

NOW
Specialties, Inc.

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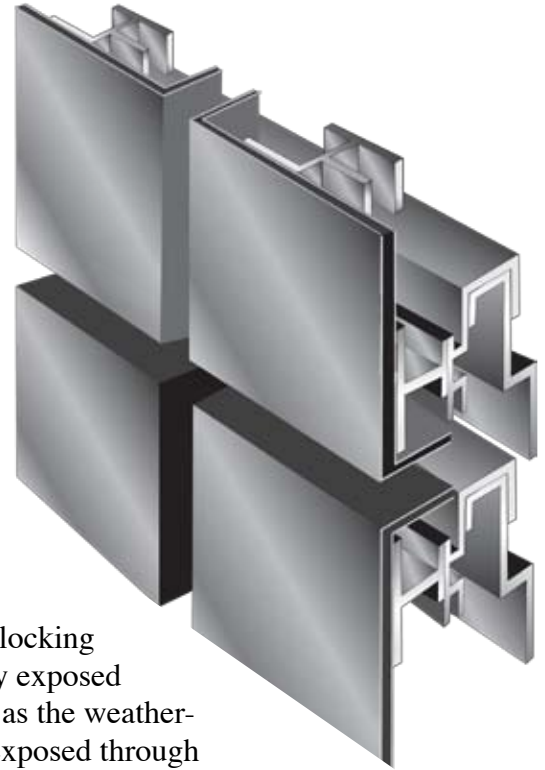
NOW-4100Z System

Features and Benefits

NOW-4100Z Panel System is a drained/back-ventilated rainscreen wall system that, when installed on a properly-designed exterior wall, provides unrivaled structural integrity and weather-proofing. NOW-4100Z is an excellent choice for the outer leaf of your wall assembly, deflecting the majority of bulk water, while protecting the inner leaf from condensation and thermal stress. When matched with a UV-stable air barrier/vapor retarder suitable to project geography, NOW-4100Z meets even the most demanding applications. Capitalizing on the impressive performance characteristics and natural beauty of zinc, the NOW-4100Z System delivers a sleek, flat look that manages thermal expansion and contraction, and virtually eliminates oil-canning.

Description

NOW-4100Z is a route and return system that features proprietary, interlocking extrusions at pre-determined locations. The material return legs are fully exposed for a clean, open joint. Panel joints do not require field-applied sealants as the weather-proofing is a component of the inner barrier. Note that the inner leaf is exposed through the open joint. Integral stiffeners strengthen the field of the panel. Greater wind loads or more stringent deflection requirements may require additional stiffeners, or stiffeners of a different type. See our design data for a more detailed discussion of panel stiffeners.



Advantages

No sealants or interior gaskets to fail, requiring costly repairs or unsightly stains. Reduced water infiltration, and reduced trapping of water in the building. Improved structural support protection, and greatly reduced opportunities for mold growth.

About the MCA Premium Fabricator Certification

The Metal Construction Association (MCA) is a nationwide trade organization through which members of the construction industry can develop programs that promote the integration of metal in design, and to ensure its proper use. The MCA's mission is "expanding the use of metal in construction through marketing, technology, and education."

The Premium MCM Certification is an important part of this mission, offering to the design community a single, reputable source for MCM fabricator selection. Fabricators certified as "Premium MCM" by the Metal Construction Association must demonstrate longstanding experience, exceptional quality, and a broad base of services. As of this publication date, only four other US-based fabricators qualify for this mark. NOW is proud to be a member of this select group.

Material Properties on back

System Properties

System Depth	2 ¼"	Testing	Result
Joint Width	½"(Nominal)	Air Infiltration @ 6.24psf	<0.01 cfm/ft ²
System Weight	3.49 lb/ft	Water Resistance Test Pressure	15.00 psf
Aluminum Extrusion Alloy	6063 T6	Uniform Load Deflection	± 40 psf
Minimum Structural Substrate	16 ga Steel Studs	Uniform Load Structural	± 40 psf
Fastener	#12-24 Dril-Flex		

Sheet Properties

Property	Value
Thickness	4 mm
Maximum Width	39.37 inches
Maximum Length	243 inches
Core	Flame Retardant Mineral Core
Alloy Materials	
Zinc	99%
Titanium	<1%
Copper	<1%
Available Finishes	Rheinzink Pre-weathered Blue / Grey
Weight	2.99 lb/SF
Allowable Bending Stress	7,250 lb/in ²
Coefficient of Expansion ⁽³⁾ ASTM E228	12.2 x 10 ⁶ in/in/°F (Longitudinal) 9.4 x 10 ⁶ in/in/°F (Transverse)
Stiffness (EI)	2,112 lb in ² /in (Longitudinal) 2,545 lb in ² /in (Transverse)
Flexural Modulus Aged & Tested per ASTM C393 Reported Values per ASTM D6272	9.25 x 10 ⁶ lb/in (Longitudinal) 11.01 x 10 ⁶ lb/in (Transverse)
Moment of Inertia	2.37 x 10 ⁴ in ⁴ /in
Section Modulus	3.02 x 10 ³ in ³ /in
Tensile Yield of Laminate ASTM D638	7,730 lb/in ² (Longitudinal) 10,280 lb/in ² (Transverse)
Flatwise Tensile ASTM C297	615 lb/in ²
Minimum Bond Strength ASTM D1781	20 in-lb/in
Flatwise Shear ASTM D1002	310 lb/in ²

(Values Assume 4mm Reynobond with Rheinzink Sheet)

Design

1. Avoid direct contact with acids, including those present in masonry cleaner, some sealants and woods, sweat, and solvents.
2. Avoid contact with standing water and sustained moisture on either side of the zinc sheet. Rainscreen systems modified for zinc are best for wall construction. Design wall assemblies with drainage cavities and proper back-ventilation. Minimum roof pitch is 1:12.
3. Zinc's coefficient of thermal expansion is roughly 50% higher than that of aluminum. Panel joinery and mounting should be designed accordingly.
4. Color variations will occur at the time of installation. Zinc exhibits a discernible grain orientation and adjacent panels should be designed accordingly.
5. Formation of zinc patina will vary depending on material orientation, climate, building geometry, and proximity to coastal regions. Carbon dioxide and pollution do not pose design concerns.
6. Areas shaded from weather will not form patina for many years.
7. Zinc oxychloride can form in high salt conditions, and may not wash away in dry environments. Please make color selections accordingly.
8. Pre-warm zinc if bending or folding under 50°F.
9. Do not install zinc where it will encounter copper runoff. Incompatible materials include:
 - Copper
 - Non-galvanized steel
 - Some wood (including wood nailers at parapet walls and curtainwall perimeters)
 - Limestone dust
 - Gypsum dust



Maintenance

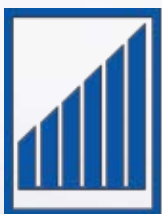
1. Avoid direct contact with acids, including those present in masonry cleaner, some sealants and woods, sweat, and solvents.
2. Maintenance personnel should handle zinc with white cotton gloves and long sleeves.
3. Clean fingerprints in strict accordance with manufacturer's instructions. Regular-strength detergents and abrasives will harm the material finish.
4. Normal maintenance includes:
 - Removal of foreign matter, with emphasis on decaying leaves.
 - Cleaning with a new cotton cloth soaked in warm water and a reduced-strength detergent. Apply cloth in the same direction as the finish. Limit cleaning to only those areas where foreign matter is noticeable.
 - Allowing light scratches to self-heal.

Environmental

1. Zinc waste will be accepted by any metal scrap dealer and ultimately converted into galvanizing.
2. Zinc runoff is non-hazardous. Zinc is an atomic element and most organisms need it to survive. Zinc deficiency is a much greater concern than zinc toxicity.
3. Zinc production requires half of the manufacturing energy of steel and one-quarter the manufacturing energy of aluminum.



Arizona Science Center – Phoenix, Arizona *Fabrication and Installation by Elward Systems Corporation*



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METAL CONSTRUCTION ASSOCIATION

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