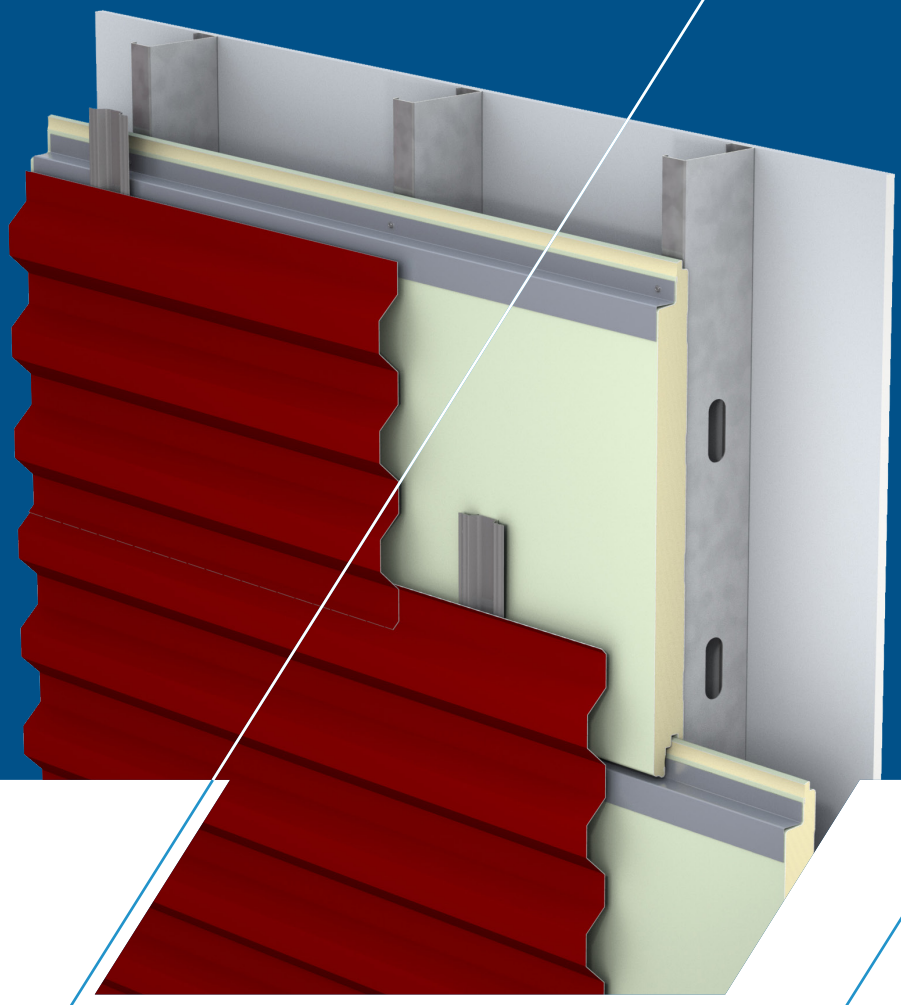
METL SPAN®
a NUCOR® company

BACKUP WALL SYSTEMS

BW UNIVERSAL SYSTEM™ & BW STRETCH SYSTEM™



BACKUP WALL SYSTEMS

BW Systems are the ultimate backup wall systems, providing superior air, water, thermal and vapor protection in an all-in-one barrier component compared to traditional multi-component wall systems. They can be vertically and horizontally installed with nearly any type of exterior rainscreen system. These unique insulated metal wall panel systems introduce new standards in cost savings, design integrity, and sustainability. Easily and quickly installed in a single step, the BW Systems eliminate the need for multiple work crews, expediting close-in/dry-in building times and reducing the likelihood of improper installation.

BENEFITS OF BW APPLICATION:

- Provides an air barrier, vapor barrier and moisture control, drain plane and superior thermal performance in one composite assembly.
- Encloses the building faster in all weather conditions.
- Works well for all building types in all climates.
- Assembly thermal performance achieves u-factors that exceed International Energy Conservation Code® (IECC) requirements in all climate zones.
- BW with different wall assemblies meets the requirements for the NFPA 285 multi-story fire test.
- Fully tested for air, water infiltration, vapor and thermal performance.

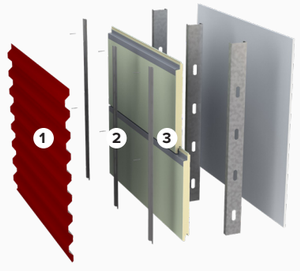
SINGLE COMPONENT VS. MULTI-COMPONENT

With its single component construction, BW is a vast improvement over traditional multi-component building technology. A single component means a single source of responsibility, including less coordination, fewer scheduling and interface issues, and one-step installation by one contractor. Together, this all contributes to a faster, more efficient construction process.

TRADITIONAL BACKUP WALL SYSTEMS ARE INSTALLED IN THREE OR FOUR STEPS, REQUIRING MULTIPLE LAYERS AND MULTIPLE CONTRACTORS.

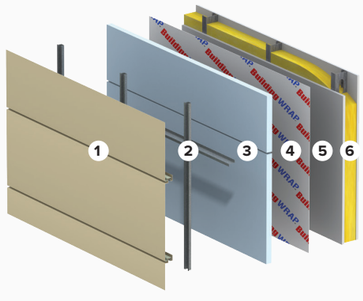
- Multiple layers equals more potential for installation errors, including issues with the connections between the framing and exterior façade.
- Multiple layers can lead to moisture entrapment in the wall cavity, resulting in wet insulation, mold and mildew.

BW SYSTEMS



1. Exterior Rainscreen
2. Subgirts
3. BW with integral attachment system

TRADITIONAL BACKUP SYSTEM



1. Exterior Rainscreen
2. Zs Support & Vertical Subgirts
3. Insulation
4. Air and Vapor Barrier
5. Exterior Sheathing
6. Cavity Insulation

BW SYSTEM IS FULLY TESTED AND CODE COMPLIANT

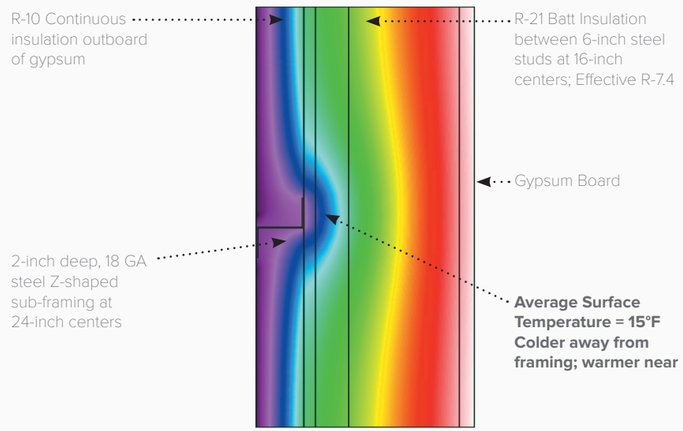
Building and energy code compliance are critical parts of any construction project. BW provides a superior solution for these requirements and outperforms multi-component wall assemblies.

THERMOGRAPHS

The images to the left compare thermally equivalent wall assemblies. The multi-component wall with continuous insulation still requires supplemental steel framing (Zs) to convey the wind load from the rainscreen to the supports.

Required supplemental framing for the multi-component wall leads to a loss in thermal performance and leads to a greater potential for condensation in the cavity.

MULTI-COMPONENT WALL

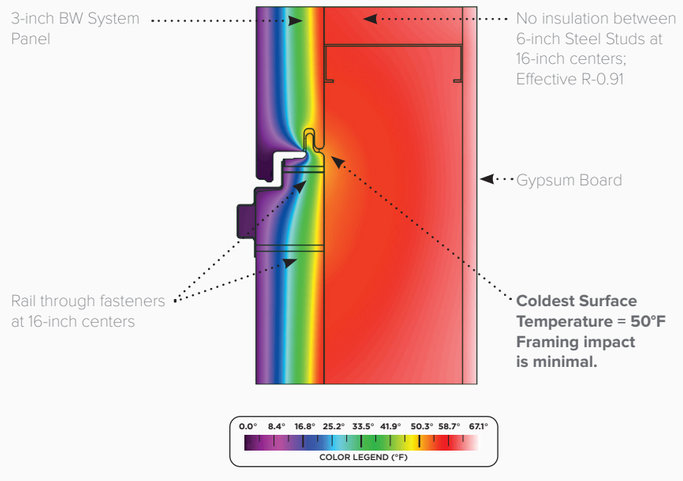


BW System exceeds IECC energy performance requirements based on u-factors tested in accordance with ASTM C1363. BW System compliance is based on using the u-factor Alternative Method as published in a table by climate zone in the IECC.

BW has several wall assemblies that pass NFPA 285 and it meets the most rigorous standards in IBC Chapter 26.

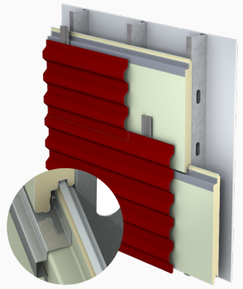
BW's single component design provides a simpler, faster and more thermally efficient solution.

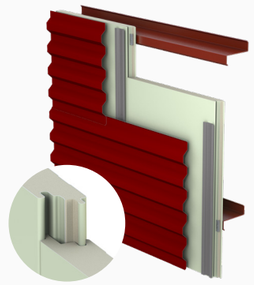
3" BW SYSTEM



Exterior Temperature (0°F), Interior Temperature (70°F)

BACKUP WALL SYSTEMS





BW SYSTEMS

BW UNIVERSAL SYSTEM™

Width: 32"*, 36"

Thickness: 2", 3"

Length: 12'-0" or 20'-0"

Orientation: Horizontal

Exterior Profile: No Profile, unembossed

Exterior Face: AZ-50 aluminum-zinc coated steel in 29 Ga. with epoxy primer finish

Interior Profile: Shallow Planked, nominal 3/64" deep, unembossed

Interior Face: AZ-50 aluminum-zinc coated steel in 29 Ga. with epoxy primer finish

Core: Foamed in-place polyisocyanurate

Joint: Tongue-and-groove with concealed face fastening

Span Capabilities: Up to 24" o.c.

Attachment Method: Panel Clips, pre-punched rails integrated with the panel joinery and integrated brick tie clips.

Sealing Method: Joint has factory applied sealant. Panel ends and marriage beads to factory sealant applied during installation.

Exterior Cladding Attachment Method: Subgirts attached to panel clips. Integrated BWUH Rail and BWUV Rail. Integrated brick ties for brick installation.

* Primarily for brick application

BW STRETCH SYSTEM™

Width: 30", 36"

Thickness: 2", 2¾", 4"

Length: 12'-0" or 20'-0"

Orientation: Vertical

Exterior Profile: No Profile, unembossed

Exterior Face: G-90 galvanized steel in 22 Ga. with epoxy primer finish

Interior Profile: Shallow Planked, nominal 3/64" deep, unembossed

Interior Face: G-90 galvanized steel in 26 Ga. with epoxy primer finish

Core: Foamed in-place polyisocyanurate

Joint: Double tongue-and-groove

Span Capabilities: Greater than 24" and up to 6 ft. o.c.

Attachment Method: Panel Clips

Sealing Method: Joint has factory applied sealant. Panel ends and marriage beads to factory sealant applied during installation.

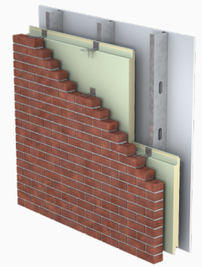
Exterior Cladding Attachment Method: Subgirts attached into panel joint.

BW UNIVERSAL SYSTEM

RAINSCREEN SELECTION GUIDE

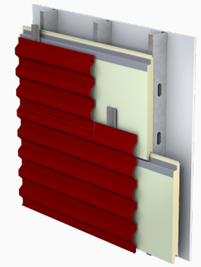
RAINSCREEN	BWUH RAIL*	BWUV RAIL	BRICK TIES	PANEL CLIPS*
Horizontal Profile Panels	X			X
Vertical Profile Panels		X		
Brick			X	
Terra Cotta	X			
ACM Panels	X-horiz.	X-vert.		
Honeycomb Panels	X-horiz.	X-vert.		
Stucco	X			
Perforated Panels				X

*Additional subgirts are required.



BRICK

TERRA COTTA



METAL

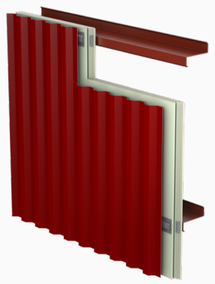
ACM

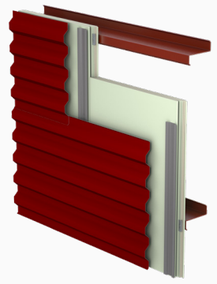
BW STRETCH SYSTEM

RAINSCREEN SELECTION GUIDE

RAINSCREEN	PANEL/GIRTS*
Horizontal Profile Panels	X
Vertical Profile Panels	X

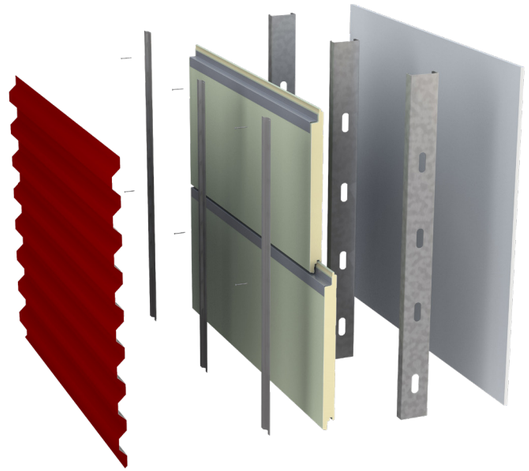
*Additional subgirts are required.



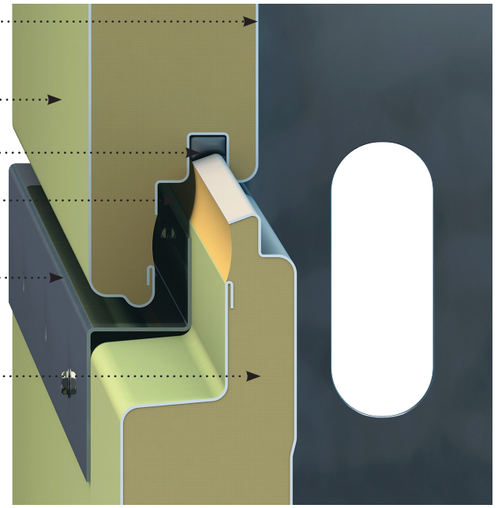


BW UNIVERSAL SYSTEM™

BW Universal System achieves energy efficiency goals with its integrated composite panel design. This construction eliminates the need for conventional batt or board insulation, exterior gypsum, air barriers, vapor retarders, and building wraps.



- Metal Liner Provides Air and Vapor Barrier
- Durable Metal Drain Plane
- Factory Applied Sealant
- Tongue-and-Groove with concealed face fastening
- BWU Horizontal Rainscreen Rail Integral Attachment System
- R-16.7 or R-25.1 Tested Assembly Insulation



BW Universal System

BW UNIVERSAL SYSTEM™ TESTING

DESCRIPTION	TEST METHOD	RESULTS
Fire US The BW insulated composite back-up panel system provides outstanding fire resistance. BW has been tested to the most rigorous industry standards noted in IBC Chapter 26.	ASTM E84 NFPA 259 NFPA 285	Flame Spread < 25 Smoke Developed < 450 Potential heat of foam plastic insulation contained in the assembly tested in accordance with NFPA 285 Representative mockup tested in accordance with NFPA 285. Requires one layer of ⅝-inch Type X gypsum board on the interior side of the steel framing of the panels. Contact Metl-Span for complying wall assemblies.
Structural A foamed-in-place core and two steel skins offer strength, durability and an excellent drain plane. BW can be applied horizontally to achieve required span capabilities.	ASTM E72	See Load Span Tables
Thermal Performance Thermal Performance utilizes strong, composite construction with thermally broken panel joinery and places the thermal envelope on the outside of the framing cavity.	ASTM C518 ASTM C1363	ASTM C1363* u-FACTOR (BTU/h*ft²*°F) Panel Width: 36" 35° 2" 0.062 3" 0.041 ASTM C518 R-VALUE (h*ft²*°F/BTU) Panel Width: 36" 35° 2" 16.7 3" 25.1
Air Infiltration With so much attention to thermal and water performance, air infiltration is often the most overlooked aspect of wall performance. BW addresses air infiltration by providing a continuous air barrier via a formed metal liner with a combination of field-applied and factory applied sealants.	ASTM E2357	Maximum Air Infiltration Rate of 0.004 cfm/sq. ft. at a static-air-pressure difference of 1.57 psf
Water Performance BW utilizes a joinery system that eliminates moisture build up and entrapment within panel joinery, thus ensuring the highest level of water performance.	ASTM E331	No uncontrolled leakage when tested to a static pressure of 15 psf for 15 min. No uncontrolled leakage when tested at a differential pressure of 6.24 psf for 2 hours (per IBC - Chapter 14)

*k-Factor Units: BTU in/ft2hr. °F, Based on ASTM C518, 35° core mean temp.
**Based on ASTM C1363, 35°F core mean temp.

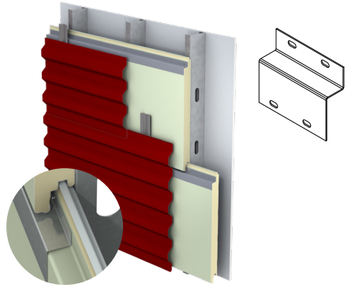
OPTIONAL WARRANTY

Metl-Span backs its BW System with a weathertight 10-year warranty. When any cladding is used with BW, you get the extra quality and performance assurance that no other backup wall with multiple components and layers can offer.

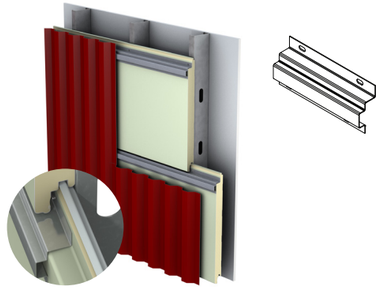
BW UNIVERSAL SYSTEM™

DESIGN FLEXIBILITY

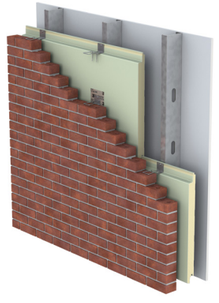
Metl-Span BW Universal System provides you design flexibility to support a variety of rainscreen applications, as well as accessories. The rainscreen systems provide aesthetics as well as a performance barrier to compliment any project under any climate condition.



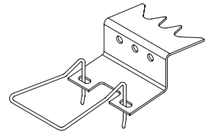
BWU HORIZONTAL RAINSCREEN RAIL



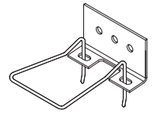
BWU VERTICAL RAINSCREEN RAIL



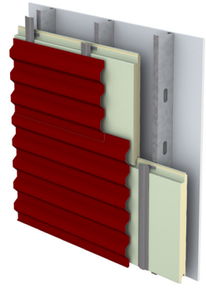
BRICK TIES



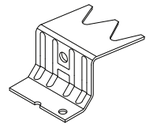
Integrated Panel Clip and Pintle for Brick



Mid-Span Face Attachment Clip and Pintle for Brick



PANEL CLIP



BW UNIVERSAL SYSTEM

RAINSCREEN SELECTION GUIDE

RAINSCREEN	BWUH RAIL*	BWUV RAIL
Horizontal Profile Panels	X	
Vertical Profile Panels		X
Brick		
Terra Cotta	X	
ACM Panels	X-horiz.	X-vert.
Honeycomb Panels	X-horiz.	X-vert.
Stucco	X	
Perforated Panels		

*Additional subgirts are required.

BW UNIVERSAL SYSTEM

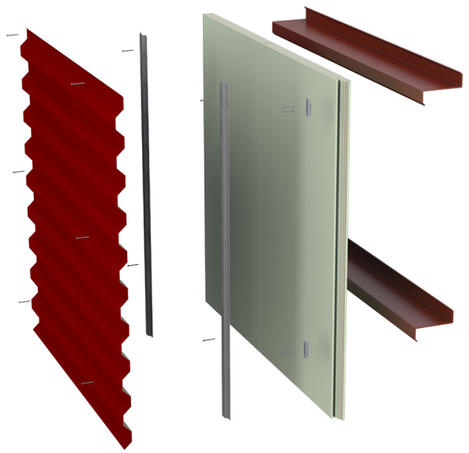
RAINSCREEN SELECTION GUIDE

RAINSCREEN	BRICK TIES	PANEL CLIPS*
Horizontal Profile Panels		X
Vertical Profile Panels		
Brick	X	
Terra Cotta		
ACM Panels		
Honeycomb Panels		
Stucco		
Perforated Panels		X

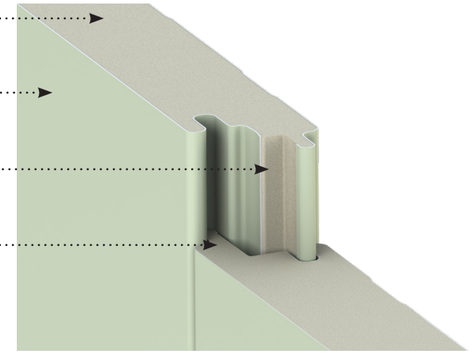
*Additional subgirts are required.

BW STRETCH SYSTEM™

The BW Stretch System can be vertically installed with multiple types of exterior rainscreen systems and can span up to 6 ft. o.c. This unique insulated metal panel wall system can be easily and quickly installed in a single step. The BW Stretch System eliminates the need for multiple work crews, expediting close-in/dry-in building times and reducing the likelihood of improper installation.



- R-16.7, R-23, or R-33.5 Tested Assembly Insulation
- Durable Metal Drain Plane
- Offset Double Tongue-and-Groove Joint
- Factory Applied Sealant



BW Stretch System

BW STRETCH SYSTEM™ TESTING

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Fire US/ Fire Canada The BW insulated composite back-up panel system provides outstanding fire resistance. BW has been tested to the most rigorous industry standards noted in IBC Chapter 26	ASTM E84	Flame Spread < 25 Smoke Developed < 450
	NFPA 259	Potential heat of foam plastic insulation contained in the assembly tested in accordance with NFPA 285
	NFPA 285	Representative mockup tested in accordance with NFPA 285. Contact Metl-Span for complying wall assembly
	CAN/ULC S101	Meets Acceptance Criteria per the National Building Code of Canada
	CAN/ULC S102	Meets Acceptance Criteria per the National Building Code of Canada
	CAN/ULC S134	Meets Acceptance Criteria per the National Building Code of Canada. Testing performed on panel only.
Structural A foamed-in-place core and two steel skins offer strength, durability and an excellent drain plane. BW can be applied vertically to achieve required span capabilities.	ASTM E72	See Load Span Tables
Thermal Performance Thermal Performance utilizes strong, composite construction with thermally broken panel joinery and places the thermal envelope on the outside of the framing cavity.	ASTM C518 ASTM C1363	ASTM C1363* u-FACTOR (BTU/h*ft²*°F) Panel Width: 36” 35° 2” 0.063 2¾” 0.046 4” 0.034 ASTM C518 R-VALUE (h*ft²*°F/BTU) Panel Width: 36” 35° 2” 16.7 2¾” 23.0 4” 33.5 k-Factor of 0.147 BTU/h·ft².°F at 75°F mean core
Air Infiltration With so much attention to thermal and water performance, air infiltration is often the most overlooked aspect of wall performance. BW addresses air infiltration by providing a continuous air barrier via a formed metal liner with a combination of field-applied and factory applied sealants.	ASTM E2357	Maximum Air Infiltration Rate of 0.004 cfm/sq. ft. at a static-air-pressure difference of 1.57 psf Meets acceptance criteria per the International Energy Conservation Code and the National Energy Code of Canada.
Water Performance BW utilizes a joinery system that eliminates moisture build up and entrapment within panel joinery, thus ensuring the highest level of water performance.	ASTM E331	No uncontrolled leakage when tested to a static pressure of 15 psf for 15 min. No uncontrolled leakage when tested at a differential pressure of 6.24 psf for 2 hours (per IBC - Chapter 14)

*k-Factor Units: BTU in/ft2hr. °F, Based on ASTM C518, 35° core mean temp.
**Based on ASTM C1363, 35°F core mean temp.

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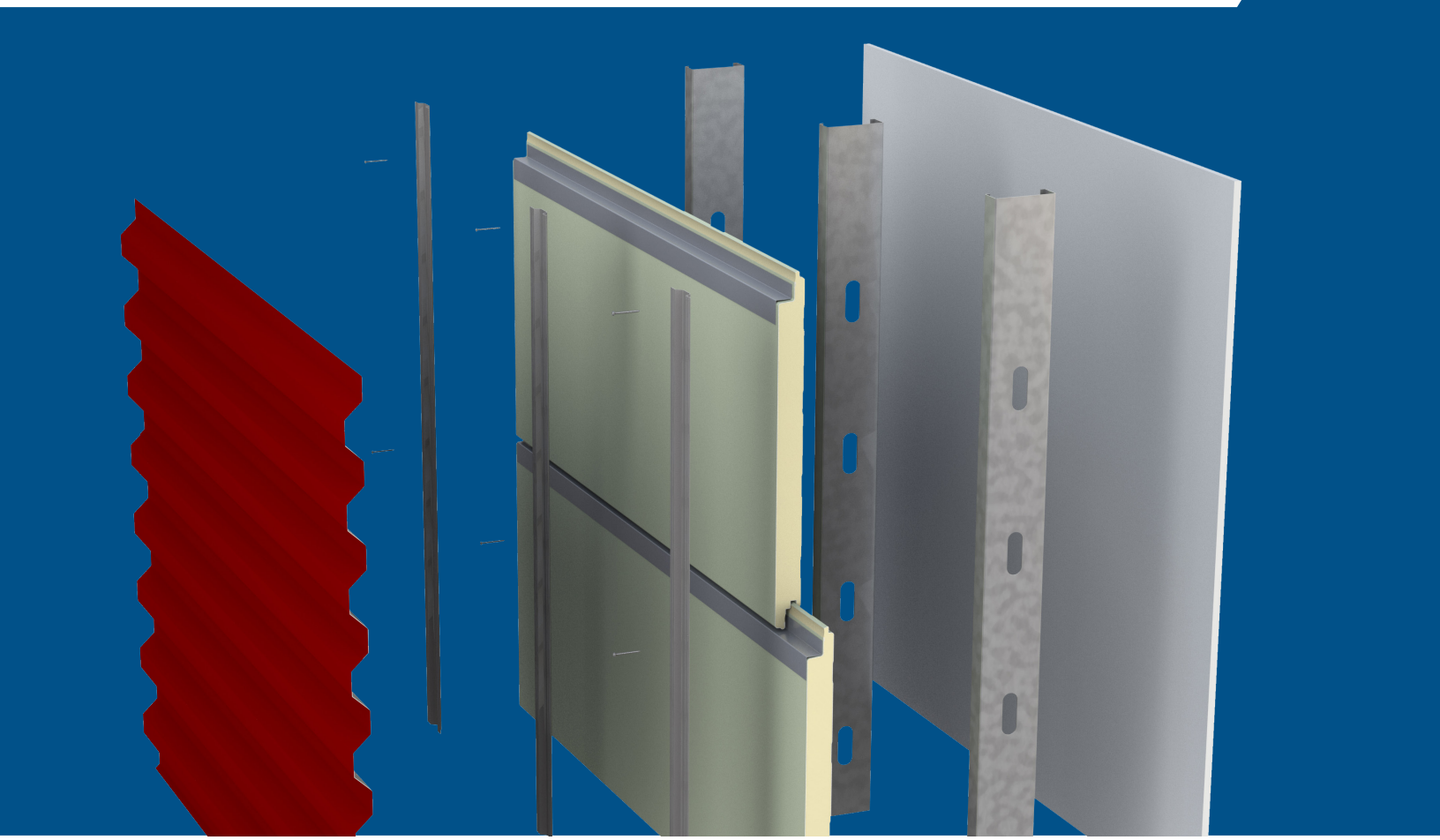

Metl-Span: All-In-One Performance
1720 Lakepointe Drive, Suite 101, Lewisville, Texas 75057 (p) 877.585.9969 metlspan.com

Reference BWS NJ/PO 11_22 SKU #307209991167