American
Buildings
Company

METAL ROOFING

With more panel options
in metal roofing,
ABC has you covered.

Standing Seam II
Standing Seam 360

AMERICAN BUILDINGS
a NUCOR company

INNOVATION
TECHNOLOGY
SOLUTIONS

Excellent Performance. Superior Aesthetics.

When it comes to performance, few roof systems compare to ABC's Standing Seam panels.

American Buildings Comnpany (ABC) Standing Seam II (SSII) and Standing Seam 360 (SS360) panels have been designed to withstand a diverse range of climates and demanding roof conditions. The panels float on a system of sliding clips that prevent damage from thermal expansion and contraction. With a width coverage of 24 inches and a height of 3 inches, ABC standing seam designs eliminate 80% of the through fasteners found in other systems for greater weathertightness, energy efficiency and ease of installation.

ABC Roof Panels withstand the most extreme weather conditions day in and day out.

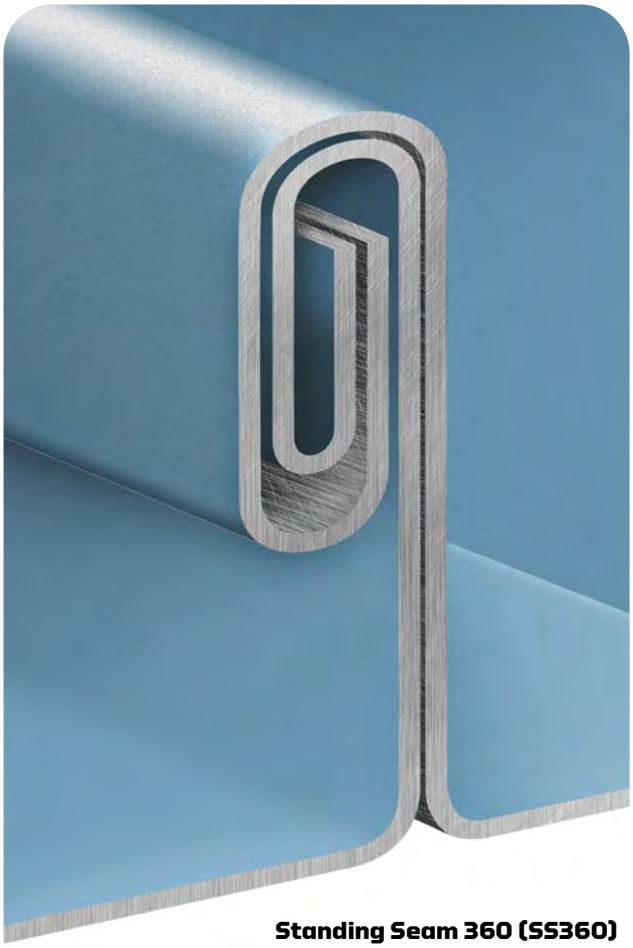
To ensure weathertightness, both Standing Seam II and Standing Seam 360 panel sidelaps have factory-applied mastic as standard – even better, Standing Seam 360 panels are joined by an electric seaming machine, developing a full 360-degree rolled seam.

When it comes to performance, few roof systems compare to ABC's Standing Seam panels. Both SSII and SS360 carry a Class 90 Wind Uplift rating by Underwriters Laboratories when tested in accordance with test procedure UL 580. The SS360 is also Factory Mutual and Miami-Dade County approved.

Both systems have Class A fire ratings when tested in accordance with test procedures ASTM E108.

SSII and SS360 are excellent performers in both new and retrofit applications. While these roof panels were designed to withstand the most extreme weather conditions, their benefits don't end there. The uninterrupted linear roof is also aesthetically pleasing, even for higher sloped roofs. Our SSII and SS360 panels provide a clean, attractive look that can be used in almost any application.

Standing Seam II (SSII)



Standing Seam 360 (SS360)

Class 90 Wind Uplift Rating
By Underwriters Laboratories when tested in accordance with test procedure UL 580.

Class A Fire Rating
When tested in accordance with test procedures ASTM E108.

Approved
By Factory Mutual and Miami-Dade County

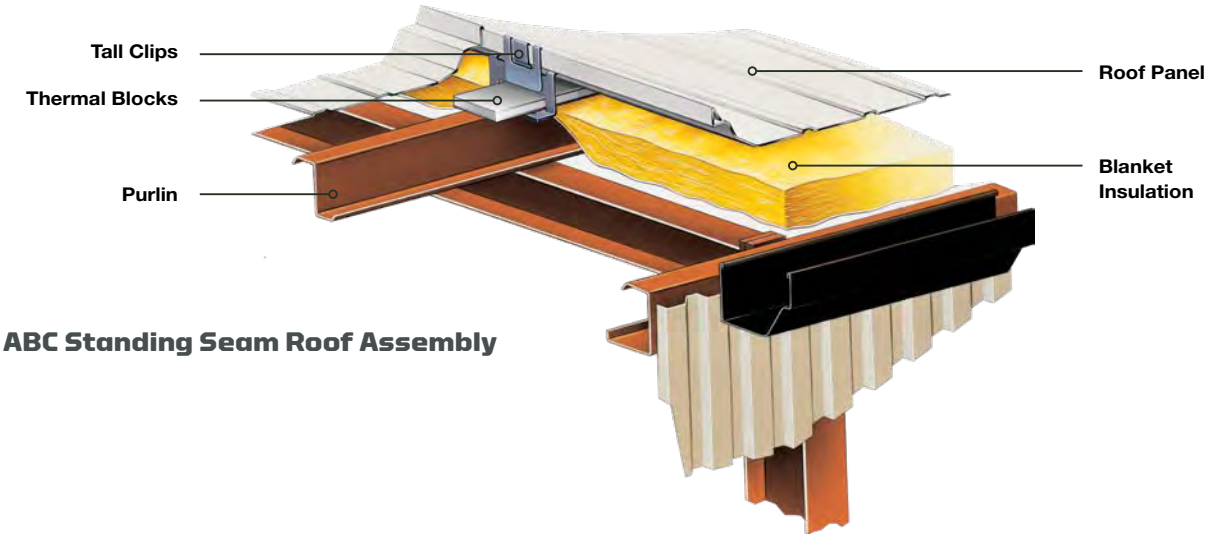
ABC Standing Seam Roofing vs. Through-Fastened Roof Systems

The design of the Standing Seam Roof (SSR) System with thermal blocks has been developed and proven to be over 38% more energy efficient than a through-fastened system. Although there is some compression of the blanket insulation with the SSR System, the potential energy loss is offset by the higher R-Value provided by thermal blocks.

A roof system's U-factor, which is the overall coefficient of heat transfer for all of the elements of construction and is typically used with a combination of materials, is the inverse of an R-value. The lower the U-factor, the greater the assembly's resistance to heat flow and the better its insulating value. Our SSR Systems maintain a lower U-factor, increasing their energy efficiency over through-fastened systems.

Thermal bridging occurs at the panel screws with each screw transferring the outside temperature through the panel to the purlin. Blanket insulation used with a through-fastened roof is compressed over the purlins so that the insulation's R-value is greatly reduced along the purlins. Both of these conditions lower the effectiveness of the roof insulation.

ABC Standing Seam Roof Systems have been designed to minimize thermal bridging and reduce the effect of blanket insulation compression with the addition of thermal blocks, taller clips, the reduction of roof fasteners, and the addition of clip shoulders that provide support to the panel ribs.



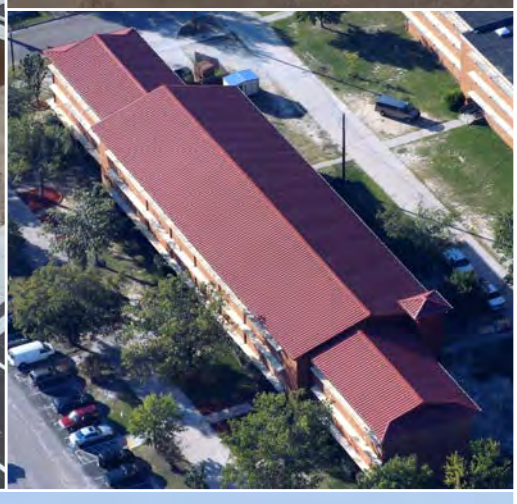
ABC Standing Seam Roof Assembly

Overall U-factor For Entire Base Roof

Fiberglass Insulation R-Value	Through Fastened Roof	Single Layer Standing Seam Roof with Thermal Blocks	Standing Seam Outperforms Through-Fastened Roof
R-10	0.184	0.115	38%
R-11	0.182	0.107	41%
R-13	0.174	0.101	42%
R-16	0.157	0.096	39%
R-19	0.151	0.082	46%

ASHRAE 90.1 2013 Standards


SRAM



ABC Roofs Offer an Installation Advantage

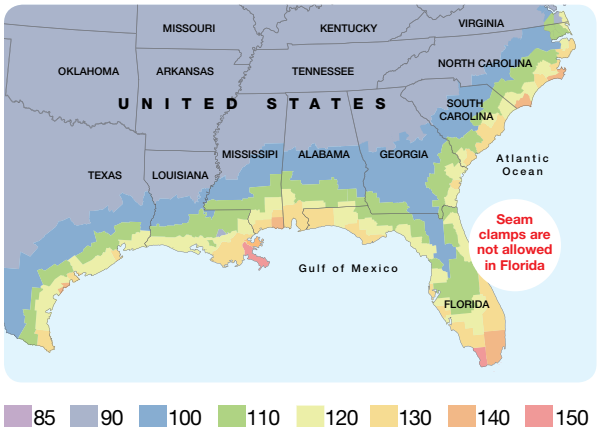
American Buildings Company roofs are installer-friendly. The parts, pieces and details are engineered to require minimal time and effort to erect and install. Our roof systems are designed to maintain integrity throughout the longevity of the structure.

The following features and benefits capture positive feedback from building erectors and roofers about SSII and SS360.

Feature:
Roof-anchoring fasteners at the building eave are located outside of the building envelope.

Benefit:
Thermal-induced movement of all floating roof systems continually stresses the roof anchoring attachments, creating the long-term potential for leaks at the anchoring fasteners. With the ABC standing seam roof systems, the potential for a leak at anchoring fasteners within the building envelope has been eliminated.

Feature:
There are two options that maintain compliancy with the updated 2006 and newer IBC codes.



Benefit:
Based upon IBC code wind load requirements, many standing seam snap systems cannot be used; however, the ABC's SSII roof system can be used on IBC wind zones up to and including 90 MPH with the addition of SSII seam clamps in designated areas of the roof. The ABC's SS360 is a much stronger alternative, capable of meeting the more stringent requirements of the higher IBC wind zones. Laboratory testing has proven that the 360 degree rolled seams created by electric seaming machines provide a secure rolled seam which is preferred by many architects and roof specifiers.

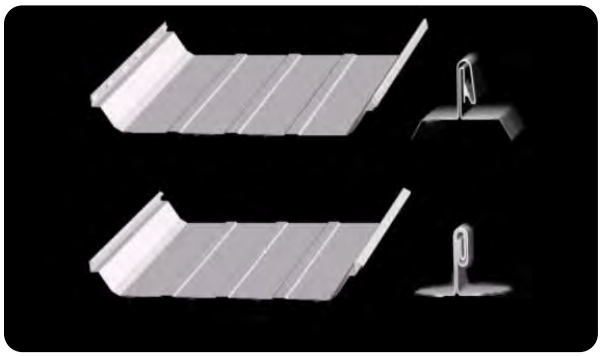
Feature:
A flatter angle than most other standing seam roof systems is required for locking adjacent panel seams together.

Benefit:
When installing each additional panel run on the ABC's SS360 roof system, the added panels require a minimal leading edge lift to engage the previous panel seam. This improves on what could be a time-consuming and cumbersome process, especially with long panel lengths. With other systems long panels tend to shift positions due to their weight and often do not lock in uniformly along their length and at critical endlap locations.

Feature:
Mechanical seamers for ABC's Standing Seam Roof Systems are among the fastest in the industry.

Benefit:
Standing Seam 360 panels are joined by an electric seaming machine, developing a full 360-degree rolled seam to ensure weathertightness. A consistent 7 to 10 amps of power to the seamer enables up to 30 to 35 lineal feet of panel seaming per minute. In addition to the speed, mechanical seamers engage the panel seam from within the perimeter of the roof — a safer operation for your installation crews. Also, the roller wheel engaging levels and the light seamer weight make these machines very user friendly, reducing installation labor costs.

Feature:
ABC offers two trapezoidal standing seam roof system options.



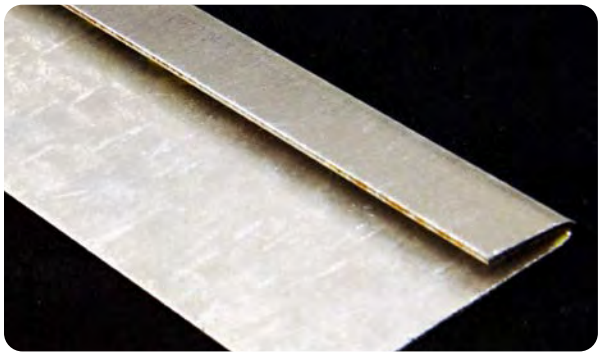
Benefit:
ABC offers two trapezoidal roof systems: SS360 and SSII. Both roof systems attach to the secondary structural system in the same manner and share identical trim attachment details. However, SSII utilizes a simple snap together male and female panel rib designed to minimize installation costs. Both of these high-quality roof systems qualify for our extended weathertightness warranty programs.

Both systems have received a Class 90 Wind Uplift rating by Underwriters Laboratories when tested in accordance with test procedure UL 580. The SS360 is also Factory Mutual and Miami-Dade County approved.

Feature:
The ABC panel endlap design provides sturdy, durable and functionally time-tested high-quality performance.

Benefit:
Panel endlaps are one of the most critical installation details of any standing seam (floating) roof system. ABC provides a heavy gauge backup plate, without pre-punched holes, to avoid stripping of the endlap screws. Dimples are stamped into the downslope ends of every roof panel indicating proper screw placement in the flat of the panel by the installer. In lieu of a top (or “cinch”) strap, the ABC design utilizes eight premium screws in the flat of the panel to help ensure alignment of the roof panels as well as proper compression of the endlap mastic. Our superior endlap design also helps accommodate uniform panel movement due to thermal stresses.

Feature:
The ABC roof system uses an 18 gauge backup plate at trim endlaps susceptible to roof expansion and contraction.



Benefit:
ABC has all but eliminated the ability for trim screws to “back out” over time due to the normal thermal movements of a standing seam metal roof system. By providing an 18 gauge backup plate at specific roof trim endlaps, we add the same integrity to our trims as we do our roof panel endlaps.

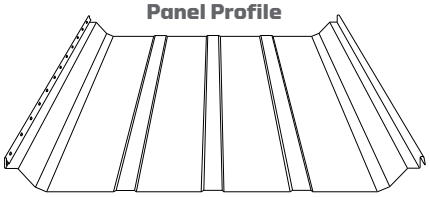
Feature:
ABC offers the job specific tools (and instructions) required for proper installation of our standing seam roof systems.

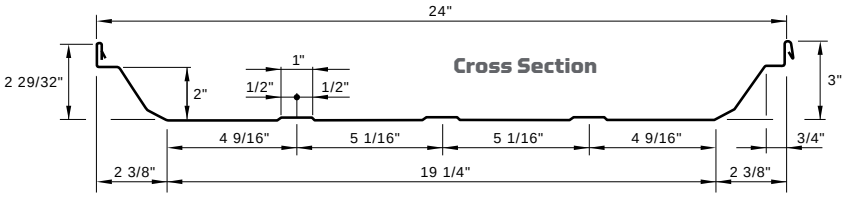
Benefit:
Employing the correct tools for any job is key to ensuring a high-quality and long-lasting end result. ABC offers specialized clamps, crimpers, gauges, grips and other tools for use by the installer. Proper installation utilizing the right tools results in a high performance roof system while reducing installation time, effort and costs. Details for proper use of these specialized installation tools are provided in the installation drawing package.


William A.
PITT COURT

Standing Seam II Engineering Properties

Panel Profile





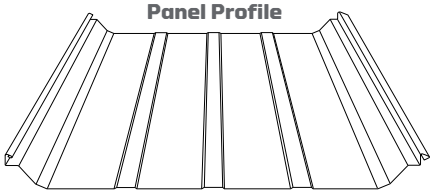
Engineering Properties of American Buildings Company Standing Seam II Panel

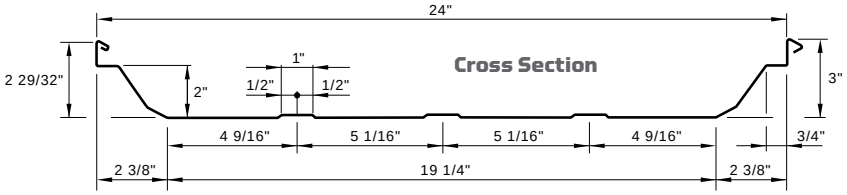
Designated Gauge of Steel	Steel Yield KSI	Base Metal Thick. (In.)	Total Thick. (In.)	Panel Weight (lbs. / ft.^{2})	Top In Compression			Bottom In Compression			Fb KSI
					Ix (In.^{4} / ft.)	Sx (In.^{3} / ft.)	Ma K-IN.	Ix (In.^{4} / ft.).	Sx (In.^{3} / ft.)	Ma K-IN	
24 Ga.	50	0.0225	0.0241	1.20	0.277	0.112	3.36	0.129	0.079	2.37	30
22 Ga.	50	0.0300	0.0316	1.58	0.372	0.153	4.59	0.180	0.108	3.24	30

Gauge of Panel	Number of Spans	Load Type	Maximum Total Uniform Load in PSF							
			Span Lengths, Ft.							
			1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
24 Ga.	1	POS	995	560	358	249	183	140	111	90
	2	POS	549	339	228	163	122	95	75	61
	3	POS	634	401	274	198	149	116	93	76
	4	POS	608	381	259	187	140	109	87	71
22 Ga.	1	POS	1360	765	490	340	250	191	151	122
	2	POS	793	481	320	227	169	131	104	85
	3	POS	928	575	388	278	208	161	129	105
	4	POS	886	545	366	261	195	151	121	98

Standing Seam 360 Engineering Properties

Panel Profile





Engineering Properties of American Buildings Company Standing Seam 360 Panel

Designated Gauge of Steel	Steel Yield KSI	Base Metal Thick. (In.)	Total Thick. (In.)	Panel Weight (lbs. / ft.^{2})	Top In Compression			Bottom In Compression			Fb KSI
					Ix (In.^{4} / ft.)	Sx (In.^{3} / ft.)	Ma K-IN.	Ix (In.^{4} / ft.).	Sx (In.^{3} / ft.)	Ma K-IN	
24 Ga.	50	0.0225	0.0241	1.20	0.278	0.116	3.48	0.126	0.080	2.41	30
22 Ga.	50	0.0300	0.0316	1.58	0.372	0.159	4.76	0.177	0.111	3.32	30

Gauge of Panel	Number of Spans	Load Type	Maximum Total Uniform Load in PSF							
			Span Lengths, Ft.							
			1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
24 Ga.	1	POS	1032	581	372	258	190	145	115	93
	2	POS	548	340	230	165	123	96	76	62
	3	POS	631	402	275	199	151	117	94	77
	4	POS	606	382	261	188	142	110	88	72
22 Ga.	1	POS	1409	793	507	352	259	198	157	127
	2	POS	798	487	325	231	173	133	106	86
	3	POS	930	580	393	282	212	164	131	107
	4	POS	889	551	371	266	199	154	123	100

1. The panels are checked for bending, shear, combined bending and shear, and deflection. Deflection is limited to span/60.
2. Section properties are calculated in accordance with the 2007 North American Specification for the Design of Cold-Formed Steel Structural Members.
3. Minimum yield strength of 24- and 22-gauge steel is 50,000 psi.
4. Steel panels are either aluminum-zinc alloy or G-90 coated. The base metal thickness is used in determining section properties.
5. Positive load (POS) is applied inward toward the panel supports and is applied to the outer surface of the full panel cross section.

Building for Tomorrow

American Buildings Company is committed to reducing our impact on the environment.

Not only are our buildings manufactured from at least 70% recycled steel, but also at the end of its useful life, 100% of an ABC building can be recycled into a variety of steel products including new cars, appliances, buildings and bridges. Furthermore, all ABC divisions are ISO 14001: 2004 Certified. Protecting the environment is critical to our operations and the company's long-term success. At ABC, environmental compliance with laws and regulations governing our operations is a priority equal with all other business functions.

Our commitment to the environment has even more direct effects on our building owners in terms of energy savings. ABC offers two cool panel finish options. Our SP cool coated panels include a 25-year finish warranty. Our PVDF cool coated panels come with a 35-year finish warranty. The cool coatings on both options help generate lower environmental temperatures reducing smog and the heat island effect. What's more, they help reduce cooling costs in hot summer months.

All ABC SSII and SS360 panels are manufactured in our IAS-accredited plants. As an IAS-accredited manufacturer, ABC is committed to quality, skilled workmanship and customer satisfaction. By complying with the special inspection requirements in Chapter 17 of the International Building Code, you can be assured that we have the expertise, resources and infrastructure to provide the highest level of manufacturing standards.

American Buildings Company

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About American Buildings Company

ABC has pioneered the design, manufacture and delivery of metal buildings and roofing systems that set the industry standard.

From industrial and commercial structures to tailored projects for the automotive, retail, athletic and transportation industries, the ABC family of more than 900 authorized Builders has the expertise to exceed expectations for custom engineered metal building projects in a variety of industry segments.

ABC delivers a proven combination of products, technology and customer service to accurately execute projects on time and on budget.

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