

Precast Wall Panel Systems

Higher quality and more durable finishes provide for lower maintenance costs, while using local materials and recycled content to enhance sustainable practices.



Precast offers a distinct advantage over other traditional materials for the following reasons:

- Precast insulated wall systems can be thermally efficient with low life-cycle costs, meet ASHRAE and IgCC standards, and allow for higher R-values and thermal efficiency.
- Precast walls are produced under manufactured controlled conditions and are PCI certified.
- Wall panel systems permit faster construction over alternative systems, allowing for an accelerated construction schedule, increasing project-site safety, and decreasing weather-related risks and delays.
- Interior and exterior finish options are available for every budget and create aesthetic solutions unique to your needs.
- Wall panel systems can be utilized in numerous structure types including residential, retail, commercial, educational, religious, medical, judicial and military.
- Precast solutions provide long-term durability, impact and fire resistance, are impervious to most chemicals, and will not degrade when exposed to UV light.



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Wall Panel Options

The following table has been developed to compare similar panel types for load bearing and non-load bearing applications. Typical panel size is 12'-0" x 30'-0".

	Solid	Insulated Panel Type					
		Composite		Non-Composite		Composite	
		Solid Wall Panel	Metal Truss ³ Insulated Panel with Solid Zones ⁴	Metal Truss ³ Insulated Panel No Solid Zones ⁵	Thermomass [®] Insulated Panel No Solid Zones		CarbonCast [®] Insulated Panel ⁶ No Solid Zones
Panel Type	8-0-0	3-2-3	3-3-3	8-2-3	8-2-3	3-3-3	3-4-3
Cost Per sq. ft.	\$	\$\$	\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
Total Panel Thickness (in)	8	8	9	13	13	9	10
Insulation Thickness (in)	0	2	3	2	2	3	4
Equivalent Concrete Thickness (in)	8	6.05	6.06	11	11	6.17	6.17
Panel Weight ¹ (psf)	100	75.6	75.8	137.5	137.5	77.1	77.1
Available Insulation Types ⁷	NA	EPS/XPS	EPS/XPS	XPS	Polyiso	EPS	EPS
Continuous Insulation (ci)	N	N	Y	Y	Y	Y	Y
R-value ² Steady State (hr·ft ² ·F/BTU)	0.6	▶ 17.8					
Fire Rating (hr)	4	3	3	4	4	3	3
Tinted Concrete	Y	Y	Y	Y	Y	Y	Y
Architectural Finishes	Y	Y	Y	Y	Y	Y	Y
Brick Inlay	Y	Y	Y	Y	Y	Y	Y

Footnotes:

1. Concrete weight assumed to be 150 pcf
2. Steady state winters R-Values, insulation assumed to be Type IX, 2# EPS or XPS for Thermomass[®]
3. Values based on six (6) rows of metal truss along with thermal bridging for the full height of panel
4. Values based on (10) solid zones for lifting devices and connections, 12" x 12" in size
5. Values based on (10) thickened sections for lifting devices and connections, 2" x 12" x 12" in size
6. CarbonCast panel is made with carbon fiber shear connectors with two 2" x 12" continuous thickened regions for lifting and connection hardware
7. Insulation types: Expanded Polystyrene (EPS), Extruded Polystyrene (XPS), Polyisocyanurate (Polyiso)

CarbonCast is a registered trademark of AltusGroup, Inc.

Structural Plus is a registered trademark of EnCon United

Thermomass is a registered trademark of Composite Technologies Corporation

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Fact Sheet FS005 – Precast Wall Panel Systems