


THERMAL STORAGE FOR AGRICULTURE



Templok

PHASE CHANGE MATERIAL



Whether in a greenhouse or an indoor grow facility, managing both temperatures and energy usage represents one of the most extreme and toughest challenges. Yet these severe changing conditions represent an ideal opportunity for phase change materials.

Templok™ uses **PHASE CHANGE MATERIALS** to absorb and release that thermal heat within your building naturally. It works just like ice inside a cooler, but it freezes and melts **at the temperature you need** to sustain your facility. Templok™ can be installed over walls inside greenhouse and grow rooms, or can be used within our proprietary duct solution.

DURING DAYTIME: Templok is used to absorb free heat from the sun in winter, or unwanted heat in summer as the PCM inside the tiles goes through a melting phase.

DURING NIGHTTIME: Templok is used to release this heat back to the facility to save energy in winter, or can exhaust heat or recharge using fresh air or cheap cooling in summer.

Compact Thermal Storage



DUCTED OR WALL MOUNT SYSTEMS



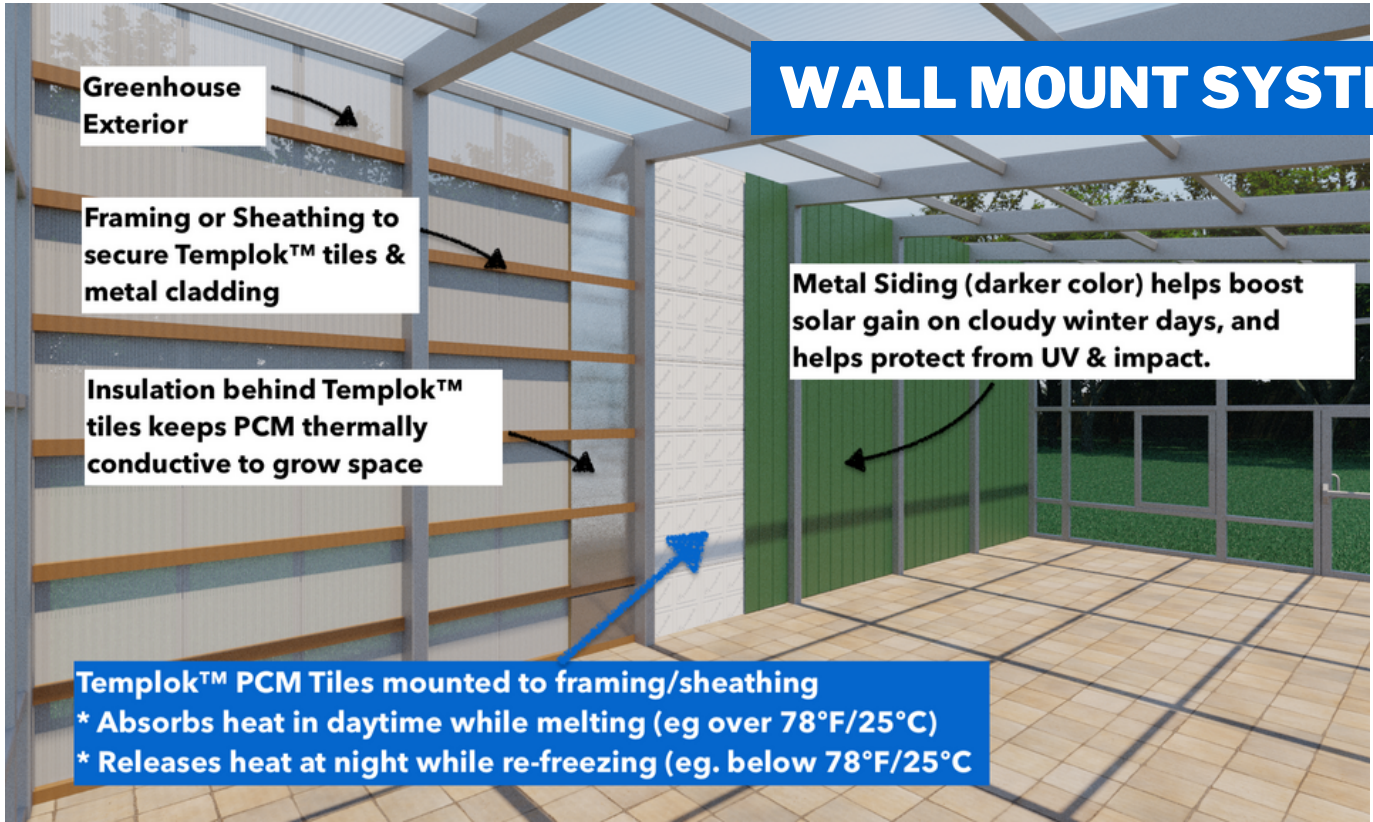
100% Made in USA by:

INSOLCORP

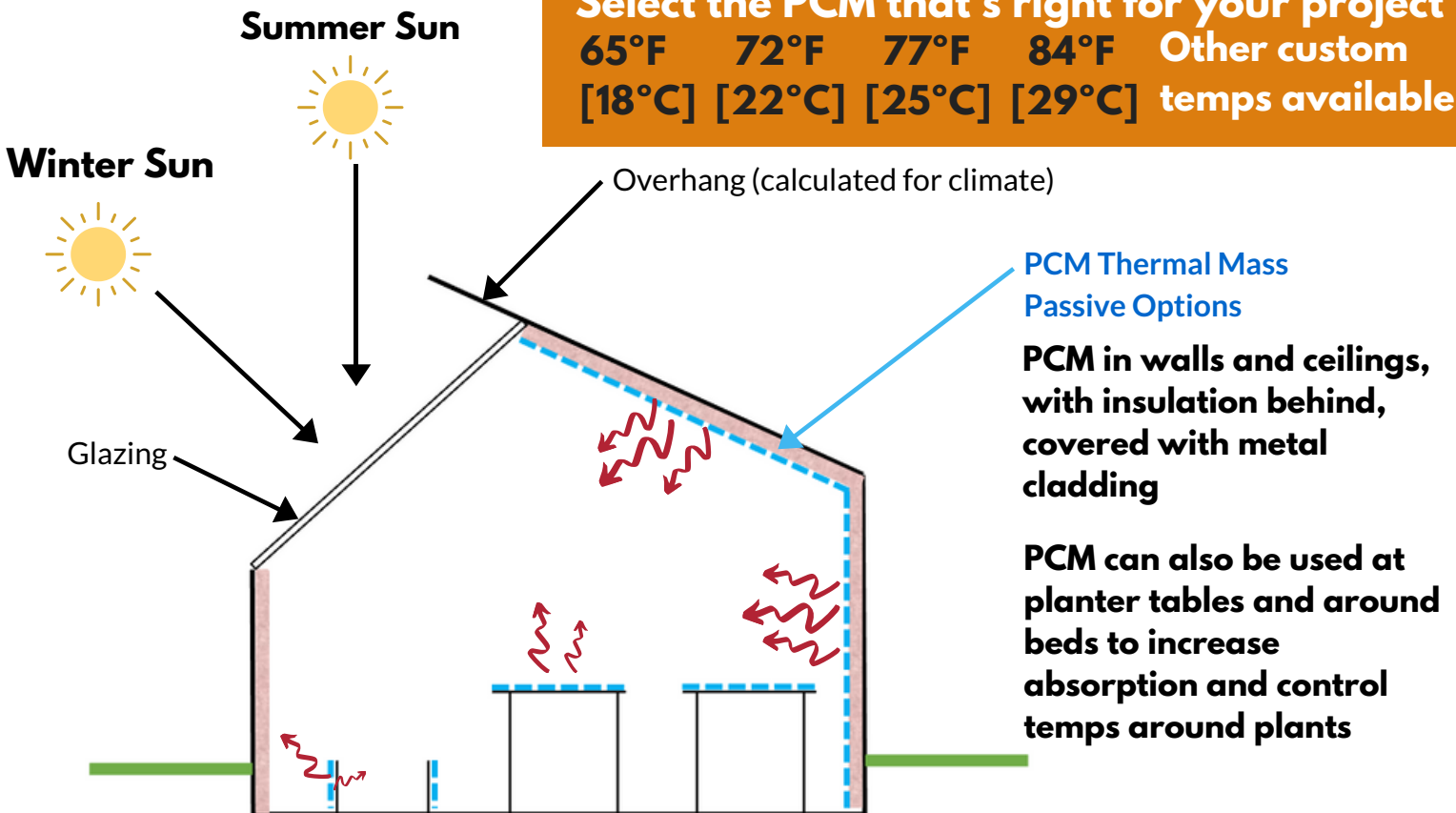
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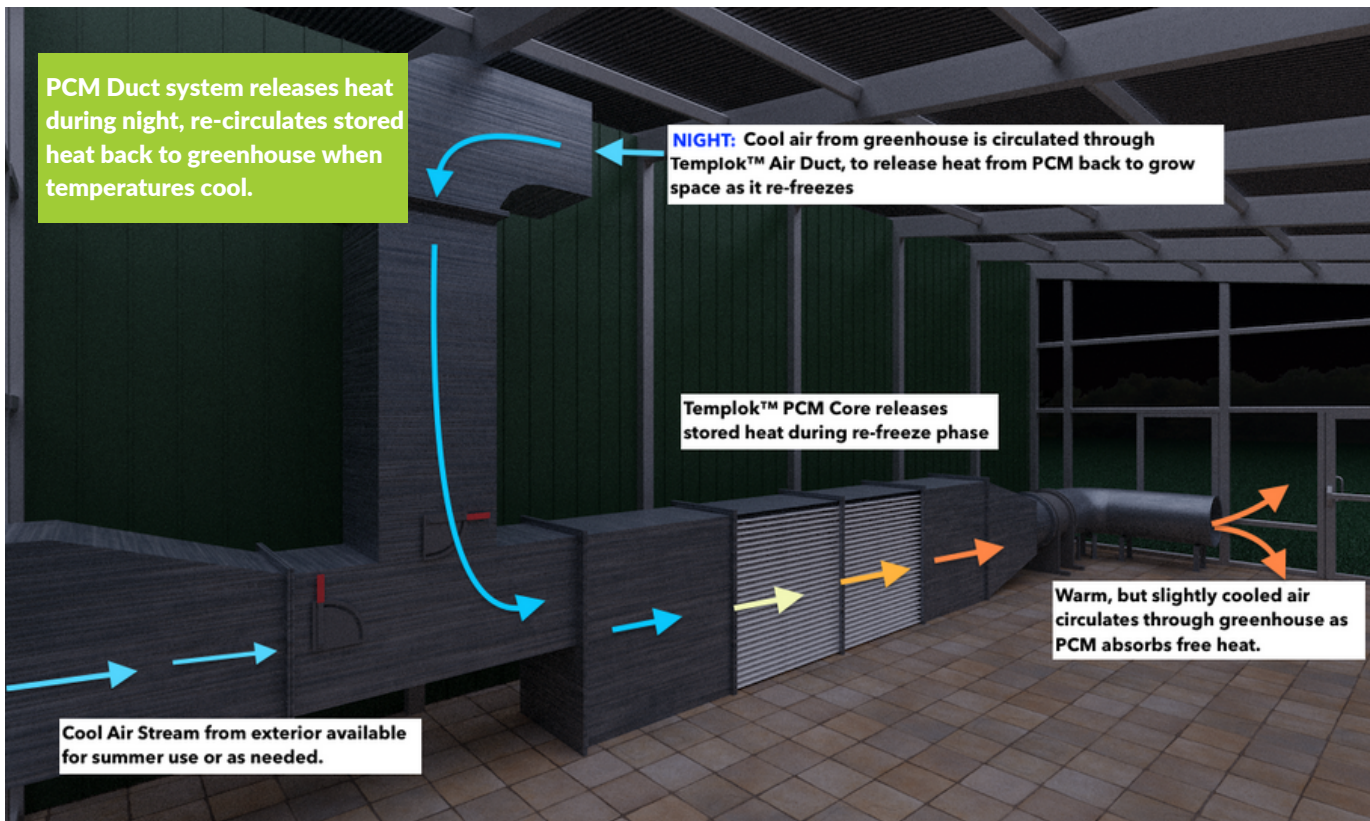
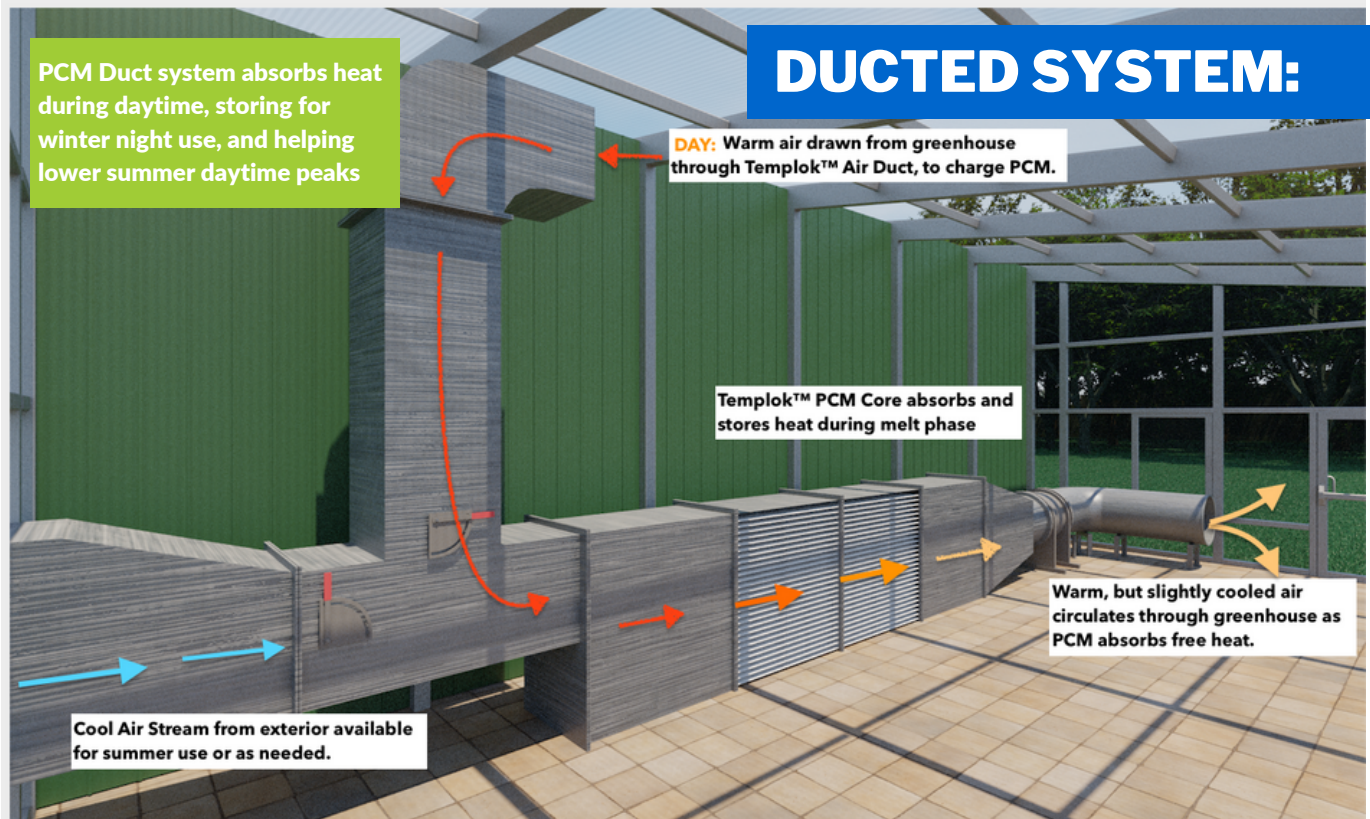
HOW IT WORKS:



Select the PCM that's right for your project
 65°F 72°F 77°F 84°F Other custom
 [18°C] [22°C] [25°C] [29°C] temps available



HOW IT WORKS:



PRODUCT DATA

Templok by Insolcorp, LLC is a revolutionary rigid panel with specifically engineered cells containing the highest capacity phase change material [PCM] in the world. The thermoformed design features a double seal solution to ensure longevity and reliability.

PHASE CHANGE MATERIAL

The Secret to Unbeatable Performance:

Insolcorp's phase change material is built around a fundamental property of Nature: The natural tendency of materials to absorb heat when they melt (phase change from solid to liquid/gel) and to release heat when they solidify (phase change from liquid/gel to solid). When these phase change materials are placed in quantity within a building, they will naturally absorb heat or air condition the building during the day and release heat at night. Working to provide year round thermal storage with heating and cooling savings.

PANEL MATERIAL: Thermoplastic 20 mil Top & Bottom

PANEL WIDTH: 23.75" OR 16" (603mm or 406mm)

PANEL LENGTH: 23.75" (603mm)

GENERAL PANEL THICKNESS: 0.25" (6.3mm)

MAX CENTER RIDGE THICKNESS: 0.16" (mm)

THERMAL CAPACITY +100btu/sf ; [2,496 J/m²]

PHASE CHANGE MATERIAL Mineral Based/Inorganic

TEMPERATURES 65F(18C), 72F(22C), 77F(25C), 80F(27C)

LATENT HEAT ~86 btu/lb; [~200 j/g]

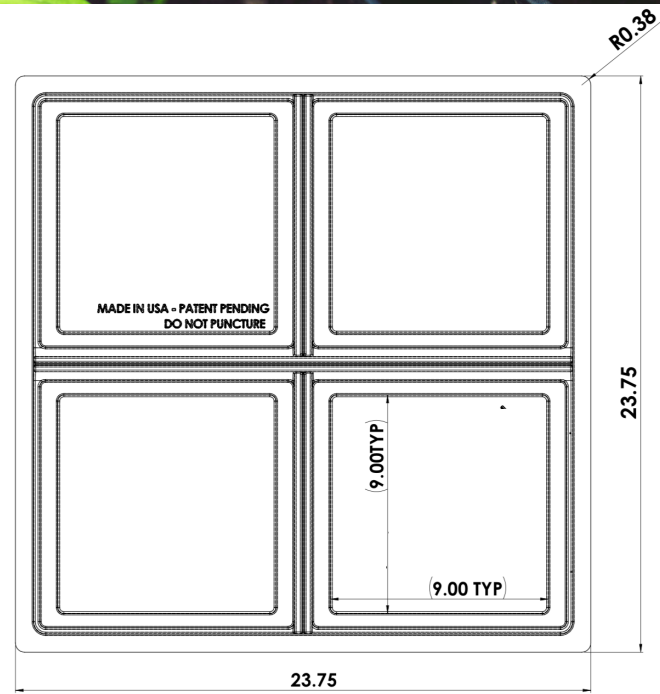
SPECIFIC HEAT 1.35 btu/lb; [3.14 j/g]

THERMAL CONDUCTIVITY ~0.15 W/ft/K Liquid, ~0.38 W/ft/K Solid

WEIGHT 1.3 lbs/sf [5.7 kg/m²]

FLAMMABILITY ASTM E84|UL723 - CLASS A FIRE RATED

MANUFACTURED: USA - International Patents Pending



USE

- Applied to Solar Exposed Walls
- Loose laid on planter tables
- Secured to internal ceilings/walls of grown rooms
- Ducted PCM system to charge/discharge energy

THERMAL STORAGE BENEFITS

- Compact thermal storage, less weight, less cost, less room needed.
- PCM holds at target temperature
- Reduce or HVAC use
- Extend Growing Season
- Additional Protection from Freeze/Overheating
- No Maintenance

