

Megaaccrete Structural Wall Panel

Vertical Load-bearing Insulated Wall

Division 03
Autoclaved Aerated Concrete Reinforced Panels

1. DISTRIBUTOR

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2. PRODUCT DESCRIPTION

Megaaccrete Structural Wall Panel is a lightweight, load-bearing, insulated wall system that utilizes large-format, structurally reinforced autoclaved aerated concrete (AAC) panels. These panels provide structure, enclosure, insulation, fire protection, water resistance, and sound reduction. The system can be used for both exterior and interior walls, offering an economical and flexible alternative to insulated concrete or masonry wall systems.

Product Sizes:

Megaaccrete Structural Wall Panels are custom manufactured to project specifications and are available in nominal thicknesses ranging from 6 to 12 inches (150 to 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 either flat or half-circle grooves, where vertical reinforced concrete columns are required.

- **Thickness:** 6, 7, 8, 10, & 12 inches, (nominally 150-300 mm)
- **Width:** 24 inches (610 mm)
- **Length:** Up to 19.685 feet (6,000 mm)

3. TECHNICAL DATA

Composition and Materials:

Structural Wall Panels are precast, lightweight autoclaved aerated concrete panels, internally reinforced 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	45 lb/ft ³
Compressive Strength	580 psi	870 psi
Thermal Conductivity (K)	0.9124 Btu-in/ft ² hF	0.9811 Btu-in/ft ² hF
Thermal Resistance (R-Value per inch)	1.096 BTU/ft ² hF	1.019 BTU/ft ² hF
Sound Transmission (STC)**		
- 6-inch	STC 44	--
- 8-inch	STC 47	STC 50
- 12-inch	STC 52	--
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 Megaaccrete Structural 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 ER405. AAC wall panels are also 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, and methods. Panels can be cut using rotary saws with diamond blades that are suitable for cutting the internal steel reinforcement. Consult project plans and the Structural Wall Panel installation guide for limitations on cutting and coring penetrations into the panels.

Panels can be lifted into place using cranes or other lifting equipment suitable for the panel weights (up to 1,450 pounds), lifting heights, and required reach, utilizing straps or rated clamping tools. Temporary bracing is required until the walls have been reinforced and the floor or roof diaphragm has been fully connected to the walls.

Carefully unpack, clean, and inspect panels prior to installation. Place panels according to engineering plans or shop drawings, ensuring that the correct full-height, corner, jamb, lintel, and sill panels are used in the specified locations.

The wall panels should be set on the foundation using a leveling bed of Type M cement mortar, in compliance with ASTM C270. Apply Megaacrete Thin Bed Mortar to the longitudinal joints using a grooved trowel while the panels are on the ground. Apply thin bed mortar to adjacent panels as required before placing lintel panels.

Where panels with vertical cores are specified, attach a minimum #5 reinforcement dowel to the foundation by drilling and securing it with a 2-part epoxy adhesive. Once the panels are in place and braced, fine grout the mortar.

Structural Wall Panels can be designed as a single-course wall or stacked in multiple courses to achieve taller wall heights. Consult engineering plans for floor, roof, or other connection details.

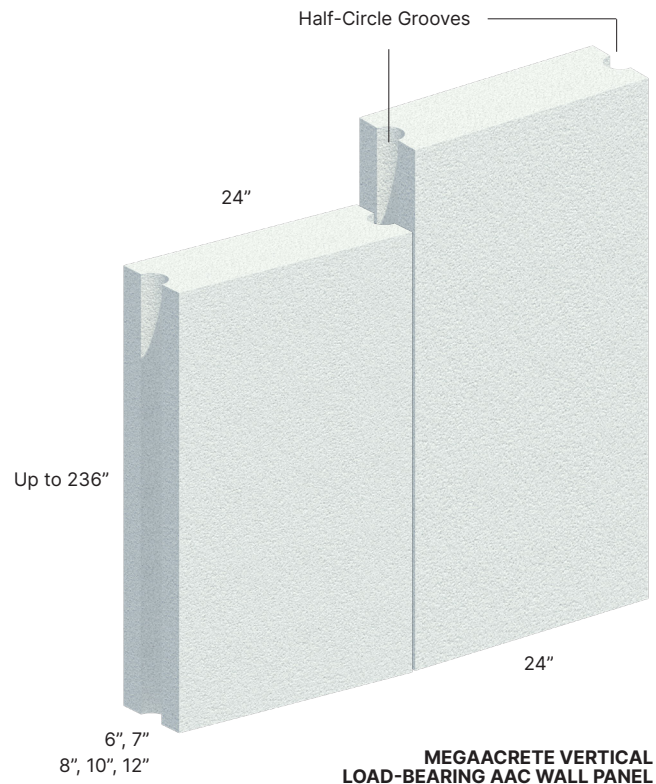
Materials Required:

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

- Megaacrete Structural Wall Panels
- Megaacrete Thin Bed Mortar
- Megaacrete Patch Mortar
- Reinforcement bar (min #5)
- Fine grout mortar
- Corrugated nails fasteners
- Wafer head timber screw (10", 12" long)

5. HANDLING AND STORAGE

Megaacrete AAC products are durable and long-lasting building materials once installed. However, because they are up to 75% lighter and have 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, but sections of panels that are completely cracked 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 warranty for its manufactured products. However, the company does not warrant or guarantee the installation of these products, nor the results obtained from their use, or any other factors affecting product performance beyond the company's control. A sample of the Megaacrete Limited Warranty Statement is available upon request.

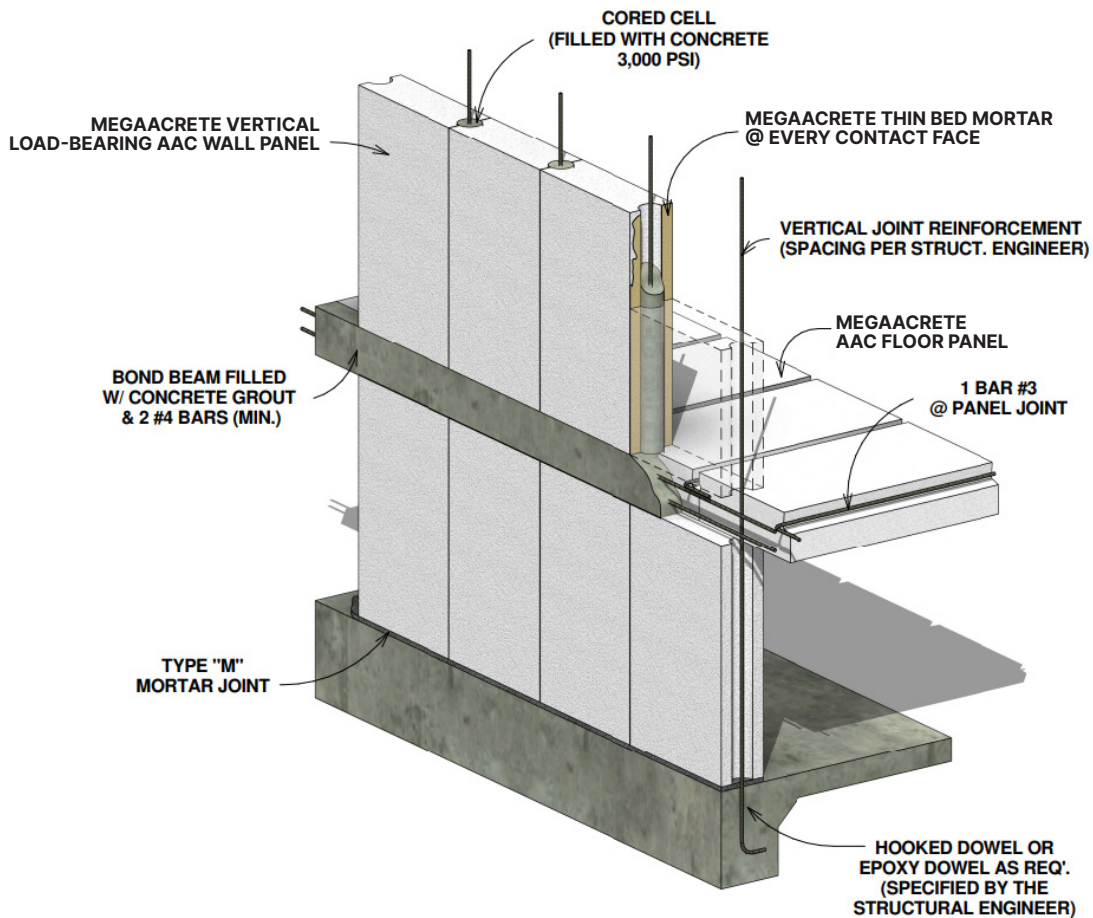
7. TECHNICAL SUPPORT

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.

STRUCTURAL WALL PANELS

Thickness (in)		AAC-4					AAC-6				
Nominal	Actual	Item No.	R-Value ft ² hF/BTU	lbs/ft ²	lbs/ft	lf/truck [†]	Item No.	R-Value ft ² hF/BTU	lbs/ft ²	lbs/ft	lf/truck [†]
6	5.906	PVC415	6.47	18.43	36.89	886	PVC615	6.02	22.12	44.27	788
7	6.889	PVC417	7.55	21.51	43.04	709	PVC617	7.02	25.81	51.65	630
8	7.874	PVC420	8.63	24.58	49.19	630	PVC620	8.03	29.49	59.03	552
10	9.843	PVC425	10.79	30.72	61.48	532	PVC625	10.03	36.87	73.78	473
12	11.811	PVC430	12.95	36.87	73.78	433	PVC630	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.



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