

1 1/2" MECHANICAL

**METAL
FORMED
GOODS** COMPANY

Hilliard, Ohio

PH: 614-876-4280 / FX: 614-876-8850

www.metalformedgoods.com

Advantages

- ◆ Available widths from 12" to 20"
- ◆ Can be installed on solid substrates or over open framing
- ◆ Mechanically seaming provides maximum uplift resistance
- ◆ Nominal 1 1/2" seam height with hidden fasteners
- ◆ Seams can be single or double locked
- ◆ 30 Year Finish Warranty
- ◆ 24 gauge Kynar steel standard

Materials:

24 gauge galvanized / galvalume steel (Standard)
22 & 26 gauge galvanized / galvalume steel
.032 Aluminum (Kynar or Anodized)
16 & 20 ounce copper

Performance:

ASTM 1592 Wind Uplift
ASTM 1680 & 283 Air Infiltration
ASTM 1646 & 331 Water Penetration
ASTM 330 Structural Performance
ASTM 380 Concentrated Load Test

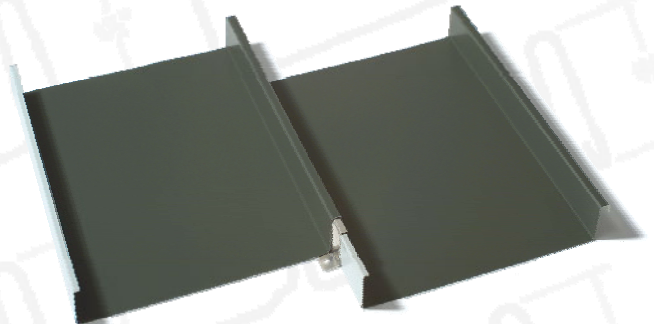
Load Span Table for 1 1/2" Mechanical Seamed Panel
18.25" Width

Material	24 Gauge			22 Gauge		
	THREE EQUAL SPANS			THREE EQUAL SPANS		
SPAN (FT)	W (PSF)	RE	RI	W (PSF)	RE	RI
2	162.5	130	357.5	218.75	175	481.2
2.5	104	104	286	140	140	385
3	72.22	86.7	238.3	97.22	116.7	320.8
3.5	53.06	74.3	204.3	71.43	100	275
4	40.63	65	178.8	54.69	87.5	240.6
4.5	32.1	57.8	158.9	43.21	77.8	213.9
5	26	52	143	35	70	192.5

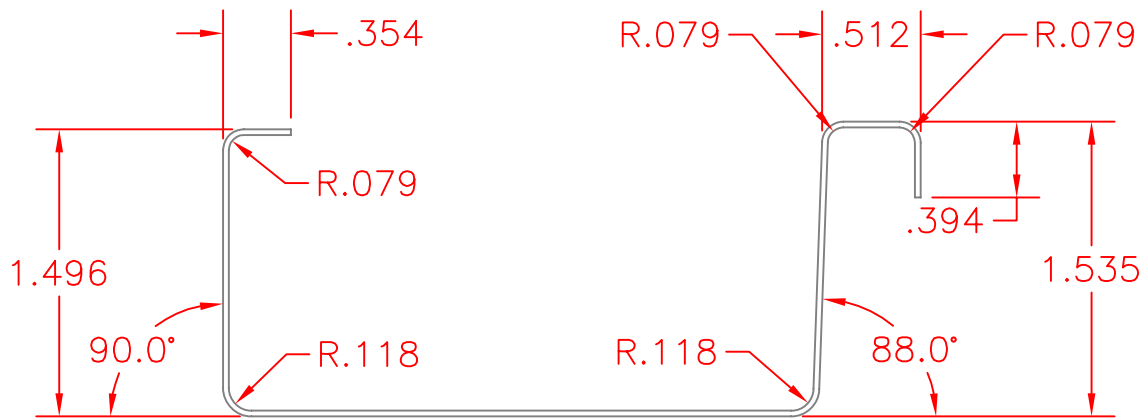
W = Allowable Uniform Load

RE = End Support Reaction (#/ft)

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 Suite D
 Hilliard, OH 43026
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PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preformed, prefinished metal roofing and flashings.
- B. Miscellaneous trim, flashing, and accessories.
- C. Sealant
- D. Fastening devices.

1.02 RELATED SECTIONS

- A. Section 05120: Structural Steel Framing.
- B. Section 05500: Miscellaneous Metal Fabrication.
- C. Section 06100: Rough Carpentry.
- D. Section 07631: Flashing and Sheet Metal Gutters.
- E. Section 07900: Sealants.

1.03 REFERENCES

- A. American Iron & Steel Institute (AISI) Specification for the Design of Coldformed Steel Structural Members.
- B. ASTM A-525 Steel Sheet, Zinc-Coated (Galvanized)
- C. ASTM E 1680 & 283
- D. ASTM E 1646 & 331
- E. ASTM E-1592
- F. Building Materials Directory - Underwriter's Laboratories, Test Procedure 580.

1.04 ASSEMBLY DESCRIPTION

- A. The roofing assembly includes preformed sheet metal panels, related accessories, valleys, hips, ridges, eaves, corners, rakes, miscellaneous flashing and attaching devices.

1.05 SUBMITTALS

- A. Submit detailed drawings showing layout of panels, anchoring details, joint details, trim, flashing, and accessories. Show details of weatherproofing, terminations, and penetrations of metal work.
- B. Submit a sample of each type of roof panel, complete with factory finish.
- C. Submit results indicating compliance with minimum requirements of the following performance tests:
 - 1. Air Infiltration ASTM E 1680 & 283
 - 2. Water Infiltration ASTM E 1646 & 331
 - 3. Wind Uplift ASTM E 1592

1.06 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in Architectural Sheet Metal Products with five (5) years minimum experience.
- B. No product substitutions shall be permitted without meeting specifications.
- C. Substitutions shall be submitted 10 Days prior to Bid Date and acceptance put forth in an addendum.
- D. No substitutions shall be made after the Bid Date.

1.07 FABRICATION, STORAGE AND HANDLING

- A. Upon fabrication of panels and other materials, installer shall examine the shipment for damage and completeness.
- B. Panels should be stored in a clean, dry place. One end should be elevated to allow moisture to run off.
- C. Panels with strippable film must not be stored in the open, exposed to the sun.
- D. Stack all materials to prevent damage and to allow for adequate ventilation.

1.08 WARRANTY

- A. Paint finish shall have a twenty year guarantee against cracking, peeling and fade (not to exceed 5 N.B.S. units).
- B. Galvalume material shall have a twenty year guarantee against failure due to corrosion, rupture or perforation.
- C. Applicator shall furnish guarantee covering watertightness of the roofing system for the period of two (2) years from the date of substantial completion.

PART 2 PRODUCT

2.01 ACCEPTABLE MANUFACTURERS

- A. Metal Formed Goods Company of Hilliard, Ohio
- B. Substitutions shall fully comply with specified requirements.

2.02 SHEET MATERIALS

- A. Prefinished Metal shall be Hot-Dipped Galvanized - ASTM A446-

85 Grade C G90 Coating A525-86 24 Gauge core steel or prefinished Galvalume - ASTM 792-86 AZ-55.

B. Unfinished Metal shall be Grade C Galvalume ASTM 792-86, AZ 55, "Satin Finish".

C. Finish shall be full strength Kynar 500 Fluoropolymer coating coating, applied by the manufacturer on a continuous coil coating line, with a top side dry film thickness of 0.70 to 0.90 mil over 0.25 to 0.35 mil prime coat, to provide a total dry film thickness of 0.95 to 1.25 mil. Bottom side shall be coated with primer with a dry film thickness of 0.25 mil. Finish shall conform to all tests for adhesion, flexibility, and longevity as specified by the Kynar 500 finish supplier.

D. Strippable film shall be applied to the top side of the painted coil to protect the finish during fabrication, shipping and field handling. This strippable film must be removed before installation.

2.03 FABRICATION

A. All exposed adjacent flashing shall be of the same material and finish as the roof panels.

B. Hem all exposed edges of flashing on underside, 1/2 inch.

2.04 METAL FORMED GOODS - 1 ½" MECHANICAL SEAM

- 1. Panels shall have [12" to 20"] on-center seam spacing with a nominal seam height of 1 1/2".
- 2. Panels shall be site-formed or factory-formed in continuous lengths from eave to ridge.
- 3. Concealed clips and fasteners shall be spaced as required to meet uplift load requirements.

PART 3 EXECUTIONS

3.01 INSPECTION

- A. Substrate:
 - 1. Examine plywood or metal deck to ensure proper attachment to framing.
 - 2. Inspect roof deck to verify deck is clean and smooth, free of depressions, waves or projections, level to +/- 1/4" in 20', and properly sloped to [valleys] (or) [eaves].
 - 3. Verify roof openings, curbs, pipes, sleeves, ducts or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
 - 4. Verify deck is dry and free of snow or ice.
- B. Felting:
 - 1. Verify #30 unperforated asphalt saturated roofing felt underlayment has been installed over solid sheathing and fastened in place.
 - 2. Felt to be installed horizontally, starting at eave to ridge with a 6" minimum overlap and 18" endlaps.

3.02 INSTALLATION

- A. Comply with manufacturers standard instructions and conform to standards set forth in the manufacturer's standard literature, in order to achieve a watertight installation.
- B. Install panels in such a manner that horizontal lines are true and level and vertical lines are plumb.
- C. Install starter and edge trim before installing roof panels.
- D. Remove protective strippable film prior to installation of roof panels.
- E. Attach panels with 24 gauge clips and #10-12 x 1" pancake head wood screws, spaced in accordance with approved shop drawings.
- F. Install sealants for preformed roofing panels as approved on shop drawings.
- G. Do not allow panels or trim to come into contact with dissimilar materials.
- H. Do not allow traffic on completed roof. If required, provide cushioned walk boards.
- I. Protect installed roof panels and trim from damage caused by adjacent construction until completion of installation.
- J. Remove and replace any panels or components which are damaged beyond successful repair.

3.03 CLEANING

- A. Clean any grease, finger marks or stains from the panels per manufacturer's recommendations.
- B. Remove all scrap and construction debris from the site.