

TITANTEK

Architectural Metal Panels

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Specifications for VariPanel™ Metal Panels

DIVISION 7 Metal VariPanel™ Cladding System

PART 1 GENERAL

1.1 DESCRIPTION

A. Section Includes:

1. Prefinished Architectural metal wall panel system
2. Associated metal panel flashings, trim, and closures

1.2 RELATED SECTIONS

- A. Section 054000: Cold-Formed Metal Framing
- B. Section 061000: Rough Carpentry
- C. Section 072100: Thermal Insulation
- D. Section 079200: Joint Sealants
- E. Section 092116: Gypsum Board Assemblies

1.3 REFERENCES

- A. American Iron & Steel Institute (AISI) Specification for the Design of Cold-formed Steel Structural Members
- B. American Institute of Steel Construction (AISC) Manual of Steel Construction (Current Addition)



- C. American Society for Testing and Materials (ASTM):
 - 1. ASTM A-653 & ASTM A924: Specifications for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvanized) by the Hot-Dip Process
 - 2. ASTM A-792: Specification for Sheet Steel, Aluminum-Zinc Alloy-Coated by the Hot-Dip Process
 - 3. ASTM E-283: Standard Test Method for Determining Rate of Air Leakage
 - 4. ASTM E-330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
 - 5. ASTM E-331: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
 - 6. ASTM E-1592: Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
- D. Sheet Metal and Air Conditioning Contractors National Association (SMACNA):
 - 1. Architectural Sheet Metal Manual (Current Addition)

1.4 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. Provide continuous, one-piece, preformed, prefinished custom length panels.
- B. Thermal Movement:
 - 1. Complete wall system shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, anchors or fasteners, or reducing performance ability.



1.5 SUBMITTALS

A. Product Data Submittals:

1. Submit manufacturer's detailed product literature including the panel profile and dimensions, material gauge, and finish.
2. Submit manufacturer's standard color chart for color selection.
3. Submit manufacturer's installation instructions for panel system.
4. Submit a sample of each type of panel, complete with factory finish.

1.6 QUALITY ASSURANCE

A. Manufacturer:

1. Company specializing in Architectural Sheet Metal Products with ten (10) years minimum experience.

B. Installer Qualifications:

1. Installer shall follow manufacturer's installation instructions and details without exception unless written authorization from the manufacturer and architect are provided.

C. Product Substitutions:

1. No product substitutions shall be permitted without meeting specifications.
2. Substitutions shall be submitted 10 days prior to bid date and acceptance put forth in an addendum.
3. No substitutions shall be made after the bid date.

1.7 DELIVERY, STORAGE, AND HANDLING

- ### **A.**
- Upon receipt 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 sun.
- D. Stack all materials to prevent damage and to allow for adequate ventilation.

1.8 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit metal wall panel work to be performed.
- B. Field Measurements: Verify actual supporting and adjoining construction by field measurements before fabrication and indicate recorded measurements on final shop drawings. Coordinate construction to ensure that wall panel assemblies fit properly to supporting and adjoining construction and coordinate schedule with construction progress to avoid delaying the work.

1.9 WARRANTY

- A. FINISH WARRANTY: Furnish to the Owner the Manufacturer's standard 35-year warranty covering the paint finish against cracking, peeling, and fade (not to exceed 5 N.B.S. units).

PART 2 PRODUCT

2.1 ACCEPTABLE MANUFACTURERS

- A. ***TitanTek by Metal Panel Systems 513-554-6120***
- B. Substitutions must fully comply with specified requirements.

2.2 SHEET MATERIALS

- A. Pre-finished metal shall be Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A792, Class AZ-50 coating, Grade C or Hot Dipped Galvanized Steel ASTM A446-85 Grade C, G-90 Coating ASTM A653-94 and A924-94
 - 1. Gauge: 24 gauge (0.024") or 22 gauge (0.031")



- B. Unfinished metal shall be Galvalume Plus clear acrylic coated Galvalume ASTM 792, Class AZ-55 coating, Grade C.
 - 1. Gauge: 24 gauge (0.024") or 22 gauge (0.031")

- C. Finish shall be full strength Kynar 500 Fluoropolymer coating, applied by the manufacturer on a continuous coil coating line, with a topside 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. Finish color shall be selected by the architect/designer from the manufacturer's current standard color selection guide. Unless otherwise noted, all prefinished metal components shall be of the same finish and color.

2.3 PREFORMED METAL PANEL SYSTEM

- A. Preformed Metal Wall Panels:
 - 1. Product Name: VariPanel™ System
 - 2. Seam Type: VariPanel™ locking system
 - 3. Depth: Panels 1" , Trims 1 1/8"
 - 4. Width: Varies by panel
 - 5. Texture: Smooth
 - 6. Surface Pattern: Smooth



- B. All exposed adjacent flashing shall be of the same material and finish as the panels.

- C. Fasteners:
 - 1. Concealed fasteners for panel and flashing attachment to wood substrate shall be #10-12 x 1" long pancake head wood screw.
 - 2. Pop rivets shall be stainless steel, rivet and mandrel, 1/8" diameter 1/4" grip range painted to match panel system.
 - 3. There shall be no exposed fasteners except to fasten flashings, at fixing points, or as indicated on the shop drawings.

- D. VariPanel Type(s): (HVP1, HVP2, HVP4, 1 Rib, 2 Rib, 3 Rib, 4 Rib, ACC (Angular Concave), ACV (Angular Convex), Custom)
 - 1. Single Panel: [____]
 - 2. Multiple Randomized Panels: [____ | ____ | ____ | ____]
 - 3. Multiple Ordered Pattern: [____ | ____ | ____ | ____]

- E. VariPanel Color(s): (list a standard or premier color or default to selection to be made from Manufacturer' Standard Colors)
 - 1. Single Color:
 - 2. Multiple Randomized Colors:
 - 3. Multiple Colored Pattern:

2.4 FABRICATION

- A. Fabricated roofing and wall panel related sheet metal work in accordance with reviewed shop drawings and applicable standards set forth in the Sheet Metal and Air Conditioning Contractors National Association – Architectural Sheet Metal Manual (current addition).

- B. All sheet metal flashings shall be fabricated in minimum 10'-0" lengths except as noted otherwise. All flashings shall have a minimum 1/2" hemmed edge in exposed locations. Provide field fabrication miters for components that change direction on the project.



PART 3 EXECUTION

3.1 INSTALLATION

- A. Comply with manufacturer's standard installation instructions and conform to standards set forth in the Architectural Sheet Metal Manual published by SMACNA, in order to achieve a professional installation.
- B. Install panels in such a manner that horizontal lines are true and level and vertical lines are plumb.
- C. Install perimeter trim and edge metals in accordance with installation best practices as set forth by the manufacturer.
- D. Remove protective film prior to installation of panels.
- E. Attach panels using manufacturer's required fasteners, spaced in accordance with approved shop drawings.
- F. Do not allow panels or trim to come into contact with dissimilar materials.

3.2 CLEANING

- A. Clean any grease, finger marks or stains from the panels per manufacturer's recommendations.
- B. Immediately remove metal filings produced from drilling and cutting to prevent rust from staining paint finish.
- C. Remove all scrap and construction debris from the site.
- D. Touch up minor abrasions and scratches with manufacturer approved touchup paint.

END OF SECTION