SCHULTE BUILDING SYSTEMS, INC.

SERIOUS PERFORMANCE THROUGH SUPERIOR DESIGN

INTRODUCING A REVOLUTIONARY ARCHITECTURAL STANDING SEAM ROOF THAT SUCCESSFULLY COMBINES GREAT LOOKS WITH THE HIGHEST WIND AND WATER RESISTANCE AVAILABLE.

VS-216 PLUS ARCHITECTURAL ROOF SYSTEM

EXCELLENT AESTHETIC APPEARANCE BACKED BY SUPERIOR STRUCTURAL INTEGRITY.

IT ALL BEGINS WITH A SEAM

A METAL ROOF IS ONLY AS GOOD AS THE SEAMS THAT HOLD IT TOGETHER.

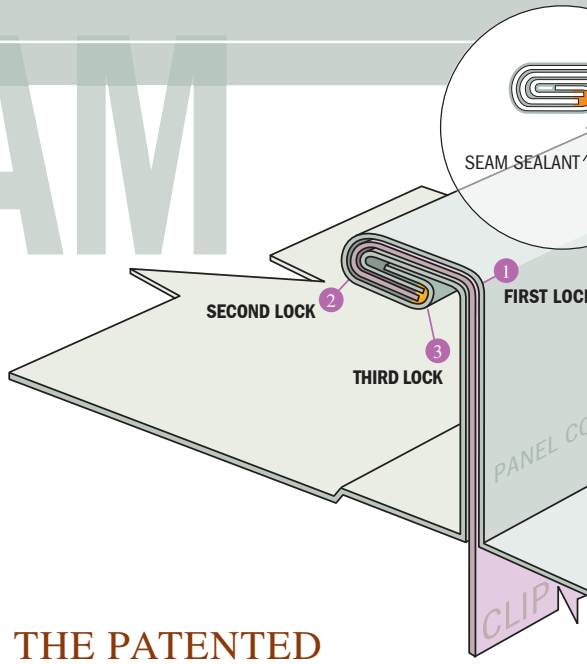
Recent changes in wind uplift resistance requirements and testing methods have called for a new approach to roof performance.

And while other manufacturers continue to react to these changes by refitting their existing roof systems with "band-aid" solutions, we have invested in a totally new patented method and technology that is specifically designed to meet and exceed these new requirements.

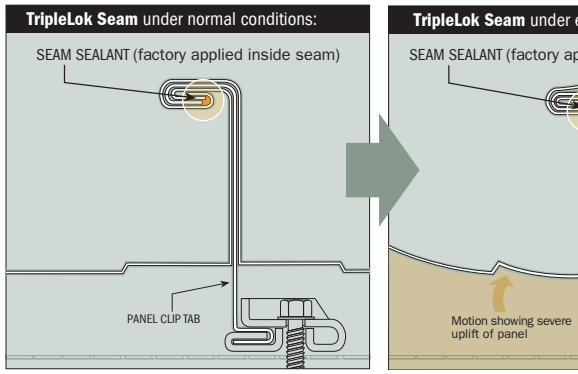
Now you can have excellent aesthetic appearance in a Architectural standing seam roof without compromising superior wind and water resistance.

The breakthrogh technology behind our seaming system is the reason why our metal roof is the best in its class for performance, reliability, and cost efficiency.

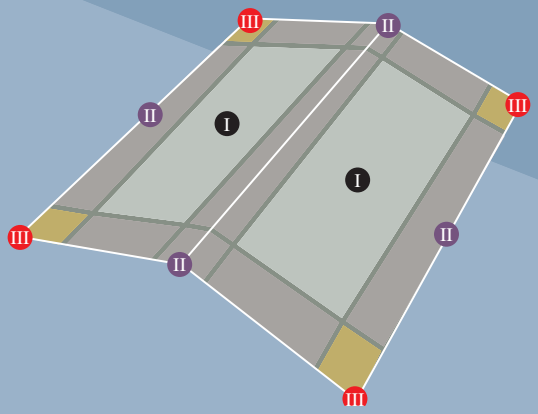
Our proven, patented seam – utilizing the VS-216 panel system technology – provides superior wind and weather protection under all roof loading conditions. The seam geometry and seaming methods virtually assure that your installed roof will perform as it was designed at minimum cost.



THE PATENTED



ZONEABILITY

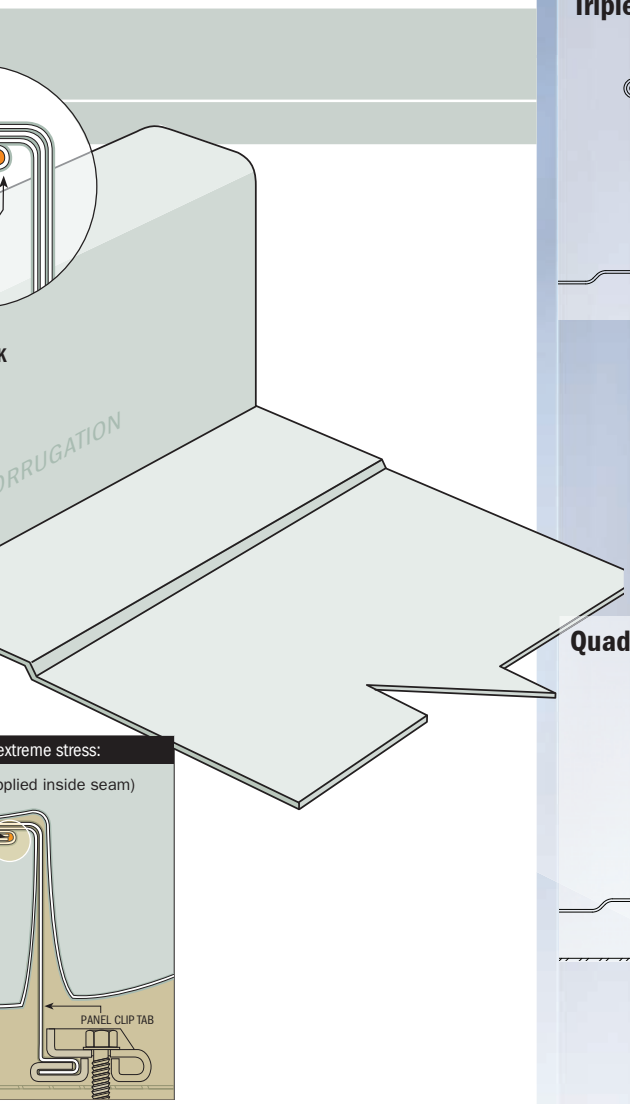


Standard industry wind tunnel tests on various roof configurations have shown that the wind loading on a roof is divided into three zones:

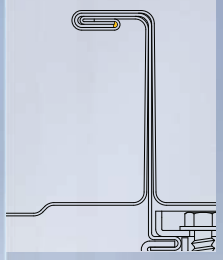
Zone I: LOWEST LOAD – main field of the roof (about 80% of total roof surface)
Zone II: INTERMEDIATE LOAD – area around the perimeter of the roof (about 15% of total roof surface)
Zone III: HIGHEST LOAD – at each corner of the roof (about 5% of total roof surface)

Other roof systems accommodate these various wind load zones by either one or a combination of the following: reduced purlin spacing at higher zone roof areas, thicker panel material in these areas, reduced panel width, or exterior clamps over the panel seams. All of these conventional methods call for increased materials, inconsistent structural spacing, and added complexity during installation.

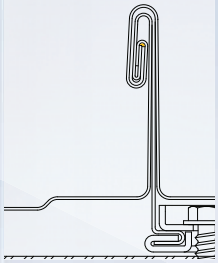
Our patented roof system accommodates all three roof zones – simply and efficiently – by executing one of two seaming shapes. Each shape is formed in the field after the roof panels have been installed, meeting precise roof wind loading requirements for each roof zone without added materials or altering panel/purlin placement.



TripleLok



QuadLok



The TripleLok™ seam is accomplished by seaming the entire seam with an electrical seamer. This seam will provide an allowable wind uplift loading of 48 psf.*

1. It's the only seam on the market to use the 360°+ 90° seam, which:
   - structurally isolates the seam from the effects of severe wind loading by placing load resisting bends between the seam and the stresses of panel deflection.
   - isolates the seam sealant from dislodgment or separation during severe wind loading, thereby assuring a water resistant seam throughout the life of the roof.
2. Fool-proof installation: all that is required is the placement of the electrical seaming machine on the seam to begin the seaming process. It's virtually impossible for the seamer to run off the seam until it comes to the end of the panel or is removed by the operator.

The QuadLok™ seam is only required in extremely high wind areas such as coastal regions. This seam is accomplished by seaming special roof zones with an electrical seamer, when required. This seam will provide an allowable uplift load of 63 psf*, (or 97 psf over 2'6" purlin spacing).

By using the QuadLok seam, the perimeter conditions of roofs in high wind coastal locations can resist wind loads without exterior clamps and brackets that most other roof systems require to meet the Zone III uplift loads.

The Quadlok seam is the only seam on the market that provides higher uplift resistance with 24 gauge panel than all other roof systems using 22 gauge panels.

* when seamed with a 24 gauge panel over 5'0" purlin spacing

All of the above seams and load tolerances are calculated using ASTM E 1592 tests.

BOTTOM-LINE

In almost every case, your entire roofing system is accomplished with one consistent purlin spacing, one panel size, and one clip throughout...

RELIABLE, ATTRACTIVE & COST-EFFICIENT.

DEPENDABLE ROOF PERFORMANCE

The patented VS-216 panel system's technology offers considerable benefits to the roof designer, roof installer, contractor and building owner.

Take a closer look at some of the features and benefits.

Assured weather resistance

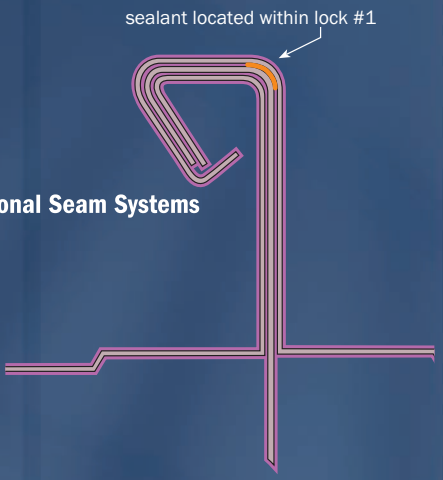
With VS-216 technology, the sealant is protected from severe seam stresses during high wind uplift because of its position within the seam. And the patented panel clip provides even greater air and water resistance, because it doesn't interfere with the sidelap sealant seal.

Fool-proof seaming

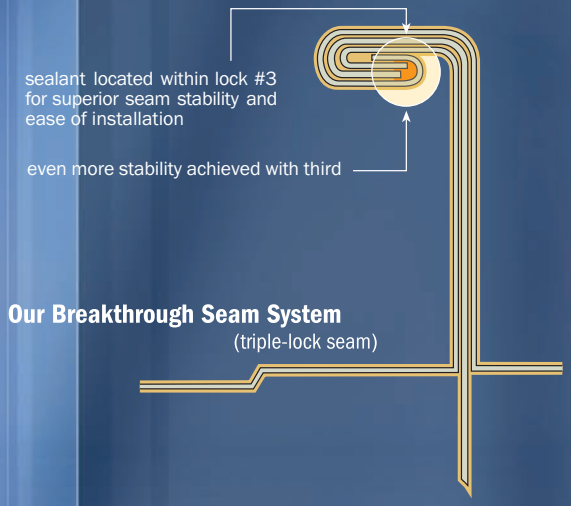
Say goodbye to damaged panels from seamers that run off-course. With the VS-216 roof system, even inexperienced operators with little or no training can easily accomplish a good seam – because our seam is larger by design, allowing the seamer to lock onto the seam, and stay locked, until the seam is finished.

Seam all at once

Unlike other systems on the market, the VS-216 roof system does not require seaming as each individual panel is installed. This is because the panel seam is partially formed automatically as the panels are placed, allowing seaming to be accomplished after the entire roof has been installed. The result is a roof that is installed quickly, efficiently and without costly wear and tear caused by excess traffic along the unfinished roof.



Conventional Seam Systems



Our Breakthrough Seam System
(triple-lock seam)

BELIEVE IT OR NOT.

When you look at most metal roofs on the market today, you're looking at systems that rely on technology that's over 30 years old.

It's a fact that the design of existing standing seam roof systems has not been fundamentally upgraded since 1969 – when assumptions about wind resistance and expected roof performance were severely undercalculated compared to what we know today.

OUR SYSTEM IS DIFFERENT.

We've used the latest technology available to develop a metal roof system that's designed for tomorrow – with components and techniques that outperform others by specifically addressing current and anticipated building codes and roofing requirements.

With steel panels that are designed to last, innovative clips that add stability while allowing for thermal expansion and contraction, and a patented seaming system that's designed to handle even the most stringent uplift requirements – our system truly is above and beyond the rest.

Proof of this superior performance can be found by reviewing our UL 580 Class 90 listing and ASTM test results (shown on the back of this brochure).

NO OTHER ROOF COMES CLOSE

A NUMBER OF ADVANCED FEATURES COMBINE TO MAKE THIS METAL ROOFING SYSTEM THE BEST IN ITS CATEGORY.

Schulte Building Systems, a leading Manufacturer of pre-engineered metal buildings, is proud to offer the VS-216 roof system to its customers. This product will meet or exceed your expectations.

SBS believes exceptional fabrication along with the new technological breakthroughs in developing our Standing Seam System will make you an industry leader.

We urge you to take advantage of the latest technologies with a roof system that's designed for tomorrow.

The ease of erectibility, dependable performance and cost efficiency make this system superior to its competition.

For more information about the VS-216 roof system and how you can provide your builders and erectors with the most technologically advanced roof system available, contact Schulte Building Systems today.

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SCHULTE BUILDING SYSTEMS

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The following recognized certifications and listings have been earned:

Underwriters Laboratories UL-90 Classification Construction No. 506
Corps of Engineers CEGS 07416 Uplift Test
ASTM E 1592 Uplift Test (three tests each span each gauge)
ASTM E 1680 Air Infiltration
ASTM E 1646 Water Leakage

The VS-216 panel system has been tested and certified by independent testing agencies and laboratories and achieved the loads and listings shown below.

Underwriters Laboratories Inc. Construction No. 506, 506A, 506B
VS-216 roof with TripleLokTM and QuadLokTM Seam

UL Listing	Panel Width	Panel Gauge	Seam Type	Purlin Gauge	Purlin Spacing
UL-90	16"	24 ga.	All Seam Types	16 ga.	5'0"

ASTM E 1592 Uplift Test Results
VS-216 roof with TripleLok Seam

Purlin Spacing	Panel Width	Panel Gauge	Design Load CEGS (sf = 1.65*)
2'6"	16"	24 ga.	79.4
5'0"	16"	24 ga.	48.1
7'6"	16"	24 ga.	28.8

ASTM E 1592 Uplift Test Results
VS-216 roof with QuadLok Seam

Purlin Spacing	Panel Width	Panel Gauge	Design Load CEGS (sf = 1.65*)
2'6"	16"	24 ga.	97.7
5'0"	16"	24 ga.	63.0
7'6"	16"	24 ga.	45.7

ASTM E 1680 Air Infiltration all seams 16" wide panels = .005 CFM/sq.ft
ASTM E 1646 Water Leakage all seams 16" wide panels = None at 12 psf

* Design Load = (Mean Ultimate Load/Safety Factor) based on U.S. Corps of Engineers CEGS07416

VS-216 roof system and its components are covered by US Patent numbers 5,692,352 - 5,737,894 - 6,301,853 B1 and other patents pending.