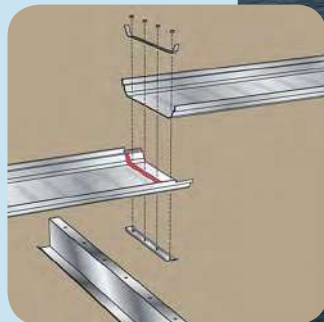
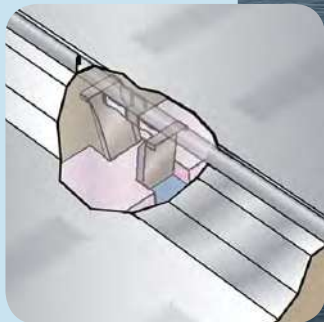
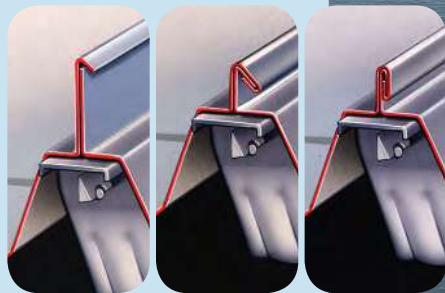


# INDUSTRY LEADER SINCE DAY ONE

The MR-24® standing seam roof system has always been a pioneer in its industry, and some of its most important innovations remain one-of-a-kind. The MR-24 roof system is:

- The first low-rise [almost flat, but able to drain] standing seam roof system developed for large metal buildings.
- The first, and only, roof system to seam panels with a 360° Pittsburgh double-lock seam finished in the field with a unique Roof Runner® seaming machine.
- The first standing seam roof system without exposed thru fasteners.
- The first standing seam roof system secured with uniquely designed clips to allow for thermal expansion and contraction.
- The first standing seam roof system to include ridge cap and gable trims that can also move with temperature extremes.
- The first standing seam roof system with cross-fluted panels to reduce wind noise.
- The first, and only, standing seam roof system with factory-punched panels and secondary roof structurals for precise, lasting alignment.
- The first standing seam roof system with certified thermal performance based on guarded hot box testing.
- The first standing seam roof system to offer a 20-year weathertightness warranty.
- The first standing seam roof system to offer a weathertightness warranty on its roof curbs.
- The first standing seam roof system to be UL certified for extreme wind uplift conditions. Butler also helped develop the Army Corps of Engineers' wind uplift test procedure.
- The first standing seam roof system with staggered panel splices located over, and supported by roof structurals for extra strength.
- The first standing seam roof system with an optional fall protection and insulation support system to protect roof installers (and also improve the appearance of batt insulation).
- The first standing seam roof system to reach two billion square feet installed.



The first and only standing seam roof system with documented, fully functional 45-year installations.



# NEVER EQUALED, NEVER SURPASSED

When the MR-24® standing seam roof system was introduced in 1969, it revolutionized the systems construction industry.

It was the very first roof of its kind, and it has remained the industry leader for 45 years—introducing new industry innovations, being constantly tested and improved, and collecting many patents along the way. More than 2 billion square feet of the MR-24 system have been installed worldwide, and the number grows daily.



# THE MR-24® ROOF SYSTEM

45 YEARS OF  
EXCEPTIONAL,  
DOCUMENTED  
PERFORMANCE



Butler Manufacturing™  
Kansas City, MO  
816-968-3000

Butler Buildings, Canada  
Burlington, ON  
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Form No. 5446 09/14

# DID YOU KNOW?

## WHAT'S WITH THE NAME?

"MR-24" was adapted from a code nickname that Butler engineers gave the roof system while it was being developed. They liked the technical sound, and the name stuck.

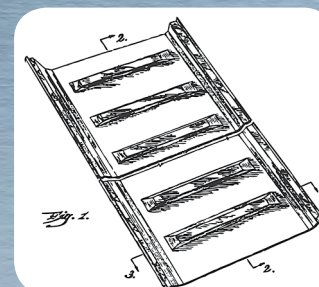
## EXCEPTIONAL TESTS, NO LEAKS

When the MR-24® system was introduced in 1969, Butler demonstrated its weathertight performance by building an 18- by 18-foot tank with Pittsburgh double-lock-seamed MR-24 roof panels as the bottom. They filled it with 10 inches of water and checked for distortion or seepage for five months. There was neither. In the 1990s, Butler used a similar tank test to pass the stringent Dade County, Florida, hurricane requirements. The seams did not leak.



## THE NO-MOAN SOLUTION

The initial version of the MR-24 roof system had flat panels. One of the first customers installed it on his funeral home. When he discovered that his new roof "moaned" during high winds—very disconcerting to mourners during the services—Butler solved the problem by stamping cross flutes in the MR-24 system's panels and patenting the design.

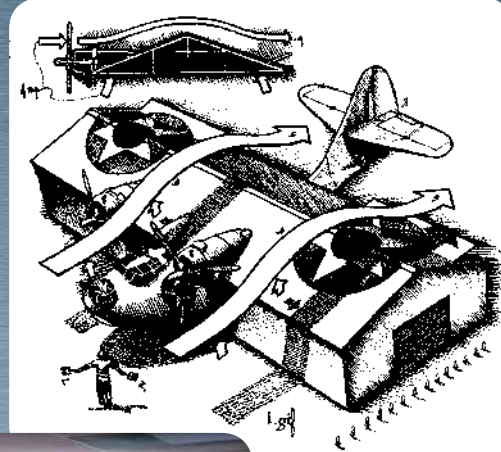


## AN UNUSUAL USE, NO LEAKS

In 1901—long before it became a unique feature of its premier standing seam roof system—Butler used the Pittsburgh double-lock seam on the water lines for its first product—superior stock tanks. The seams did not leak.

## WHEN IS A ROOF LIKE AN AIRPLANE?

Whenever wind passes over a double-sloped surface. Why? See the diagram. Double-sloped roofs act like the wing of a plane, shaping the wind to create lift—just what you don't want. The higher the wind, the more lift—and the edges and corners of the roof are especially vulnerable. But the MR-24 roof system is designed to stay put. It was the first in its industry to meet strict UL Class 90 wind uplift requirements, and Butler actually helped the U.S. Army Corps of Engineers to develop its own wind uplift certification procedure. The MR-24 system also passes the ASTM wind uplift test, the Factory Mutual wind uplift test, and the strict hurricane requirements of Dade County, Florida



Underwriters Laboratory  
Wind Uplift Test Fixture

## PEACE OF MIND, LASTING PERFORMANCE

Once installed, the MR-24 roof system can provide building owners with exceptional, weathertight performance. Its many precision-engineered features are completely integrated—not just components and trim. They add up to a roof system that will stay weathertight with virtually no maintenance for a long, long time.

## COUNTS TOWARD LEED® CERTIFICATION

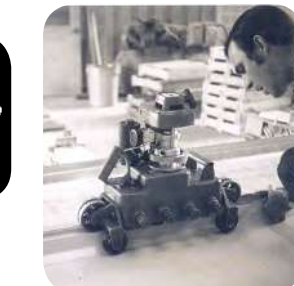
The MR-24 system's sustainable, environmentally friendly design and use of recycled and recyclable materials help contribute credits toward LEED certification. In addition, the system's many insulation options and finishes help reduce energy usage.

*"As an architect, I think it's the best roofing system that I've ever come across. It's just far superior to anything else I've ever put down. I know I can rely on the MR-24 roof system—that it will perform as promised."*

**Phil Clark, AIA, President, Claris Construction, Butler Builder®**



1959

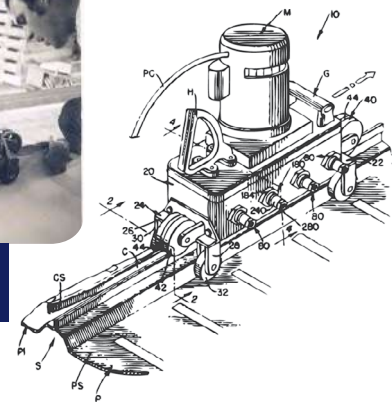


1965



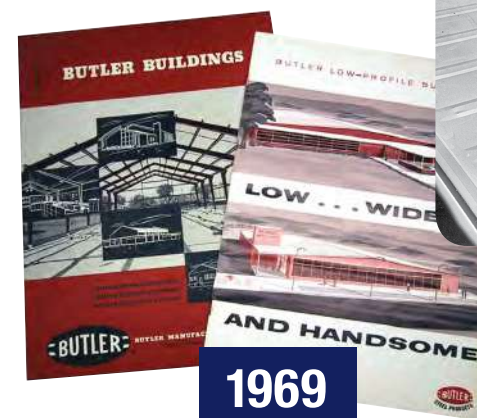
**1959** Butler Research Center founded, with a mandate to develop a low-slope roof system for large buildings.

**1965** Butler begins revisions on a European seaming machine that will evolve into its Roof Runner®—the unique machine that completes the final weathertight panel seam in the field.

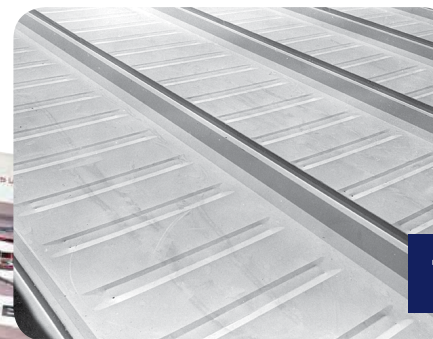


**1969** MR-24 standing seam roof system introduced along with the Landmark structural system, which emulates conventional bar joist construction, allowing almost flat roof systems to be put on large buildings and more architectural design flexibility.

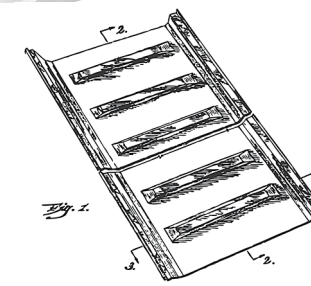
**1969–1974** Constant improvements, including a new wheel design and motor for the Roof Runner and a patented, cross-fluted roof panel design to reduce wind noise.



1969



1969–1974



**1972** the MR-24 roof system receives its first UL 90 wind uplift certification.

**1974** Butler introduces high-performance Galvalume® coated roof panels; an impressive sales year for the MR-24 system.

**1977** 20-year materials warranty introduced for the MR-24 roof system.

## SIGNIFICANT TWO-WAY SAVINGS

**CUTS MAINTENANCE COSTS**—the MR-24 roof system can save as much as 90% in maintenance costs compared to conventional, non-metal roof systems.

**CUTS ENERGY COSTS**—The MR-24 roof system offers insulation options as high as R-40—and because the MR-24 system is unaffected by thermal shock, the additional insulation won't shorten the life of the roof. Its cool-roof finish options can save even more energy dollars.

*"Since we became a Butler Builder, we just don't have any issues with roof leaks. Butler takes the time to make sure everything works out so you have to seam the trim onto the roof panel. And the clips, the whole design of an MR-24 roof system is much better than even the closest competitor."*

**Chris Mlejnek, Northwest Builders, Butler Builder®**

## EASY, DEPENDABLE INSTALLATION

Factory-punched panels and secondary structural members mean that the MR-24 system's seams are always straight. And the panels' staggered, supported end-lap design means that workers can walk on them without causing leaks. Butler's unique Scrubolt™ fasteners have twice the strength of self-drilling screw fasteners. That helps the roof resist wind uplift loads and stay tight and reliable, too.



## RESISTS ALL KINDS OF WEATHER

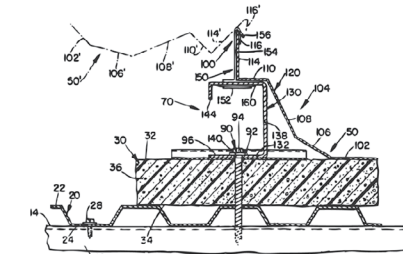
The MR-24 roof system passes all the toughest wind uplift certifications, is designed to handle heavy snow loads and offers the best finishes in the industry to resist acid rain and sun fading. It also has withstood battering by softball-sized hailstones.

*"Our maintenance costs are virtually non-existent. I believe this is largely due to the amount of research and development that Butler puts into its products—including flashing details and sealants. The weathertightness of the MR-24 roof system far exceeds any other standing seam roof system or any other type of roof system that we have researched or that we have in service."*

**Neil Van Loo, director of engineering for Blain's Farm & Fleet**



1985



1979

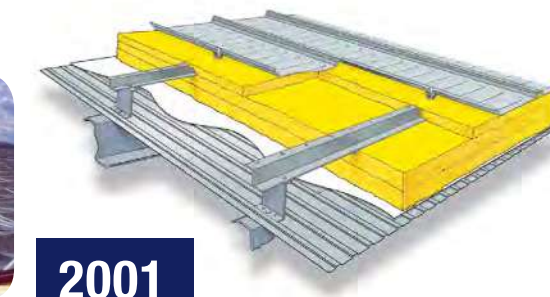
**1979** Butler patents the roll runner insulation system, which helps builders quickly lay down fiberglass batt insulation for large roof installations.

The patented CMR-24® roof system is also introduced—a version of the MR-24 roof system with rigid board insulation, an interior liner and diaphragm action.

**1985** MR-24 system is engineered for retrofit and the high performance Butler-Cote™ finish system is introduced.



1992



2001

**1984** Optional 20-year weathertightness warranty introduced for the MR-24 roof system.

**1992** Butler introduces the patented Sky-Web® fall protection and insulation support system.

**2001** Butler introduces the ThermoLiner™ insulation system—another great way to keep energy costs from going through the roof.

## SIMPLY THE BEST

The MR-24 roof system simply can't be beat. It boasts seven US patents and an unmatched list of firsts, including the industry's only 360° standing seam that is 180° factory-finished and 180° finished in the field using 3,800 pounds of pressure. With 45 years of documented service, it has surpassed the performance of any other type of roof.

Butler's dedication to constantly evolving design enhancements has kept the MR-24 roof system the industry's most popular choice. More than 2 billion square feet—about 200,000 miles—of the MR-24 system have been installed. Many original installations are still in place today, continuing to perform the way that they were designed to do—superbly.



2009

**2003** Solar White Butler-Cote™ cool-roof finish system with an SRI of 87 introduced to help with "heat island" effect.

**2009** In its ongoing commitment to quality, Butler introduces guarded hot-box testing to certify the MR-24 roof system's actual, assembled and installed energy performance in the field.

**2014** 45-year anniversary of the MR-24 roof system.