



Metalwërks®

Metal Sales & Service Inc.

Your passion. Our precision.



Metalwërks® Arcwall PERS

ARCWALL PERS (PRESSURE EQUALIZED RAIN SCREEN) PRODUCT DESCRIPTION

For use in exterior wall cladding when the A/E desires a solid aluminum, high performance, dry-joint, pressure equalized rain screen exterior cladding system. A smooth cladding material comprised of 1/8" thick Aluminum for insulated and/or non-insulated cladding applications over continuous masonry or stud/sheathing substrates where a suitable air/water barrier can be applied. Flexible joint designs enable the designer to articulate almost any vertical and horizontal joint rhythm or pattern.

FEATURES AND BENEFITS:

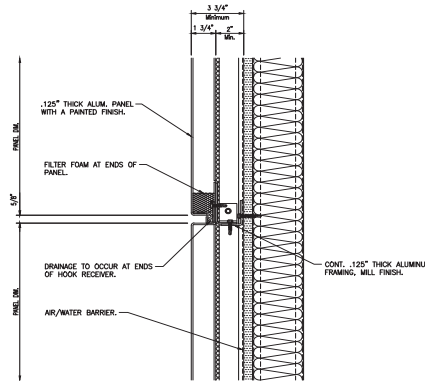
- ⊕ All products are engineered and manufactured in-house. Fully tested to meet or exceed performance values mandated by AAMA 508-07.
- ⊕ System designed for almost instantaneous pressure equalization which dampens the capillary action created by negative pressure and vapor drive from exterior to interior associated with sealed systems.
- ⊕ Self Alignment: Adjustable 2 piece furring allows wall substrate to be plumbed prior to panel installation to create a flat plane with minimal deviations from vertical. This design, unlike other rain screen systems, also facilitates sealing the system to the air water barrier by eliminating shims.
- ⊕ Standard 5/8" wide vertical and horizontal joints are open. No exposed sealants to retain dirt and create streaking.
- ⊕ Internal gutters use concealed silicone gaskets to fully express a 1-3/4" joint depth. Consult Sales for alternative design options.
- ⊕ Panels are secure yet free floating to accommodate thermal expansion and contraction due to the interlocking horizontal joint.

- ⊕ All panels are custom fabricated and not limited by minimum production runs in standard or custom colors.
- ⊕ Panel finishes are applied post fabrication for complete coverage-no seams.
- ⊕ Superior impact resistance to Composite material or foamed in place panels.
- ⊕ Panel unit and stiffeners are welded during assembly for superior stiffness.
- ⊕ Panel corners are shop welded and ground smooth for a seamless appearance.
- ⊕ Panels can be back-routed to provide "sharp" edges with a nominal 1/16" radius bend. Consult factory for product limitations.

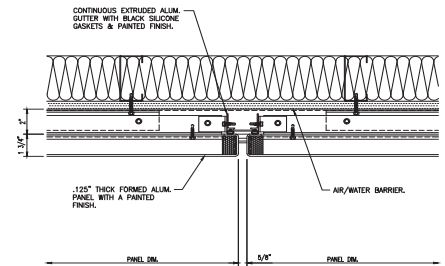
PRODUCT APPLICATIONS:

- ⊕ Any vertical exterior wall surface application with continuous air/water barrier.
- ⊕ Articulations: Rain Screen Wall Cladding Systems rely on gravity to drain water out of the wall cavity. All horizontal surfaces should be sealed which include copings, soffits, and sloped conditions. To minimize water penetration, all perimeter conditions to be sealed. Accents applied to face of panel that do not interrupt the air water barrier may not require sealant. Consult Sales for design options.
- ⊕ Where panel systems attach to studs through exterior sheathing; CMU Block walls and Concrete substrates.
- ⊕ Solid Aluminum panels are particularly useful where metal panels are used in high traffic pedestrian areas due to superior impact performance comparable to other metal panel cladding products.
- ⊕ For use on LEED projects- consult our staff for specific areas of contribution.
- ⊕ Enclosures for exposed columns, beam or pilaster features can also be clad using a similar design appearance.

HORIZONTAL JOINT



VERTICAL JOINT



ARCWALL PERS APPLICATIONS

ArcWall Plate PERS is used as a non insulated and/or insulated Pressure Equalized Rain Screen (PERS) wall cladding system utilizing solid aluminum for vertical wall surfaces over continuously sheathed or masonry substrates covered with an appropriate air/water barrier.

COMPOSITION & MATERIALS:

Arcwall Plate PERS system is a "Dry-set" Design with formed and extruded aluminum interlocking horizontal joints. Other system accessories:

- ⊕ Panel units: Panels are formed on CNC programmable folding machines with accuracy down to .040" for most profiles; Panel corners are welded and ground smooth for a seamless appearance.
- ⊕ Panel Face Material: Standard substrates are 3003 H14 aluminum alloy and temper. Standard offerings include: minimum .125" thickness (1/8" or 3mm) standard, .190" thickness (3/16" or 4.5 mm); .250" thickness (1/4" or 6mm). Other materials available subject to factory limitations.
- ⊕ Stiffeners: Extruded aluminum panel stiffeners are welded to the panel skins and structurally adhered to panel face with structural silicone of sufficient size and strength to maintain panel flatness and deflection resistance.
- ⊕ Horizontal panel uses two mating continuous 6063 T6 panel retention extrusions. Interlocking profiled joint allows for thermal expansion, directs moisture horizontally to verticals and saves field labor by reducing fasteners.
- ⊕ Total system depth is 3-3/4" including 2" cavity for gutters and 2-piece furring for adjustment to adjacent construction. Additional space is allowable to provide a "Continuous Insulation" layer. Consult for system depth adjustments based on preferred insulation and R value.
- ⊕ Vertical gutters receive drainage from horizontal gutters and drains moisture to the exterior. Gutters are sealed to back of panel with concealed extruded silicone gaskets.
- ⊕ Gutters also act to provide compartmentalization where necessary to baffle air flow behind the system to fully effect rain screen principles.
- ⊕ Perimeter flashing is provided to drain moisture to the exterior and effect seals to adjacent construction.
- ⊕ Anchor clips are pre-punched and can be installed in coordination with and sealed to air barrier to minimize the impact of fastener penetrations.

SHAPES OR PROFILES:

Panels are custom formed to specific project design requirements.

- ⊕ Panel width: minimum 3" up to 60". Larger sizes are subject to factory limitations.
- ⊕ Panel length: optimal sizes up to 156" with longer sizes up to 240". Larger sizes are subject to factory limitations.
- ⊕ Panels are typically flat and mitered but can be easily formed to custom profiles for any vertical or horizontal surface. Design adjustments for air/water management must be applied. Consult Sales for design options.
- ⊕ Panels are strong enough to receive shop applied appliques for additional design accents. Consult sales for design options.

ACCESSORIES:

- ⊕ Flashing: 0.040" thick to 0.063 aluminum sheet metal trim.
- ⊕ Coping /Fascia options: Same material as the wall panel system or in aluminum sheet metal to match.
- ⊕ Furring channels- as required for proper mounting of panels in 16 ga. minimum thickness.

TECHNICAL INFORMATION:

- ⊕ AAMA 508-07 "Voluntary Test Method and Specification for Pressure Equalized Rain Screen Wall Cladding Systems." Full battery of tests includes:
- ⊕ Air Infiltration - ASTM E 283-04 Passed at .12 cfm/SF (.13 allowed). Test conducted at 1.57 psf positive static air pressure difference.
- ⊕ Cyclic Static Air Pressure: ASTM 1233-06 Passed at less than .08 seconds.
- ⊕ Water Infiltration - ASTM E 331-00: passed at .31 SF2 (3.2 SF2 allowed). Test conducted at 15.05 psf positive static air pressure difference.
- ⊕ Structural - ASTM E330 used for applying loads between tests.
- ⊕ Dynamic Pressure Water resistance - AAMA 501.1-05: passed at .73/SF2 (3.2 SF2 allowed). Test conducted at 15.05 psf positive static air pressure difference.

WARRANTY INFORMATION:

- ⊕ Material & Workmanship – Standard – one, two or five year options.
- ⊕ Finish Integrity – Standard – 10 year up to 20 years (Not available for Stainless Steel products)