

hori:zon

BY MAASBERG

Glare and view protection



Innovationspreis

Textil und Objekt

PCM accumulators for air conditioning in hot weather

Offices heat up and must be conditioned

Modern glass façades result in high solar irradiation in offices. Most rooms still use sun protection at the windows for reducing blinding sunlight and additional heat as well as for privacy. Employees spend their days in artificial light behind blinds. Solar radiation, computer workstations, employees and lamps all generate heat in the offices during the day. Active air conditioning can be used to enhance the room's climate, but is often unable to sufficiently cope with these conditions. Drafts, agitation of dust, too low temperatures, noise and the need for someone to sensibly operate this type of equipment are some of the disadvantages of this solution. State-of-the-art cooling irradiators for air conditioning are difficult to install and cause continually high operating costs.

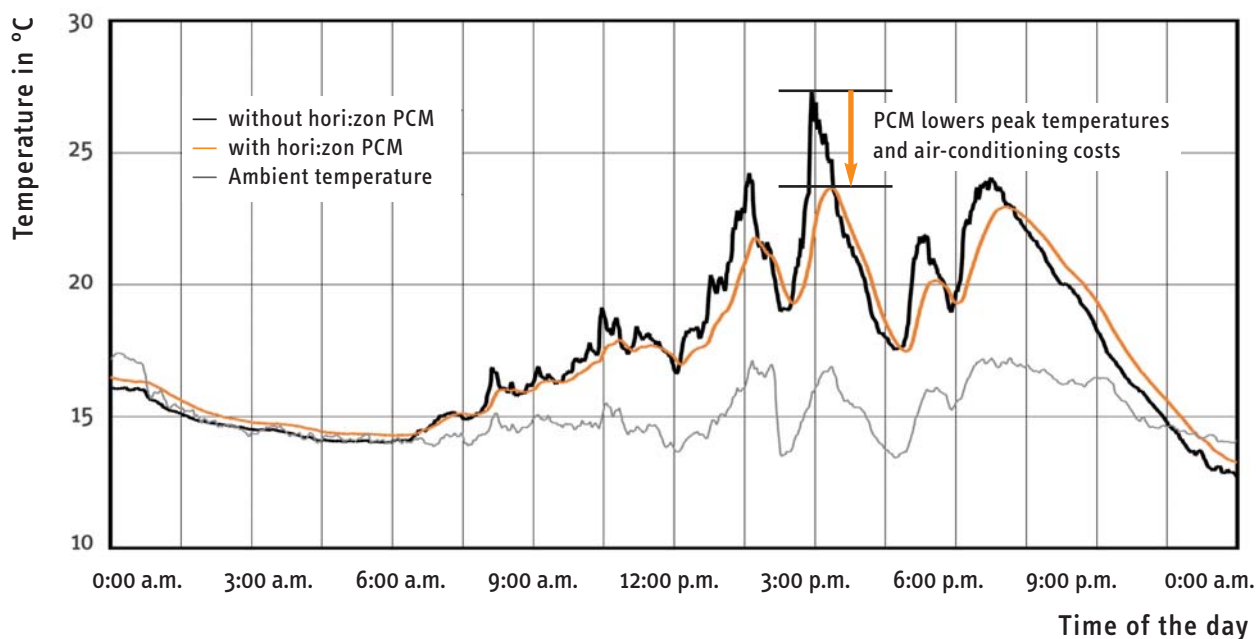
Rest assured – our solution is as simple as it is ingenious

The hori:zon panel curtain with a passive heat accumulator reduces peak temperatures at the window

Solar radiation at the window is the main source of heat in most rooms. The hori:zon heat accumulator serves as a kind of cistern. Once the temperature rises above 24°C, it collects heat until it is filled – in many cases, this happens before spring is out. At night, when temperatures are lower and no one will mind, the heat is dispensed again. There is no switch, no pump, no water or power connection: The hori:zon PCM heat accumulator is completely independent. You may look forward to a pleasant ambient climate.

Office temperature comparison with and without hori:zon PCM

The orange curve »with PCM« in comparison to the black curve »without PCM« shows how the heat peaks in the office are lowered by hori:zon PCM.



The reduction in artificial light lowers costs for electricity

Natural sunlight increases your employees' productivity and makes for a pleasant atmosphere for your guests. Natural, diverse light is an important wellness factor.



“Art and technology as a new unit!” (Walter Gropius)

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hori:zon PCM is safe, simple and has proven its worth in many applications

Air conditioning without operating costs

The hori:zon heat accumulator uses PCM salt hydrate, a table salt, is flame resistant (A2) and multiply packed. One kilogram of PCM stores the same amount of heat as 1 litre of water at 80°C as compared to water at 1°C. This means that 1 kg of loaded PCM can be used to heat 1 litre of water from 1°C to 80°C. One hori:zon panel is made of 4 kg of PCM.

PCM in hori:zon is the better solution

hori:zon is the only PCM application to use PCM right at the window, the main source of heat. This way, it can be used to full capacity and the heat accumulation between window pane and panel charges it even in spring and autumn.

hori:zon PCM is the pure form of application. Due to the sealed integration into aluminium profiles, micro encapsulation, which would reduce heat capacity again, is not required.

hori:zon PCM offers full efficiency without using graphite or any additional heat exchange areas. Heat accumulation at the window trips heat collection by the PCM at lower ambient temperatures in the room.

Scientifically tested and approved

hori:zon PCM was developed with the ILK Dresden's scientific support. It received the AiT innovation prize at the 2008 heimtex trade fair for its design.

The hori:zon PCM salt is produced by an established German building materials producer and is converted by Maasberg. PCM has been successfully used in many different applications for years.

Nothing but Green Building! Environmentally sustainable in all respects

The hori:zon heat accumulator has a useful life of more than 10,000 cycles, amounting to more than 50 years. hori:zon PCM could be disposed of as domestic refuse. Like a water cistern, PCM always collects a limited amount of heat and disperses it again. Similar to other air conditioning systems, hori:zon's influence on the ambient temperature depends on many factors, such as the amount of PCM, window size, solar radiation on the window, other heat sources in the room and the possibility to cool off at night.

We will gladly determine your hori:zon PCM advantage for you.

The hori:zon panel curtain with its passive heat accumulator reduces peak temperatures at the window. hori:zon PCM can be purchased directly from the manufacturer through our service partners in your area. We will analyse your room situation and provide noncommittal information on possible applications and the expected effect on your room climate.



“Light makes a room perfect”

Work places must be protected from blinding light

Having a protected view outside and non-blinding daylight for natural office lighting free of charge is the ideal situation. The occupational safety directive places high demands on protection from blinding light at work stations with screens. Meet them with hori:zon.

hori:zon PCM is tailored to your office according to the panel sizes requested by you.

Assembly is simple. Matching assembly parts create a convincing overall impression at nearly every window.

Look forward to a comfortable room climate!

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