

Double-Lok®

Standing Seam Roof System

Double-Lok® is a metal standing seam roofing product attached to sub-framing using a variety of concealed, interlocking clips that provide for minimum panel penetrations. Double-Lok® panels can be used on new construction as well as retrofit on existing structures. This panel design provides a high degree of weathertightness and has been tested by independent laboratories in accordance with ASTM E283 and E331 (for air infiltration, water penetration, and wind uplift).

Gauge

24 gauge (standard)
22 Gauge

Length

50' maximum is standard but longer lengths available by special request

Dimensions

24" wide by 3" high

Finish

Galvalume Plus®
Signature® 200 Colors
Signature® 300 Colors

Limitations

Recommended for roof slopes of 1/4:12 or greater. Fixed clip recommended only for double slope buildings 200' wide or less and single slope buildings 100' wide or less. (May vary upon extreme weather conditions.) Oil-canning is not a reason for rejection.

Usage

New and retrofit applications

Fasteners

Concealed fastening system. The clips are available as floating or fixed. Two different clip heights are available to allow for thermal blocks.

Attributes

1. Panel penetration is eliminated over the entire building envelope other than at the end laps and panel ends which are connected by a compression joint
2. Factory notched at both ends with pre-punched holes
3. End laps feature a 16 gauge backup plate with pre-punched holes
4. Fewer exposed fasteners (by 80%) than traditional side lap panels
5. Air infiltration and water penetration tests under IAS E283 and E331 methods performed on side lap panels
6. Signature® 300 paint system
7. Tall or short clips
8. Panel side laps feature a factory applied sealant
9. UL® 90 and FM rated
10. Optional product and weathertightness warranties

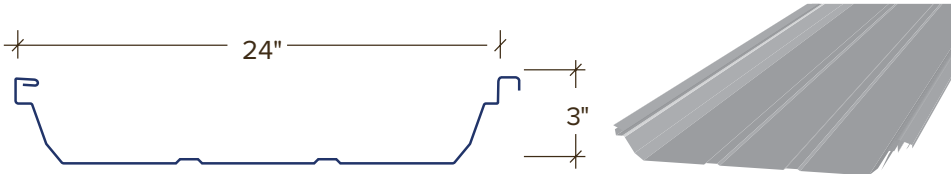
Advantages

1. Assures a weathertight building envelope
2. Maximizes field installation efficiency with installation allowed from either end of building or on both sides simultaneously
3. Allows solid connection at end laps plus proper fastener spacing; Pre-punched holes facilitate installation and assure proper panel placement
4. Maximizes weathertightness
5. Assures specifiers of minimal air infiltration and water penetration
6. 25-year finish warranty
7. Maximizes insulation systems options including 1" thermal spacers at the purlins
8. Facilitates weathertight construction and ease of installation
9. Lowers insurance costs
10. Adds to customer confidence

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Double-Lok® - Measurements



Double-Lok® - Section Properties

Panel Gauge	Fy (KSI)	Weight (PSF)	NEGATIVE BENDING			POSTIVE BENDING		
			Ixe (IN. 4/FT.)	Sxe (IN. 3/FT.)	Maxo (KIP-IN.)	Ixe (IN. 4/FT.)	Sxe (IN. 3/FT.)	Maxo (KIP-IN.)
24	50	1.23	0.1507	0.0989	2.9619	0.3224	0.1307	3.9132
22	50	1.56	0.2059	0.1394	4.1747	0.4205	0.1708	5.1120

Properties Notes:

1. All calculations for the properties of Double-Lok® panels are calculated in accordance with the 2001 edition of the North American Specification For Design Of Cold-Formed Steel Structural Members.
2. **Ixe** is for deflection determination.
3. **Sxe** is for bending.
4. **Maxo** is allowable bending moment.
5. All values are for one foot of panel width.

Allowable Uniform Loads Notes:

1. Allowable loads are based on uniform span lengths and Fy = 50 ksi.
2. **Live Load** is limited by bending, shear, combined shear and bending.
3. Allowable loads consider a maximum deflection ratio of L/180.
4. The weight of the panel has not been deducted from the allowable loads.
5. **The allowable uniform loads are not for use when designing panels to resist wind uplift.**
6. Please contact manufacturer or manufacturer's website for most current allowable wind uplift loads.
7. The use of any field seaming equipment or accessories including but not limited to clips, fasteners, and support plates (eave, backup, rake, etc.) other than those provided by the manufacturer may damage the panels, void all warranties and will void all data.

Allowable Uniform Loads in Pounds Per Square Foot

24 Gauge (Fy = 50 Ksi)

Span Type	Load Type	SPAN IN FEET						
		2.5	3.0	3.5	4.0	4.5	5.0	5.5
Single	Live	204.0	170.0	145.7	127.5	113.3	102.0	86.2
2-Span	Live	204.0	170.0	145.7	123.4	97.5	79.0	65.3
3-Span	Live	204.0	170.0	145.7	127.5	113.3	98.7	81.6
4-Span	Live	204.0	170.0	145.7	127.5	113.3	92.2	76.2

22 Gauge (Fy = 50 Ksi)

Span Type	Load Type	SPAN IN FEET						
		2.5	3.0	3.5	4.0	4.5	5.0	5.5
Single	Live	296.9	247.5	212.1	185.6	165.0	136.3	112.7
2-Span	Live	296.9	247.5	212.1	173.9	137.4	111.3	92.0
3-Span	Live	296.9	247.5	212.1	185.6	165.0	139.1	115.0
4-Span	Live	296.9	247.5	212.1	185.6	160.4	129.9	107.4

The engineering data contained herein is for the expressed use of customers and design professionals. Along with this data, it is recommended that the design professional have a copy of the most current version of the North American Specification for the Design of Cold-Formed Steel Structural Members published by the American Iron and Steel Institute to facilitate design. This specification contains the design criteria for cold-formed steel components. Along with the specification, the designer should reference the most current building code applicable to the project jobsite in order to determine environmental loads. If further information or guidance regarding cold-formed design practices is desired, please contact the manufacturer.