



Roofing Integrity, Quality, Value and Service Since 1986



There are good reasons to choose metal roofing, including lower initial installation costs and superior protection against fire.

But years of exposure to the elements, hot and cold extremes, and rust and corrosion can eventually combine to compromise your metal roof's integrity.

In fact, if your metal roof is more than a few years old, you probably know the frustration of leaky buildings and escalating maintenance costs.

And you're not alone. With over 60 billion square feet of metal roofing in place in the United States and two billion more installed each year, that adds up to a lot of leaks — and a lot of money spent fighting them.

# A closer look at metal roof problems

Unfortunately, metal roofs are susceptible to a number of problems that lead to leaks and larger repair and maintenance budgets. These are some of the most common:

#### Loose seams and cracked penetrations

Roofs expand and contract with the weather. Because metal roofs are made of rigid sheets fastened together, this expanding and contracting loosens screws, pulls at seams, and causes cracks to form around stacks and other penetrations.

#### Rust and corrosion

Everyone knows what moisture does to steel. Snow, rainfall, and ponding water eventually cause rust and corrosion to form and holes to appear.

#### Interior drips

Cold temperatures chill inadequately insulated metal, causing warmer moisture vapor inside the building to collect as water or frost on the under-side of steel roofing panels. This condensation effect can cause dripping inside, even when the weather is dry outside. And the problem is com-pounded when oxidation occurs and rust forms on the inside of the building.

#### Ice build-up

Ice build-up in gutters can block water from properly draining off the roof during a thaw, creating a drainage back-up and providing more opportunities for moisture to enter through a roof's seams.

Seam and fastener problems.



Cracks or leaks around penetrations.



Rust and corrosion.





There are several solutions to the problems caused by aging metal roofs, each with advantages and disadvantages.

#### Sealing and coating

The first and least expensive option is to reseal exposed seams and apply a waterproof coating. But this method only protects against rain — and only temporarily. That's because the roof continues to expand and contract, eventually rupturing the new seals and the coating.

#### Spray-on foam and sealant

The second option is to insulate the metal roof with a spray-on urethane foam and then apply a sealant. This method helps protect against rain as well as interior drips. But the irregular surfaces of foam coatings are notorious for collecting water. That's one reason that most warranties for spray-on foam do not cover damages due to ponding water.

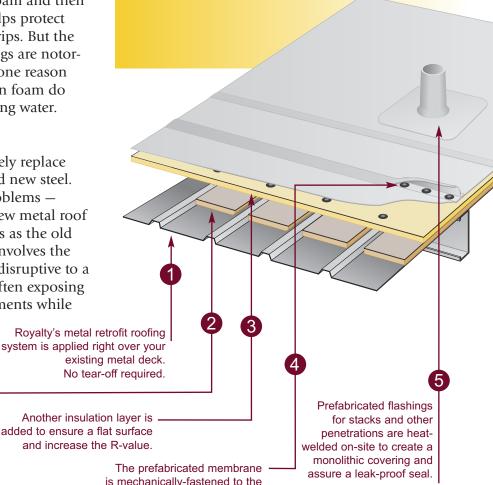
### Roof replacement

The third option is to completely replace the roof with new insulation and new steel. This option addresses all the problems – until they begin again, since a new metal roof will have the same characteristics as the old roof. This option is also costly, involves the use of heavy equipment, and is disruptive to a building's normal operations, often exposing the building contents to the elements while work is performed.

There is a better option.

Instead of fixing or replacing your metal roof, install a new, long-lasting roofing system right over your current roof without an expensive tearoff. A single-ply metal retrofit roofing system installed by Royalty Roofing is the cost-effective, long-term way to protect your building against rain, temperature changes, interior drips, ice build-up, and rust and corrosion.

Here's how it works:



Insulation is cut and placed to fill the flutes.

Another insulation layer is added to ensure a flat surface and increase the R-value.

> The prefabricated membrane is mechanically-fastened to the deck over the insulation.



## A Metal Retrofit Roofing Solution from Royalty is Customized for Your Roof

The long-term solution to your metal roof problems begins with an evaluation by one of our experienced commercial roofing technicians, who will analyze your roof's condition and performance requirements and draw up a specific plan.

The metal retrofit roofing system we prefer to install is custom-manufactured by Duro-Last Roofing to fit your roof. This includes deck sheets, accessories, flashings and other details. Duro-Last's factory-welded system ensures that up to 85% of the seaming work is done in an ideal, controlled environment to speed the application and minimize the potential for on-site installation challenges.

Royalty will install insulation material to fill the roof's metal flutes and add another layer of insulation on top to ensure the metal deck can withstand temperature extremes. The retrofit membrane is unrolled and installed over the insulation, with individual deck sheet sections and flashings heat-welded together on-site to produce a monolithic covering. The entire process is safe and simple, requiring no heavy equipment, no unpleasant odors or dangerous chemicals, and no excessive labor. And because a tear-off is not required, the metal retrofit

roofing system can be installed by Royalty while you remain open for business, even during inclement weather.

### Flexible and Money-Saving

Your new metal retrofit roofing system is a flexible membrane and once installed, it will expand and contract with the weather, virtually eliminating the risk of rooftop leaks. It will also help protect your budget from high energy costs because the white membrane is highly-reflective. This feature is saving significant energy and money for building owners all over North America. Rebates and other incentives for energy-efficient roofing are often available through local, state or federal government programs.

The manufacturer warranties offered by Duro-Last are the best in the industry. The standard Duro-Last 15-year No Dollar Limit (NDL) warranty is transferable, has no exclusions for ponding water, and provides coverage against consequential damages that result from defects in the Duro-Last material. In addition, Royalty provides our own 10-year Workmanship Warranty and we also carry \$11 million in liability insurance, to give commercial building owners and managers unmatched peace of mind.

If time has caught up with your metal roof, it's time you replace it with a new metal retrofit roofing system installed by Royalty Roofing.

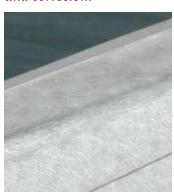
No more seam and fastener problems.



No more cracks and leaks around penetrations.



No more rust and corrosion.





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Royalty is headquartered in Seymour, Indiana, with strategically located offices throughout the Midwestern, Central and Southeastern United States to serve commercial roofing customers with single locations or that own or manage multiple facilities.

An Authorized Duro-Last Elite Contractor











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