Omni Block
AN INSULATED CONCRETE BLOCK

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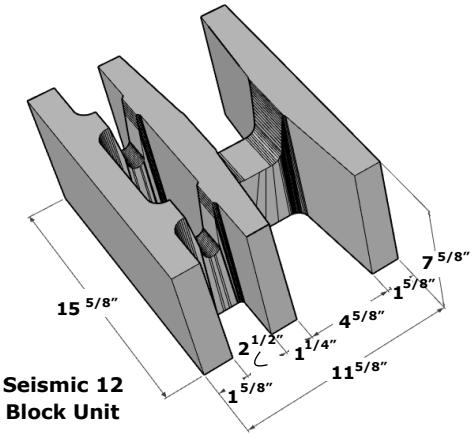
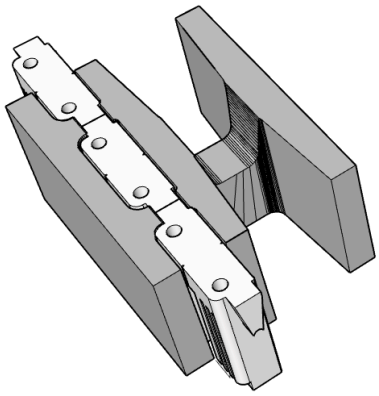
WWW.OMNIBLOCK.COM



Seismic 12 Block Unit



Small Cell Insulation Insert

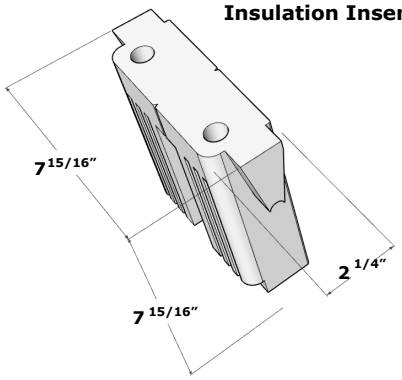


Table 1 - U-Factors (Btu/hrft²°F) and R-Values (hrft²°F/Btu) of Concrete Masonry Walls [A]

Nominal Wythe Thickness in. (mm)	Concrete Density pcf	Standard CMU Cores Empty		100% Solid Grouted [B]	
		U	R	U	R
12 in. (305mm)	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

Table 1 Source: Abbreviated Accredited Industry Sources

[A] (hrft²°F/Btu) (0.176) = m²K/W. Mortar joints are 3/8" (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/m³). Lightweight grouts will provide higher R-values and may be used.

Table 2 - U-Factors (Btu/hrft²°F) and R-Values (hrft²°F/Btu) of Omni Block Seismic 12 Walls [A]

Nominal Wythe Thickness in. (mm)	Concrete Density pcf	Stretcher Unit Cores Empty [C]		Cores With EPS Inserts [D]	
		U	R	U	R
12 in. (305mm)	85	0.123	8.2	0.061	16.37
	95	0.133	7.5	0.064	15.67
	105	0.139	7.2	0.065	15.37
	115	0.146	6.8	0.067	14.97
	125	0.153	6.5	0.068	14.67
	135	0.161	6.2	0.070	14.37

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

[A] (hrft²°F/Btu) (0.176) = m²K/W. Mortar joints are 3/8" (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.

[C] 12 inch unit has an additional face shell and reduced cross-web conductance. Resulting formula: (hrft²°F/Btu)(1.50)+(hrft²°F/Btu)(1.76).

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

Note: Some table values are the same due to rounding.

Table 3 - Thermal Resistance of EPS Foam Insulation

EPS Type	Minimum Density (pcf) [F]	R-Value Per Inch of Thickness (F°•ft²•h/Btu)
II	135	4.00

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

[F] pcf = 16.02 kg/m³, 1°F ft²hr/Btu=0.176m²K/W, 1°F=1.8°C+32