

CAST-IN-PLACE | **thermomass**<sup>®</sup>



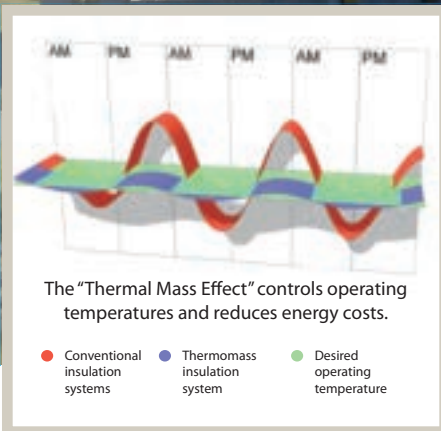
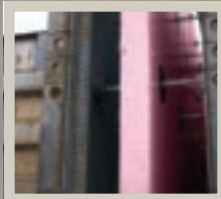
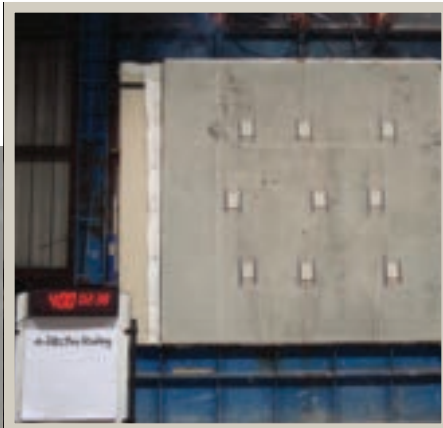
INNOVATIVE PRODUCTS

DEDICATED SERVICE

CONCRETE RESULTS

[THERMOMASS.COM](http://THERMOMASS.COM)

## A LOOK INSIDE



## PROVEN PRODUCTS

Since 1980, Thermomass has helped clients design and build durable, energy efficient, aesthetically versatile and environmentally responsible cast-in-place concrete sandwich walls. Comprised of rigid insulation and fiber-composite TL Series connectors, Thermomass System CIP is designed to provide the highest level of performance for sandwich walls. As part of our stringent quality control process, Thermomass systems are subject to rigorous third party evaluation. Additionally, traceable quality control processes are implemented at our facility through laser etching and product testing. Thermomass has a tested and trusted cast-in-place system to fit almost any application.

## THERMAL PERFORMANCE

Whether our client is striving for a LEED rating, aiming for a zero-energy building, looking to exceed ASHRAE 90.1 or simply trying to reduce HVAC loads; there is a Thermomass Cast-In-Place insulation system designed and tested to help our partners reach their goals. By incorporating System CIP, a concrete wall can be insulated in a single operation, maintaining over 99% of the insulation's "purchased" R-value.

## ARCHITECTURAL FEATURES

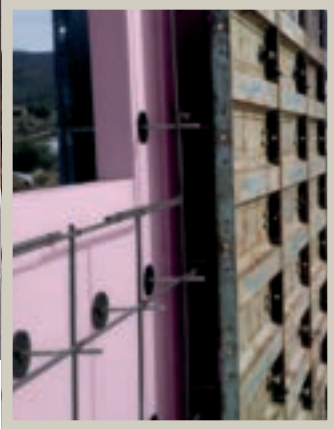
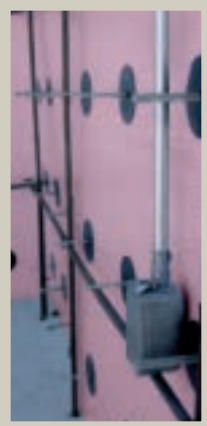
Concrete is a naturally flexible material and when cast in place with vertical forms, there is no limit to the design possibilities. Concrete will ultimately reflect the forming material's shape and texture, and since the insulation is integral to the wall, the interior and exterior finishes can be left exposed to show off concrete's natural beauty. At the same time, if a softer interior look is desired, it can be textured or covered to reflect a more traditional gypsum finish. As for the exterior, there is no limit to the design possibilities of a Thermomass insulated cast in place wall.

## SERVICE & SUPPORT

If it is advice on the compatibility of our systems with your project goals, recommendations on details or a thermal analysis, our technical department is there every step of the way. Additionally, we have strategically placed individuals around the world to service local markets and projects, allowing us to tackle even the most challenging tasks. We learned long ago that the best projects are built on not one, but two cornerstones: superior products and trusted partnerships.



## PUTTING IT ALL TOGETHER



### FORMING A CAST-IN-PLACE SANDWICH WALL PANEL INSULATED WITH THERMOMASS IS A SIMPLE PROCESS.

- :: Set the first wall of the formwork, including form ties, according to the forming system provider's standard assembly practices. Make sure the forms are accurately set, clean, tight, adequately braced, and constructed of or lined with materials that will result in the desired finish to the hardened concrete, including appropriate release agents.
- :: Place the first layer of reinforcing steel against the erected side of the wall forms. Next, place exterior electrical components. Be sure to seal boxes to avoid concrete consolidation into the box or conduit. Place any framing components in need of assembly, such as door and egress window openings. Install the TL series connectors through the twist-lock retainers in the insulation sheets. Continue this process for all of the connectors on the foam sheet. Install the assembled insulation sheets against the form.
- :: Place the second layer of reinforcing steel according to project specifications and standard assembly practices. Reinforcement

may be tied to the notches in the fiber composite connectors to allow for ease of installation. Place electrical components as detailed in Step 2.

- :: Set the second wall of the formwork, including form ties, according to the forming system provider's standard assembly practices. This will be in a similar manner to Step 1.
- :: When constructing a cast-in-place wall, it is ideal to have a plastic concrete mixture that will provide consistency during handling and placement while also supplying the recommended strength necessary for construction. At the same time, several admixtures may be used to adjust for adverse conditions. For detailed pour rates and mix designs, please contact Thermomass.
- :: Once the concrete has cured and the forms are removed, the result is an energy efficient, durable, cast-in-place concrete sandwich wall.
- :: Please contact Thermomass for full installation instructions on any of our systems or visit [www.thermomass.com](http://www.thermomass.com) for videos and details.



Minnesota



Vermont



Ohio



Colorado



South Carolina



Minnesota



Demanincor - Italy



Nevada



Florida



Oklahoma



Colorado



Vermont

## MISSION

At Thermomass, we are passionate about high-performance walls.

For over 30 years, we have helped customers from around the world design and build concrete sandwich walls that exceeded their expectations for durability, energy efficiency and environmental responsibility.

We take great pride that our insulation systems are the most stringently tested and widely trusted in the industry, but we know that our customers also depend on the unique, personal support that we offer through all phases of the project - from initial sketches to final walkthrough.

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**thermomass**<sup>®</sup>  
Energy Efficiency in Concrete Terms™

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