Megaacrete

Product Data Sheet

Megaacrete Wall Panel

Lightweight Insulated Curtain Wall

Division 03
Autoclaved Aerated Concrete Reinforced Panels

1. DISTRIBUTOR

Megaacrete AAC Plant, LLC
310 Peterson Farm Rd.
Kerrville, TX 78028
www.megaacrete.com
support@megaacrete.com
(210) 402-3223

2. PRODUCT DESCRIPTION

Megaacrete Wall Panel is a non-load bearing, insulated curtain wall system that uses large-format, structurally reinforced autoclaved aerated concrete (AAC) panels to provide enclosure, insulation, fire protection, and sound reduction for steel- and concrete-framed buildings. This system offers an economical, high-performing, durable, and long-lasting hard-wall alternative to conventional metal panels, light-gauge framing infill, or insulated concrete tilt-wall panels.

Product Sizes:

Megaacrete Wall Panels are custom manufactured to project specifications and are available in thicknesses of 4 to 12 inches (nominal 100–300 mm), with standard widths of 24 inches (610 mm) and lengths up to 236.22 inches (6,000 mm). The long edges of the panels are manufactured with a tongue-and-groove profile (except 4” panel) and may be ordered with a flat or chamfered edge.

- **Thickness**: 4, 5, 6, 7, 8, 10, & 12 inches (nominally 100-300 mm)
- **Width**: 24 inches (610 mm)
- **Length**: Up to 19.685 feet (6,000 mm)

3. TECHNICAL DATA

Composition and Materials:

Megaacrete Wall Panels are precast, lightweight autoclaved aerated concrete (AAC) panels reinforced internally with a double layer of welded steel mesh.

AAC Class*	AAC-4	AAC-6
Dry Bulk Density	31 lb/ft^3	37 lb/ft^3
Design Weight	37 lb/ft^3	44 lb/ft^3
Compressive Strength	580 psi	870 psi
Thermal Conductivity (K)	0.9124 Btu-in/ft²hF	0.9811 Btu-in/ft²hF
Thermal Resistance (R-Value per inch)	1.096 ft²hF/BTU	1.019 ft²hF/BTU
Sound Transmission Class** - 6-inch - 8-inch - 10-inch	STC 44 -- STC 50	-- STC 50 --
Fire Resistance Rating ASTM E119 / ANSI UL 263 Bearing Walls & Non-Load Bearing Walls	Up to 4.0 hr UL Design No. U920	
* Manufactured according C1693 y C1694 / ** Only material without finishes		

Applicable Standards:

The Megaacrete Wall Panel system has been evaluated by the International Association of Plumbing & Mechanical Officials Uniform Evaluation Services (IAPMO UES) and is listed in evaluation report ER-405. AAC wall panels are covered in the American Concrete Institute (ACI) publication ACI 523.4R-09 – Guide for Design and Construction with Autoclaved Aerated Concrete Panels.

4. INSTALLATION PROCEDURE

The system can be installed using conventional construction tools, equipment, means, and methods. Panels can be cut using rotary saws with diamond blades suitable for cutting through the internal steel reinforcement. Consult project plans and the Megaacrete Wall Panel installation guide for limitations on cutting and coring penetrations into the panels.

The wall panels may be installed on steel or concrete structures as non-load bearing partitions or curtain walls, spanning either horizontally or vertically. Panels can be lifted into place by cranes, forklifts, or other lifting equipment suitable for the panel weight, lifting height, and required reach, using straps, a lifting hook or rated clamping tools.

A waterproof membrane must be applied to the foundation prior to the installation of the first panel to ensure proper moisture protection. Avoid moisture migration from the foundation into the wall. The first course of wall panels will be set on the foundation using a leveling bed of Type M cement mortar, complying with ASTM C270.

Each end of the panel will be attached to the building structure with mechanical connectors in accordance with the approved plans. Wall panels must be joined together with Megaacrete Thin Bed Mortar, except where contraction joints are specified in the plans. Contraction joints must be filled with a backer rod and approved sealant (fire-rated sealant where required).

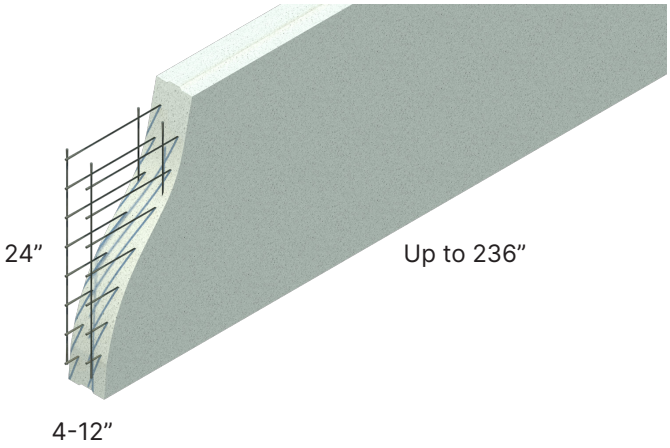
Wall panels used for exterior walls or other building elements exposed to weather and moisture must include a code-compliant moisture barrier as part of the final exterior finish. Consult moisture barrier or finish manufacturers for specific details.

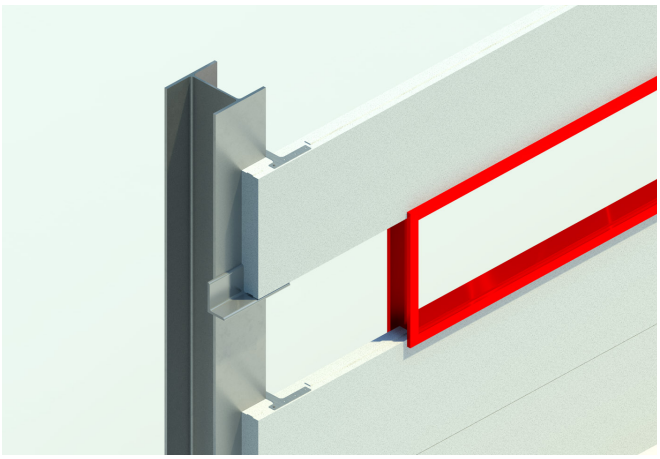
Materials Required:
To complete the installation of Megaacrete Wall Panels, the following minimum materials are needed:

- Megaacrete Wall Panels
- Megaacrete Thin Bed Mortar
- Megaacrete Patch Mortar
- Approved panel steel connectors
- Sand-cement mortar
- Foundation waterproofing
- Backer rod and sealant
- Weather-resistant exterior finish

5. HANDLING AND STORAGE

Megaacrete AAC products are durable and long-lasting building materials once installed. However, due to being up to 75% lighter and having lower compressive strength than standard concrete, AAC products can be chipped or cracked if not handled, transported, and stored properly. Never lift panels directly with a forklift; instead, lift them from the supplied pallet. Chips can be patched with Megaacrete Patch Mortar; however, sections of





panels that have cracked completely through should be cut off and discarded. Pallets can be stacked but must be stored on flat, level, and firm ground.

6. WARRANTY

Megaacrete provides a limited product warranty for its manufactured products. However, the company does not warrant or guarantee the installation of these products or the results obtained from their use by others, nor any factors affecting product performance beyond the company’s control. A sample of the Megaacrete Limited Warranty Statement is available upon request.

7. TECHNICAL SUPPORT

Megaacrete offers technical assistance with design and engineering specifications, technical information, installation manuals, performance test data, and construction support. To request assistance, email support@megaacrete.com or call (210) 402-3223.

AAC HORIZONTAL WALL PANEL (PH)

Thickness (in)		AAC-4					AAC-6				
Nominal	Actual	Item No.	R-Value ft²hF/BTU	lb/ft²	lb/ft	lf/truck†	Item No.	R-Value ft²hF/BTU	lb/ft²	lb/ft	lf/truck†
4	3.937	PH410	4.31	12.29	24.59	1,339	PH610	4.01	14.75	29.51	1,182
5	4.921	PH412	5.39	15.36	30.74	1,064	PH612	5.02	18.43	36.89	946
6	5.906	PH415	6.47	18.43	36.89	886	PH615	6.02	22.12	44.27	788
7	6.889	PH417	7.55	21.51	43.04	709	PH617	7.02*	25.81	51.65	630
8	7.874	PH420	8.63*	24.58	49.19	630	PH620	8.03*	29.49	59.03	552
10	9.843	PH425	10.79*	30.72	61.48	532	PH625	10.03*	36.87	73.78	473
12	11.811	PH430	12.95*	36.87	73.78	433	PH630	12.04*	44.24	88.54	394

† Approximate linear feet of panel per truckload based on standard shipping "wet" weight and a maximum 42,100 pounds per load.

* Indicates wall panels that meet mass wall requirements of Section C402.2.2 of International Energy Conservation Code (IECC) and weigh not less than 25 pounds per square foot (122 kg/m^2) of wall surface area where the material weight is not more than 120 pounds per square foot (1900 kg/m^3).

AAC VERTICAL WALL PANEL (PV)

Thickness (in)		AAC-4					AAC-6				
Nominal	Actual	Item No.	R-Value ft²hF/BTU	lb/ft²	lb/ft	lf/truck†	Item No.	R-Value ft²hF/BTU	lb/ft²	lb/ft	lf/truck†
4	3.937	PV410	4.31	12.29	24.59	1,339	PV610	4.01	14.75	29.51	1,182
5	4.921	PV412	5.39	15.36	30.74	1,064	PV612	5.02	18.43	36.89	946
6	5.906	PV415	6.47	18.43	36.89	886	PV615	6.02	22.12	44.27	788
7	6.889	PV417	7.55	21.51	43.04	709	PV617	7.02*	25.81	51.65	630
8	7.874	PV420	8.63*	24.58	49.19	630	PV620	8.03*	29.49	59.03	552
10	9.843	PV425	10.79*	30.72	61.48	532	PV625	10.03*	36.87	73.78	473
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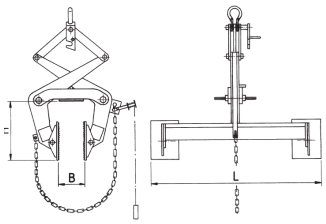
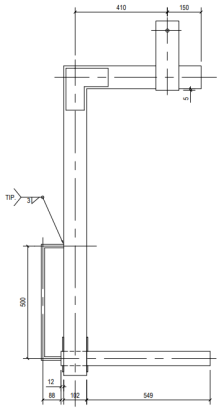
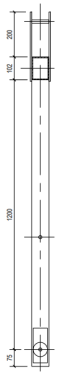


Wall Panel Lifting Clamp
Horizontal Installation





Wall Panel Lifting Hook
Vertical Installation

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