims awarded by US Patent & Trademark Office	over 40			
Factory installed microfilter	Yes	Yes	No	Yes
Solution for valley overshoot	Yes	No	No	No
Available in copper	Yes	No	No	No
			4, no dark colors since PVC would deteriorate in the sun	1
Color Options	15	6		
Installation methodology approved by GAF	Yes	No	No	No
Fascia/alternative mounting options	Yes	Yes	No	No
Flexible to adjust to pitch/fascia changes in gutter run	Yes	No	N/A, mounts on gutter	No
Easy for dealer to install	Yes	Yes	No	No
Handles turbulent flow of water (wave effect) from metal roofs	Yes	Yes	Not Recommended	Mftg shows installs, but with LeafFilter design, not recommended