EZ-Wall Product Guide

Ambrico american brick company

Engineered Thin Brick Panel System

EZ-WALL SYSTEM

A true mechanical support and spacing system using an architectural grade galvanized steel panel for thin brick, tile, marble and granite.

Each thin veneer unit is supported and spaced with custom relief ledge integrated into the steel. The panel can accommodate various sizes of thin veneer for interior or exterior use.

Application is accomplished by either using components or sub-assemblies at the job site or factory.

Finished wall system can be insulative, structural or fire rated.

Product offers the:

- **Designer:** Choices of sizes, patterns, finishes and textures.
- **Contractor**: Various methods of installation to fit budget, site and project.
- **Owner**: A cost effective, aesthetically pleasing and maintenance free wall system.

PRODUCT DESCRIPTION

EZ-WALL PANELS

DESCRIPTION OF PRODUCT

26 - GAUGE GALVANIZED, PAINT- COATED, STUCCO EMBOSSED PANELS, WITH 10mm (3/8") TABS FOR USE WITH THIN BRICK VENEERS, AND 7mm (1/4") TABS FOR TILE & STONE VENEERS.

DIMENSIONS:

- 1200 mm x 600 mm (48" x 24")
- 1200 mm x 1200 mm (48" x 48")

MISCELLANEOUS PRODUCT DESCRIPTION

MASTIC ADHESIVE 850 ml (28 oz.) TUBES (12 / BOX)

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EZ-WALL Support System Offers:

- Light weight finish – 32 kg / m2 (6.5 lb per square foot).
- 13mm (1/2" high) profile that can be used with standard trims, moldings, window and door frames.
- Year round installation.
- Assembled components have about the same co-efficient of expansion, allowing components to cycle together.
- Custom manufactured panel heights.
- Utilizes less expensive labor.
- Faster and simpler installation methods.
- Minimal height restrictions.
- Interior or exterior applications.
- Internationally patented.
- Full depth mortar joint.

With standard construction products, procedures and materials, finished wall sections with EZ-WALL can offer:

- Moisture control, using standard flashing or weep methods.
- Certified and listed fire rating.
- Exterior insulative thin veneer finish.
- High shear and wind resilient thin veneer walls.
- Structural curtain and spandrel panellized wall sections.
- Tilt-up construction methods with finished thin veneer.
- Diaphragm wall systems that help eliminate moisture.

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COMPONENT FEATURES / BENEFITS

All of the base components the EZ-Wall system is comprised of are accepted materials and standards in the construction industry.

FEATURES:

ARCHITECTURAL GRADE STEEL PANEL

BENEFITS:

- Tensile strength of steel will carry sidewall wind loading – particularly in diaphragm engineered systems.
- Is a steel ledge for the thin veneer's shear weight to rest on – a true mechanical (structural) support system.
- Double steel tab spaces the thin veneer horizontally and vertically on the panel for easy installation.
- Zinc-coated galvanized to G-90 for rust prevention for heavy-duty commercial applications.
- Steel sheet is fastened and applied to wall like any other standard siding – no special clips, hooks, trims, or strips needed.
- Allows you to fasten anywhere through the panel for even weight distribution or loading on the wall, using industry standard fasteners.
- High fastener pull-through strength for panel support and integrity.
- Hardened steel sheets help brace the wall, minimizing wall racking.
- Architectural grade steel has approximately the same co-efficient of thermal expansion as thin veneer and mortar.

STUCCO EMBOSSED STEEL

BENEFITS:

- Provides a built-in weep system on both sides of the panel for true moisture control.
- More surface area for mortar and mastic to attach to.
- Not a flat surface – it acts like small suction cups, therefore mastic and mortar grab better.
- Makes for easier handling.

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PAINTED FINISH

BENEFITS:

- White color helps reflect and evenly distribute heat.
- Finish is a two-coat, themo-set, siliconized polyester for better mastic and motor adhesion.
- Provides barrier rust protection.

HIGH SOLIDS MASTIC

BENEFITS:

- Impervious to water.
- Not affected by freezing.
- Remains pliable after initial set.
- Base product has been marketed for over 50 years.
- Workable open time of 15 minutes.

VENEERS

BENEFITS:

- Customized finishes – numerous colors, textures and sizes (brick, tile, marble and granite).
- Tested to meet and pass severe weather requirements.
- Can be maintained and cleaned like standard brick, tile or stone construction.

LATEX MODIFIED MORTAR

BENEFITS:

- Has Portland cement base for high compressive strength.
- Water-based acrylic latex gives high shear properties to mortar.
- Allows mortar to remain flexible.
- Brings permeability to rating of mortar down to one.
- Water-based acrylic latex helps neutralize cement alkalinity and reduce mortar efflorence.

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SPECIFICATIONS FOR EZ-WALL SYSTEM

SECTION 04245 | BRICK PANEL SYSTEMS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 general requirements apply to this section.

1.2 SUMMARY

This specification document is designed to provide Dealers, Architects, and specifiers with information concerning the EZ-WALL system, through the outline of materials, construction details and product dimensions.

This section contains details that are required during the specification process. Information can also be useful as a continuing reference to owner.

Related Work: (Select as Required)

Slab/Tilt-Up Construction:	Section 03470
Closures and Setting Accessories for Concrete:	Section 03490
Design Information Masonry:	Section 04001
Mortar and Masonry Grout:	Section 04100
Unit Masonry:	Section 04200
Concrete Unit Masonry:	Section 04220
Reinforced Unit Masonry:	Section 04230
Stone:	Section 04400
Granite:	Section 04465
Masonry Restoration and Cleaning:	Section 04500
Simulated Stone:	Section 05050
Structural Metal Framing:	Section 05100
Structural Framing Systems:	Section 05160
Cold-Formed Metal Framing:	Section 05400
Expansion Control:	Section 05800
Laminated and Processed Sheets:	Section 06118
Structural Plywood:	Section 06122
Fiberwood Sheets and Decking:	Section 06124
Composite Wood/Metal Framing:	Section 06150
Design Information Thermal and Moisture Protection:	Section 07001
Waterproofing and Damp Proofing:	Section 07100
Sheet Membrane Waterproofing:	Section 07110
Damp Proofing:	Section 07150
Water Repellent Materials:	Section 07180
Vapor Retarders:	Section 07190

Air Infiltration Barriers:	Section 01795
Insulation:	Section 07200
Fireproofing:	Section 07250
Firestopping:	Section 07270
Pre-Formed Flashing:	Section 07645
Flexible Flashing:	Section 07650
Joint Fillers and Gaskets:	Section 07910
Sealants, Caulking and Seals:	Section 07920
Non-Load Bearing Wall Framing:	Section 09110
Metal Furring and Accessories:	Section 09206
Gypsum Board:	Section 09250
Gypsum Fabricators:	Section 09290
Tile:	Section 09300
Ceramic Tile:	Section 09310
Quarry Tile:	Section 09330
Pre-Engineered Structures:	Section 13120
Metal Building Systems:	Section 13122
Portable and Mobile Buildings:	Section 13124
Pre-Engineered Wood Components Systems:	Section 13136
Pre-Engineered Parking Structures:	Section 13138
Pre-Fabricated Residential Structures:	Section 13144

1.3 SCOPE OF WORK

Include all labor, materials and appliances, and perform all operations in connection with the installation of the EZ-WALL system and all related work, in strict accordance with drawings, and as specified herein.

Dimensions are nominal and specifications are based on the latest product information available at time of publication. EZ-WALL reserves the right to make changes in its product at any time without notice.

Products to be considered equal to those specified must be approved in writing by the architect, engineer, or specifier ten (10) days prior to the project bid date.

1.4 SUBMITTALS

Samples provided in small-scale form for initial selection purposes showing range of colors, textures, and patterns are available for each type of thin veneer.

Shop drawings detailing dimensioned plans and elevations that include large scale details of connections, joint conditions and other related components.

Test Reports: System Flammability, Wind Load, Impact Load, Rain Penetration, Freeze/Thaw and Component Physical Property Tests are available from EZ-WALL, INC.

1.5 QUALITY ASSURANCE

Appoint at least one supervisory journeyman who shall be present at all times during execution of work, who shall be thoroughly familiar with design requirement, type of materials being installed, reference standards and other requirements, and who shall direct all work performed at jobsite.

Applicator Contractor shall be EZ-WALL approved and/or have at least three (3) years experience in the installation of panel systems.

Comply with all applicable codes, regulations, and standards. Where provision of applicable codes, regulations, and standards conflict with requirements of this section, the more demanding shall govern.

EZ-WALL component parts meet National Building Code requirements including: BOCA, SBCC, ICBO, CABO, HUD-FHA, VA AND MEA.

1.6 PERFORMANCE CHARACTERISTICS

Assembled wall system shall meet or exceed the following performance standards when tested in accordance with the following methods:

ASTM E-84-89a SURFACE BURNING TEST

- **Objective**: Determine the combustibility of the EZ-WALL assembled system.
- **Result**: Flame spread index = 0

  Smoke developed index = 0
- **Conclusion**: EZ-WALL offers a Class 1 non-combustible wall cladding.

ASTM E-119-88 FIRE RESISTANCE TEST

- **Objective**: Determine the fire resistance of a wall system with EZ-WALL for fire penetration that meets a 2-hour rating.
- **Result**: Temperature did not rise above prescribed levels and water hose test was met.
- **Conclusion**: Certified and listed fire endurance rating of 2 hours was given by a code approved testing laboratory for a wall system.

ASTM-E-72-80 WINDLOAD STRUCTURAL TESTING

- **Objective**: Determine wind load capacity of a composite EZ-WALL section based upon stud or girt spacing and deflection design of substrate.
- **Result**: Transverse Load Test with approved minimum sheathing of 7 mm (1/4”) extruded foam board.

Summary of Test Results

Allowable panel load based on a deflection limit of:
L/180 =24/180 = 3.4 mm (.1333 in.) Allowable load = 754 kg/m2 (154.5 PSF)

Allowable panel load based on a deflection limit of:
L/240 = 24/240 = 2.5 mm (.1000 in.) Allowable load = 603 kg/m2 (123.6 PSF)

Allowable panel load based on a deflection limit of:
L/360 = 24/360 = 1.7 mm (.067 in.) Allowable load = 416 kg/m2 (85.3 PSF)

Unless clearance has been obtained from EZ-WALL, INC. per specific project, design deflection shall be based on L/240.

WIND SPEEDS (BASED ON 1985 U.B.C.)

208 km (130 MPH) wind

WallHeight	Height & ClearWall ExposureElement FactorFactor	Safety Factor using L/240*
6 m =	215 kg/m2 x 1.0 x 1.2 =	312 kg/m2
(20 ft. =	44 PSFx 1.0 x 1.2 =	64 PSF 2.35)
12 m =	215 kg/m2 x 1.2 x 1.2 =	337 kg/m2
(40 ft. =	44 PSFx1.2 x 1.2 =	69 PSF 2.17)
18 m =	215 kg/m2 x 1.5 x 1.2 =	386 kg/m2
(60 ft. =	44 PSFx 1.5 x 1.2 =	79 PSF 1.88)
30 m =	215 kg/m2 x 1.6 x 1.2 =	415 kg/m2
(100 ft. =	44 PSFx 1.6 x 1.2 =	85 PSF 1.76)
45 m =	215 kg/m2 x 1.8 x 1.2 =	464 kg/m2
(150 ft. =	44 PSFx 1.8 x 1.2 =	295 PSF 1.56)
60 m =	215 kg/m2 x 1.9 x 1.2 =	488 kg/m2
(200 ft. =	44 PSFx 1.9 x 1.2 =	100 PSF 1.48)

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192 km (120 MPH) wind

WallHeight	Height & ClearWall ExposureElement FactorFactor	Safety Factor using L/240*
6 m =	181 kg/m2 x 1.0 x 1.2 =	259 kg/m2
(20 ft. =	37 PSFx 1.0 x 1.2 =	53 PSF 2.35)
12 m =	181 kg/m2 x 1.2 x 1.2 =	283 kg/m2
(40 ft. =	37 PSFx1.2 x 1.2 =	58 PSF 2.17)
18 m =	181 kg/m2 x 1.5 x 1.2 =	327 kg/m2
(60 ft. =	37 PSFx 1.5 x 1.2 =	67 PSF 1.88)
30 m =	181 kg/m2 x 1.6 x 1.2 =	347 kg/m2
(100 ft. =	37 PSFx 1.6 x 1.2 =	71 PSF 1.76)
45 m =	181 kg/m2 x 1.8 x 1.2 =	391 kg/m2
(150 ft. =	37 PSFx 1.8 x 1.2 =	80 PSF 1.56)
60 m =	181 kg/m2 x 1.9 x 1.2 =	410 kg/m2
(200 ft. =	37 PSFx 1.9 x 1.2 =	84 PSF 1.48)

176 km (110 MPH) wind

WallHeight	Height & ClearWall ExposureElement FactorFactor	Safety Factor using L/240*
6 m =	151 kg/m2 x 1.0 x 1.2 =	220 kg/m2
(20 ft. =	31 PSFx 1.0 x 1.2 =	45 PSF 2.35)
12 m =	151 kg/m2 x 1.2 x 1.2 =	234 kg/m2
(40 ft. =	31 PSFx1.2 x 1.2 =	48 PSF 2.17)
18 m =	151 kg/m2 x 1.5 x 1.2 =	273 kg/m2
(60 ft. =	31 PSFx 1.5 x 1.2 =	56 PSF 1.88)
30 m =	151 kg/m2 x 1.6 x 1.2 =	293 kg/m2
(100 ft. =	31 PSFx 1.6 x 1.2 =	60 PSF 1.76)
45 m =	151 kg/m2 x 1.8 x 1.2 =	327 kg/m2
(150 ft. =	31 PSFx 1.8 x 1.2 =	67 PSF 1.56)
60 m =	151 kg/m2 x 1.9 x 1.2 =	347 kg/m2
(200 ft. =	31 PSFx 1.9 x 1.2 =	71 PSF 1.48)

*Conservative in that panels did not fail using minimum approved 7mm (1/4") foam sheathing. (test equipment maximum capacity was reached).

- **Conclusion**: EZ-WALL systems offers minimal restrictions with minimum thickness sheathing, While higher wind resistive sheathing materials will offer maximum height usage.

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ASTM-E-695-85 IMPACT LOADING

- **Objective**: Determine if wall system with EZ-WALL can withstand maximum measured impacts between studs using an impact of a 27 kg (60 lb.) bag.
- **Result**: No visible cracking of thin brick or mortar.
- **Conclusion**: EZ-WALL system provides a resistive finish for everyday environment.

ASTM E-331 WIND-DRIVEN RAIN AND WATER PENETRATION

- **Objective**: Determine if EZ-WALL system offers a water resistant cladding per ICBO criteria, June, 1990.
- **Result:** No moisture was observed behind sheathing.
- **Conclusion**: EZ-WALL system provides a water resistant finish.

ICBO FREEZE/THAW STABILITY OF SYSTEM TEST. ACCEPTANCE CRITERIA FOR EXTERIOR FINISH SYSTEMS, JUNE, 1990.

- **Objective**: Determine if EZ-WALL system can withstand thermal cycling.
- **Result**: No surface changes, deleterious surface effects, delamination of thin veneer or mortar shrinkage when viewed under 5X magnification.
- **Conclusion**: EZ-WALL system can be used in severe thermal cycling weather conditions.

ASTM C-297-88 SHEAR BOND STRENGTH TEST OF MASTIC

- **Objective**: Measure bond strength between thin brick and panel.
- **Result**: Average tensile strength over 100 kg/m2 (150 PSI) was achieved.
- **Conclusion**: With application of specified amount of mastic, it will take over 360 kg (800 lbs) of force to pull thin brick away from panel.
- **Objective**: Measure flatwise tensile strength between the thin brick surface area and panel after seven days immersion in water.
- **Result**: Average flatwise tensile strength was 47 kg/m2 (70 PSI).
- **Conclusion**: With application of specified amount of mastic, it took more than 450 kg(1,000 lbs) of force to break the bond of a modular size thin brick.
- **Objective**: Measure mastic shear strength of thin brick surface area to a steel panel after seven days immersion in water.
- **Result**: Average shear strength was 73 kg/m2 (109 PSI) of thin brick surface area without being mortared.
- **Conclusion**: With application of specified amount of mastic it took over 815 kg (1,800 lbs) of force to pull the modular size thin brick from the panel.

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System components shall meet or exceed the following performance standards when tested in accordance with the following methods:

ASTM D-1037-89 FASTENER PULL-THROUGH RESISTANCE TEST

- **Objective**: Determine the amount of force in lbs. needed to pull steel panel over head of #6 screw fastener.
- **Result**: Average pull over load was over 160 kg (350 lbs.) per fastener.
- **Conclusion**: Specified fastener spacing safely allows use of panel in winds up to 288 km (130 mph).

ASTM C-1088-88 THIN VENEER BRICK TEST

- **Objective**: Test and measure physical properties of thin brick veneer (freeze/thaw, type, grade, size and tolerance).
- **Result**: Approved thin brick passes exterior grade requirements, meets size and tolerance ranges, passes 50 cycles of freezing and thawing, and classifies as either TBS, TBX, TBA (standard, select or architectural).
- **Conclusion**: Thin veneer can be used and specified in almost any application.

ANSI A 137.1 -1988 AMERICAN NATIONAL STANDARD SPECIFICATION FOR CERAMIC TILE

- **Objective**: Test and measure physical properties of ceramic tile.
- **Result**: Approved tile passes requirements for quarry or paver tile, glazed or unglazed, vitreous or semi-vitreous for application.
- **Conclusion**: Tile can be used and specified in most EZ-WALL applications.

ASTM C-270 MORTAR

- **Objective**: Test physical properties of mortar (shear bond adhesion, tensile, compressive, and flexible strength).
- **Result**: Mortar obtained shear adhesion over 35 kg/cm2 (500 PSI), tensile strength over 21 kg/cm2 (300 PSI), compression strength over 140 kg/cm2 (4000 PSI), and flexible strength over 90 kg/cm2 (1300 PSI).
- **Conclusion**: Mortar can be used and specified in all applications.

ASTM C-557 MASTIC

- **Objective**: Test and measure physical properties of mastic (shear, tensile, bridging, aging, freeze/thaw).
- **Result**: Mastic retains minimum shear and tensile values after 500-hour aging, freeze/thaw cycling with a 10mm (3/8”) bridge gap between materials.
- **Conclusion**: Mastic can be used and specified for application.

AFG-01 MASTIC

- **Objective**: Test mastic for strength, freeze/thaw, moisture and oxidation resistance.
- **Result**: Strength under and over freezing and wet was higher than 14 kg/cm2 (200 PSI). Mastic durability to moisture and oxidation or aging passed test 100 % with strength value higher than 18 kg/cm2 (225 PSI).
- **Conclusion**: Mastic is not affected by moisture, freeze/thaw cycling or oxidation even with a 35 mm (1/16") thick glue line.

ASTM C-446 PANEL (STRUCTURAL, PHYSICAL QUALITIES) (CHEMICAL, MECHANICAL STRESS TEST, COATING BEND TEST)

- **Objective**: Test and measure structural qualities of panel.
- **Result**: Panel passes chemical, stress, coating bend, and mechanical requirements with a yield higher than 2320 kg/cm2 (33,000 PSI) and tensile strength over 3160 kg/cm2 (45,000 PSI).
- **Conclusion**: Panel is produced from structural quality steel.

ASTM A-525 PANEL (REQUIREMENTS FOR HOT-DIP, ZINC-COATED STEEL SHEET)

- **Objective**: Test and measure zinc coating requirements.
- **Result**: Panel passes testing and coating requirements for a minimum spangle G-90 classification.
- **Conclusion**: Panel's corrosion resistant classification is suitable for commercial application.

ASTM B-117-90 SALT SPRAY (FOG) TESTING (FOR CORROSION)

- **Objective**: Evaluate the corrosion resistance of the painted EZ-WALL support panel with manufactured and hand sheared edges when exposed to outside conditions.
- **Results**: No visible red rust after 3,000 hours of continuous exposure.
- **Conclusion**: The commercial grade zinc coating does provide sacrificial protection on the cut edges and substantiates the specification and use of the panel in commercial and industrial applications

1.7 DELIVERY, STORAGE AND HANDLING

Deliver materials to project sites in their original factory wrappings and containers, clearly labeled with identification of manufacturer, brand name, fire hazard classification, and lot number. Store materials in original undamaged packages and containers, inside a well ventilated area protected from weather, moisture, soiling, extreme temperatures and humidity, laid flat and blocked off-ground to prevent sagging and warping.

Comply with the instructions and recommendations of manufacturer for special delivery, storage and handling requirements.

1.8 SEQUENCING AND SCHEDULING

Sequence EZ-WALL system installation with other work to minimize the possibility of damage during the remainder of the construction period.

1.9 WARRANTY

EZ-WALL warrants to the original Buyer that the goods will be free from defects in material and manufacturer's workmanship for a period up to fifty (50) years from the date of original delivery. In the event that the goods are not installed or maintained in accordance with EZ-WALL's specifications, are modified or are damaged by accident, unreasonable use, improper maintenance or neglect, this Warranty shall become void. For the purpose of this Warranty, a defective item is an item that is found by EZ-WALL to have been defective in materials or workmanship, if the defect materially impairs the value of the goods to the Buyer.

EZ-WALL shall have no obligation or liability under this Warranty for claims arising from any other party's (including Buyer's) negligence or misuse of the goods, the installation of the goods in any area subject to fallout or exposure to corrosive chemicals, ash, liquids, fumes or vapors, or in any area in which the environment changes from normal to corrosive atmosphere. This Warranty does not apply to any claim or damage arising from fire, flood, accidents, structural defects, building settlement or movements, acts of God or other causes beyond EZ-WALL's control.

Buyer must give notice of any alleged defect in the goods to EZ-WALL within 30 days after discovery of the defect by Buyer. If notice is not given within such period, any claim for breach of Warranty shall be conclusively deemed to have been waived and EZ-WALL shall not be liable under this Warranty. EZ-WALL or its agents shall be entitled to examine the goods. EZ-WALL shall have the option of requiring the return of the defective goods, transportation prepaid, to establish the claim. The acceptance by EZ-WALL of any goods returned shall not be deemed an admission that the goods are defective or in breach of any warranty, and, if EZ-WALL determines that the goods are not defective, the material shall be reshipped to the Buyer at Buyer's expense. No product will be returned to EZ-WALL without it's written consent.

EZ-WALL MAKES NO WARRANTY AS TO ANY GOODS NOT MANUFACTURED BY EZ-WALL. THE TERMS AND DURATION OF WARRANTIES OF SUCH GOODS, IF ANY, WILL BE SPECIFIED BY THEIR MANUFACTURERS. THE WARRANTIES HEREIN ARE IN LIEU OF ALL WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE. IN PARTICULAR, EZ-WALL MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AS TO ANY GOODS SOLD UNDER THE AGREEMENT.

Any action for breach of the Warranty must be commenced within one year from the occurrence unless the period for action is extended by EZ-WALL in writing. No representative, agent or dealer of EZ-WALL has authority to modify, expand or extend this Warranty, to waive any of the limitations or exclusions, or to make any different or additional warranties with respect to the Product.

If EZ-WALL determines that the goods are defective, EZ-WALL may, at its option either (1) replace a Pro-rata portion of the defective goods, or (2) refund to Buyer a Pro-rata portion of Buyer's cost for the defective goods. Buyer's Pro-rata share for replacement or refund for any goods that are found

to be defective by EZ-WALL during the first year after the original delivery shall be 100%. Buyer's pro rata share for each year thereafter shall be based on a fraction, the numerator of which is the number of years remaining under the Warranty at the time the original Buyer gives proper notice of a claim under the Warranty to EZ-WALL, and the denominator of which is the total number of years of the Warranty as set above. The repair, replacement or payment in the manner described above shall be the exclusive remedy of the Buyer for breach of this Warranty. EZ-WALL shall not be liable for labor or other costs of installation or removal of the defective product incurred by Buyer. Buyer shall have no right to "cover" by procuring substitute goods at the cost or expense of EZ-WALL, INC. CONSEQUENTIAL DAMAGES OF ANY KIND WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, PERSONAL INJURY, PROPERTY DAMAGE, LOST PROFITS, OR OTHER ECONOMIC INJURY DUE TO ANY DEFECT IN THE GOODS OR ANY BREACH BY EZ-WALL. EZ-WALL SHALL NOT BE LIABLE TO THE BUYER IN TORT FOR ANY NEGLIGENT DESIGN OR MANUFACTURE OF THE GOODS, OR FOR THE OMISSION OF ANY WARNING THEREFROM. The foregoing shall not limit Buyer's recourse against any other manufacturer of goods sold under this Agreement, for any warranty extended by other manufacturer of goods sold under this agreement, or for any warranty extended by such manufacturer. The warranty of any such manufacturer will not be deemed to be the warranty of EZ-WALL.

PART II – PRODUCTS

2.1 MANUFACTURER

Materials and accessories specified herein are based on an EZ-WALL system. All parts of work shall be of the materials, design and dimensions shown on drawings and herein specified. Unless otherwise directed, methods of fabrication, assembly and installation shall be in accordance with EZ-WALL, INC's published standards and unpublished industry standards.

2.2 MATERIALS

PRODUCT DESCRIPTION

Product is intended for interior or exterior nonstructural mechanical support of thin veneer on masonry, metal or frame construction for architectural aesthetics or engineered panel systems.

EZR WALL system is manufactured by American Brick Company, (AMBRICO) L.L.C., 101 Shafer Dr., Romeo, MI 48065. EZR WALL, Inc. system is a patented thin veneer support panel, consisting of architectural grade embossed galvanized steel with thin veneer as specified.

PANEL (SELECT SIZE AS REQUIRED)

EZR WALL patented mechanical support and spacing panel is 26 gauge architectural grade steel, hotR dipped galvanized to GR 90, with a painted, stucco embossed finish that has tabs punched into and protrude outwards from the plane that support and space the thin veneer. Panels are available in 1200mm x 600mm (48" x 24"), 1200mm x 1200mm (48" x 48") and custom sizes.

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THIN VENEER (SELECT TYPE AS REQUIRED):

EZ-WALL approved thin brick / tile veneer shall be approximately 13-mm (1/2") thickness s.w. (severe weather) grade kiln-fired clay brick in various colors, sizes and finish, and shall meet ASTM C-1088-88, grade exterior, Type TBS, TBX, or TBA.

Thin Brick sizes as follows (Select as Required):

- 4'x4' EZ-Wall panel with a 2.625" spacing (Modular panel)
- 4'x 4'EZ-Wall panels with a 3.125" spacing (Queen panel)
- 4'x4' EZ-Wall panels with a 2.953" spacing (75MM panel)
- 4'x4' EZ-Wall panels with a 4.00" spacing (Utility panel)
- 4'X4' EZ-Wall panels with a 2.812" spacing (McNear standard)
- 4'x4' EZ-Wall panels with a 2.000" spacing (Roman panel)
- 4'X4' EZ-Wall panel with a 2.625" spacing (Norman panel)
- We also can make other special spacings upon request

ADHESIVE

EZ-WALL adhesive is specially formulated to ASTM C-557, ANSI A 136.1, and FHA-HUD #60 requirements, with a shear value between the thin veneer and the panel greater than 10.5 kg/cm2 (150 PSI), per ASTM E-297-88. CAUTION: EZ-WALL mastic should not be used on stone. Contact distributor or manufacturer for adhesive use.

GROUTING MATERIAL

CAUTION: Do not use mortar mix with stone veneer. (for tile veneers use industry accepted grout)

EZ-WALL latex modified mortar meeting Type S and ANSI Specs A118.4 requirements with Portland Cement base, has shear properties on the panel of 18 kg/cm2 (250 PSI) or greater.

FASTENERS (SELECT AS REQUIRED)

Fasteners shall be either corrosive resistant twist shank masonry anchors, #8 or larger self drilling or self-tapping corrosive resistant screws, galvanized nails or staples, depending on substrate.

Panels shall be attached to the wall with minimum of one fastener per 900 cm2 (1 square foot). Fasteners shall be attached a minimum of 25mm (1") into supporting wood frame or masonry, or 7mm (1/4") into steel studs or girts.

Fastener shall be specified by a fastener manufacturer with regards to weather conditions, substrate, shear, fatigue, installation methods, and safety.

SHEATHING (SELECT AS REQUIRED)

Sheathing is required over a stud wall to allow the panel to lay flat. Select the sheathing material that meets the design criteria, taking into account not only its insulative, structural or fire resistant abilities, but moisture, water vapor transmission or control features, and thermal cycling or properties of the sheathing material as well.

The following types of sheathing materials can be used with or adhered to EZ-WALL panels:

- **Gypsum Board** – Use either regular, fire-rated, moisture resistant, or combinations, 7mm (1/4") minimum thickness that complies with appropriate use and ASTM test (C36, C79, C630) or Federal specifications SS-L-30D type (II, III, IV, VI, VII), grade (R, X, R&W, X&W, W), class (1, 2, 3).
- **Cement Board** – Shall be light weight fiber-reinforced cement board, 7mm (1/4") minimum thickness, suitable to meet fire ratings in place of gypsum, if required, as manufactured by Plycem Corporation, and has a compressive strength higher than 70 kg/cm2 (1,000 PSI), Tensile strength over 35 kg/cm2 (500 PSI), and nail head pull through greater than 57 kg (125 lbs).
- **Insulation Board** – 7mm (1/4") minimum thickness.
  - **Use either expanded polystyrene (EPS) – Type 1, air dried, with a flame and smoke rating per ASTM-84 that meets Class 1.**
  - **Extruded polystyrene – per ASTM C-578 with a flame and smoke rating per ASTM-84 that meets Class 1.**
  - **Polyisocyanurate that complies with Federal Specification HH-1-1972/1, Class 2.**
  - **Insulating boards manufactured with wood fibers shall meet the strength and Durability tests specified in ASTM C-208 and C-532.**
- **Wood-based panels**, 7mm (1/4") minimum thickness, shall be APA rated and designed to meet performance and durability requirements for designated application.

  Panels manufactured as:
  - **Plywood**
  - **Wafer Board**
  - **Oriented-Strand Board**
  - **Composite Panels**

  Sheathing shall be applied per manufacturer's instructions, and shall meet EZ-WALL, INC. approval.

WATER INFILTRATION BARRIER (SELECT AS REQUIRED)

The following types of infiltration barriers are approved by EZ-WALL, INC. for use with the EZ-WALL system:

- Rufco-wrap, as manufactured by Ravem Industries, Inc.
- Tyvek, as manufactured by DuPont Company.
- Barricade, as manufactured by Simplex Products.
- Typar, as manufactured by Reemay, a member of Intertech Group. #15 perforated saturated felt paper, as manufactured by Tamco or equal. Felt Paper should be installed with a minimum 50 mm (2") lap.

Products specified shall comply with manufacturers' recommendations and performance requirements.

PART III – EXECUTION

3.1 INSPECTION

Installer must examine conditions under which the EZ-WALL system is to be installed and notify contractor in writing of any unsatisfactory conditions. Do not proceed with installing of EZ-WALL system until the unsatisfactory conditions have been corrected in manner acceptable to the installer.

Installer shall consult the other trades and contractors involved prior to start of placing the EZ-WALL system, to determine any areas of potential interference. Do not start the installation until interferences have been resolved to the satisfaction of the installer.

Coordinate layout with other work to determine that work schedule is satisfactory with other contractors.

3.2 PREPARATION

Wherever possible, take field measurements prior to the preparation of shop drawings and fabrication to insure proper fitting of product.

Verify that materials are those specified before installing.

Insure walls and corners are braced to area specifications.

Maximum wall frame spacing for stud walls = 60 cm (24") O.C. Girts = 75 cm (30") O.C.

Walls must be structurally sound and the substrate system designed with a wall deflection not greater than L/240. Substrate shall have no planer irregularities greater than 7mm in 3.05m (1/4" in 10').

Water infiltration barrier, if required, must be installed prior to placement of panel.

Trim or flash in place per EZ-WALL details and/or BIA Technical Note 7A on Flashing of Brick Walls.

3.3 INSTALLATION

PANELS

Exterior walls shall be constructed of structurally sound masonry, wood, or steel studs, with an approved building sheathing and a water infiltration barrier placed over it, if needed. This should be done prior to the installation of the EZ-WALL panel.

Panels shall be mechanically secured to a structural wall with a manufacturer's approved fastener in accordance with the manufacturer's recommendation. Panels shall be attached with minimum of one fastener per 900 cm2 (sq. ft.). All fastening devices shall be of corrosion resistant type.

Panels applied to an oblique wall shall be installed with the support tabs aligned and level to each other.

If possible, panel joints shall be staggered over sheathing joints.

Control joints in the EZ-WALL system (including pre-fabricated panels) are required to coincide with the building control joints where substrates change, within 600mm – 1200mm (2-4 ft.) of corners, per Technical Note 18A Revised, as recommended by the BIA or where significant structural, substrate or frame movement occurs.

Panels shall be clean, free of dirt, oil or any other surface contaminant.

THIN VENEERS

Thin veneers shall be either field applied, factory installed, or panellized into components or curtain walls (select are required).

Thin veneer shall be initially adhered to panel using specially formulated adhesive in "Quarter" sized dabs or vertical strips 10mm (3/8") wide.

Thin veneers shall be applied within 5 to 10 minutes after adhesive has been applied.

Thin veneers shall be placed in the bond pattern called for.

MORTAR

When all applied veneers are secured in place, fill joints and seams with an EZ-WALL approved latex-modified mortar or industry accepted grout for tile.

Mortar vertical joints immediately following each fourth horizontal joint.

Mortar only an area that can be tooled before mortar becomes too stiff. Mortar should have a dull finish and be moist, but not wet.

Weather requirements:

- In cold weather do not use frozen materials in mortar mix. Do not apply mortar to frozen surfaces containing frost. Do not apply mortar when ambient temperature is less than two degrees Celsius (35 degrees Fahrenheit) without sufficient protection and supplemental heat.
- In hot weather, protect mortar from uneven and excessive evaporation. Where conditions are hot, dry, and/or windy and evaporation is great, veneer shall be fogged with water to allow the mortar enough time to set. Moist curing is not recommended for latex modified mortar.

CAULKING

All areas, where thin veneer meets non-veneer surfaces, must be caulked with the proper approved sealant for conditions.

Thoroughly and neatly caulk all joints between thin veneer and abutting material.

CLEANING

Thin veneer shall be cleaned per appropriate method established by the Brick Institute of America for brick (see Technical Bulletin "#20 Revised", or the Association of Tile, Terrazzo & Marble Contractors and Affiliates bulletin entitled "Grouting and Cleaning Ceramic Floors With Latex Grout").

SPECIFIC DETAILS

Specific details of installation can be found in EZ-WALL's Installation Guide.

3.4 MAINTENANCE

When applied according to manufacturer's specifications, EZ-WALL system installations should last indefinitely and be maintenance free. However, if for any reason the EZ-WALL system should become unattached from its surface, or damaged by severe impact, the affected areas should be cleaned of old mortar and adhesive and a new EZ-WALL system applied with its approved adhesive and mortar.