METAL DEPOTS

YOUR METAL CONSTRUCTION SOLUTION

ROOFING SYSTEM ESTATE™ SERIES

ARCHITECT/ENGINEER INFORMATION

1. The **Estate™ Series** is a concealed fastener roof and fascia panel. The panel is designed with an integral lock and fastening flange which requires no clips or special tools for installation. Panels are available with Striations or Minor Ribs.
2. Minimum recommended slope is 3:12. For slopes less than 3:12, please inquire. The substructure (eave to ridge) must be on plane (¼" in 20' or ⅜" in 40' tolerance).
3. Use a properly aligned and uniform substructure to avoid panel distortion. Typical substructure is ⅝" plywood. **(Oil canning is not a cause for rejection.)**
4. **Estate™ Series** panels are water shedding panels and therefore must be installed on a minimum 3:12 roof slope. The panels must be installed over a completely waterproofed substructure. If the waterproof membrane is mechanically attached with metal fasteners of any type, fasteners should be covered to protect the back side of the roof panels. Any mechanical attachment device that does not lay flat on the deck will telegraph through the panels.
5. For continuous panels over 40', please inquire. Panels may not be endlapped.
6. Do not overdrive fasteners when installing panels. This can cause panel distortion and prevent the panels from moving freely with thermal changes.
7. **Estate™ Series** panels are best secured to a solid wood substrate by using a Fastener #13. Fastener placement is dependent upon design considerations. A qualified engineer must be consulted to insure that all design codes and other pertinent criteria are met, refer to load tables.

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ESTATE™ SERIES ROOFING SYSTEM

GENERAL DESCRIPTION

Coverage Width - 16" and 12"

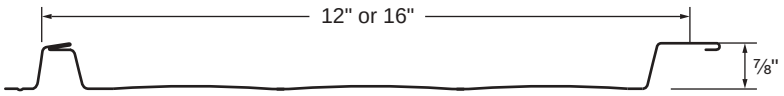
Minimum Slope - 3:12

Panel Attachment - Fastener #13 (Concealed Fastener)

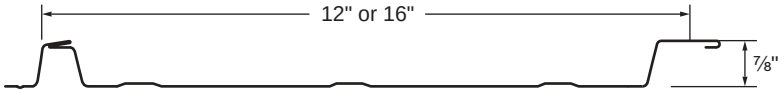
Panel Substrate - Galvalume Plus® & Signature® 200

Gauge - 29 ga. or 26 ga.

Finishes - Smooth



STRIATIONS



MINOR RIBS

PRODUCT SELECTION CHART

Product	Galvalume Plus®		Standard Colors	
Estate™ Series	29 ga.	26 ga.	29 ga.	26 ga.
16"	●	●	●	●
12"	●	●	●	●

● - Available in any quantity.
Other colors, finishes, gauges, and materials available: please inquire.
*Striated or minor rib panels may reduce "oil canning".

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ROOFING SYSTEM ESTATE™ SERIES

UL 90 Requirements

Estate™ Series

Construction #454

29 MSG Min. Gauge Estate™ Series Panel over Plywood Deck

1. Metal Panels (29 gauge or heavier) - 12" or 16" wide, continuous over two or more spans.
2. Fasteners - No. 10 X 1" long No. 2 Phillips pancake head screw spaced 12" O.C.
3. Plywood - Minimum ⅝" thick plywood. All Butt Joints to be sealed with tape or caulk.
4. Joists - joists spaced 2' O.C. may be one of the following"
   A. Nom. 2' X 6" wood joists No. 2 or better.
   B. Nom. 2' X 4" wood when used on a top cord of a wood truss, No. 2 or better.
   C. Light gauge structural steel framing with the member against the plywood to be a minimum No. 22 msg coated steel.
5. Moisture Barrier - Membrane to protect plywood substructure.

NOTES:

1. Wind uplift 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 Construction Number above and can be found in the UL Roofing Materials and Systems Directory or at http://www.ul.com. 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 will be qualified for over a combustible substrate.
4. **Estate™ Series** panels carry a Class 4 Rating under UL 2218 "Test Standard for Impact Resistance".

CAUTION

For UL 90 Rated Roofs, the above requirements must be followed. See UL Roofing Materials and Systems Directory for additional requirements. If you have any questions, call Metal Depots before proceeding.

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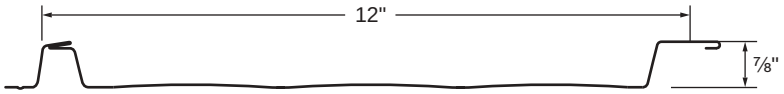
ESTATE™ SERIES ENGINEERING

Estate™ Series 12"



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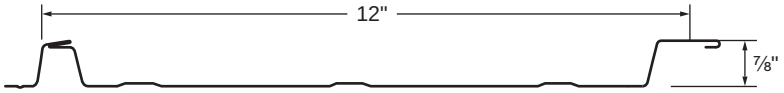


MINOR RIBS

SECTION PROPERTIES								
			NEGATIVE BENDING			POSITIVE BENDING		
PANEL GAUGE	Fy (KSI)	WEIGHT (PSF)	Ixe (IN.4/FT.)	Sxe (IN.3/FT.)	Maxo (KIP-IN.)	Ixe (IN.4/FT.)	Sxe (IN.3/FT.)	Maxo (KIP-IN.)
29	50	0.75	0.0077	0.0161	0.4821	0.0159	0.0234	0.7018
26	50	0.95	0.0106	0.0231	0.6920	0.0211	0.0313	0.9357

NOTES:

1. All calculations for the properties of Estate Series panels are calculated in accordance with the 1996 edition of the *COLD-FORMED STEEL Design Manual*, with 1999 supplement - published by the American Iron and Steel Institute (AISI).
2. Ixe is for deflection determination.
3. Sxe is for Bending.
4. Maxo is allowable bending moment.
5. All values are for the one foot of panel width.

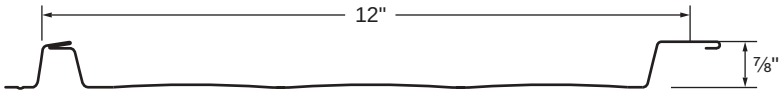
METAL DEPOTS

YOUR METAL CONSTRUCTION SOLUTION

ENGINEERING

ESTATE™ SERIES

Estate™ Series 12"



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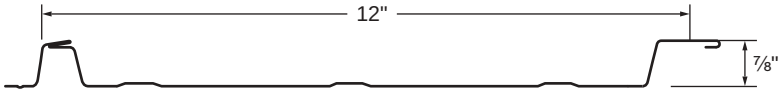


MINOR RIBS

ALLOWABLE UNIFORM LOADS IN POUNDS PER SQUARE FOOT

29 Gauge (Fy = 80 KSI)								
SPAN TYPE	LOAD TYPE	SPAN IN FEET						
		1.0	1.5	2.0	2.5	3.0	3.5	4.0
SINGLE	LIVE LOAD/DEFLECTION	194.5	129.7	97.3	74.9	51.4	32.4	21.7
2-SPAN	LIVE LOAD/DEFLECTION	182.1	121.4	80.4	51.4	35.7	26.2	20.1
3-SPAN	LIVE LOAD/DEFLECTION	207.0	138.0	100.4	64.3	44.6	32.8	25.1
4-SPAN	LIVE LOAD/DEFLECTION	199.2	132.8	93.8	60.0	41.7	30.6	23.4

26 Gauge (Fy = 80 KSI)								
SPAN TYPE	LOAD TYPE	SPAN IN FEET						
		1.0	1.5	2.0	2.5	3.0	3.5	4.0
SINGLE	LIVE LOAD/DEFLECTION	303.0	202.0	151.5	99.8	68.3	43.0	28.8
2-SPAN	LIVE LOAD/DEFLECTION	299.9	199.9	115.3	73.8	51.3	37.7	28.8
3-SPAN	LIVE LOAD/DEFLECTION	340.8	227.2	144.2	92.3	64.1	47.1	36.0
4-SPAN	LIVE LOAD/DEFLECTION	328.0	218.6	134.6	86.2	59.8	44.0	33.7

NOTES:

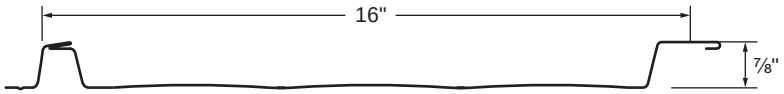
1. Allowable loads are based on uniform span lengths.
2. LIVE LOAD is limited by bending, shear, combined shear and bending, or web crippling.
3. DEFLECTION is limited by a maximum deflection ratio of L/180 of span.
4. Panel weight has not been deducted from allowable loads.

METAL DEPOTS

YOUR METAL CONSTRUCTION SOLUTION

ESTATE™ SERIES ENGINEERING

Estate™ Series 16"



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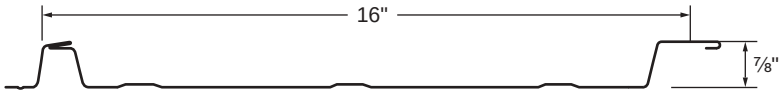

MINOR RIBS

SECTION PROPERTIES								
			NEGATIVE BENDING			POSITIVE BENDING		
PANEL GAUGE	Fy (KSI)	WEIGHT (PSF)	Ixe (IN.4/FT.)	Sxe (IN.3/FT.)	Maxo (KIP-IN.)	Ixe (IN.4/FT.)	Sxe (IN.3/FT.)	Maxo (KIP-IN.)
29	50	0.75	0.0059	0.0123	0.3668	0.0131	0.0184	0.5513
26	50	0.95	0.0833	0.0182	0.5444	0.0175	0.0246	0.7357

NOTES:

1. All calculations for the properties of Estate Series panels are calculated in accordance with the 1996 edition of the *COLD-FORMED STEEL Design Manual*, with 1999 supplement - published by the American Iron and Steel Institute (AISI).
2. Ixe is for deflection determination.
3. Sxe is for Bending.
4. Maxo is allowable bending moment.
5. All values are for the one foot of panel width.

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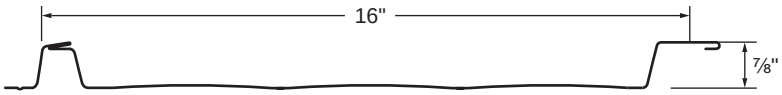
ENGINEERING

ESTATE™ SERIES

Estate™ Series 16"



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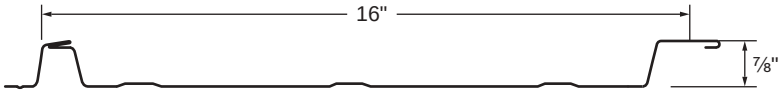

MINOR RIBS

ALLOWABLE UNIFORM LOADS IN POUNDS PER SQUARE FOOT

29 Gauge (Fy = 80 KSI)								
SPAN TYPE	LOAD TYPE	SPAN IN FEET						
		1.0	1.5	2.0	2.5	3.0	3.5	4.0
SINGLE	LIVE LOAD/DEFLECTION	194.5	129.7	91.9	58.8	40.8	26.7	17.9
2-SPAN	LIVE LOAD/DEFLECTION	182.1	108.7	61.1	39.1	27.2	20.0	15.3
3-SPAN	LIVE LOAD/DEFLECTION	207.0	135.9	76.4	48.9	34.0	25.0	19.1
4-SPAN	LIVE LOAD/DEFLECTION	199.2	126.8	71.4	45.7	31.7	23.3	17.8

26 Gauge (Fy = 80 KSI)								
SPAN TYPE	LOAD TYPE	SPAN IN FEET						
		1.0	1.5	2.0	2.5	3.0	3.5	4.0
SINGLE	LIVE LOAD/DEFLECTION	294.1	196.1	122.6	78.5	54.5	35.6	23.9
2-SPAN	LIVE LOAD/DEFLECTION	293.5	161.3	90.7	58.1	40.3	29.6	22.7
3-SPAN	LIVE LOAD/DEFLECTION	333.5	201.6	113.4	72.6	50.4	37.0	28.4
4-SPAN	LIVE LOAD/DEFLECTION	320.9	188.3	105.9	67.8	47.1	34.6	26.5

NOTES:

1. Allowable loads are based on uniform span lengths.
2. LIVE LOAD is limited by bending, shear, combined shear and bending, or web crippling.
3. DEFLECTION is limited by a maximum deflection ratio of L/180 of span.
4. Panel weight has not been deducted from allowable loads.