

## Megaaccrete Masonry

Structural Insulated Masonry

Division 04 22 26  
Autoclaved Aerated Concrete Unit Masonry

### 1. DISTRIBUTOR

Megaaccrete AAC Plant, LLC  
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### 2. PRODUCT DESCRIPTION

Megaaccrete Masonry is a structurally reinforced unit masonry system that utilizes lightweight autoclaved aerated concrete (AAC) blocks. This masonry wall system integrates structure, enclosure, and insulation into a single solution, resulting in a high-performance mass wall that is highly insulating, structurally robust, and resistant to damage from water, windstorms, fire, rodents, and insects.

#### Product Sizes:

Standard Megaaccrete Masonry block dimensions are 8"x24" on the face, with thickness options of 5, 6, 7, 8, 10, and 12 inches (125-300 mm) for solid blocks. Precut O-Block and U-Block configurations are available in thicknesses of 5, 6, 7, 8, 10, and 12 inches (125-300 mm). Non-standard semi-jumbo blocks (16"x24") and jumbo blocks (24"x39.37") are also available, but only in solid block configuration.

### 3. TECHNICAL DATA

#### Composition and Materials:

Megaaccrete Masonry blocks are manufactured from solid unreinforced autoclaved aerated concrete material in two primary strength classes: AAC-4 and AAC-6 (ASTM C1693-11R17).

AAC Class	AAC-4	AAC-6
Dry Bulk Density	31 lb/ft <sup>3</sup>	37 lb/ft <sup>3</sup>
Design Weight	37 lb/ft <sup>3</sup>	45 lb/ft <sup>3</sup>
Compressive Strength	580 psi	870 psi
Thermal Conductivity (K)	0.9124 Btu-in/ft <sup>2</sup> hF	0.9811 Btu-in/ft <sup>2</sup> hF

Thermal Resistance (R-Value per inch of thickness)	1.096 ft <sup>2</sup> hF/BTU	1.019 ft <sup>2</sup> hF/BTU
Sound Transmission		
4-inch Wall	STC 41	--
8-inch Wall	STC 47	STC 50
12-inch Wall	STC 52	--
Fire Resistance Rating ASTM E119 / ANSI UL 263 Bearing & Non-Bearing Walls	Up to 4 hr UL Design U919	

#### Applicable Standards:

The Megaaccrete Masonry system has been evaluated by the International Association of Plumbing & Mechanical Officials Uniform Evaluation Services (IAPMO UES). Inspection and installation of construction must comply with the requirements outlined in IAPMO Report ER-405.

### 4. INSTALLATION PROCEDURE

The location, design, and specification of vertical and horizontal reinforcement are critical. Therefore, projects utilizing the Megaaccrete Masonry wall system must be specifically engineered to meet the requirements of each application.

Blocks are typically installed on a concrete foundation at the finished floor level or on a recessed masonry ledge designed for this purpose. Steel reinforcement dowels can either be cast into the foundation or drilled and set with epoxy grout, as specified in the plans.

The first course of blocks is set on the foundation using a leveling bed of sand-cement mortar up to 3/4 inch thick. All subsequent blocks are set using Megaaccrete Thin Bed Mortar, applied with a notched trowel.

Precut O-Blocks and U-Blocks are installed as indicated in the plans and are filled with a single (O-Block) or double (U-Block) reinforcement bar and fine grout, per ASTM C476, to create load-bearing vertical columns and horizontal beams within the wall.

A bond beam consisting of at least one row of U-Blocks must be installed at bottom and top of windows, and at the top of each floor level. A truss anchor plate, double wood sill plate, or other structural system specified in the plans must be anchored to the bond beam in the AAC block wall to connect the floor or roof system.

Exterior walls exposed to weather or moisture should have a code-compliant air and moisture barrier installed on the exterior surface beneath the final architectural finishes. Consult the air and moisture barrier or architectural finish manufacturers for more details.

A final interior and exterior architectural finish must be applied over the AAC blocks to complete the system. Megaacrete Masonry is compatible with most interior and exterior architectural finish systems. Consult a Megaacrete technical representative for finishing options and procedures.

### Materials Required:

To complete the installation of Megaacrete Masonry, the following minimum materials are needed:

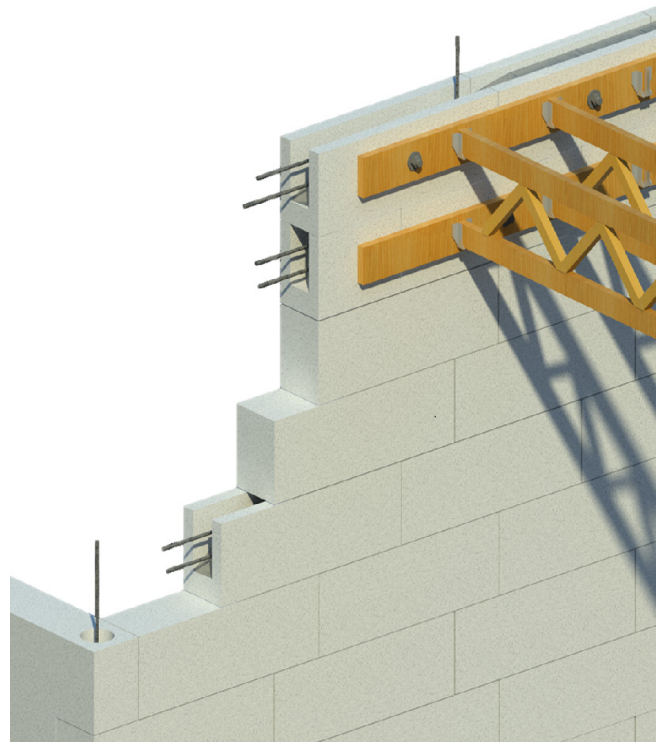
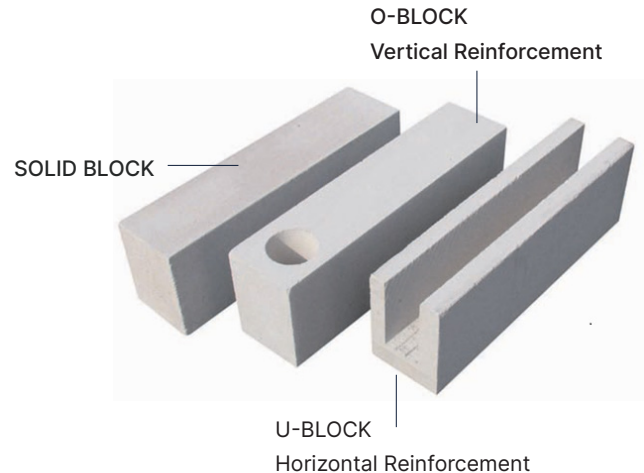
- Megaacrete Masonry Blocks
- Megaacrete Thin Bed Mortar
- Megaacrete Patch Mortar
- Sand-cement mortar
- Reinforcement bar & epoxy adhesive
- Fine grout (ASTM C476)
- Weather barrier system

### 5. HANDLING AND STORAGE

Megaacrete Masonry products are durable and long-lasting 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 material directly with a forklift; instead, lift them from the supplied pallet. Chips can be patched with Megaacrete Patch Mortar, but sections of blocks 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 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, 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](mailto:support@megaacrete.com) or call (210) 402-3223.

## SOLID BLOCK

Thickness (in)		AAC-4					AAC-6				
Nominal	Actual	Item No.	lb/unit	Pieces	ft <sup>2</sup> /plt	lb/plt	Item No.	lb/unit	Pieces	ft <sup>2</sup> /plt	lb/plt
5	4.921	BL4122061	20.17	144	189.1	3,507	BL6122061	24.21	144	189.1	4,208
6	5.906	BL4152061	24.21	120	157.6	3,507	BL6152061	29.05	120	157.6	4,208
7	6.890	BL4172061	28.24	96	126.1	3,273	BL6172061	33.89	96	126.1	3,928
8	7.874	BL4202061	32.28	84	110.3	3,273	BL6202061	38.73	84	110.3	3,928
10	9.843	BL4252061	40.34	72	94.6	3,507	BL6252061	48.41	72	94.6	4,208
12	11.811	BL4302061	48.41	60	78.8	3,507	BL6302061	58.10	60	78.8	4,208

## O-BLOCK

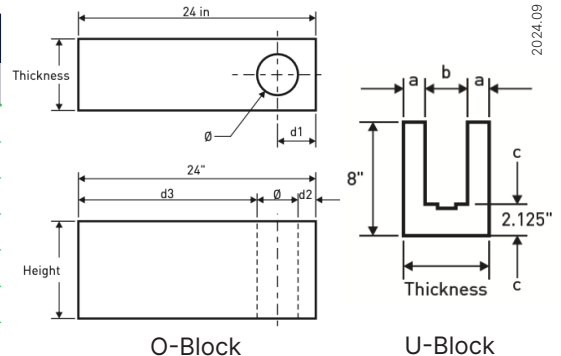
Thickness (in)		AAC-4					AAC-6				
Nominal	Actual	Item No.	lb/unit	Pieces	ft <sup>2</sup> /plt	lb/plt	Item No.	lb/unit	Pieces	ft <sup>2</sup> /plt	lb/plt
5	4.921	BLO412206113	19.15	144	189.1	3,330	BLO612206113	22.98	144	189.1	3,996
6	5.906	BLO415206113	22.52	120	157.6	3,263	BLO615206113	27.03	120	157.6	3,916
7	6.889	BLO417206113	26.56	96	126.1	3,078	BLO617206113	31.87	96	126.1	3,694
8	7.874	BLO420206114	29.76	84	110.3	3,018	BLO620206114	35.71	84	110.3	3,622
10	9.843	BLO425206114	37.83	72	94.6	3,288	BLO625206114	45.40	72	94.6	3,946
12	11.811	BLO430206114	45.90	60	78.8	3,325	BLO630206114	55.08	60	78.8	3,990

## U-BLOCK

Thickness (in)		AAC-4					AAC-6				
Nominal	Actual	Item No.	lb/unit	Pieces	ft <sup>2</sup> /plt	lb/plt	Item No.	lb/unit	Pieces	ft <sup>2</sup> /plt	lb/plt
5	4.921	BLU4122061	14.19	108	141.8	1,850	BLU6122061	17.02	108	141.8	2,220
6	5.906	BLU4152061	15.23	96	126.1	1,644	BLU6152061	18.27	96	126.1	1,973
7	6.889	BLU4172061	17.77	72	94.6	1,233	BLU6172061	21.32	72	94.6	1,480
8	7.874	BLU4202061	20.30	72	94.6	1,233	BLU6202061	24.37	72	94.6	1,480
10	9.843	BLU4252061	22.39	48	63.0	822	BLU6252061	26.87	48	63.0	986
12	11.811	BLU4302061	24.47	48	63.0	822	BLU6302061	29.37	48	63.0	986

## DIMENSIONS

Size	O-BLOCK					U-BLOCK		
	ft <sup>3</sup> /ft	∅	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	ft <sup>3</sup> /ft	a	b
5	0.041	2.756	2.461	1.083	20.177	0.080	1.50	2.0
6	0.068	3.543	2.953	1.181	19.291	0.120	1.50	3.0
7	0.068	3.543	3.445	1.673	18.799	0.140	1.75	3.5
8	0.102	4.331	3.937	1.772	17.913	0.160	2.00	4.0
10	0.102	4.331	4.921	2.756	16.929	0.240	2.00	6.0
12	0.102	4.331	5.906	3.740	15.945	0.319	2.00	8.0



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