



ApolloTM Panel

PRECISE TEMPERATURE CONTROL FOR REFRIGERATION

Using BioPCM[®] Engineered Smart Material

Eliminates Product Waste

Up to 30% reduction in energy consumption

Zero Maintenance



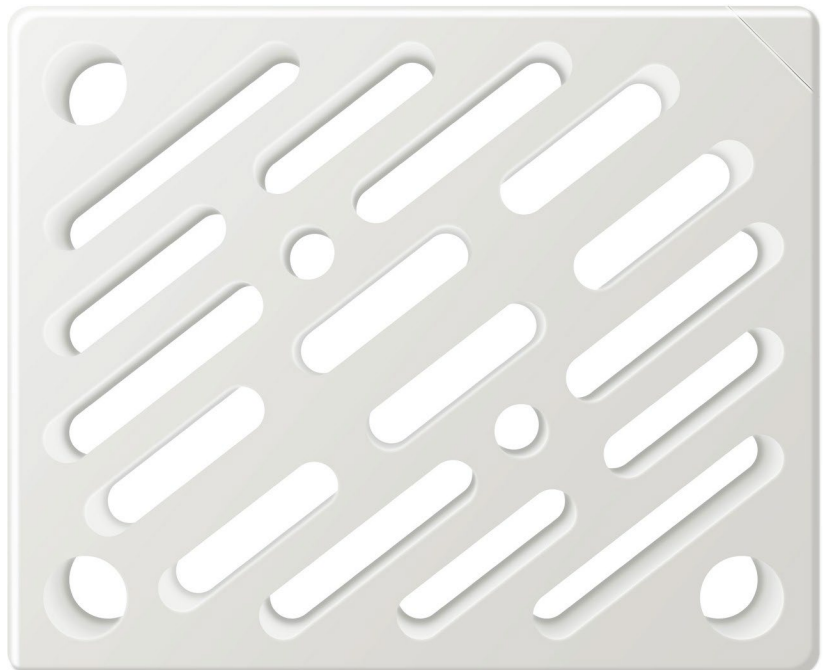
Phase Change Solutions (PCS) is a smart material company whose proprietary family of BioPCM® products impact our daily lives.

The BioPCM® based Apollo™ panel can slow the temperature rise inside the refrigerators when doors are opened and in the event of a power loss. The panel absorbs the excess heat, stores it, and releases it when needed, thereby regulating the temperature inside the refrigerator.

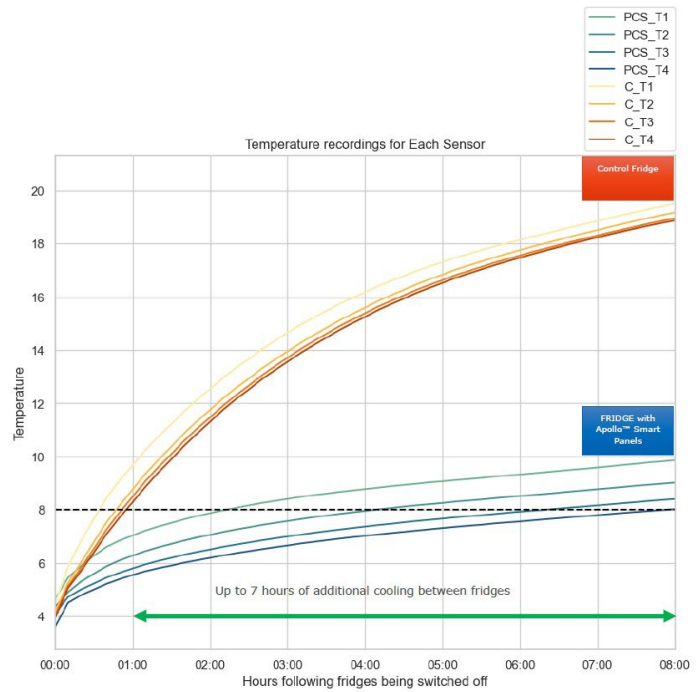
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This precise tunability enables customers worldwide to preserve vaccines, pharmaceuticals, and drugs at just the right temperature. This eliminates waste, reduces electricity consumption and carbon emissions.

The Apollo™ Panels are simple to attach to refrigerator shelves with zip ties.



The BioPCM powered Apollo™ Panels maintained a temperature range of 2°C to 8°C for up to 8 hours ±42 minutes through simulated power outages.



NHS UK Apollo™ Panel trial

Pharmaceuticals and vaccines are usually packed by the manufacturers according to strict FDA and other regulations. The Apollo™ Panel powered by BioPCM® reduces risk from the manufacturer to the vaccine recipient and provides standardization of temperature control across the entire supply chain.

SPECIFICATIONS	
PARAMETER	REFERENCE
Panel Construction	HDPE Plastic Container
Dimensions	15.75" L x 15.75" W x 1.25" D
Energy Density	210-250 J/g
Weight	6-7 lbs.



Smart Materials For People and The Planet

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