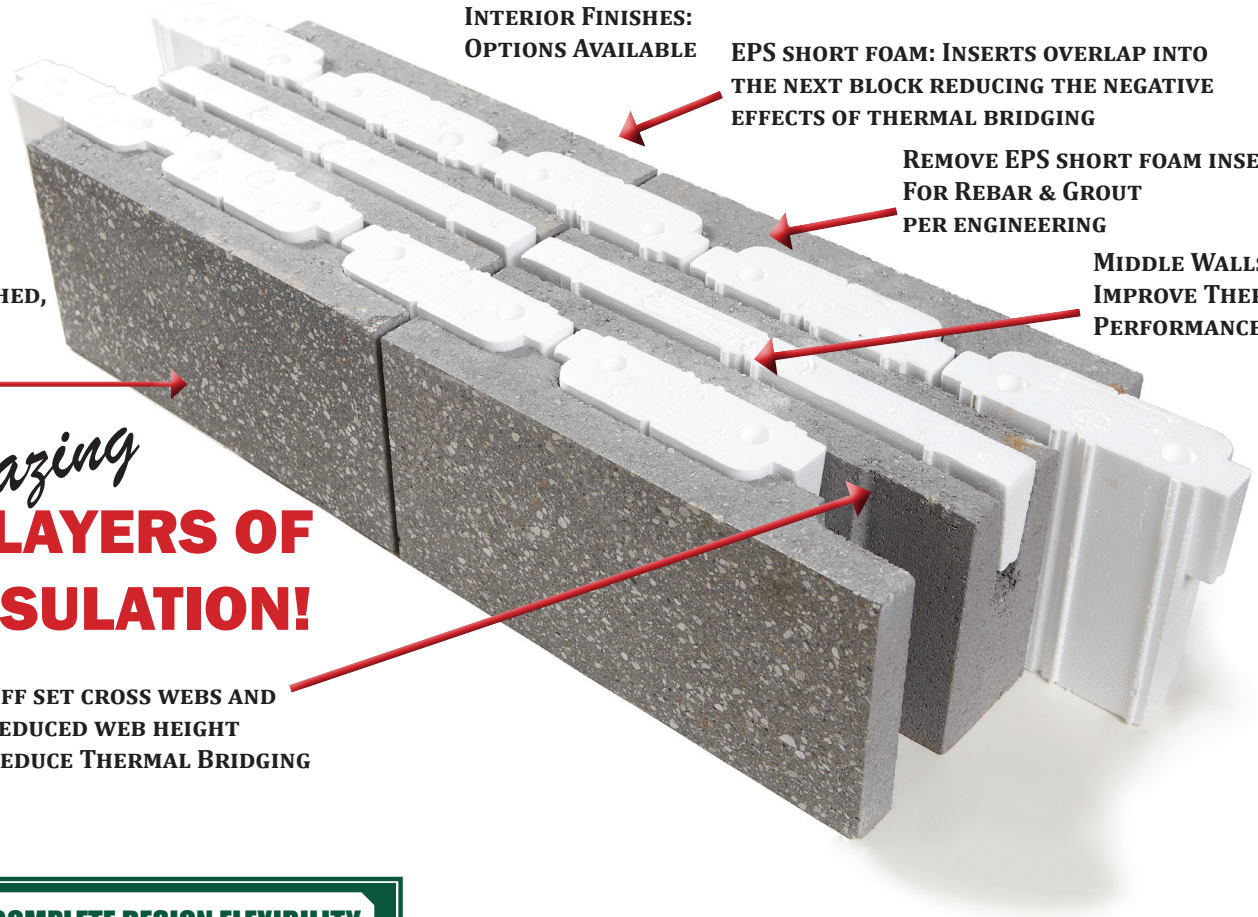
Omni Block R-29

INSULATED CONCRETE MASONRY WALL SYSTEM



Amazing

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OFFERING COMPLETE DESIGN FLEXIBILITY

- Wide Variety of Architectural Finishes Available
- Standard Masonry Engineering
- Reduces HVAC Tonnage
- Qualifies for LEED credits
- Mold, Wind, Fire and Sound Resistant
- Exceeds The International Energy Conservation Code for R-Value Requirements

EXCEED YOUR EXPECTATIONS

At its core, Omni Block is a patented insulated masonry wall system that has been designed to take advantage of thermal mass and thermal lag principles in order to create a high energy efficient block wall system. This results in an Omni Block wall system with an R-Value of over 29 for a 12" block (U Factor of .034) and an R-Value of over 19 (U Factor of .051) for an 8" block. Omni Block has four main components; block, foam, rebar and grout. The blocks are installed the same way as standard CMU's.

Manufactured and sold in New England by Genest Concrete

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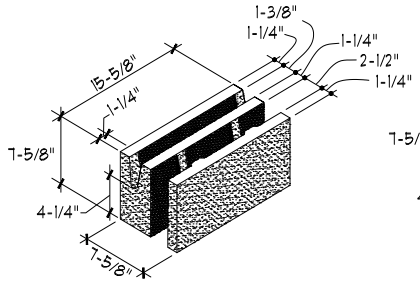
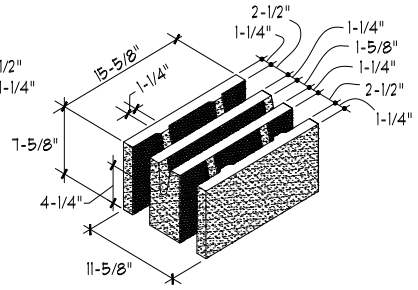
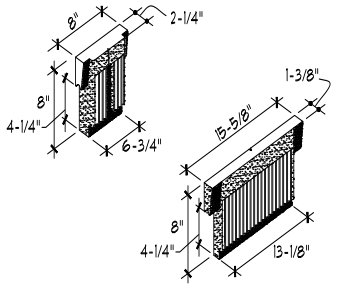


STRETCHER - 8 x 8 x 16



STRETCHER - 12 x 8 x 16



INSULATION INSERTS

Table 1 - U-Factors (Btu/hrft^2°F) and R-Values (hrft^2°F/Btu) of Concrete Masonry Walls [A]

Nominal Wythe Thickness in. (mm)	Concrete Density pcf	Standard CMU Cores Empty U	Standard CMU Cores Empty R	100% Solid Grouted [B] U	100% Solid Grouted [B] R
8 in. (203 mm)	85	0.402	2.5	0.525	1.9
	95	0.427	2.3	0.559	1.8
	105	0.452	2.2	0.592	1.7
	115	0.479	2.1	0.623	1.6
	125	0.507	2.0	0.654	1.5
	135	0.537	1.9	0.684	1.5
12 in. (305 mm)	85	0.390	2.6	0.441	2.3
	95	0.411	2.4	0.466	2.1
	105	0.433	2.3	0.490	2.0
	115	0.455	2.2	0.515	1.9
	125	0.478	2.1	0.539	1.9
	135	0.503	2.0	0.564	1.8

[A] (hrft^2°F/Btu) (0.176) = m^{2}K/W. Mortar joints are 3/8 in. (9.5 mm) thick, with face shell mortar bedding. Unit dimensions based on *Standard Specification for Loadbearing Concrete Masonry Units,* ASTM C 90. Surface air films are included.

[B] Grout density is 140 pcf (2,243 kg/m^3). Lightweight grouts, which will provide higher R-values, may be available and used.

Table 1 Source: Abbreviated NCMA TEK 6-2B

Table 2 - U-Factors (Btu/hrft^2°F) and R-Values (hrft^2°F/Btu) of Omni Block Walls [A]

Stretcher Unit Cores Empty [C] U	Stretcher Unit Cores Empty [C] R	Cores With EPS Inserts [D,E] U	Cores With EPS Inserts [D,E] R	Interior Cores Solid Grouted [F] U	Interior Cores Solid Grouted [F] R
0.123	8.2	0.047	21.2	0.077	13.1
0.133	7.5	0.049	20.6	0.081	12.4
0.139	7.2	0.049	20.2	0.083	12.1
0.146	6.8	0.050	19.9	0.085	11.7
0.153	6.5	0.051	19.6	0.088	11.4
0.161	6.2	0.052	19.3	0.090	11.1
0.102	9.8	0.032	31.0	0.044	22.9
0.110	9.1	0.033	30.3	0.045	22.1
0.115	8.7	0.033	29.9	0.046	21.8
0.121	8.3	0.034	29.5	0.047	21.4
0.126	7.9	0.034	29.2	0.048	21.0
0.133	7.5	0.035	28.8	0.048	20.6

[C] 8 in. unit has an additional face shell and reduced cross-web conductance. Resulting formula: (hrft^2°F/Btu)(1.50)+(hrft^2°F/Btu)(1.76).
12 in. unit has two additional face shells and reduced cross-web conductance. Resulting formula: (hrft^2°F/Btu)(2.00)+(hrft^2°F/Btu)(1.772).

[D] Values apply when all cores are filled completely.

[E] Average continuous insulation correction factor is 10% less than total insert R-value.

[F] 8 in. exterior core insulated in combination with solid grout interior cores.
12 in. middle and exterior cores insulated in combination with solid grout interior cores.
See complete analysis for detailed formulae.

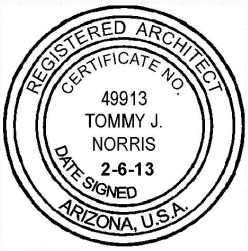
Table 2 Source: Tom Norris (Architect/ICC Certified)

Table 3 - Thermal Resistance of EPS Foam Insulation

EPS Type	Minimum Density (pcf) [G]	R-Value Per Inch of Thickness (F°•ft^2•h/Btu)
II	135	4.00

[G] pcf = 16.02 kg/m^3, 1°F ft^{2}hr/Btu=0.176m^{2}K/W, 1°F=1.8°C+32

Table 3 Source: ICC ESR-1498 per ASTM C 578



EXPIRES 9-30-2015

Omni Block is patented US 6,513293 and US Pat. Pend. 61581959