



*Design Systems & Services Corporation*  
"Division 7 Professionals"

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## Architect & Specifier Guide to DSS PANEL SYSTEMS



*Design Systems & Services Corporation is an exclusive "Fabricator" of ACM & Phenolic Cladding Systems for Styro Systems & Claddings, Inc. in the Carolinas.*



*Design Systems & Services Corporation is an exclusive "Fabricator" of Phenolic Cladding Systems for Convoy Supply, Inc. in DC Beltway Region & MD.*

[info@dss-corporation.com](mailto:info@dss-corporation.com) — [www.dss-corporation.com](http://www.dss-corporation.com)

Proud supporters & members of NAWIC

# Table of Contents

About DSS	1 – 2
Wet Sealed (caulked) Systems	4 – 6
Dry Joint Systems	7 – 8
EVO Rivetless Panel Solutions	9 – 11
Phenolic Panels	12 – 14
ACM Projects	16 – 20
Machining & Fabrication Capabilities	22 – 27
Color Chart	28 – 32
Qualifications & Certifications	34 – 36



## About DSS

With our manufacturing facility in Petersburg, VA. DSS is an integrated “Fabricator” of custom architectural aluminum composite panels systems and custom sheet metal

Visit [www.DSS-Corporation.com](http://www.DSS-Corporation.com) to learn how we can impact your business. Or just give us a call to meet our design team.



Composite Panels



Phenolic Panels



Single Skin Panels



## Architectural Panel Systems for any project...

Wet Seal or Dry, DSS offers aluminum metal composite panels from well-known, brand name (ACM)

Aluminum Composite Material Manufacturers. Choose from a large selection of standard colors including metallic finishes, or an almost limitless array of factory-applied custom colors. DSS glazed and rain-screen systems come with time-tested securing systems.

By using a pre-engineered system approach, DSS can quickly design and fabricate a panel and extrusion system that is easy to install, enabling smooth work flows on the job site.

*Animal Services Facility, Chesapeake, VA*



ACM quality-to-price ratio is extremely favorable when compared to materials such as marble, granite, brick and pre-cast. Weighing less than 1.5lbs./sq. ft., installation goes quickly. ACM is fused under tension to resist deflection and provide maximum flatness, structural integrity and stability. It is weather resistant, easy to maintain, deadens sound, and is available with a fire-rated core. ACM is available in 3mm, 4mm and 6mm thicknesses in a standard Fire Resistant (FR) core.

As an approved fabricator for major ACM manufacturers, DSS is your most dependable choice for any panel job!!

*Caroline County*



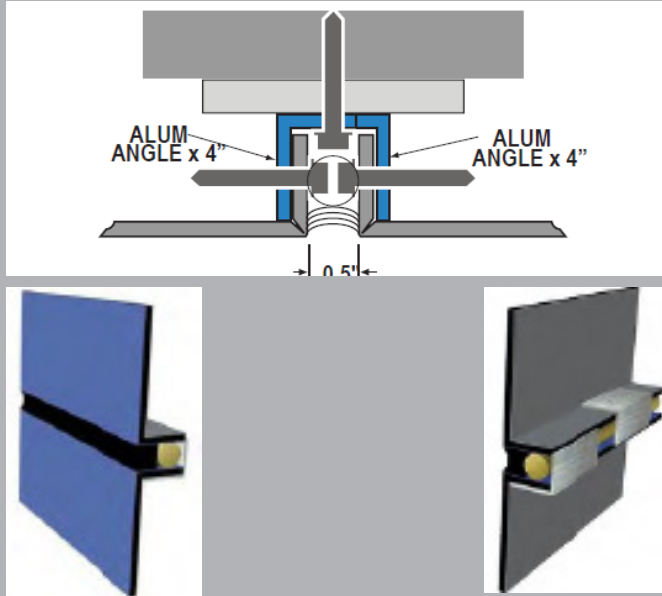
*Gloucester County*



**DSS**  
**Wet Sealed / Dry Joint**  
**ACM Systems**

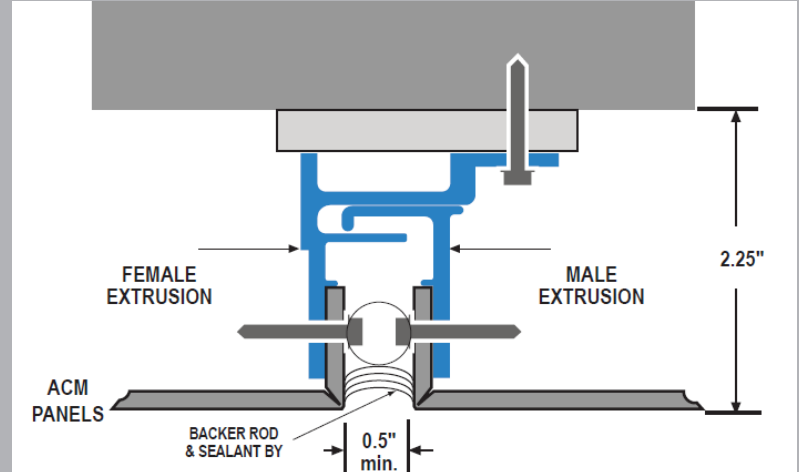
# DSS - Wet Sealed (Caulked) Systems

DSS is a manufacturer of caulked, also known as "Wet - Joint", panel systems. DSS fabricates systems made from Aluminum Composite Materials (ACM), anodized and painted aluminum. DSS fabricates composite materials by 3A / Alucobond and VITRABOND® - Fair-view Architectural. For aluminum DSS also offers custom color matching using polyvinylidene fluoride (PVDF) coatings with Kynar 500 or Hylar 5000 resins. DSS can provide a manufacturer's 20 Year finish warranty on request.



## DSS - RR1000 ACM Panel System

DSS - RR1000 aluminum angle clip system is our least expensive wet seal (caulked) system. The system uses a series of staggered clip angles along the routed and returned edges of the panel. The clip angles are factory attached in such a manner to allow for the removal of any panel with-out disturbing adjacent panels. This system can also be offered with shipped loose clip angles for field attachment to the panels giving installers more flexibility of clip angle location during panel installation. Also, the RR1000 system allows the building owners to quickly and easily replace a damaged panel in the future.



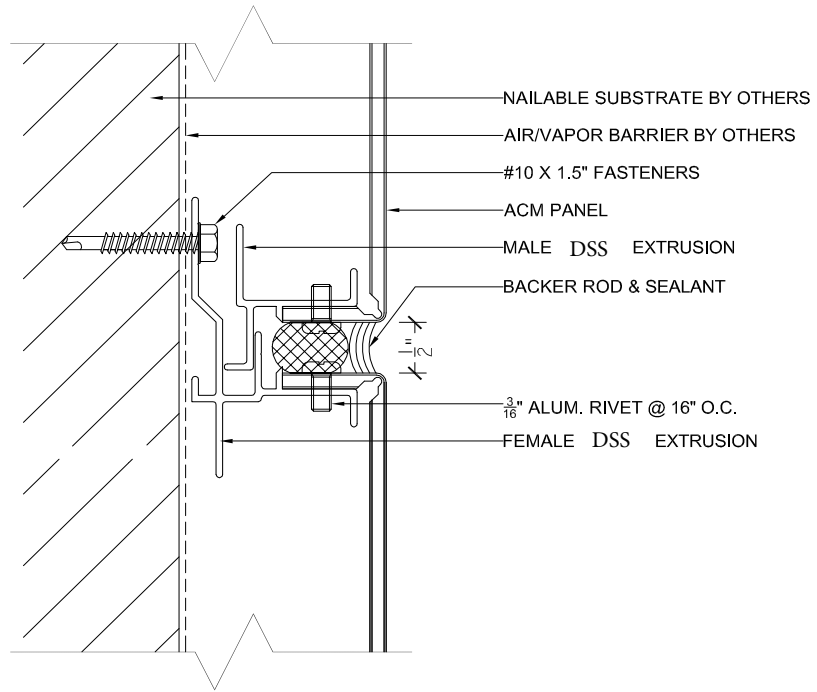
## DSS - RR1100 ACM Panel System

The DSS - RR1100 wet sealed (caulked) panel system is designed for better structural integrity and better water/vapor protection. While no panel system is completely impervious to vapor/water penetration, the caulked RR1100 system adds an extra level of protection. Additionally, this system is designed for higher wind loads and flatter panels. This system uses continuous "male" and "female" extrusions factory attached along the routed and returned edges of the panel. The RR1100 system may be manufactured with factory applied stiffeners to prevent "oil-canning."

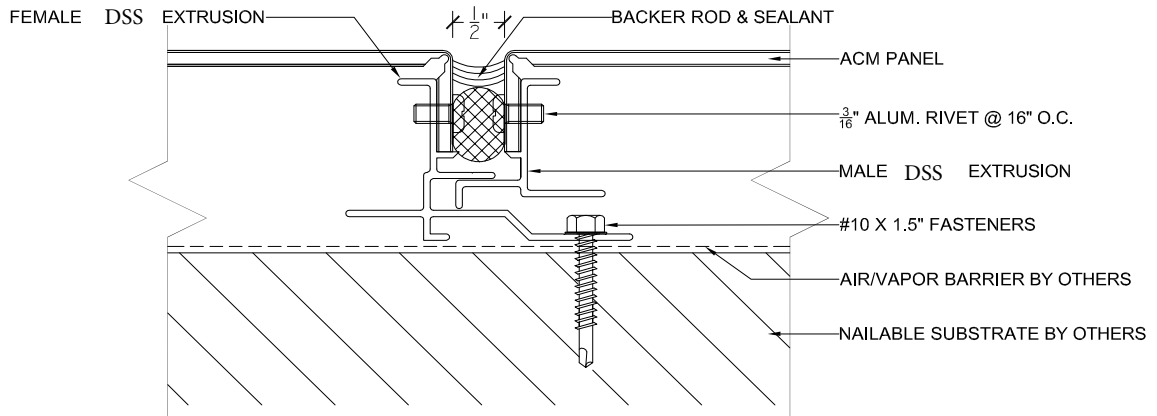
NOTE: The DSS - RR1100 Wall Panel System in conjunction with the use of 3A / Alucobond or Vitrabond Aluminum Composite Material, when constructed as tested, complies with (Dade County) South Florida Building Code.

*Albemarle County, VA*





HORIZONTAL JOINT



VERTICAL JOINT

**DSS**  
 DESIGN SYSTEMS & SERVICES CORPORATION

OFFICE/SHOP:  
 318 E. WYTHE STREET  
 PETERSBURG, VA 23803  
 CORPORATE MAILING:  
 PO BOX 5757  
 VIRGINIA BEACH, VA 23471

SCALE:  
 HALF

DETAIL: HORIZONTAL & VERTICAL JOINTS

DSS - RR1100 ACM Panel System

DATE:  
 01/01/16

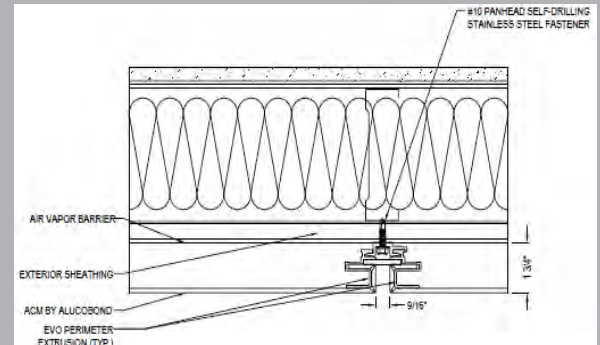
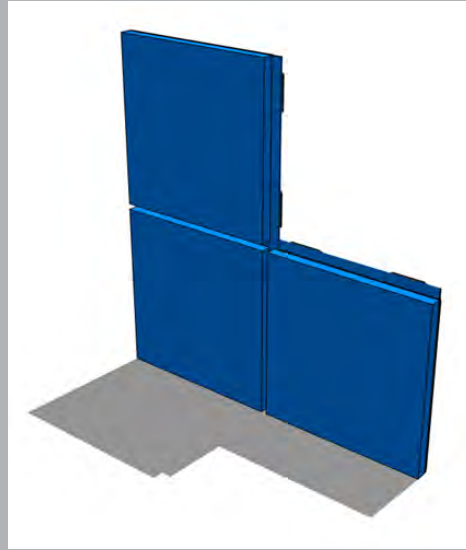
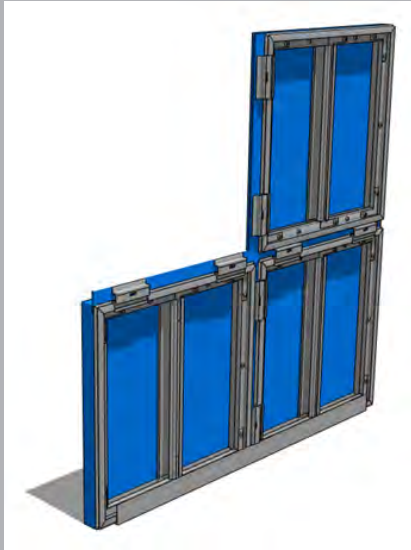
DETAIL #: WJ-01

"Division 7 Professionals"

PHONE: 804-722-0395  
[www.DSS-Corporation.com](http://www.DSS-Corporation.com)

# DSS - EVO2000 “Dry - Joint” ACM Panel Systems

DSS - EVO2000 ‘Dry-Joint’ system uses Splines or Gaskets in the joint - typically when a reveal is desired. Rain Screens are a facade, and the installer must apply a Fluid Applied or Self Adhered weather barrier between the panel system and structural wall. Specify ACM panel dimensions up to 5’ x 16’ in 3, 4, 6 mm standard Fire-Rated (FR) core material by VITRABOND® - Fairview Architectural ; 3A / Alucobond ; Alcoa - Reynobond or Alpolic - Mitsubishi. DSS also offers custom color service with a 10 week lead-time. Designer finishes feature Kynar 500® or Hylar 5000 polyvinylidene fluoride (PVDF) resins in two (2) or three (3) coat finish. DSS can provide a manufacturer’s 20 or 30 year finish warranty on request.



## Non-Progressive:

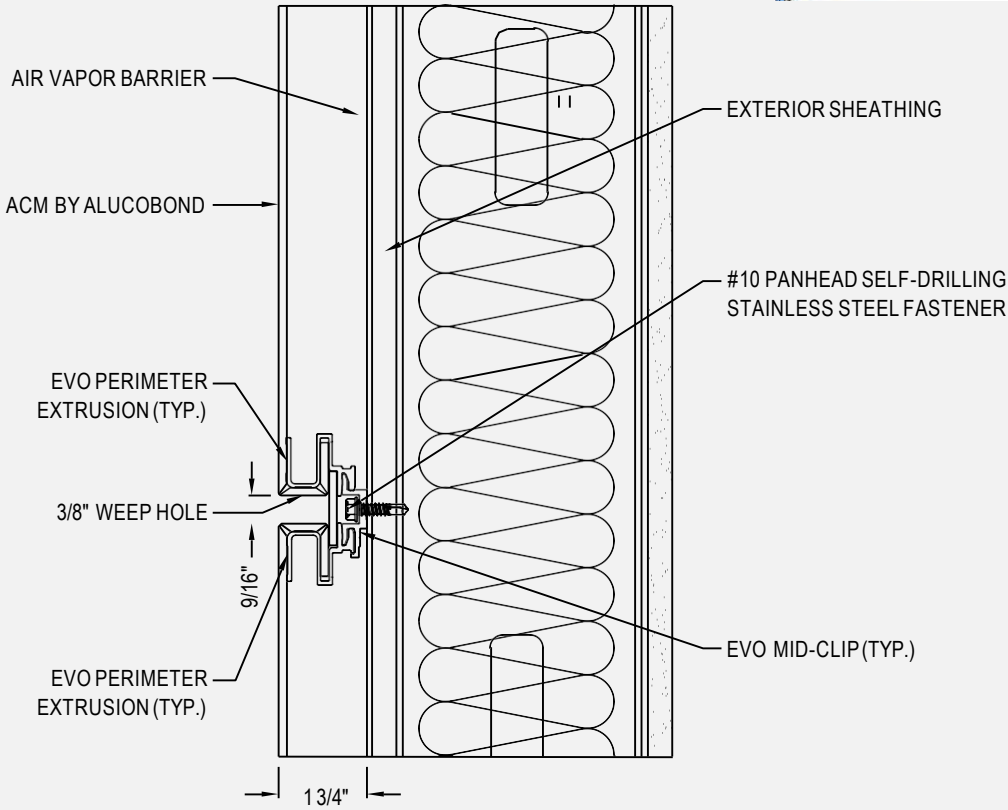
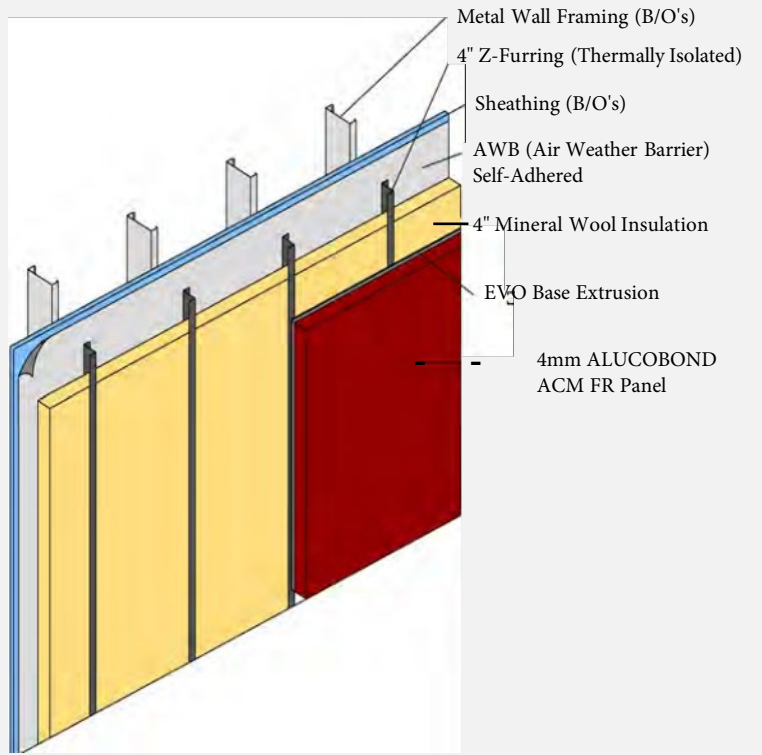
Install “Any panel in any sequence” and remove damaged panels easily without compromising the quality, fit or integrity of the system.

## EVO RIVETLESS® 508 and 509 Panel System:

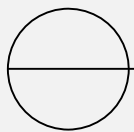
Is a Non-Progressive system that incorporates a spline in the reveal between each panel. These systems allow you to immediately start attaching the base extrusions and to create the panel frame openings as you go. You can accurately place the center of the curtain wall mullions or other material joint that you are required to line up with. The placement of the base extrusions allows protection of the air weather barriers while waiting for panel installation.







SECTION DETAIL



## HORIZONTAL JOINT


DSS EVO2000™ PANEL SYSTEM: HORIZONTAL JOINT DETAIL (SECTION)

REVISION DATE 08/28/2019

# ZERO RIVETS

CHANGING THE STANDARD BY DESIGN

## GUIDING PRINCIPLES BEHIND OUR EVO™ RIVETLESS SYSTEM

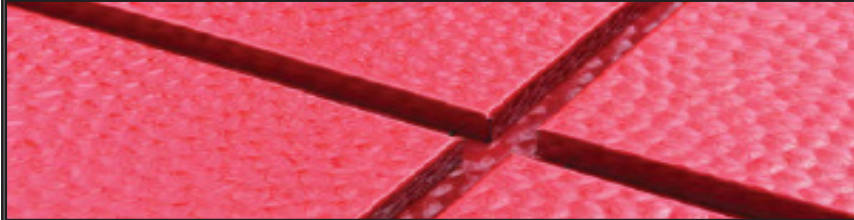


"Companies that do not practice Smart Lean Manufacturing are doomed to mediocrity & ultimately failure."

J. LIKER

"For you to sleep well at night, the aesthetic, the quality, has to be carried all the way through."

STEVE JOBS



"Good design is nothing less than the translation of functional specifications. When it expresses & supports functionality, design becomes a selling point."

EUGEN GASSMANN

"Design is not what it looks like and feels like. Design is how it works."

STEVE JOBS

Time savings through implementing Lean Manufacturing practices can result in: cost savings, cost avoidance, and indirect savings, benefiting project outcome measurably.



RIVETLESS™ PANEL SOLUTION



# 100% CONCEALED FASTENERS

## ARCHITECTURAL PANEL TYPE

### EVO™ RIVETLESS™

- Innovative – Patent Pending
- Free of exposed fasteners
- NO RIVETS = Elegant appearance
- Superior Structural performance
- Standardized System by design
- Coast-2-Coast Mfg consistency
- Available thru US & CDN partners
- EVO™ Integrated Stiffener
- Value Engineered: various finishes
- EVOWOOD/EVOSTONE/EVOEXOTIC
- Matched look = less load and \$ave
- Able to replace individual panels
- Panels are deliverable to site faster

### RIVETTED (OTHERS)

- Status Quo
- Unightly screws and rivets
- Color match screws and rivets
- No manufacturing consistency between fabricators

## A PARADIGM SHIFT IN THE MAKING

Our objective is to establish the EVO™ RIVETLESS™ panel system as the highest standard of ACM panels, anywhere.

EVO's™ elegant appearance offers superior Value and Performance to any type of façade, simple or complex.

EVO's™ Exclusive Manufacturer's Network in North America, ensures Quality Assurance in production and installation procedures, attainable through our standardized system design. Architects, Developers and decision-makers, will appreciate excellence in our planning, execution, delivery and service follow thru, as being a signature of our Network.

The EVO™ Network provides a collaborative resource between manufacturer's to complete projects on-time, discuss innovations, remain competitively positioned with broad appeal in N. America and confidently be the leaders within their industry, year-after-year.

Future testing for compliance to: CAN/ULC S134-13, Miami-Dade HVHZ tests and others, will continue to position EVO™ RIVETLESS™ at the forefront of innovative solutions.

## TESTED + CERTIFIED

Reaching New Heights with these Professionals



EVOWOOD<sup>+</sup>

ZERO RIVETS

EVOSTONE<sup>+</sup>

ZERO RIVETS

# PERFORMANCE + TECH SPECS

## RAINSCREEN TESTING

AAMA 508 - 07 COMPLIANT  
Voluntary Test Method and Specification  
for Pressure Equalized  
Rain Screen Wall Cladding Systems

## AIR/WATER/WIND PERFORMANCE

AAMA 501.1-05 (Dynamic)  
ASTM E 1233 (Modified)  
ASTM E 283 (Static)  
ASTM E 330 (Static)  
ASTM E 331 (Static)

## EVO STONE PERFORMANCE

Evaluation of EVO STONE Coating  
System testing in accordance with:  
ASTM B117-11 (Salt Spray)  
ASTM D4541-09 (Adhesion Strength)  
ASTM D2794 (Impact Resistance)  
ASTM D6944-09 (Thermal Cycling)  
ASTM D2247-11 (Humidity Resistance)  
ASTM G155 (Accelerated Weathering)  
ASTM D1654 (Corrosion Creepback)

## FIRE TEST METHOD

Standard Fire Test Method For  
Evaluation of Fire Propagation  
Characteristics of Exterior Non  
Load Bearing Wall Assemblies  
Containing Combustible Components

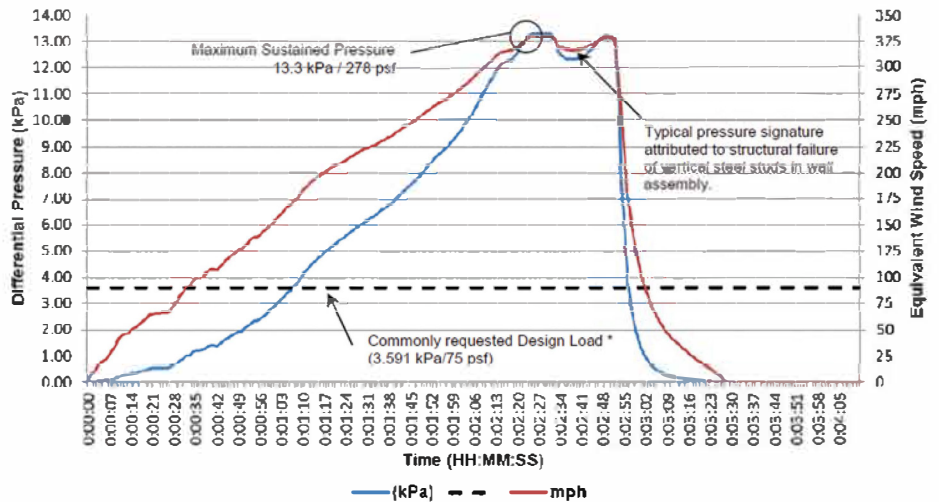
## MATERIAL SIZE AVAILABILITY

PE & FR core options with sheet material sizes  
W 50" | 62" L up to 196" T 4mm | 6mm

EVO™ Architectural Panel System (U.S. Pat. Pending)

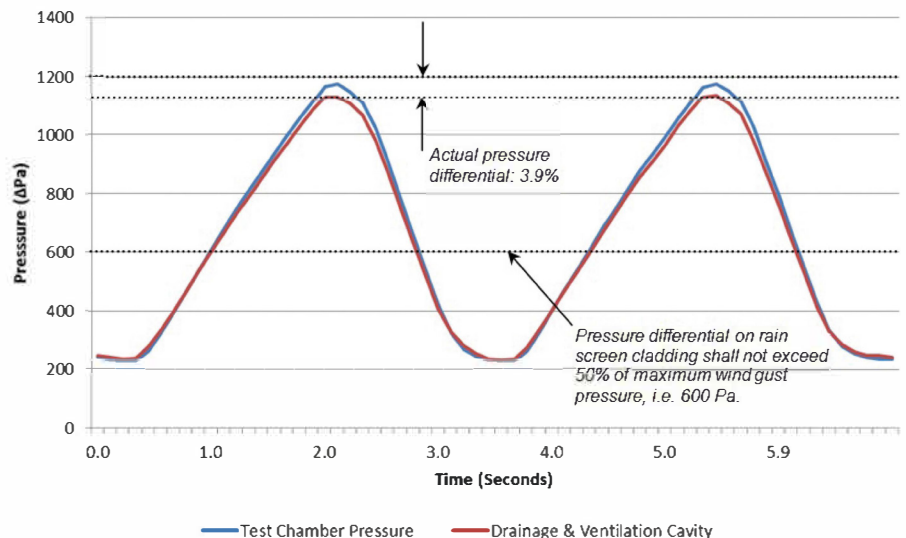
## DIFFERENTIAL PRESSURE & EQUIVALENT WIND SPEED VS. TIME (Loading to failure in the Negative Wind Load Direction)

Exova Specimen No: 15-06-M0134 | EVO™ RIVETLESS™



## AAMA 508-07 - PRESSURE EQUALIZATION BEHAVIOR

Exova Specimen No: 14-06-M0187-B | EVO™ RIVETLESS™



EVOEXOTIC<sup>+</sup>

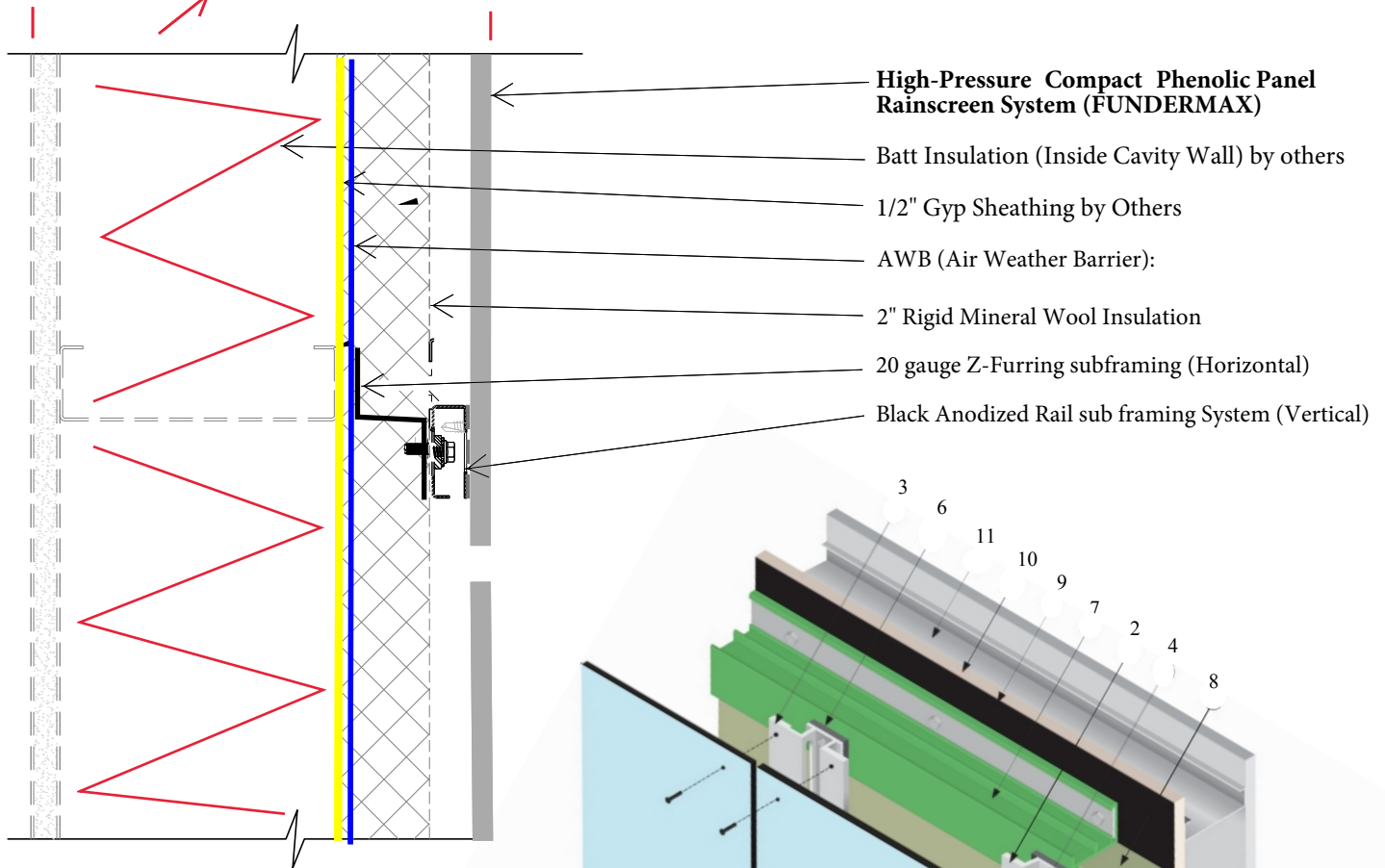
ZERO  
RIVETS

EVOPURE<sup>+</sup>

ZERO  
RIVETS

**DSS**  
**Phenolic Panel Systems**

Wall Thickness Dimensions to be the same as the Basis of Design



PLAN VIEW

1. High Pressure Compact Phenolic Panel (Included)
2. Universe Aluminum Z-Extrusion - Black Color (Included)
3. Universe Aluminum Hat Extrusion - Black Color (Included)
4. Extrusion Fastener (Included)
5. Panel Fastener (Included) - "Color to Match Panel"
6. 1/4 Thermal Isolater (Included)
7. 20 gauge Z-Furring Sub framing (Included)
8. 2" Mineral Wool Insulation (Included)
9. Air & Moisture Barrier (Included)
10. 1/2" Exterior Grade Sheathing (Not Included)
11. 16 gauge Min. Steel Stud Exterior Wall Assembly (Not Included)

1

Phenolic Panel Rainscreen System / 20ga. Z-Furring w/ Vertical (Black) Rail Sub Framing System - Steel Stud Exterior Wall Assembly

SCALE: N/A

w/ 2" Rigid Mineral Wool Insulation w/ Air Weather Barrier

NOTE: DO NOT SCALE FROM DRAWINGS. ALL DIMENSIONS

**DSS**

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VIRGINIA BEACH, VA 25471  
PHONE: 804-722-0395

[WWW.DSS-CORPORATION.COM](http://WWW.DSS-CORPORATION.COM)

ATTACHMENT SYSTEM ENGINEERING DRAWINGS

PROJECT:

LOCATION:

SHEET TITLE: TYPICAL PLAN VIEW

REV. #:

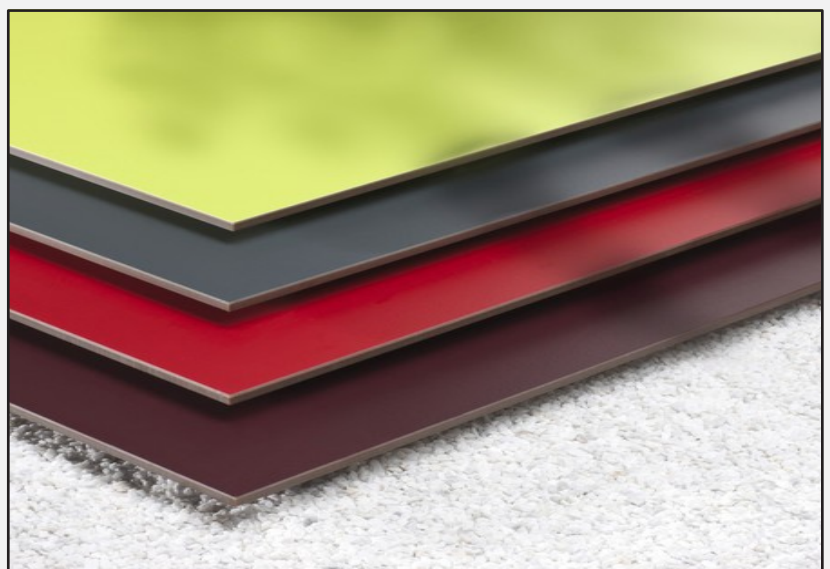
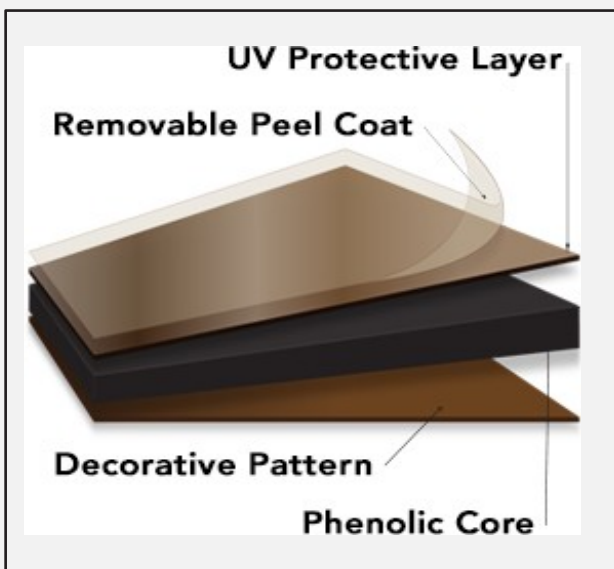
REV. DATE: 03/18/2019

DRAWN BY: SM

PAGE:



*Bluestone Elementary School - Harrisonburg, VA*



**DSS**  
**ACM Projects**





*Recent Reference Project*

**ACM SYSTEM:**                    **AAMA 508 Pressure Equalized Rainscreen Wall System Project**

**RE PROJECT:**                    Central District Police Facility Solicitation #: IFB160003  
5026 David Ford Road, Woodbridge, VA

**A/E:**                                    Moseley Architects, Richmond, VA

**Owner:**                             Prince William County

**Gen Cont:**                          Sorensen Gross Construction Services  
3407 Torrey Road, Flint, MI 48507



*Recent Reference Project*

**ACM SYSTEM:**                    **AAMA 509 Drained & Back Ventilated Rainscreen Wall System**

**RE PROJECT:**                    Scott's View Apartments  
Richmond, VA

**A/E:**                                    SWA Architects, Richmond, VA

**Owner:**                                HHistoric Housing LLC

**Gen Cont:**                            SWA Construction, Inc.



*Recent Reference Project*

**ACM SYSTEM:**                    **AAMA 508 Pressured Equalized Rainscreen Wall System Project**

**RE PROJECT:**                    James Blair Middle School  
   Williamsburg, James City County, VA

**A/E:**                                    Waller Todd & Sadler Architects, Inc.  
   Virginia Beach, VA

**Owner:**                              Williamsburg James City County Public Schools

**Gen Cont:**                            Oyster Point Construction Company  
   Newport News, VA



*Design Systems & Services Corporation*  
"Division 7 Professionals"

"Changing the Standard by Design"  
BUILDING ENVELOPE SOLUTIONS

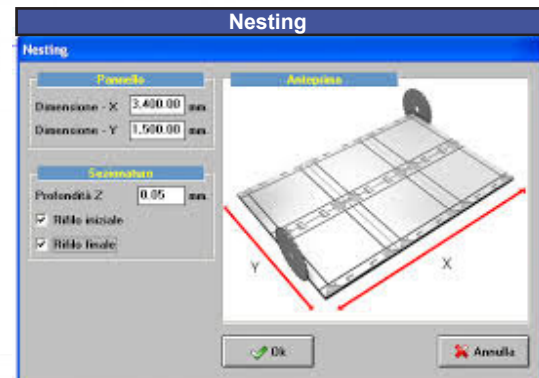
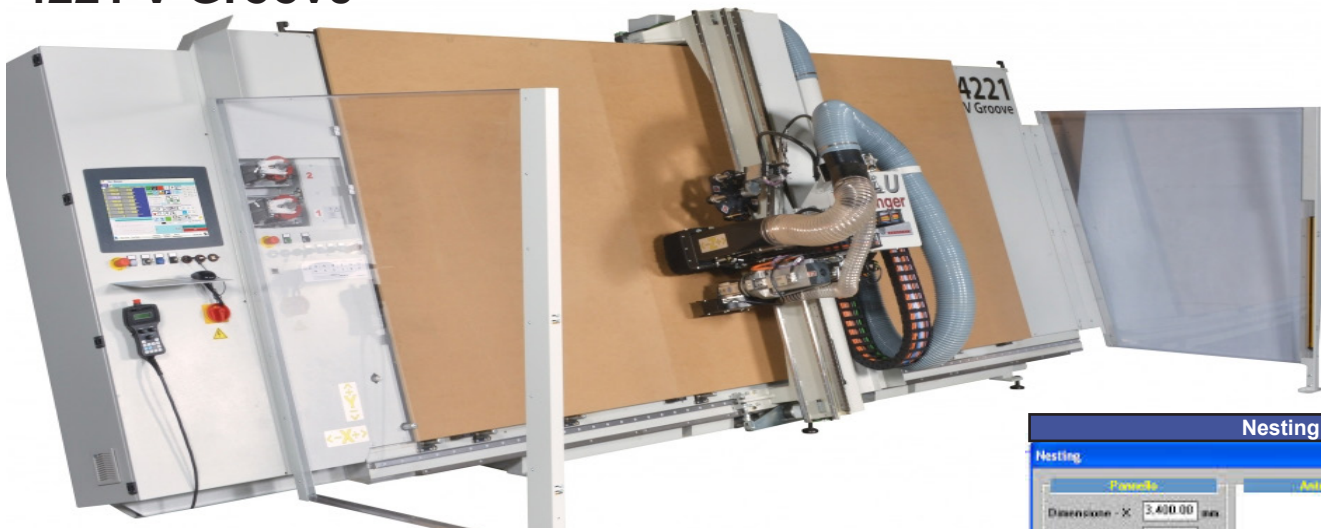
- Composite Panels
- Phenolic Panels
- Plate Panels
- Custom Profile Panels



# **DSS**

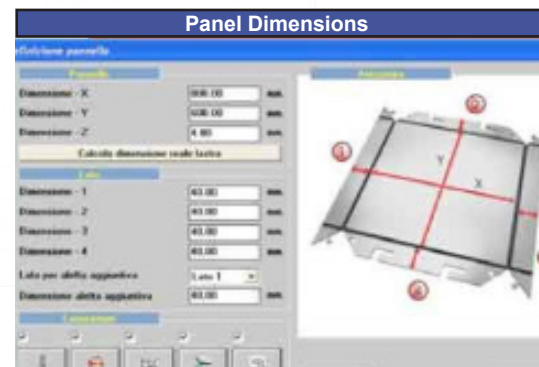
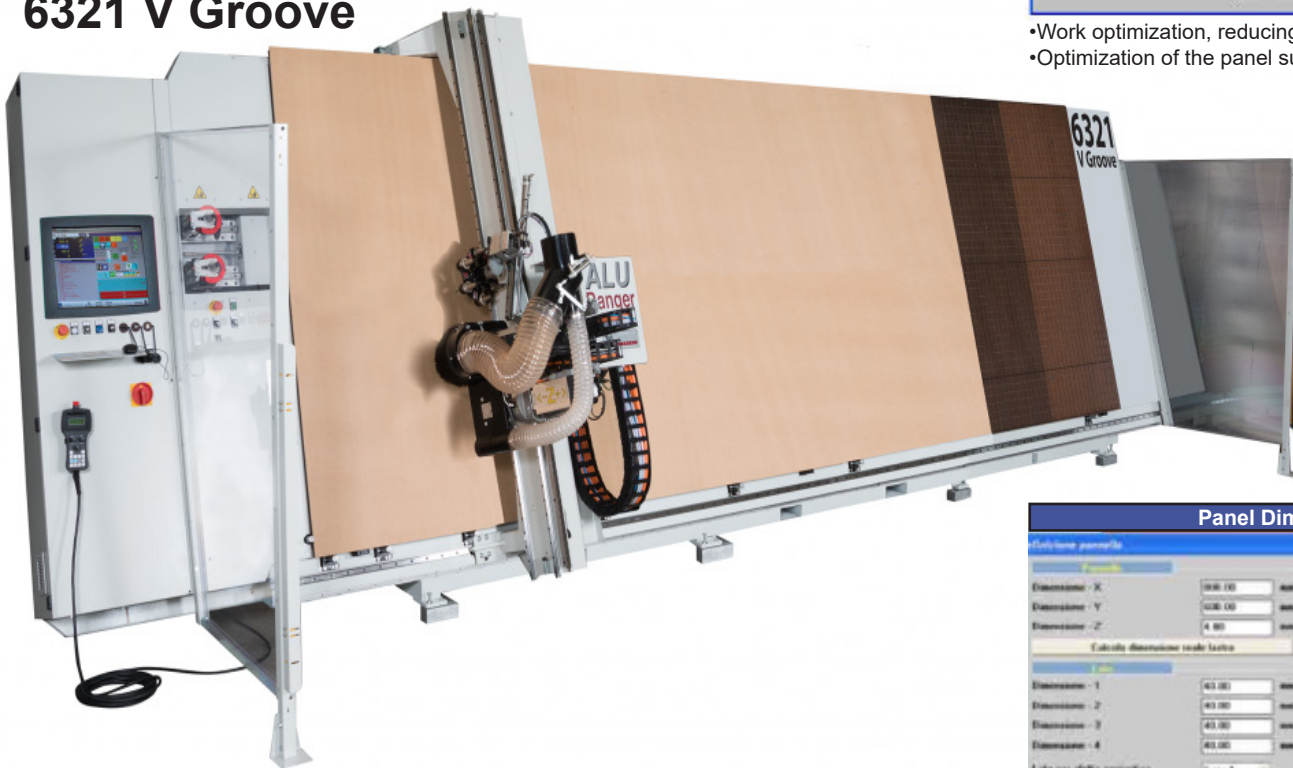
## **Machining & Fabrication Capabilities**

## 4221 V Groove

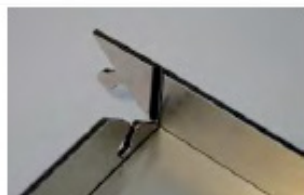


- Work optimization, reducing scraps
- Optimization of the panel surface direction

## 6321 V Groove



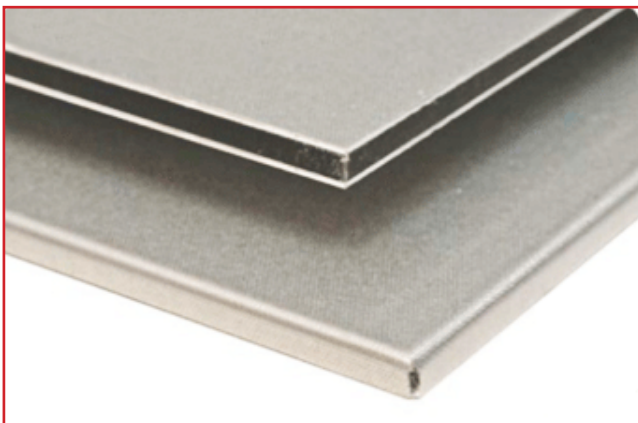
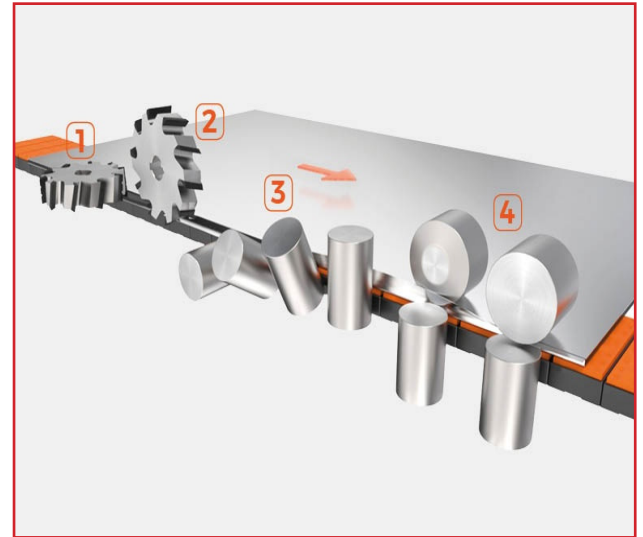
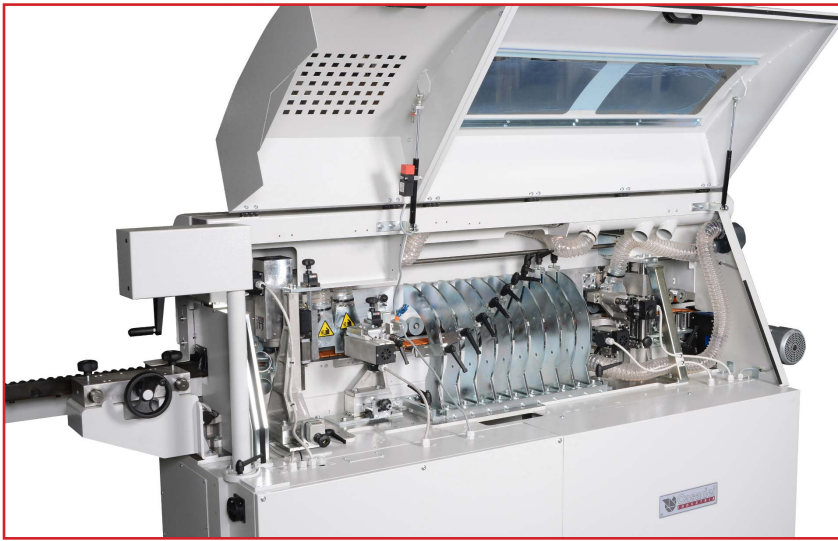
- Cassette dimensions
- Return fold height
- Extra processings
- Priority processing selection



### ACM & Phenolic Panel Fabrication:

With our ALU Ranger 4221 & 6321 V Groove Vertical CNC machines, panel processing and fabrication quality is at the highest level. Machined Panel processing minimizes planing and reduces joint tolerances making our Rainscreen- Pressure Equalized and Drained & Back Ventilated Cladding Systems perform better by minimizing the amounts of controlled moisture inside the cavity wall.

# ALU BENDER Milling & Bending Machine



- It mills off the top layer of Aluminum and the core of the ACM panel preparing the finished layer for bending.
- During the automatic feeding 10 rollers bend the finish layer against the core for a perfect edge. This protects the core from the elements and gives a clean finished look.

## Panel Edge Finishing

With our ALU Bender machine, Automatic Milling / Bending makes processing straight rolled edges on Aluminum Composite Panels and Phenolic Panels for architectural facades and cladding systems at the highest level.

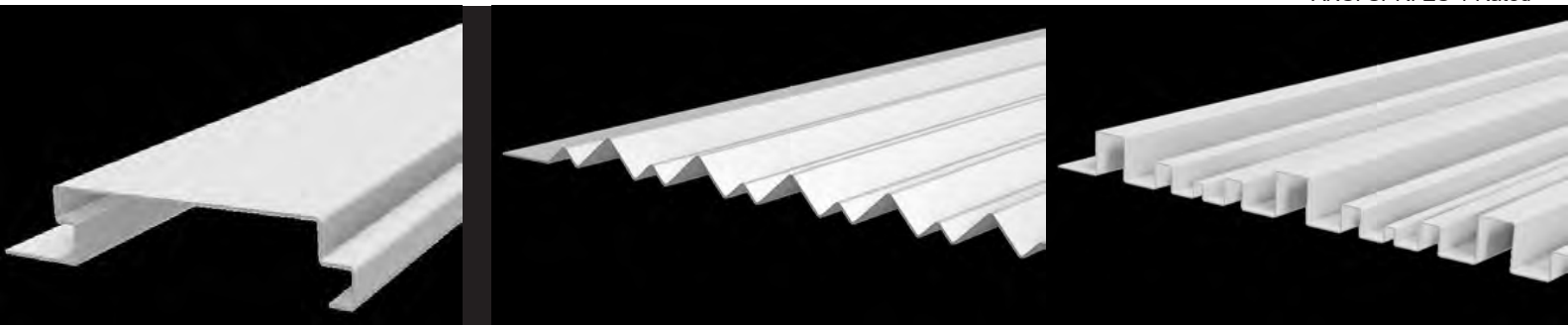
# Thalmann TD 150 Bi-Directional Single Skin Metal Folder Machine



## Sheet Metal Panel Fabrication:

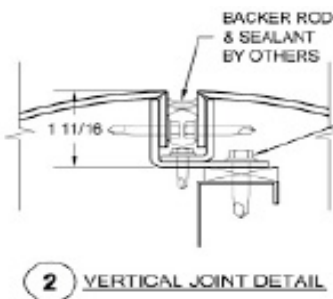
With our Swiss made Thalmann TD 150 Bi-Directional Single Skin Metal Folder machine, fabrication of any "Profile" concealed fastener wall panel or decorative piece that you can dream of comes to a reality at DSS. Our Sheet Metal Shop brings unparalleled automation with complete torsion control preventing any twisting over time. Whether it's Radius parts or Tapered parts, Fabrication Precision and Quality is at the highest level.

ANSI SPRI ES-1 Rated

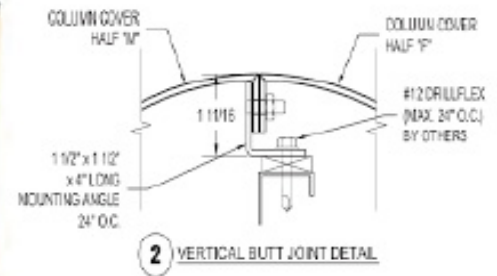




# Double Pinch Hydraulic Plate Bending Machine



#12 DRILLFLEX (MAX. 24" O.C.) BY OTHERS



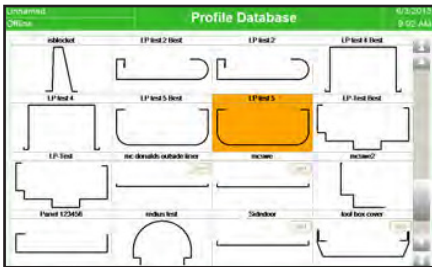
## Radius Fabrication:

With our 20' long 4-Roll Double Pinch Hydraulic Plate Bending Machine, DSS has the ability over 3-Roll machines to roll the piece continuous from the leading edge to the trailing edge with no "Flat" spots. Our machine has a minimum column roll diameter of 9 inches to produce the narrowest of columns. Capabilities range from 10 ga. plate steel to 4mm or 6mm aluminum composite material rolling capacity.



# Automatic Power Sheet Metal Folder & Automatic Power Rapid Sheet Metal Shear

**CIDAN**  
MACHINERY



## Sheet Metal Trim & Perimeter Systems Fabrication:

With our CIDAN computerized sheet metal fabrication machines, processing, cutting and fabricating sheet metal up to 16ga. to any configuration is at the highest level.



# **DSS**

## **Qualifications & Certifications**



**Design Systems & Services Corporation**  
**318 E. Wythe Street**  
**Petersburg, VA 23803**

*7/11/2019*

**3A Composites USA**  
721 Jetton Street, Suite 325  
Davidson, NC 28036

To whom it may concern,

This letter confirms *Design Systems & Services Corporation* is an approved Fabricator of ALUCOBOND® Material.

ALUCOBOND is a proprietary product manufactured by 3A Composites USA Inc. in Benton, Kentucky. ALUCOBOND material is supplied for use as an exterior and interior cladding material to approved fabricators who have demonstrated a capability to design, fabricate and install the material in accordance with code and regulatory requirements.

If you require additional information, please feel free to call me.

Sincerely,

**Nicholas Scheib**

A handwritten signature in blue ink, appearing to read 'N. Scheib', written over a light blue horizontal line.

**Vice President of Sales and Marketing**

**MEMBER CERTIFICATE**

**Design Systems & Services Corporation**

IS A MEMBER IN GOOD STANDING WITH THE

**AIR BARRIER ASSOCIATION OF AMERICA INC.**

THE MEMBER AGREES TO ACTIVELY CHAMPION THE AIR BARRIER INDUSTRY WHILE SUSTAINING HIGH INDUSTRY STANDARDS, PROFESSIONALISM AND ABIDING BY THE PRINCIPLES OF ABAA.



**510-1159**

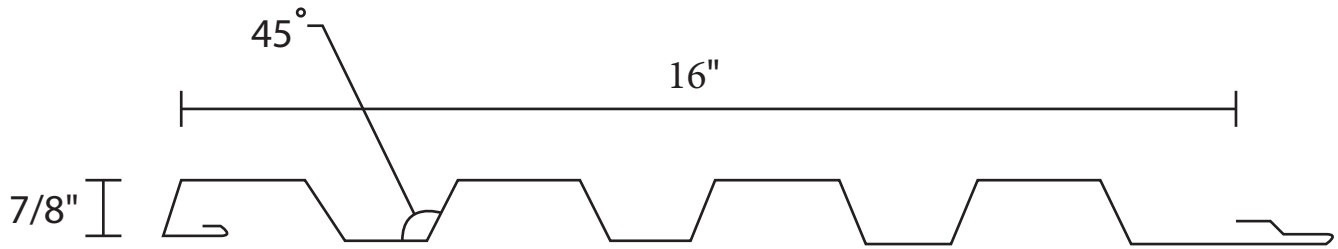
MEMBER #

AIR BARRIER ASSOCIATION OF AMERICA INC.

DSS

Concealed Fastener  
Lap Seam Wall Panels

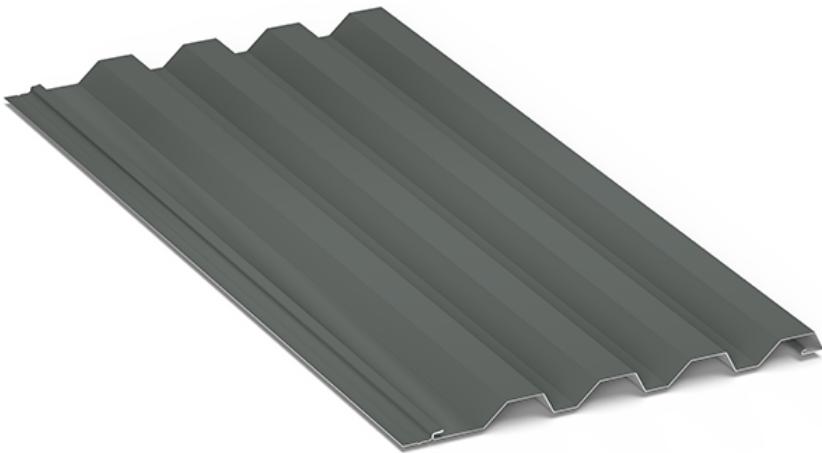
# DSS System M-16



**Material:** 24 ga. Galvalume

**Requirements:** Solid substrate or Open Framing  
Wall or Soffit applications

**Finish:** Hylar 5000 or Kynar 500

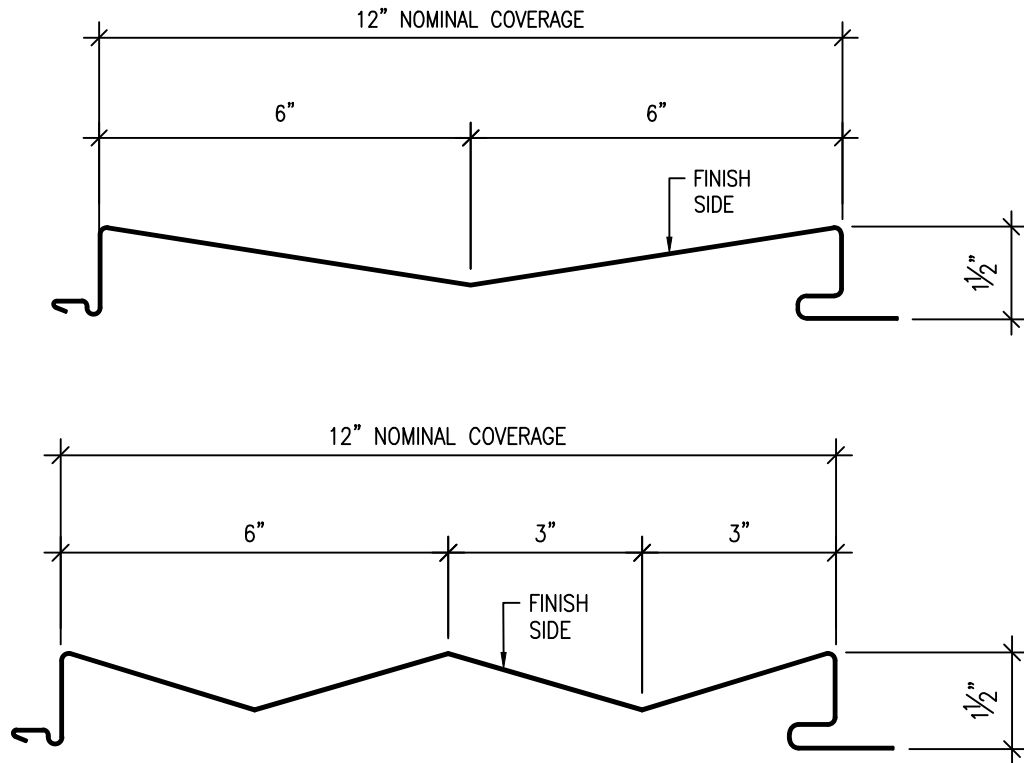


# DSS

*Design Systems & Services Corporation*  
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[www.dss-corporation.com](http://www.dss-corporation.com)

# DSS - Chevron Panels



PANEL PROFILE

**Material:** 24 ga. Galvalume

**Requirements:** Solid substrate or Open Framing  
Wall or Soffit applications

**Finish:** Hylar 5000 or Kynar 500



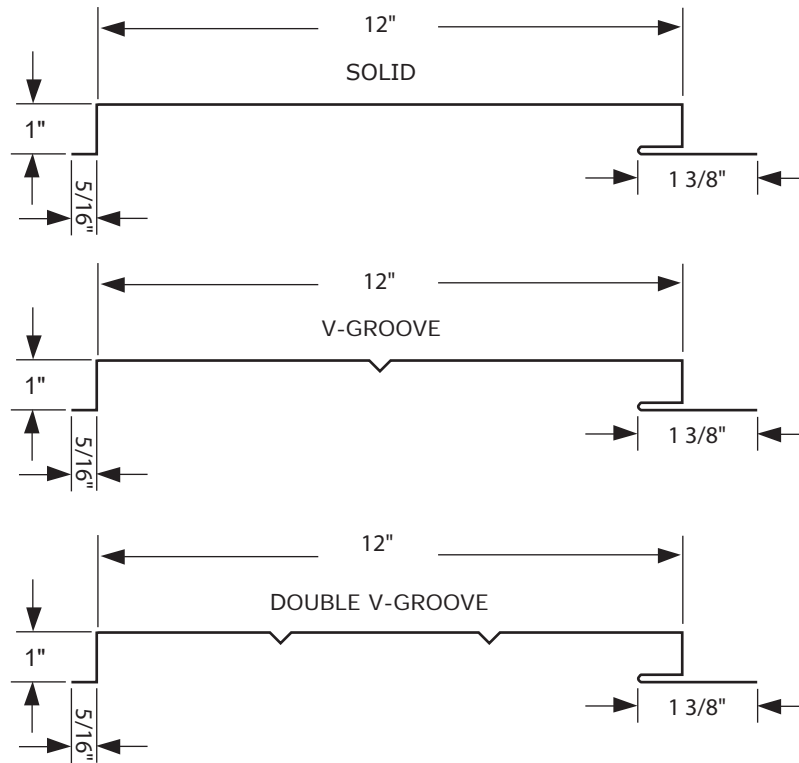
# DSS

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*"DIVISION 7 PROFESSIONALS"*

[www.dss-corporation.com](http://www.dss-corporation.com)



## DSS FLUSH PANEL



Versatility accomodates a variety of commercial installations. Can be used as a wall or soffit panel system.

**Material:** 24 gauge Galvalume

**Finish:** Kynar 500



# DSS

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[www.dss-corporation.com](http://www.dss-corporation.com)