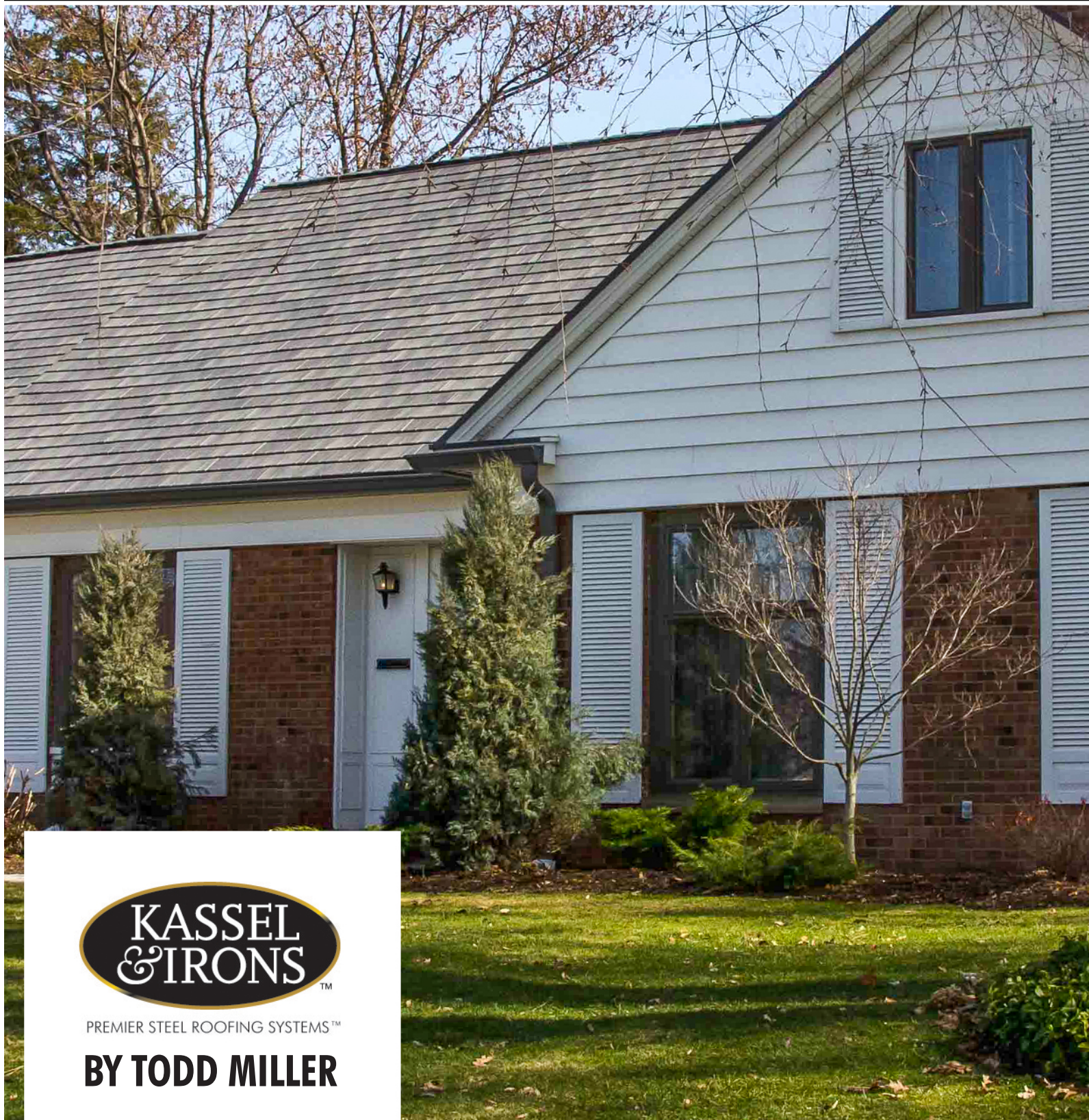


# HOW TO BUY A METAL ROOF!



PREMIER STEEL ROOFING SYSTEMS™

**BY TODD MILLER**

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# HOW TO BUY A METAL ROOF FOR YOUR HOME

## Introduction

Buying a new roof for your home can be a daunting and difficult task for any homeowner. Most homeowners only re-roof when they know they have a problem—there is a leak in the bedroom or missing shingles from the storm. It is an expense people put off until the very last minute because it is easy to forget how centrally important your roof is to not only the protection of your family and your belongings, but also the cost of cooling and heating and the resale value of your home.

There are many excellent reasons to buy a metal roof for your home. Maintenance-free, long life, distinctive looks, energy savings, fire safety, low weight, seismic stability, the ability to be installed over your old roof, recycled content, 100% recyclability, and increased home value are just a few of these reasons. The manufacturers and dealers of metal roofing products will gladly share these compelling considerations with you.

But, while manufacturers and dealers tell you “why” to buy a metal roof, they don’t tell you “how” to buy a metal roof. They will all claim that their product is the best and—amidst all of their product benefits—it can be very hard to figure out what is the best choice for you and for your home.

While metal has many benefits, the risk of buying the “wrong” metal roof can be a costly and heart-breaking mistake for you and for your home. The wrong metal roof can leak, rust, cause ventilation issues that may lead to internal mold growth and be a distraction from the beauty of your home and your neighborhood.

We want to help you understand the ins and outs of choosing the right metal roof for your home. We want to help you get to the bottom of things and make an informed and wise choice. Together, we will look at all of the key considerations to keep in mind when purchasing a new metal roof as well as the important relationship you will have with the manufacturer and the installer. These relationships must be open, honest and pro-actively directed toward a positive outcome. As soon as they turn in a different direction, you can rest assured that a successful outcome may be missed.

## The Manufacturer—The Choice Begins Here

Not all metal roofs are created equal. Some only work in agricultural, industrial or commercial applications and, when applied to a home, result in a roof that is inappropriate or even dangerous and will detract from the beauty and value of your home.

Unfortunately, there are many unscrupulous contractors and roofing manufacturers who are more interested in the “sale” than in ensuring your home has the right roof to protect and beautify it.

### **Know the Manufacturer’s History**

The cost of manufacturing a very simple metal roofing profile is fairly low. As more homeowners become aware of the beauty and longevity of quality metal roofing, many companies with no history or experience are trying to cash in on that market interest.

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Some are genuinely doing things right and showing a commitment to the industry but others are here for a quick dollar. In some cases, these companies are literally producing metal roofing out of their garage.

Some important questions to ask about your metal roofing manufacturer are—

- Do they take a leadership role in the metal and construction industry?
- Do they own their own buildings and facilities?
- Do they have quality installation manuals and training programs for their dealers and distributors?
- Do they have lasting capital assets (large presses and a manufacturing facility) or temporary and “mobile” equipment?
- Do their products meet the Metal Construction Association Certified Metal Roofing program requirements?

If the answer to any of these questions is no, continue your search.

### **Know the Manufacturer’s Warranty**

The benefits of a metal roof are the protection, durability, longevity and beauty it brings to your home. Those benefits though, are only as good as the strength of the warranty offered by the manufacturer. Buying from a company without a history that is substantial, solid, and significant means that your roof investment is jeopardized by what will be a worthless warranty if that manufacturer goes out of business.

Don’t hesitate to talk to the manufacturer. Make sure you know **exactly** what their product warranty covers and doesn’t cover.

- Be wary of warranties that seem very broad and non-specific. A quality warranty will state specifically what it covers and will go beyond very broad and hard-to-nail-down terms like “manufacturer’s defects” and “cosmetically acceptable”.
- Make sure your roof is suitable for their product in terms of pitch and configuration. This is especially important if there is anything unusual about your roof’s shape.
- Ask them how they have handled past warranty claims.
- Find out whether their raw material suppliers back up the warranty they offer you.
- Find out about their relationship with your metal roofing dealer.

Look for a warranty from a manufacturer that—

- Includes lifetime protection from any defects in the metal
- Is transferable to a new owner
- Protects against fading and chalking
- Covers paint peeling or chipping
- Covers for chipping and leaking do to hail
- Covers the cost of replacing defective material **and** of installing the replacement material as well.

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### Accessories

Metal roofs designed and intended for residential use will include a full complement of appropriate trim pieces like eave starter, drip edge, gable trim, wall flashings, valleys, hip caps, and ridge caps. Using these accessories helps to ensure the longevity, durability, and beauty of your roof. Some metal roofing manufacturers who primarily sell their products for non-residential applications, will not offer these trim parts. It is always best to find a manufacturer who is truly committed to residential roofing so that you will have peace of mind as well as future service and support. Inquire also with your dealer to make sure that they are taking advantage of and using manufacturer-formed accessories. Some dealers will try to make their own and, while this can be done successfully, it also leaves more room for error and greater potential for finger-pointing between the manufacturer and the installer if problems should arise.

### Certifications, Memberships and “Prime” Metal

The same way all roofs are not created equal, all metal is not necessarily good metal. Many manufacturers, in an effort to cut costs, are buying “less than prime” metal. The integrity of this metal is compromised by impurities overlooked and ignored in its creation. Manufacturers who use prime metal that has been tested for quality are listed under the **Metal Construction Association Certified Metal Roofing Panel**<sup>\*</sup> program (this means the metal and coatings are certified to meet standards of quality set by the industry).

You should also inquire whether the manufacturer carries certification or meets manufacturing standards such as **ISO** (International Organization for Standardization).

### Regional Standards and Testing

Not all metal roofing is made for all conditions. Steel roofing along the ocean coast will be at risk for rust because of the salt in the water and the air. Likewise, lighter weight corrugated roofing will easily blow off in hurricane strength winds. Find out whether the manufacturer’s products are properly tested and listed for application in your area. Dishonest manufacturers try to skirt under the radar on testing and regional standards. Manufacturers with a history of longevity and performance are setting industry standards and are constantly and consistently updating their product and testing certification to ensure the life of your roof.

### Customer Service and Experienced Installers

Many homeowners make the mistake of finding a product they like and making an inquiry about it with their “roofing guy” or local “big box” home center. Metal roofing should be lifetime protection for your home—don’t leave the decision to guard your most valuable investments to someone without extensive experience in metal roofing.

Quality metal roofing manufacturers want to talk with homeowners. Customer service is a core practice of any good roofing manufacturer and they are best suited to help you

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<sup>\*</sup> [www.metalconstruction.org/roofing](http://www.metalconstruction.org/roofing)

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choose the right product and profile for your home. They also know who you can trust to install your new metal roof. Good roofing manufacturers will take the time to answer any questions you might have and will connect you with dealers and installers who are qualified, trained and have the experience necessary to provide you with the right metal roof for your home and your area.

### Understanding Your Roof

#### Roof Terminology 101

In order to make the right decision for your home, it is important to know some basic concepts and definitions.

- Eaves—The horizontal edge of the roof that is closest to the ground.
- Ridge—The peak of the roof where two roof surfaces meet.
- Gables—The vertical edge of the roof. Where a course of shingles either begins or ends.
- Hips—any outside corner of two intersecting roof surfaces.
- Valleys—any inside corner of two intersecting roof surfaces.

#### Pitch and “Shape” of Your Roof

In 8<sup>th</sup> grade science, students learn the two rules of water are

1. Water always moves downhill
2. Water always takes the path of least resistance

Water on a roof needs to be told where it is going. It needs clearly defined paths to travel or else it will find its way into your attic space and will eventually drip its way onto your insulation and into your living space. Understanding pitch is the most important part of directing that water away from the inside of your home.

What is the pitch of your roof? **Roof pitch is referred to in terms of the inches of vertical rise in relationship to the inches of horizontal run.** For convenience sake, run is always 12. So, a 6:12 pitch roof will have 6” of vertical rise for every 12” of horizontal run. A 12:12 pitch roof will have 12” of rise for every 12” of run, effectively making it be at a 45-degree angle.

Most metal roofs are designed for roof pitches of no less than 3:12. There are a few vertical seam panels that can be used down to a 2:12 pitch or maybe 1-1/2:12. However, for most roofs less than 2:12 pitch, a special kind of standing seam called a “mechanically seamed” metal roof must be used. This type of product is installed on the roof as side-by-side panels which are then seamed using an electric machine or hand crimpers to create a folded watertight lock on top of the seams.

In addition to pitch, we need to also look at the “shape” of your roof. In some cases the geometry of your roof may mean that a particular roof area will carry a large amount of water. This happens most often when a higher roof slope drains onto a lower roof slope. In these cases, special care must be taken, perhaps through a larger “pan flashing,” to

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spread that water over a wider area and make certain that an individual roof panel is not overwhelmed with so much water that the interlock between the panels is “flooded out,” allowing water to force its way under the panels.

**Should you ever install a product at lower than its manufacturer-specified minimum pitch? Absolutely positively 100% “no”.** Contractors will sometimes, through the use of special underlayments or other materials, try to place a watertight roof beneath the metal panels in hope of making the panels work at lower pitches than those for which they are intended. **This will eventually fail.** Do not let anyone do this to your roof. There are many good alternatives for low pitched roofs, including metal. Do not allow your contractor to try and make the “wrong” product work. Some manufacturers may offer products appropriate for lower pitch sections of your roof in colors matching the product you may choose for the steeper pitch portions of your roof.

### What Lies Underneath the Roofing Materials

#### **The Roof Deck**

One of the frequent benefits of a metal roof is that it often be installed over existing shingles. Regardless of whether your old shingles are left in place, what is beneath them? What is the lumber that comprises your roof deck? This is important to know. Virtually any metal roofing product intended for residential use can be installed over what is called solid decking—typically a plywood, OSB (Oriented Strand Board), or closely spaced dimensional lumber surface placed over and attached to your roof rafters.

#### **Battens**

Some metal roofing products though, can also be installed over battens or lathe boards. Sometimes called “strapping,” these are spaced apart boards fastened to and spanning horizontally across your home’s rafters. There are a few products which must be batten-mounted, even if the battens must be installed over a solid deck. And there are some tile and shake profile products which, while they normally require solid decking, can also be installed over existing wood shingles on spaced sheathing.

Making sure that the product you’re choosing is appropriate for your application is critical. The final authority on how the metal roofing should attach to the roof should be your roofing manufacturer. Generally, the more heavily formed a product is, the easier it will be to install over existing shingles but that is not a hard and fast rule. It is always best to consult with the manufacturer. Quality manufacturers are ready and willing to answer your questions and will ask for dimensions, photos and any other information you can give them.

#### **Underlayment**

Underlayment serves as an extra layer of protection against water penetration and protects both the panel and the interior of your home during installation and for years to come. If your metal roof is to be installed over solid decking or over existing shingles, a layer of quality underlayment between the two is essential. Underlayment is also a good

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idea when the roof is installed over battens though a natural tendency for the underlayment to drop between the battens can be a problem.

For many years, the standard underlayment beneath a metal roof was 30-pound felt. In some cases, local building codes may require a more fire resistant underlayment or may even require the use of self-adhering “ice and water shield” underlayment over the perimeter and valleys of the roof. Always make sure that you’re adhering to the more stringent of either building code requirements or manufacturer specifications. If a self-adhering underlayment is used, it must be a smooth surface product rather than a granulated surface product so that the rough surface does not scratch the back of the metal panels. A scratched panel could leave your roof vulnerable to rust and eventual cracks and holes from the abrasiveness.

Recent years have seen the development of many new underlayments generically called “synthetics”. These polymer-based products are longer lasting and easier to install than 30-pound felt. They also serve as a “slip sheet” for standing seam products that can be prone to sticking to traditional roofing felt in hot weather. When this happens, expansion of the metal can tear or wrinkle the felt underlayment.

### Know Your Roof’s Hotspots

Walk around your home and look closely at your roof. Use binoculars if they are helpful. If it makes it easier to understand your roof, imagine an aerial view of your roof and sketch it on paper. Don’t get on the roof – leave that to the professionals. Some important questions to ask—

- Are there any unusual areas on your roof where, because of the roof’s shape or configuration, water flow might be slowed down or impeded?
- Are there any “curves” on the roof?
- Do you know of points where leaks are occurring ? (If so, be certain to tell the manufacturer and your contractor about these!)

In the case of all of these things, discuss them with your contractor and ask how they have addressed similar situations in the past and how they will address them on your home. Also, consult with your chosen roofing manufacturer— a quality and serious manufacturer will always be the best expert in terms of knowing how their product should be used and how it will perform. If your manufacturer cannot answer your questions, doesn’t have the proper information, or prefers to not be bothered by homeowners calling them, it is wise to re-consider your manufacturer choice. If they cannot help you before you buy, can you expect their support if you have a problem after the sale?

### Dips and Swales

As you look at your roof, look for dips or swales. Does the roof have any “waviness” to it? It is not unusual to see this on older structures or even some newer buildings. These are usually a result of structural settlement or inadequate initial construction. They can



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also be caused by structural damage (such as a snapped rafter) or roof leaks which would need immediate attention.

If dips and swales seem to be the result of structural settlement, you may have a choice of paying to have the roofing and decking removed to remedy the situation or just putting up with it. There are occasions when heavily configured shake profile metal roofs will hide dips and swales. But that isn't always the case. In fact, the strong vertical lines of standing seam or the horizontal lines of shake, shingle, or tile products can accentuate dips and swales and make them even more apparent. Discuss this with your manufacturer and contractor.

### **Weighing In**

One of the big benefits of metal roofing is its low weight. More weight on the roof means your home is susceptible to buckling or snapping rafters. Worse, extra weight on the roof can be deadly in an earthquake or interior fire where the structure of the home loses its integrity and collapses under its own weight.

Composition (asphalt) shingles will tip the scales at 275 to 425 pounds per “square” (100 square feet) of roof while a tile roof can add up to 2000 pounds per square to your home. Steel and copper roofing will weigh around 85 to 125 pounds per square. Aluminum will weigh even less at 45 to 70 pounds.

The low weight of metal roofing often allows it to be installed over existing shingles. In many cases, the temporary shingles have lost more weight in terms of evaporated oils and worn-away granules than what the new metal roof will add. Because of its low weight, metal roofing is often successfully installed over multiple layers of old shingles. This saves you money on costly tears offs that are “dumped” in landfills and pollute the ground water with its petroleum based chemicals.

However, in some areas, building codes prohibit more than two layers of roofing. Oftentimes though, by talking with the building inspector and explaining the low weight of metal roofing, metal has been approved for applications over 2, 3 or even 4 layers of old shingles. A quality manufacturer will help you in dealing with your local government officials with literature and documented history from past experiences.

### **The Style of the Panel—Finding the Profile that Complements**

One of the beauties of metal roofing is the wide variety of panel profiles which are available. Homeowners can choose from corrugated looks to true standing seams to shake, slate, shingle, and tile facsimiles. But which “look” is best for your home? While this is a matter of personal choice not every profile “fits” aesthetically and stylistically with every house.

### **Is Your Roofer also a Design Expert?**

The installer you choose for your roof should not only have an excellent history of roofing, but he or she should also have an eye for the design and know which product

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will complement the beauty of your home. In some cases, your metal roofing supplier may bring sample panels so you can see for yourself and have a better idea of what a particular product may look like on your home. Some metal roofing manufacturers offer “imaging” software that shows a photo of your house with different roof profiles and colors that can be superimposed onto your home. These things, along with the expertise and experience of your manufacturer, will help you make an informed decision on the profile and color that best showcases your home.

### **A Special Word on Standing Seam Roofs and “Oilcanning”**

In recent years, vertical “standing” seam roofing has become increasingly popular. From porches to complex roofs, log homes to accents—Standing seam’s angular lines add to the beauty of many different types of homes. It is important to know up front though that standing seam roofs have their own special issues that need to be addressed with the manufacturer and the installer. The most important of these issues is oilcanning.

Oilcanning is a phenomena through which flat standing seam panels may show ripples on the roof. This does not occur with heavily formed products such as metal shake, slate, or tile and it also does not happen with “corrugated” types of metal roofing.

So, when does it occur and why? It can occur for any of a number of reasons on standing seam panels. Many of these reasons are unavoidable and it is important to realize, if you’re buying a standing seam roof, that oilcanning may be present on the finished job. Here are some things that can lead to oilcanning:

- A) Improper rollforming of the panels or a rollformer that is out of gauge.
- B) Dips, swales, or rolls in the roof surface.
- C) Installing over existing shingles rather than removing them first.
- D) Improper installation, often involving improper clip or fastener placement and tightness.
- E) Inherent stresses in the metal itself.
- F) Damage to the panels prior to installation.

Talk to your dealer/installer about what steps they take to avoid oilcanning with standing seam jobs but do realize that, for the above reasons, oilcanning can occur and, generally speaking, the industry does not consider oilcanning to be a reason for rejection of a particular installation.

### **Built to Scale**

When choosing the right look for your home, it is important to keep “scale” in mind. For example, if your home is only 50’ in width, using a 24” wide standing seam panel may be over-powering because you will end up with just 25 panels across the entire width of the roof. Likewise, a very “heavy” looking shake or tile profile may be too much for a smaller home.

In general, roofs with steeper pitches go well with a heavier looking shake. Historic homes such as a Victorian or Cape Cod, are enhanced by a lower profile “slate” looking shingle. Ranches and roofs with a lower slope do well with a low profile or wood shingle

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look. Standing seam has been made popular on log homes, cabins and as accents on a lower roof as over a porch.

### **Consider the Neighborhood**

Keep your neighbors and neighborhood in mind when choosing a profile. You want to add to your home's value. This can be achieved by setting your home apart from others in your neighborhood in terms of distinction and beauty. However, accidentally making your home stand out like a sore thumb through the color or product you choose can detract from home value and also not enamor yourself to your neighbors.

## Venting Your Roof

### **Good Ventilation Prevents Mold**

In New Orleans after Hurricane Katrina, many homes were condemned not because of damage caused by wind but by rising and receding water that left deadly black mold in its wake. Mold is caused by a combination of moisture, warmth and stillness. When water leaks from the roof into the attic and sits, microscopic organisms in the water begin to feed off of any organic material they can find. Eventually they grow into overpowering colonies of black mold that affect your health as well as your living space.

Regardless of where you live, mold is a major concern to be taken seriously. We create a lot of moisture in our homes—laundry, dishwashing, house plants, bathing, fireplaces and other appliances add microscopic water droplets that need to escape out of the house and back into the atmosphere. Unfortunately, in attempting to build more energy efficient houses over the past 30 years, the building industry has been constructing homes that are that are “tighter” than ever before. As a result, they have inadvertently “captured” all that moisture in your home. All of that moisture gravitates upward into the attic and if not vented out, it will condense on cool surfaces. If the back side of the metal roof is exposed in the attic, it creates an ideal situation for severe condensation. However, condensation can also occur on the back side of solid decking if moisture is not properly vented out. All this condensation can become a potential haven for mold.

### **Ice Damming**

Another problem resulting from the lack of attic ventilation occurs in northern climates when warm air reaches the roof system and melts wintertime snow loads. This can result in damaging ice dams on the roof especially over the eaves where re-freezing can occur. This problem can be made even worse by a lack of insulation in the ceiling floor. Keeping the attic very cool in the winter through good ventilation will eliminate this possibility.

### **Proper Venting for a Lifetime**

Proper attic ventilation requires intake and exhaust air. Usually intake air is achieved through eave soffit vents. Exhaust venting is done through vents higher on the roof such as ridge vents, turbine vents, or various types of “can” vents. A good way of thinking about ventilation is to understand that your desire is to continually and consistently

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“bathe” the underside of the roof deck with fresh air. This prevents condensation, keeping your decking dry and preventing the growth of mold.

If you choose a product that needs to be installed over battens or “strapping” and you do not have solid decking in place, you will need to pay exceptionally close attention to proper ventilation in order to avoid condensation problems. In fact, because of this, you will often find that the most credible manufacturers of metal roofing products that can technically be installed over battens will advise always having solid decking in place for residential applications.

If your home’s construction does not allow for ventilation, then you need to check whether a vapor barrier is in place in the roof assembly to prevent moisture from migrating to the decking or roofing. This vapor barrier can be a sealed sheet of polyethylene (usually directly behind the ceiling drywall) or certain types of insulation such as sprayed-on polyurethane. If these things are not in place, then having a vented “cold roof” constructed on top of your current roof may be wise.

### **Hire a Contractor Who Knows About Ventilation**

The critical thing to keep in mind about ventilation when buying a metal roof is that a professional contractor who cares about more than just selling you a roof will understand ventilation. They will discuss it with you, evaluate your needs, and either approve of your home’s existing ventilation, or offer a better solution. If your contractor seems to not want to talk about ventilation, or does not seem to be knowledgeable about it, it is a good indication that perhaps a different contractor will pay more attention to the details and service that are required by a successful roofing application.

## Your Metal Roof Options

Knowing some basic facts that are universal to metal roofing will help you make a more informed decision on the type of metal roofing that is best for your home.

Exposure to the sun and weather will cause metal to expand and contract. Metals like copper or aluminum have greater movement than steel. The integrity of the metal itself is not affected by the movement but the manufacturer needs to build in allowances for that movement into the design of their product.

### **Types of Metal**

In roofing, there are many different metals to choose from—galvanized, galvalume, steel, aluminum, copper, and others. Regardless of what metal you choose, the most important thing to look for is if the metal meets the requirements of the Metal Construction Association (MCA) Certified Metal Roofing program. They have set the standard for galvanized steel to be at least G90 in quality and AZ50 for galvalume steel.

Steel, because of its molecular make up, is prone to rust. Galvanized and galvalume have a zinc/aluminum mixture that is applied to the surface of the metal for corrosion resistance. Galvanized has primarily a zinc coating while galvalume has primarily an

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aluminum coating. G90 and AZ50 refer to the thickness of the corrosion-resistant metallic coating that is applied to both sides of the steel prior to painting or other finishing. Panels that are designed for agricultural applications do not need to have this greater layer of protection. Unscrupulous manufacturers and installers are selling these “ag” panels to homeowners which leaves the home exposed to corrosion. The manufacturer of the metal roof you are choosing should share this information freely with you. If they are unconcerned with the MCA certification, continue your search for another metal roof.

Sometimes, contractors will talk about metal thickness as being the most important part of choosing a metal roof but this is only one part of the story. If the product in the gauge you’re considering has passed required performance testing for building codes in your area, it should be acceptable.

### Coatings

The coatings on a metal roof are part of its beauty and durability. With the exception of “natural” metals like copper, zinc and terne, coatings not only color but also protect the metal being used. Coatings for residential metal roofing fall into three broad categories: Clear Coats, Paint Finishes and Stone Coats.

#### Coatings—Clear Coats

Clear Coats are used primarily on galvalume where a silvery mill finish look is desired. These acrylic finishes are designed to protect from scratches from transportation and installation and they are relatively short lived. After a few years of weathering, most clear coats dissolve away. The one exception to this are some pigmented paint systems that incorporate a higher quality clear coating on the top surface which does enhance durability and scratch resistance for a longer period. This clear coat differs significantly from those acrylic finishes used on mill finished roofs. It is designed to bond more fully with the rest of the paint and protect for the life of the system.

#### Coatings—Paint Finishes

Older aluminum siding was known for its chalking. Like the blackboard at school, if you rubbed your hand on old siding, you would end up with a fine white powder on your palms, shirt and pants. Fortunately, today’s paint systems are more sophisticated and advanced and have been preserving color on metal roofing for over 30 years.

The gold standard of paint finish is sold under the names of Kynar 500® or Hylar 5000®\*\*. These finishes resist chalk because of the tight molecular bond in the paint’s chemistry. That bond is due to a resin derived from the mineral fluorite which holds the pigment in place. They are also known for fade resistance which is the result of superior pigmentation involving only inorganic ceramic pigments. These coatings are tested by hanging metal panels on fences in Florida and are monitored for their ability to maintain color and resist chalking. As a result, they carry significant fade and chalk warranties. Manufacturers of quality residential metal roofing will use Kynar 500® or Hylar 5000®

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\*\* Kynar 500® is a product of Arkema, Inc. Hylar 5000® is a product of Solvay Solexis, Inc.

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because of its long life and high standards. Lesser grade finishes include acrylics and various polyester paint systems. Many are mixed overseas and do not have the history or testing to adequately warranty against fade and chalking.

Metal roofing that uses paint finishes can be easily repainted in the future if they have utilized lesser grade finishes and have not weathered well or if a different color is desired.

Some metal roofing manufacturers are starting to use powder-applied Kynar 500® or Hylar 5000® finishes (usually for a decorative purpose) on top of a standard Kynar or Hylar finish. Some paint systems are utilizing reflective pigments for enhanced energy efficiency even in dark colors. Increasingly, manufacturers are offering a variety of patterned or “printcoat” finishes for a more random and natural look. These are usually only happening with the Kynar and Hylar coatings.

### **Coatings—Stone Coat**

Finally, some shake, tile and slate steel profile roofs use stone coatings. Small colored granules— similar to those used on standard asphalt and fiberglass shingles— are glued to the product’s base steel. Stone coatings offer a very natural look but can be susceptible to the same streaking and staining that affects standard shingles over time, especially in damp or fungus-prone climates. One recent development to encourage “cool roofs” with stone coatings has been the use of lighter colored stones as well as stones with reflective pigment built in. Stone coated roofs usually come with an “appearance” warranty but usually do not include a fade warranty.

### **Exposed Fasteners**

Some metal roof systems have exposed fasteners and others are designed with concealed fasteners. Exposed fasteners are screwed down through the surface of the metal panel. As a result, they are unprotected against the sun and changing weather. As the metal panels expand and contract, the fasteners may loosen and require occasional tightening or even replacement. Exposed fasteners, even with regular maintenance, can eventually leave an easy hole for rain and weather to enter your home.

If you choose a roof with exposed fasteners, ask the manufacturer about the quality of the fasteners. Where are they made? Generally, fasteners made in America will be of higher quality. Stainless steel fasteners are available and can be used with virtually any metal roofing panels for extra durability.

### **Concealed Fasteners**

A metal roof with concealed fasteners offers more protection from the weather but is equally susceptible to the expansion and contraction of the metal roof itself. A roof with concealed fasteners should make special accommodations to allow for the movement of the metal. A metal roof with concealed fasteners should include one of the following

- Clips that attach to the metal panels and are then fastened down
- Slotted fastener holes or “accordion” pleats formed into the metal to allow for movement.

## HOW TO BUY A METAL ROOF FOR YOUR HOME

### The Dealer/Installer—Don't Let Just Anybody On Your Roof

As you can see, there are many different factors to consider before choosing the right metal roof for your home. Unfortunately, many homeowners make the mistake of contacting a dealer/installer for their metal roof before they have chosen the right product for their home. The result is, rather than getting the product that is right for you, the dealer/installer tries to sell you on the product they want you to have. Use the information in this guide to **select a roofing product and a manufacturer first**. Top quality manufacturers will guide you to an experienced dealer/installer for their products. The internet is a great resource for contacting roofing manufacturers and researching the right product for you.

### Time and Research

Keep in mind the seriousness of your roof. When talking with a dealer/installer, allow a minimum of two hours to visit with them so that you fully understand their company, their competency and what their relationship with you will be like. Ask lots of questions and make sure they fully understand and acknowledge what you want to accomplish with your next roof. Before the appointment, ask for references of jobs they have done so that you can experience for yourself the level of craftsmanship and customer service they offer. Your roof is an investment in your home. Do not trust that investment to just anybody. Be prepared with questions by researching your options and knowing what they bring to your roof.

Ask for answers to some of these questions

- Is the contractor properly licensed and insured and do they have the necessary documentation to prove it?
- How experienced is the crew that will be installing your roof? How were they trained? Were the reference jobs you saw installed by the same crew?
- What is the process and timetable if you go with their company? How long will the job take?
- What if problems arise? Who will be supervising the job and who will be your point of contact with them?
- What steps will they take to protect your home and property during the installation process from any physical damage (to shrubs, windows, driveways, lawn, etc.) as well as from water infiltration (especially if the old roof is removed)?
- Do they have any "Customer Commitment" documents they can share with you which will say what you can expect regarding customer care and service?
- Do they have a workmanship warranty that is specific and comprehensive?

### The Workmanship Warranty

You should receive two warranties when you purchase your roof. One is from the manufacturer and the other is from the dealer/installer. You should ask for copies of both to read over before purchasing. Ask questions about both warranties and make sure that you understand them.

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It is not uncommon for warranties to have some degree of pro-ration which doesn't necessarily have to mean a red flag. Watch out, though, for warranties that pro-rate right from the start or that run at 100% for several years and then suddenly drop significantly.

Manufacturer warranties should also have supporting warranties that they receive from their coating and even metal suppliers. Ask your manufacturer and dealer/installer to provide you with information about how they are supported against paint, coatings or coil problems and see how those warranties affect your warranty.

Be wary of warranties that have very broad or general wording. If you cannot read the warranty and see specifically what it covers, that may be a problem because it means the warranty will always be open to interpretation and misunderstandings.

Since metal roofing is a lifetime choice, the workmanship and manufacturer's warranties should be transferrable. If you sell your home, a major selling point will be the beauty and energy efficiency of the metal roof. Being able to transfer warranties will add to the value of your home and ensure that the new homeowners are protected.

A warranty—in and of itself—does not make a successful roof installation. A warranty is an ongoing contract between you, the manufacturer and the installer. It is built on history and trust. Dodgy manufacturers and dealers/installers with a short history and lack of commitment for the future will offer vague promises while making audacious claims about their products because they care more about the dollar than their reputation and growth.

### **Cost**

Metal roofing will cost more than traditional asphalt shingles and be comparable to (and sometimes less than) other premium roofing materials like wood shakes, various tiles, slate, and polymer-based materials. There are some important factors to consider when thinking about the cost of a metal roof over and above other roofing options—

- **Life Expectancy**—High quality residential metal roofing lasts a lifetime where more temporary roofing needs budgeted for and replaced every ten to fifteen years.
- **Energy Savings**—High quality residential metal roofing will reflect the sun's heat away in the summer and lower your energy bills.
- **Maintenance Free**—High quality residential metal roofing will, with few exceptions, require little to no ongoing maintenance.
- **Earth-friendly**—High quality residential metal roofing contains some percentage of recycled material and all of it should be 100% recyclable.

Other factors that will affect the cost of your metal roof include

- Location of the home.
- Freight costs from the manufacturer to the region.
- Complexity of the roof. The more complex a roof, the more labor it will require (regardless of product).



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### **Negotiating Price**

Some homeowners wonder if it is acceptable to “dicker” over the price of a roof. Generally, what you will find is that less professional contractors, who usually don’t understand the cost of running a business for the long term, will negotiate price. So will contractors who offer a high number hoping you will bite. However, professional contractors who understand their product and its cost will not be able to negotiate. They will give you their best price upfront and rarely will they deviate from it. More than likely, this will be the highest bid you receive. But when buying a product that is as important as your next roof, it is important not to cut corners but to choose the product you want and select a contractor who can install it properly.

### **During Installation**

Good installers—like quality manufacturers—welcome questions. It is important to give installers space to work and trust in their ability (built during your research of manufacturers and dealers/installers) to complete the job successfully. Good contractors though, will welcome questions you might have about your roof, their installation and any hotspots they might run into.

Not every installation goes by the book. Dips and swales and roof complexities are just some of the issues that an installer might run into on a roof. A good contractor with experience in metal roofing will be able to recognize and work with these situations and will be able to answer your questions with ease, explaining why they do things the way they do.

### **After the Installation**

After your new metal roof is completed, your dealer/installer should walk you around the home to ensure that you understand how your roof works and that you are satisfied with the end result. They should provide you with:

- Special instructions on where and how to walk on your roof—Some shake and shingle profiles offer foam backers to enhance the walkability of the roof. If these are used, you will want to receive a “map” of where they are located.
- The manufacturer’s warranty—This should include the original documentation that is to be sent back to the manufacturer.
- The workmanship warranty—This should include all necessary documentation including contact persons to ensure that your roof has been installed properly.
- A Photo release form—If the dealer/installer would like to use your home in their future advertising, they need to have written permission to photograph your home.
- A Referral form—Just like you drove around to see different jobs the dealer/installer completed, others will be interested in seeing how they did with your home. The dealer/installer should request written permission to give your address to other potential clients.
- Special instructions for maintenance—Generally a metal roof should not require any maintenance. However, walk around your home a few times a year and, from the ground, take a close look (use binoculars if necessary) at the roof to make sure that you do not see anything like damage from animals, wind gusts or other issues. If you do see anything, report it to your dealer and/or manufacturer

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immediately. Your dealer/installer should tell you how to get in touch with their office as well as the manufacturer.

If you have chosen the right roof for your home and have worked with the manufacturer to find the best installer for your area, you should not experience any issues with your roof. But, if you do see something that concerns you, contact your installer and manufacturer to ensure your home is protected and the issue solved.

### **What if?**

What if not everything in your purchasing and installation process goes “according to the book”? What if the installer did not meet up to your expectations or is no longer available? Having a good relationship with a high quality manufacturer can help you find immediate solutions to your problems. Ask manufacturers how they respond to difficult situations. Do they have anyone who travels to help with hotspots or problematic installations? Quality manufacturers will not only answer your questions before the sale, but will walk with you through any issues you may have after the installation.

### Where to Go From Here

**We hope you now have the tools necessary to start your search for the right metal roof for your home. The key to finding the right metal roof is research. Research the metal roofing manufacturer and research the dealer/installer. Utilize the *Metal Roofing Checklist* that follows so that you can be informed on this very important investment.**

**A great resource to use when starting your research is [www.asktoddmiller.com](http://www.asktoddmiller.com). Todd’s 25 years of experience as a manufacturer and industry leader have given him the expertise and know-how to answer just about any question about roofing and metal roofing that you may have.**

# HOW TO BUY A METAL ROOF FOR YOUR HOME

## The Metal Roofing Checklist

- The Manufacturer
  - Name \_\_\_\_\_
  - Address \_\_\_\_\_
  - Web \_\_\_\_\_
  - Contact Person \_\_\_\_\_
  - Phone \_\_\_\_\_ Email \_\_\_\_\_
  - Do they take a leadership role in the metal and construction industry? \_\_\_\_\_
  - Do they own their own buildings and facilities? \_\_\_\_\_
  - Do they have quality installation manuals and training programs for their dealers and distributors? \_\_\_\_\_
  - Do they have lasting capital assets (large presses and a manufacturing facility) or temporary and “mobile” equipment? \_\_\_\_\_
  - Do their products meet the Metal Construction Association Certified Metal Roofing program requirements? \_\_\_\_\_
- The Warranty
  - Includes lifetime protection from any defects in the metal? \_\_\_\_\_
  - Is transferable to a new owner? \_\_\_\_\_
  - Protects against fading and chalking? \_\_\_\_\_
  - Covers paint peeling or chipping? \_\_\_\_\_
  - Covers for chipping and leaking do to hail? \_\_\_\_\_
  - Covers the cost of replacing defective material **and** of installing the replacement material as well? \_\_\_\_\_
- The Roofing System
  - What type of metal do they use? \_\_\_\_\_
  - What type of coatings do they use? \_\_\_\_\_
  - Do they use Kynar 500 ® or Hylar 5000 ®? \_\_\_\_\_

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- If it is stone coated, are the granules reflective? \_\_\_\_\_
- Do they meet MCA metal roofing certification? \_\_\_\_\_
- What type of profiles do they offer?
  - Standing seam? \_\_\_\_\_
  - Wood shingle? \_\_\_\_\_
  - Wood shake? \_\_\_\_\_
  - Low profile? \_\_\_\_\_
  - Slate? \_\_\_\_\_
  - Barrel Tile? \_\_\_\_\_
- Regional approvals? \_\_\_\_\_
- What is the recommended pitch for installation? \_\_\_\_\_
- Do they include all the proper accessories such as starter strip, drip edge, valleys, etc.? \_\_\_\_\_
- Can the roof be installed over my current roofing material? \_\_\_\_\_
- Does the roof utilize a batten system for installation? \_\_\_\_\_
- Do they recommend underlayment? Synthetic or felt? \_\_\_\_\_
- Do they have a fully integrated ventilation system with accessories? \_\_\_\_\_
- Do they use concealed or exposed fasteners? \_\_\_\_\_
- If exposed, where are the fasteners manufactured? \_\_\_\_\_
- The Dealer/Installer
  - Name \_\_\_\_\_
  - Address \_\_\_\_\_
  - Web \_\_\_\_\_
  - Contact Person \_\_\_\_\_
  - Phone \_\_\_\_\_ Email \_\_\_\_\_
  - Were they suggested by the manufacturer? \_\_\_\_\_
  - Are they properly licensed and insured? \_\_\_\_\_
  - Do they have the necessary documentation to prove it? \_\_\_\_\_

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- How experienced is the crew that will be installing your roof? \_\_\_\_\_
- How were they trained? \_\_\_\_\_
- Were the reference jobs you saw installed by the same crew? \_\_\_\_\_
- What is the process and timetable? \_\_\_\_\_
- How long will the job take? \_\_\_\_\_
- Who will supervise the job? \_\_\_\_\_ Phone \_\_\_\_\_
- Who is the contact during the job? \_\_\_\_\_ Phone \_\_\_\_\_
- If there is a problem, what do I do? \_\_\_\_\_
- What steps will they take to protect home and property during the installation process from any physical damage (to shrubs, windows, driveways, lawn, etc.) as well as from water infiltration (especially if the old roof is removed)?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- Do they have a “Customer Commitment” document which says what I can expect regarding customer care and service? \_\_\_\_\_
- Do they have a specific and comprehensive workmanship warranty? \_\_\_\_\_
- What will I receive after the installation is complete? Will it include
  - The manufacturer’s warranty? \_\_\_\_\_
  - The workmanship warranty? \_\_\_\_\_
  - A letter of completion? \_\_\_\_\_
  - A photo release form? \_\_\_\_\_
  - A request to use my home as a referral home? \_\_\_\_\_