EcoVolt CeP

CARBON PAINT HEATING SYSTEM

EcoVolt
INNOVATION IN ENERGY

THE FUTURE OF HEATING FOR HIGH PERFORMANCE BUILDINGS.

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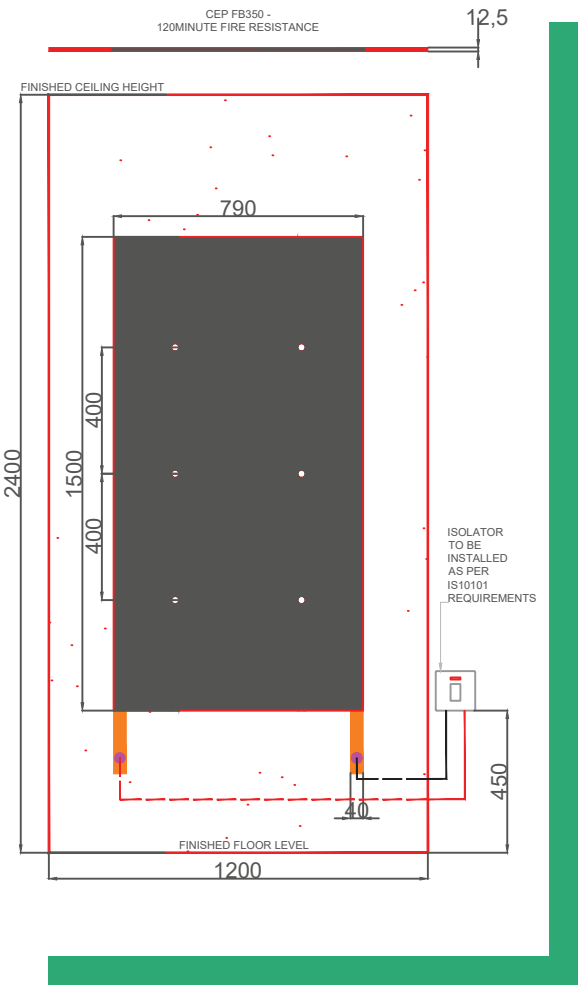
EcoVolt CeP patent pending fabricated panels are designed to integrate seamlessly in to plasterboard system construction. Designed for high performance buildings like a passive house or nZEB building.

Multi Award Winning Product

How it works:

Ecovolt CeP using the principles of resistive heating where a current passes a resistive element and produces heat. In this case the current is made from a 24V circuit passing conductive resistive carbon paint screen printed across 2 copper electrodes. When the current passes from one electrode through the CeP it generates heat up to 50 degrees Celsius while only consuming 350 watts.



How it is installed:

Mounted on metal or wood partitions, the CeP panel is installed like industry standard plaster boards. Once installed, 24V electrical connections can be made by using the CeP gripper system. A layer of thistle bond and a 4mm skimcoat finish is then applied before it is sealed and the final layer of water based decorative paint of any colour is applied.

Ecovolt CeP is designed for high performance buildings and it comes in 2 sizes. CeP350/FB and CeP175/FB. CeP means “carbon electric paint” 350 relates to the power rating in watts and FB relates to the substrate it is printed on and in this case it is a fire rated plasterboard. The product is only for use in high performance buildings that would have a heat loss of <25W/m2. The CeP panels are fabricated in our factory and tested before going to site and then go through several other tests pre and post installation before being signed off for plastering.

Technical details of both CeP panels are as below (detail image and technical table of both)

CeP TECHNICAL SPECIFICATIONS

Product Code	Width (mm)	Length (mm)	Depth (mm)	Weight (kg)	Resistance (Ω)	Current (A)	Voltage (V)	Power (W)	ΔT
CeP175/FB 2 fixing holes	800	1200	12.5	10	3.3	7.2	24	175(+/-10%)	45C(+/-10%)
CeP350/FB 6 fixing holes*	1200	2400	12.5	30	1.65	14.5	24	350(+/-10%)	45C(+/-10%)

*At 400 centres to suit UK and Ireland market.

Features of the Ecovolt CeP prefabricated panels

Designed for buildings with low heat loads the EcoVolt CeP pre-fabricated panel has many benefits like:

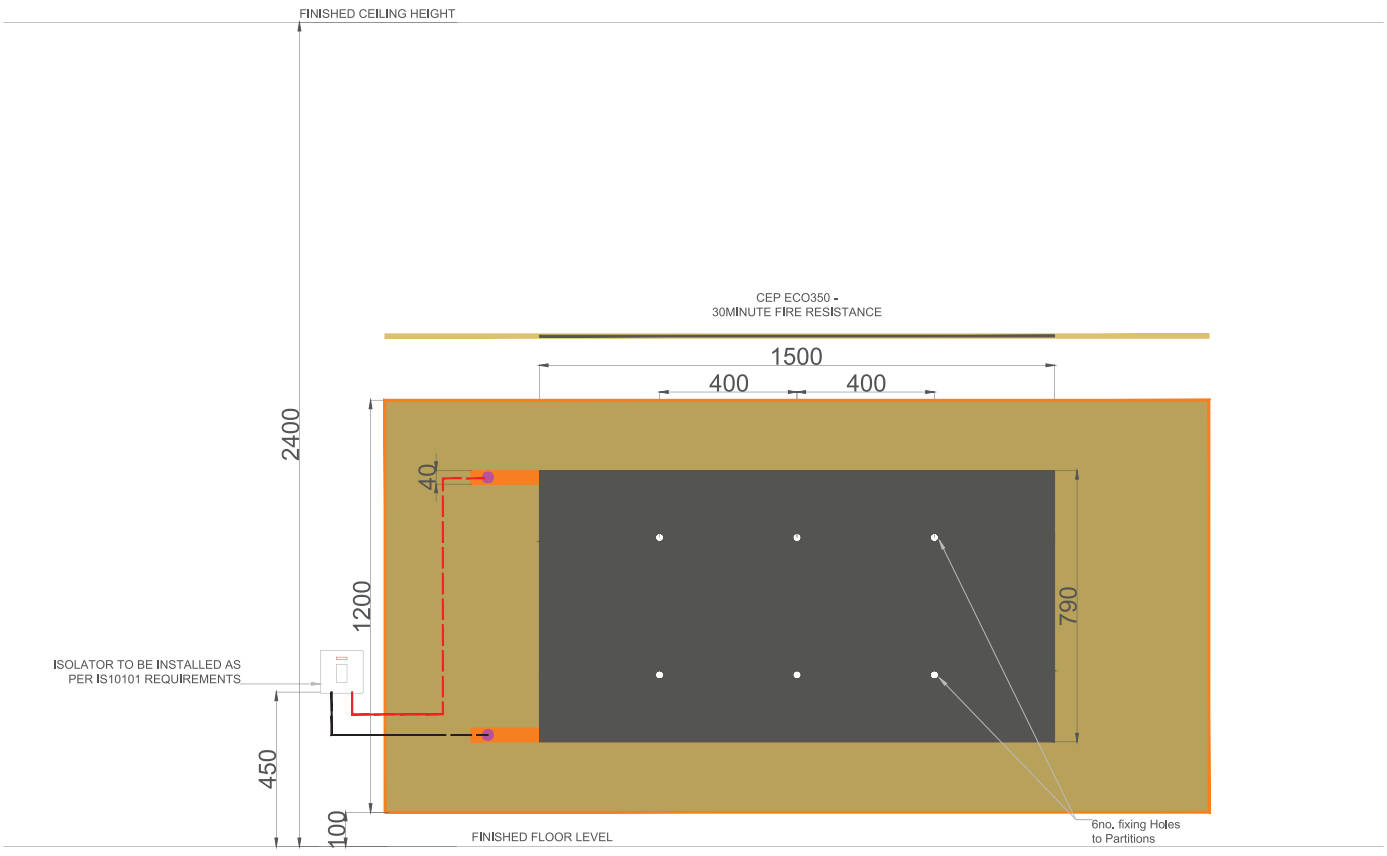
- Rapid build construction & super fast installation
- Ideal for offsite construction and MMC
- Suitable for nZEB building standard, 2019 building regulations Part L
- Suitable for Passive House Standard
- Solar PV and Battery Storage compatible
- Low energy input for large surface heating area – 350W delivering up to 50 degrees over 1 meter square of surface area
- Reduced installation and material costs compared to traditional wet and underfloor heating systems.
- Healthy radiant heating effect
- WiFi enabled smart thermostats
- Vertical or Horizontal mounted on walls and can also be fitted to ceilings.

When the heating system arrives to the site, already embedded in plasterboard, it is installed just like a plasterboard. Cables are fitted using the EcoVolt “Gripper” system and powered by 24V SELV transformers

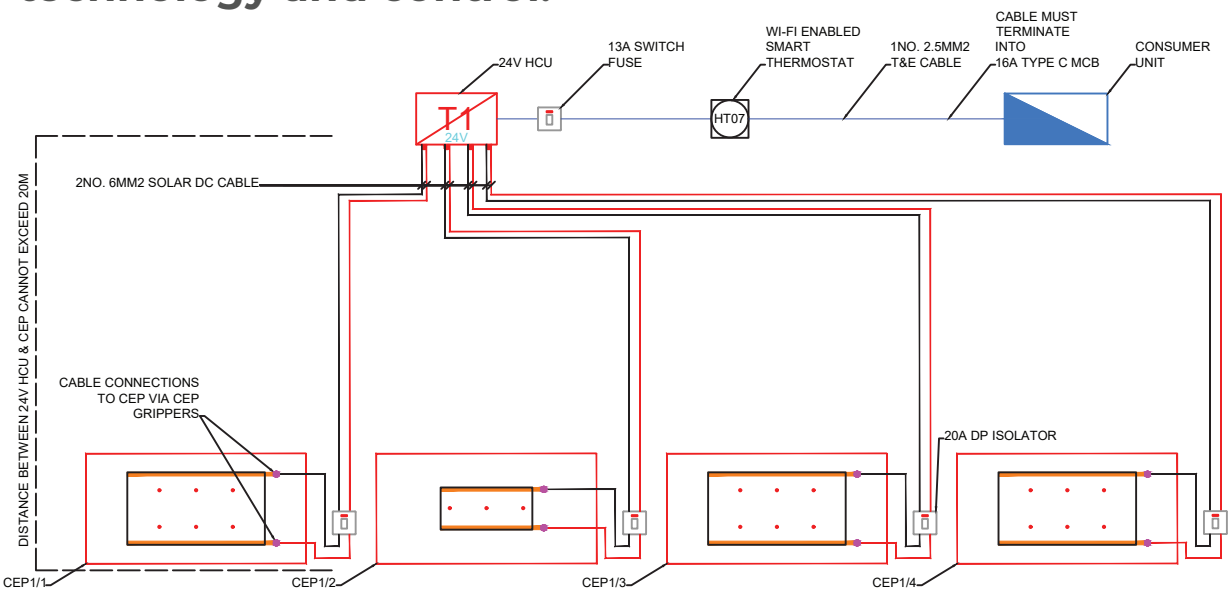
Quick and easy to install, EcoVolt CeP saves money on expensive labour and material costs in comparison to other systems. Due to the very low heat demand for the building, the requirement for expensive traditional heating systems are a thing of the past. EcoVolt CeP is “The Future of Heating”

EcoVolt CeP-Eco

Our CeP-Eco board has all the performance benefits of our fire rated plasterboard panel except the substrate is not a plasterboard but a 100% recycled acoustic board made from Tetra Pak cartons. We have introduced this product as a sustainable option over the standard CeP option in the fight to reduce carbon emissions.



24V technology and control.



Ecovolt CeP and Ecovolt CeP-Eco both use 24V electricity to operate. This would categorise the product as SELV (Safety Extra Low Voltage) which would make the product extremely safe in the event the wall is penetrated after installation. The CeP panel gets it's 24V from centrally located power transformers that are controlled by smart Wifi enabled thermostats. An illustration of the wiring layout for a typical 4 panel system is shown above. Cabling for the system can all be done during the first fix of the project with final terminations done at second fix stage.

Commissioning and thermal imaging.

When commissioning the CeP system, modern tools like thermal imaging cameras are used to ensure there is no issues with the panel and there is a homogeneous heating area across the panel with ess than 1 degree Celsius differential over all. Thermal imaging cameras are also the perfect tool to identify any issues during maintenance / service checks.

(Sample images of CeP installed)

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