

### PRODUCT NAME

KLS Roof System for new roofing or retrofit roofing.

### MANUFACTURER

Kirby Building Systems

[www.kirbybuildingsystems.com](http://www.kirbybuildingsystems.com)

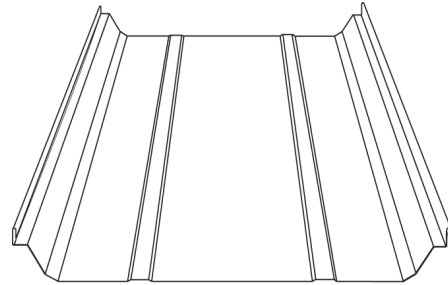
### PRODUCT DESCRIPTION

Basic Use: For roofing new buildings or reroofing existing buildings of any construction type. Specially designed roof panels are secured to the structural system with concealed clips. Sliding clips provide for thermal expansion along the slope. KLS panels have ribs 3" high on 24" centers. Net width coverage of each panel is 2', and panels are available in standard lengths up to 45'. Longer lengths are available upon request.

Materials: KLS roof panels are 24 or 22 gauge 50,000 psi steel. Aluminum zinc Alloy coated ASTM A792-08 GR 50 Class I. Prepainted panels have PVDF Cool Paint System. Also available in four Silicone-Polyester Cool colors. KLM has a two piece floating clip providing thermal expansion or contraction (UL 90 Rated - Underwriters Laboratories Inc.).

KLS sidelaps have factory applied Hot Melt mastic. Endlaps, roof flashing laps, ridges and eave closures are sealed with tape mastic. The material is non-staining, non-corrosive, non-toxic and non-volatile.

Caulk: All gutter endlaps, endcaps, outside closure-to-panel ribs, outside closure tabs to outside closure tabs and roof accessories are sealed with polyurethane caulk.



All fasteners for panel to secondary framing and panel to panel will be one of the following EPDM washer head screws.

Standard roof fasteners shall be No. 1/4"-14 x 1 1/4" ZAC. KLS panel clips are attached to the purlins with the following fasteners:

Self-drilling screws are 1/4"-14x1 1/4" TEK 2 with washer.

### TECHNICAL DATA

The KLS panel has received a Class 90 Wind Uplift rating by Underwriters Laboratories Inc. when tested in accordance with test procedure UL 580. The KLS roof panel has been Factory Mutual approved. This panel has also been tested in accordance with Air Infiltration ASTM E1680-95 and Water Penetration ASTM E1646-95.

### INSTALLATION

Installation should be performed in accordance with Kirby Building Systems' manuals and building erection drawings and should be done by a qualified installer using proper tools and equipment.

## WARRANTY

35 & 25 year paint finish warranties are available. 20 year weathertightness and 25 year aluminum zinc alloy warranties are also available.

## MAINTENANCE

Only normal routine maintenance is required over the life of the panels.

## PRODUCT NOTES

A certain amount of waviness called "oilcanning" may exist in this panel. Minor waviness of the panel is not sufficient cause for rejection, because oilcanning does not affect the structural integrity of the panel. Standing seam panels in general are known for tendency to rumble in high winds if insulation is not used. KLS and KLM are no different. Under no circumstances should KLS or KLM be used without blanket insulation between the panel and the purlin/bar joist.

Designated Gauge of Steel	Steel Yield (KSI)	Base Metal Thick. (In)	Total Thick. (In)	Panel Weight (Lbs/Ft <sup>2</sup> )	Top In Compression			Bottom In Compression			Fb (KSI)
					Ix (In <sup>4</sup> /Ft)	Sx (In <sup>3</sup> /Ft)	Ma (K-IN)	Ix (In <sup>4</sup> /Ft)	Sx (In <sup>3</sup> /Ft)	Ma (K-IN)	
24 Gauge	50	0.0225	0.0241	1.23	0.2798	0.1153	3.4524	0.1350	0.0951	2.8477	30
22 Gauge	50	0.0300	0.0316	1.56	0.3640	0.1504	4.5020	0.1837	0.1332	3.9877	30
Gauge of Panel	Number of Spans	Load Type									
			L= 2'-6"	L= 3'-0"	L= 3'-6"	L= 4'-0"	L= 4'-6"	L= 5'-0"			
24 Ga.	1	POS	204.0	170.0	145.7	127.5	113.3	92.1			
	2	POS	204.0	170.0	145.7	118.7	93.8	75.9			
	3	POS	204.0	170.0	145.7	127.5	113.3	94.9			
	4	POS	204.0	170.0	145.7	127.5	109.4	88.6			
22 Ga.	1	POS	296.9	247.5	212.1	185.6	148.2	120.1			
	2	POS	296.9	247.5	212.1	166.2	131.3	106.3			
	3	POS	296.9	247.5	212.1	185.6	164.1	132.9			
	4	POS	296.9	247.5	212.1	185.6	152.3	124.1			

1. The panels were checked for bending , shear , combined bending and shear and deflection. Deflection was limited to span/180.
2. Section properties have been calculated in accordance with the 2001 North American Specification for the Design of Cold-Formed Steel Structural Members.
3. Steel panels are either aluminum zinc alloy or G90/G60 coated. The base metal thickness was used in determining section properties.
4. Positive load (POS) is applied inward toward the panel supports and is applied to the outer surface of the panel cross-section.
5. The weight of the panel has not been deducted from the allowable loads.
6. THE ABOVE LOADS ARE NOT FOR USE WHEN DESIGNING PANELS TO RESIST WIND UPLIFT.



TENNESSEE DIVISION  
124 Kirby Drive  
Portland, TN 37148  
T. 615.325.4165

MISSISSIPPI DIVISION  
101 Airport Road  
Starkville, MS 39759  
T. 662.323.8021

[www.kirbybuildingsystems.com](http://www.kirbybuildingsystems.com)