Product Data Sheet



DefendEX™ MWP

Metal Wall Paneling

High-Performance Cladding

Description

DefendEX™ MWP12 (“MWP12”) and DefendEX MWP16 (“MWP16”) concealed fastener metal wall panels are a high-performance cladding system, offered in a range of materials and profiles to meet the specific needs of a project. The DefendEX MWP Series unique design allows for rapid installation and a unique visual safeguard to ensure the panels are correctly interconnected.

The DefendEX MWP family consists of 11 panel profiles which all interlock together regardless of the gauge, color or finish selected.

For standard color selection, consult the current *EXCEPTIONAL Metals Color Chart*.
Custom color services are available upon request.

Material only warranty available.

Method of Application

1. Attachment of panels to a system of sub-girts or direct attachment to a smooth, solid substrate of DensGlass® or plywood is recommended.
2. Horizontal & vertical installations.
3. Standardized lock joint design permits multiple profile integration.
4. Concealed clips & fasteners.
5. Optional stand-off clips provide ventilation cavity and drain plane behind panel.

NOTE: Follow approved shop drawing installation details.

Storage

- DefendEX metal panels should be stored in a well-ventilated, dry location, where no moisture can contact them. Moisture (From rain, snow, condensation, etc.) trapped between layers of material may cause water stains or white rust, which can affect the service life of the material and will detract from the appearance.
- If outdoor storage cannot be avoided, protect the panels with a ventilated canvas or waterproof paper cover. Do not use plastic, which can cause condensation. Keep the material off the ground in an inclined position with an insulator such as wood, or keep panels crated.
- Storage of end-use materials with protective film applied to the surface should be:
  - Wrapped/packaged to prevent exposure to direct UV, water, oils, or other contaminants.
  - Stored in an enclosed building or holding facility.
  - Within a temperature range of 45° – 90° F (7° – 32° C) and 20 – 80% relative humidity.
  - Less than six months with masking applied (warehouse storage and outdoor exposure combined).
  - Protective film may become brittle with long-term UV exposure.

Precautions

- Oil canning is not a cause for rejection.
    - Heavier gauges, narrower widths, striations, and embossing minimize oil canning.
- Sealant for end laps and lap joints shall be non-drying, non-toxic, and non-shrinking with a serviceable temperature of -60° – 212° F (-51° – 100° C).
- Quality, long-life butyl sealants work best as a gasket sandwiched between two pieces of metal. Non-acetic cured, silicone, color-matching sealants are recommended when voids must be filled. Sealants are not a substitute for proper assembly and workmanship.
- Exercise caution when handling to avoid injury or product damage.
- Refer to Safety Data Sheets (SDS) for safety information, including PPE.
- **Immediately remove protective film after installation.**

Manufacturing Location: Anoka, MN

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Product Data

Property	Value
Panel Type	Concealed Fastener Panels
Material Options	G90 Galvanized Steel: 22 ga (0.64 mm) and 24 ga (0.79 mm) Aluminum: 0.040 in. (1.02 mm) and 0.050 in. (1.27 mm)
Optional Materials	G90 Galvanized Steel: 18 ga (1.44 mm) and 20 ga (1.11 mm) Contact Amrize Technical Services prior to specified
Color	FSBP standard or custom colors
Finish	Kynar 500®/Hylar 5000® high-performance fluorocarbon resinous coatings
Optional Finish	Anodized (aluminum substrate only)
Sealant	Factory- or field-applied butyl
Clip	None required, options for 1/2 in. (12.70 mm) or 3/4 in. (19.05 mm) stand-off clip
Substrate	Sub-girt System or smooth wall
Standard Panel Surface	Smooth or stucco embossed
Starter Pieces	Stocked in 10 ft (3.05 m) length, random color G90 Galvanized Steel: 22 ga (0.64 mm) Aluminum: 0.040 in. (1.02 mm)

MANUFACTURING NOTE:

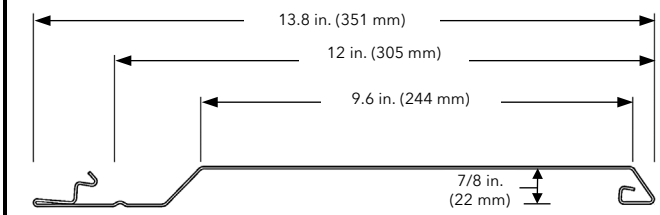
- When mill-finished or anodized aluminum panels are ordered, no lancing on the top of the panel will be provided for clip/fastener connection.
- No lancing on steel panels 120 in. (3,048.00 mm) or less
- No lancing on aluminum panels 84 in. (2,133.60 mm) or less

Product Size

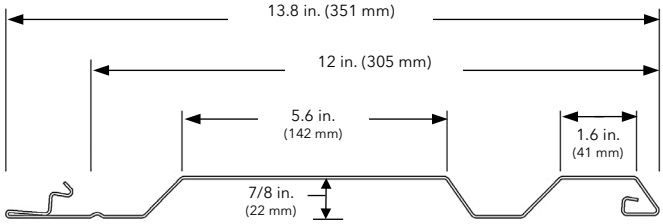
Property	Value
Maximum Panel Width	12 in. (304.80 mm)
Minimum Panel Width	12 in. (304.80 mm)
Maximum Panel Length	Steel: 30 ft (9.1 m), Aluminum: 22 ft (6.7 m) **NOTE:** Contact Amrize Technical Services for longer lengths
Minimum Panel Length	60 in. (1,524.00 mm)

MWP PROFILES

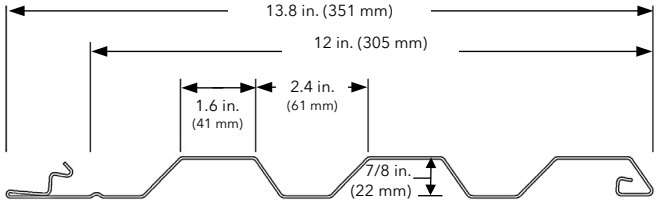
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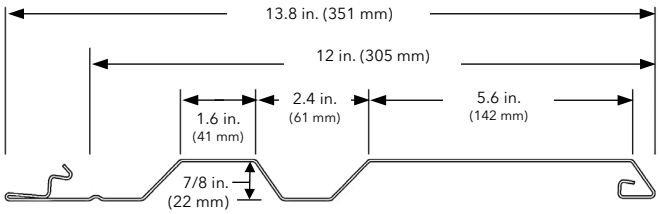
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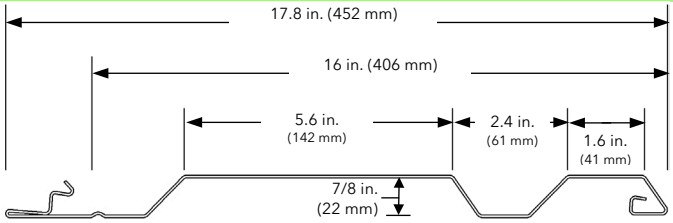
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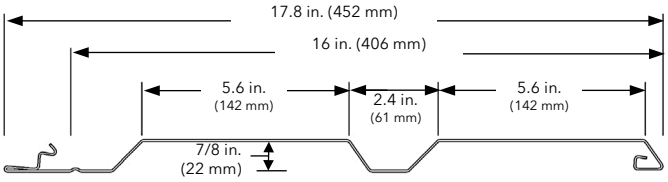
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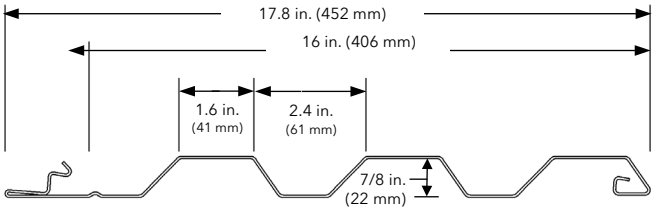
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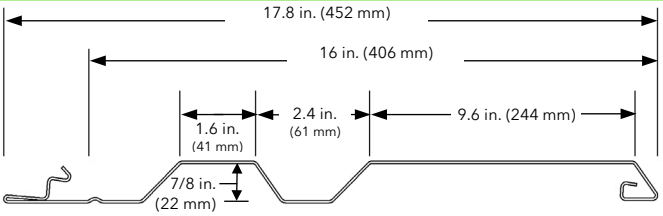
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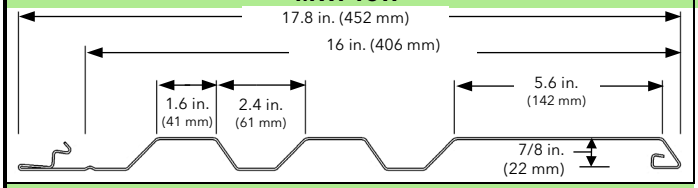
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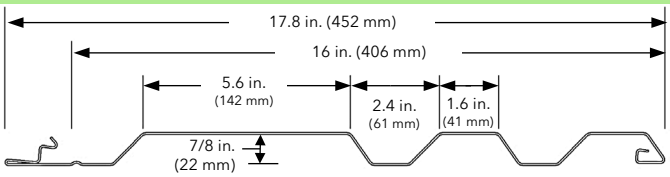
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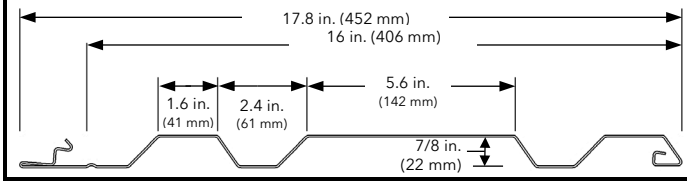
MWP16TP



MWP162B



MWP162C



Technical Information

Property	Value
Air Infiltration	ASTM E283
Water Penetration	ASTM E331
Structural Performance	ASTM E330 & E1592
Dynamic Water Penetration	AAMA 501.1

Typical Properties

Material and Thickness	Metal Specification	Available Finishes
Aluminum 0.040 in. (1.02 mm) 0.050 in. (1.27 mm)	**Base Metal**: Aluminum **Minimum Yield**: 21 KSI (145 MPa) **Thermal Expansion**: 12.6 x 10^{-6} in/in/ °F (22.68 x 10^{-6} mm/mm/°C) **Modulus of Elasticity**: 10.0 x 10^{3} x KSI (68.9 MPa)	Anodized Kynar 500/Hylar 5000 Unpainted/Mill-Finished
Galvanized Steel 22 ga (0.79 mm) 20 ga (1.11 mm) 18 ga (1.44 mm)	**Base Metal**: AISI-G90 Galvanized Steel **Minimum Yield**: 33 – 45 KSI (227 – 310 MPa) **Thermal Expansion**: 6.7 x 10^{-6} in/in/ °F (12.06 x 10^{-6} mm/mm/°C) **Modulus of Elasticity**: 29.0 x 10^{6} x KSI (200 GPa)	Kynar 500/Hylar 5000 Unpainted G90
Zincalume®/Galvalume® Steel 24 ga (0.64 mm) 22 ga (0.79 mm) 20 ga (1.11 mm) 18 ga (1.44 mm)	**Base Metal**: AZ-50 Hot Dipped Galvalume **Minimum Yield**: 50 KSI (345 MPa) **Thermal Expansion**: 6.7 x 10^{-6} in/in/ °F (12.06 x 10^{-6} mm/mm/°C) **Modulus of Elasticity**: 29.0 x 10^{6} x KSI (200 GPa)	Zincalume Plus/ Galvalume Plus/ Acrylume® – Clear Acrylic Coated Kynar 500/Hylar 5000

NOTE: Consult the appropriate base metal sheet and coil product data sheet for additional information on the base metal and coating. Not all materials and thicknesses are available from all locations.

Contact EXCEPTIONAL Metals Technical Services at (866) 337-4599 for further information.

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