



STANDING SEAM ROOF SYSTEMS



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MATERIALS

Standing Seam roof panels weigh a relatively modest 1.5 pounds per square foot. When long life is required for unpainted products, A&S Building Systems offers Galvalume™, an aluminum-zinc alloy coated steel with a coating of 55% aluminum, 43.5% zinc and 1.5% silicon by weight applied to the steel substrate by the hot-dip process in accordance with ASTM A-792.

WARRANTIES

A&S stands behind its' Standing Seam with an industry leading comprehensive optional warranty assuring color coating for Signature 300® painted panels, as well as fade and chalk resistance. This warranty provides protection for up to 40 years against blistering, peeling, cracking, chipping, excessive color fade and chalk.

MAINTENANCE

Signature 300® finishes offer long life, durable fluorocarbon exterior coating that resists chipping, pitting and peeling year after year. Standing Seam assures adequate drainage from rain and snow, effectively solving ponded water problems, leaks and other related troubles commonly associated with flat built-up roofs.

TOLERANCE

Roof leaks can be caused by the natural forces of expansion and contraction. The Standing Seam system is installed using special clip assemblies that allow for roof movement. This system is designed to handle thermal shock and won't crack, blister, absorb moisture, or require painting, patching or caulking, which is usually needed with ordinary non-metal roof systems. The Standing Seam systems carry the highest rating awarded by Underwriters' Laboratories for wind uplift: the Class 90 rating.

CUSTOM DESIGNED & FITTED PANELS

Standing Seam metal roof systems are backed by engineering support to ensure that each roof is right for each building. To guard against leakage, gables finish in a 3" high standing seam, never in the flat valleys of the roof where leakage is most likely to occur. This is even true for buildings that are out of square by up to 4".

No panel penetration is required over the building envelope other than at the endlaps, which are connected by a compression joint specifically designed to seal out the elements. Furthermore, panel sidelaps contain a pre-applied sealant that contributes to its weathertight construction.

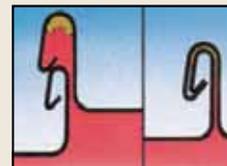
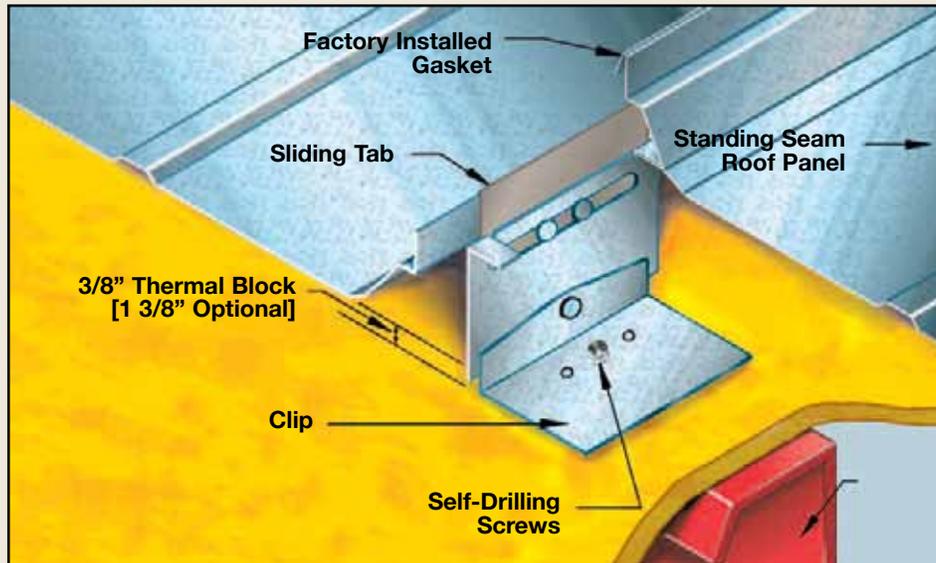
Panels can be custom designed to fit the size, style and special features of almost any commercial structure, and come with an optional 20-year weathertightness warranty.

Galvalume™ is the trademark of BIEC.

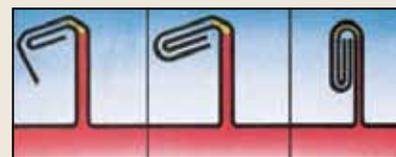
DOUBLE-LOK® & ULTRA-DEK® STANDING ROOFING SYSTEMS

A&S Building Systems offers Double-Lok® & Ultra-Dek® systems that are both constructed to provide a high degree of weathertightness and have been tested by independent laboratories – in accordance with ASTM E283 and E331 for water penetration, wind uplift and air infiltration.

Using a variety of concealed interlocking clips that provide for minimum panel penetrations, these panels can be used on new construction, as well as retrofit on existing structures.



ULTRA-DEK® SYSTEM



DOUBLE-LOK® SYSTEM

Panel Size: 24" wide, 2" high standing seam

Gauge: 24 (22 available by request)

Finish: Galvalume™, Signature® 300 optional

Warranty: 20-year available

Sealant: Factory applied

Insulation: Accommodates a variety of insulation systems, including 1" spacers at the purlin

Seamed: Does not use the mechanically seamed systems, panels snap together interlocking

Wind Uplift: UL 90 rated

Concealed Clips: Available in high or low clips

DOUBLE-LOK® AND ULTRA-DEK® SPECIFICATIONS

1. SCOPE OF WORK

The following is a description of the metal roof as per the contract drawings. Panels, flashing, clips, ridge material, endlaps and fasteners shall be as described here and in the contract drawings unless otherwise approved. The roof support (structural) system and counter flashings are not included in this section.

2. PANELS

Panels shall be UL90 rated, rollformed, 24 gauge (minimum) structural quality aluminum zinc alloy coated, steel sheet complying with ASTM A-792. Galvalume™ sheet steel shall have a minimum of class AZ-50 coating both sides and a minimum yield stress of 50,000 PSI.

- 2.2 Panels shall be in 24" widths (as per contract drawings) with a 3" high rib on each side.
- 2.3 One side of the panel shall be female in configuration, suitable to accept the other male side, and form a locking assembly.
- 2.4 Panels shall be factory notched at both ends so that field installation can commence from either end or side of the building.
- 2.5 Panel sidelaps shall have a factory applied, hot melt mastic (see sealants and closures).

3. ENDLAPS

- 3.1 Mastic (see sealants and closures) shall be applied between panels and secured with panels and back up plate to form a compression joint.

4. FASTENERS

- 4.1 Eave - #14 X 1 1/4" self-drilled with neoprene washer
- 4.2 Endlaps - #14 X 1" self-tapper with washer
- 4.3 Ridge - #14 X 1 1/4" self-driller with neoprene washer
- 4.4 Clips to purlin - #1/4 X 14 X 1" self driller with washer
- 4.5 Clips to bar joist - #12 - 24 X 1 1/4" self-driller with washer
- 4.6 Clip to panel - 14 X 7/8" Lap Tek with neoprene washer

5. CLIPS

All clips shall have factory-applied mastic and be designed so that movement between the panel and the clip does not occur.

- 5.1 Utility clips-shall be 3" in height, to be used when insulation is not required.
- 5.2 Low fixed clips-shall be 3 3/8" in height providing a 3/8" clearance for insulation between the panel and the purlin or joist to reduce water ponding on low pitch roofs. (Not available for machine system.)
- 5.3 High fixed clips shall be 4 3/8" in height to accommodate a 1" thermal space for added insulation at the purlins. (Not available for machine system.)

5.4 High or low floating expansion clips shall be either 3 3/8" or 4 3/8" in height (see contract drawings). Floating clips shall provide minimum of 2" travel to allow for expansion and contraction.

5.5 Hi-thermal clips for Double Lok panels allows a 2" offset from the top of the purlin to the bottom of the roof panel, enabling up to 12" of blanket insulation over the purlin.

6. SEALANTS AND CLOSURES

- 6.1 Factory-applied sealant used in panel sidelaps shall be foamable hot melted mastic sealant, Lastomer, FM 100 or equal.
- 6.2 Field-applied sealant used at the endlaps, eaves, ridge assembly and gable flashings shall be Lastomer Isobutylene tripolymer of 100% solids. This isobutylene based elastomeric tape sealer shall be furnished in roll form or pre-cut to length and is formulated without asbestos fillers. Sealant size, shape and quantity to be as per roof system manufacturers standards. Sealant is to be manufactured and packaged with pre-applied silicone treated release backing paper to facilitate rapid and clean application with precise control of tape placement and sealant volume.
- 6.3 Outside closures shall be manufactured from the same same materials as the roof panels.
- 6.4 Inside closures shall be 18 gauge metal.

7. FLASHING AND TRIM

- 7.1 Flashing at the rake (parallel to roof panels) and high eave shall not compromise the integrity of the roof system by allowing movement due to thermal expansion and contraction. (This applies to floating systems only.)
- 7.2 The panel manufacturer shall supply the flexible membranes if applicable.
- 7.3 All trim and flashing shall be manufactured from Galvalume™ steel sheet, whether pre-painted or bare.

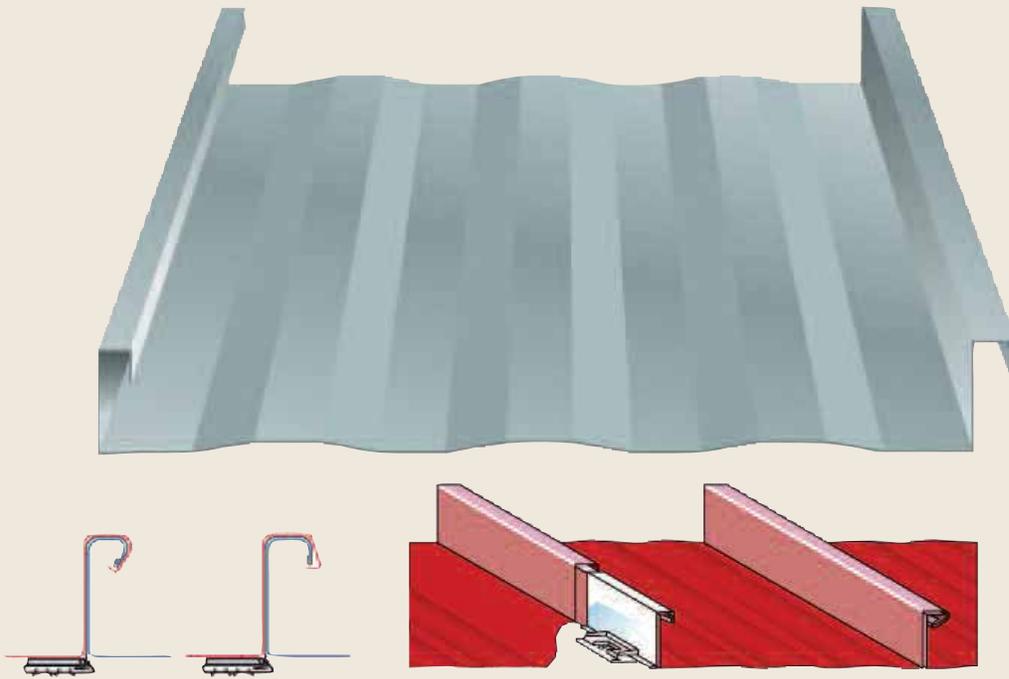
8. INSTALLATION

- 8.1 Erection of the roof systems shall be in complete accordance with the manufacturers erection manual.
- 8.2 The erection manual shall include procedures and designs to accommodate the out-of-square and out-of-plumb conditions that normally occur in construction.

For complete and in depth specification data on all components of the Standing Seam System, contact A&S Buildings Systems.

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BATTENLOK® HS STANDING SEAM ROOF SYSTEM



The BattenLok® HS (High Strength) standing seam roof system is the most proven design on the market. It has been installed on thousands of building projects all over the world.

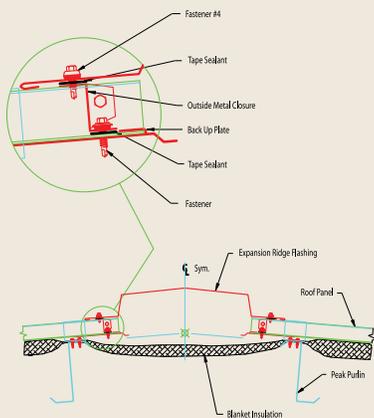
The advantages of **BattenLok® HS** include the aesthetically pleasing architectural design with vertical ribbed seams, which are easily custom flashed.

A unique feature of the **BattenLok® HS** is sidelaps that are mechanically seamed with an electric seamer for a sure lock. This system features easy to handle 16" wide panels with over 50 years of service in the market place. The proven durability and performance of the **BattenLok® HS** panel, with the factory installed mastic and swaged endlaps ensures weathertightness.

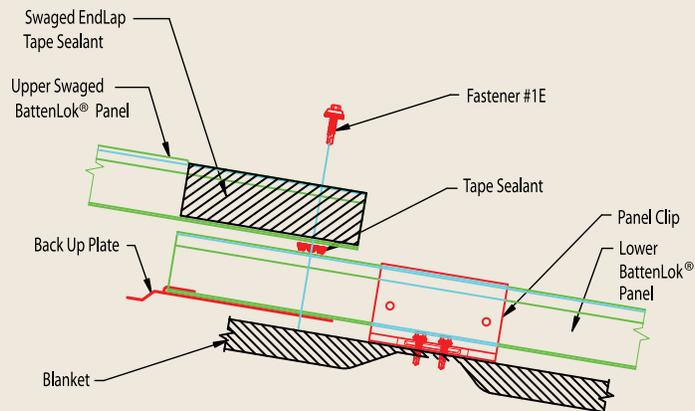
BattenLok® HS is a structural panel that spans up to 5 ft. on purlins, or can be used as an architectural panel on plywood and felt substrate.

BattenLok® HS is a flat panel with vertical ribs creating no voids, therefore no eave closure plugs are required.

BattenLok® HS is designed to meet the ever changing AISI specifications and other industry codes.



RIDGE DETAIL



ENDLAP DETAIL

FEATURES & SPECIFICATIONS



BattenLok® HS panels are 12" or 16" wide flat profile standing seam panels. Designed for reroofing existing buildings or roofing new ones of any type, the panels have 2" high ribs and are machine joined at the edges with a mechanically locking seamer. Lengths up to 45' are available and, longer panels may be ordered.

BattenLok® HS panels are available. Longer panels in 24-gauge zinc aluminum alloy coated steel, 50,000 psi minimum yield strength. Signature 300® fluorocarbon coating is formulated with Kynar 500® polyvinylidene fluoride [70% of resin solids]. Kynar 500® is a registered trademark of Atochem North America, Inc.

ICBO APPROVAL **BattenLok® HS** roofing system details, engineering calculations, computer printouts and data have been examined by the ICBO Evaluation Service, Inc. and have been found to comply with the 1997 Uniform Building Code.

PANEL SIZE: 12" & 16" wide, 2" high standing seam

GAUGE: 24 [other gauges are non-standard]

SUBSTRATE: Galvalume™

WARRANTY: 20-year available

SEALANT: Factory applied

INSULATION: Can accept up to 6" blanket fiber glass and 1" board thermal blocks

SEAMED: Roof is mechanically seamed in the field

WIND UPLIFT: UL 90 rated

CONCEALED CLIPS: Available in either fixed or floating

Superior strength-to-weight ratios



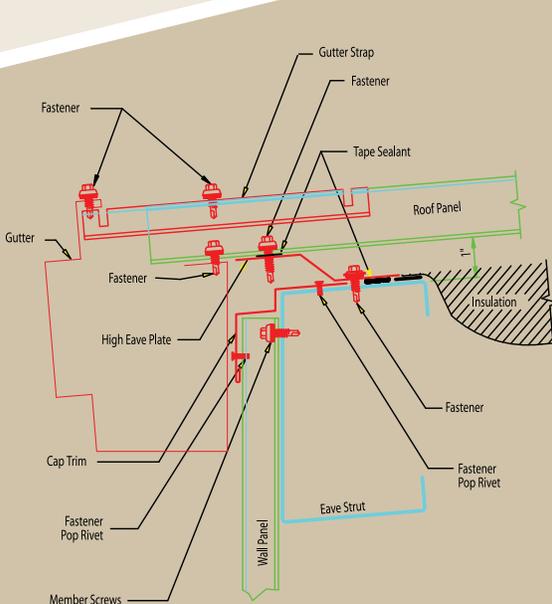
CONSTRUCTION NUMBER	PANEL WIDTH (IN.)	GAUGE	CLIP TYPE	CLIP SPACING	SUBSTRATE	UL-2218 IMPACT RESISTANCE	UL-263 FIRE/RATING	UL-580 RATING
90	16"	24 min	*	5'-0 1/4"	Open Framing	Class 4	Class A	Class 90
176	16"	24 min	N/A	5'-0 1/4"	Open Framing	Class 4	Class A	Class 90
180	16"	24 min	**	5'-0 1/4"	Open Framing	Class 4	Class A	Class 90
238B	16"	24 min	**	2'-6"	Composite System	Class 4	Class A	Class 90
437	16"	24 min	**	5'-0"	Plywood	Class 4	Class A	Class 90
449	16"	24 min	*	5'-0"	Open Framing	Class 4	Class A	Class 90
451	16"	24 min	*	2'-0"	Composite System	Class 4	Class A	Class 90
452	16"	24 min	*	2'-0"	Composite System	Class 4	Class A	Class 90
487	16"	24 min	**	4'-0"	Composite System	Class 4	Class A	Class 90

*FIXED OR FLOATING (HIGH OR LOW) ** FIXED OR FLOATING (HIGH, LOW, OR UTILITY)

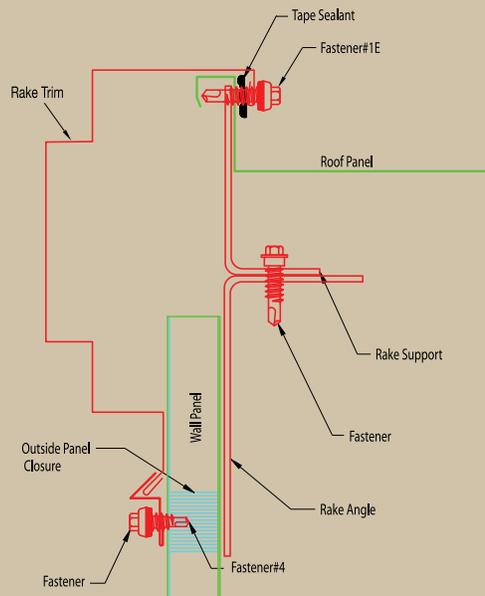
Subject to change without notice

NOTES:

1. Test procedures are in accordance with Underwriters Laboratories Standard UL-580 under "Tests For Uplift Resistance of Roof Assemblies."
2. A detailed installation method is available for each construction number above and can be found in the UL Roofing, Materials and Systems Directory. The panels must be installed in a certain manner to achieve the published results.
3. The panel qualifies for a Class A fire rating in compliance with Underwriters Laboratories Standard UL-263 when installed over a non-combustible substrate. A Class C fire rating can be obtained over a combustible deck.
4. The panel system qualifies under the following Fire Resistance Design Numbers: P225, P227, P230, P237, P265, P268, P508, P510, P512, P701, P711, P717, P720, P722, P726, P731, P734, P736, P801, P803, P814, P815, and P819. Refer to the UL Fire Resistance Directory for specific construction methods and hourly ratings. BattenLok® HS panels carry a Class 4 rating under UL-2218.
5. "Test Standard For Impact Resistance"



EAVE CONDITION WITH GUTTER



RAKE DETAIL



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