

Healthy far-infrared heating

Carbon Heating Board

We have put sincerity in warmth.

Eco-Tech studies, develops, produces, and supplies electrical and non-electrical products that use carbon fibre.

Characteristics of Carbon Heating Board

Created an eco-friendly carbon-heated living space

ECO-TECH



Health



Heat
conservation



Cost



Safety



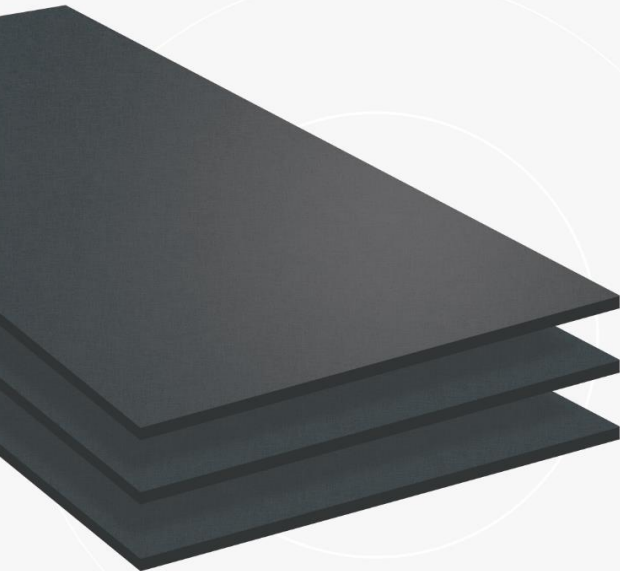
Quality



Environment

In addition to health, heating, cost, environment, safety, and quality effects

ECO-TECH's Carbon Heating Board has the five following advantages.



Resistance to Deformation

As it is shaped like a self-manufactured net, deformation does not occur due to its excellent tensile strength

Sound Absorption & Sound Insulation

The Carbon Heating Board absorbs and insulates sound (prevents noise between floors)

Protection against Freezing and Bursting Pipe

It is manufactured and constructed with high-compression boards without any water pipes that may cause water to freeze and burst like general heating facilities

Preservation

As it is shaped like a self-manufactured net, deformation does not occur due to its excellent tensile strength

Recycling

General flooring materials cannot be recycled after they break or during reconstruction. However, carbon boards are recyclable at any time

Characteristics and Specifications of Carbon Heating Board

Characteristics	Advantages
Carbon Heating Board Construction Procedure	Safe from fire
Space heating through radiant heat	Pleasant indoor air due to deodorising effect
Emits far-infrared rays and negative ions	No freezing and bursting pipes
Durable, waterproof, antiseptic, preservation, sound absorption effect	Semi-permanent
Convenient construction	Economical heating product
	Heating product that reduces particulate matter

Carbon Heating Net Specifications

Power Consumption(W)		Heating Temperature	Width(mm)	Length(mm)	Thickness(mm)
Max, power consumption	General power consumption				
270	190	60 °c	900	1800	7 or 5

Carbon heating board installation procedure

1. Inspection before installation
2. Installation that prevents the penetration of moisture
3. Insulation install
4. Board install
5. Test Run

Example of Construction I

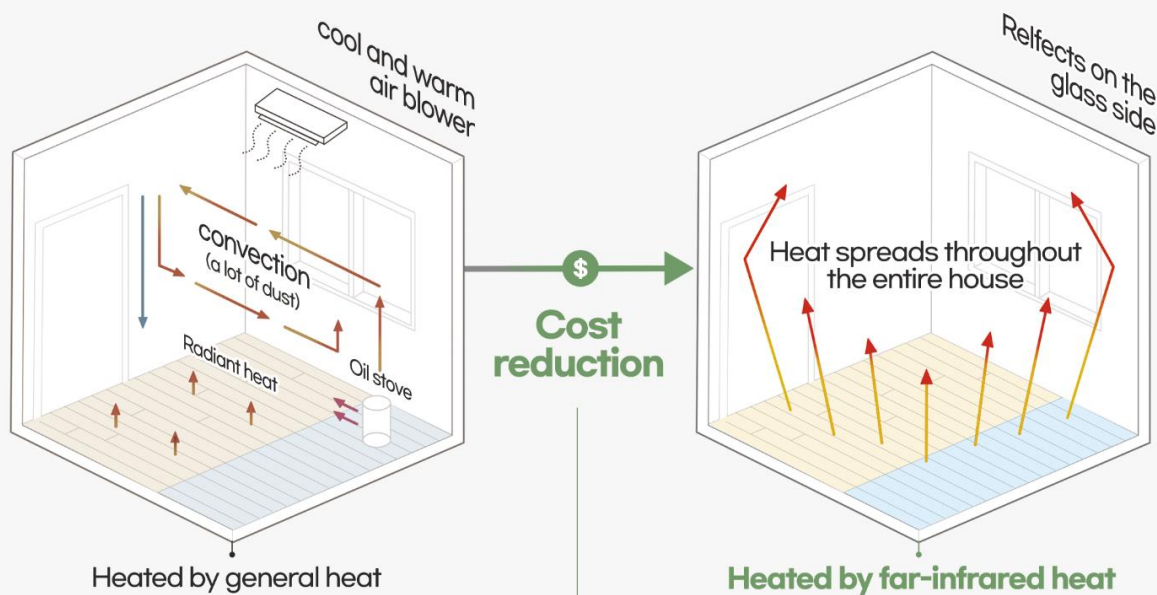


Promotion of Health



Heat conservation effect

- Far-infrared is radiation with long wavelengths of light that are invisible to the eye. It has a strong thermal effect, and since its radiant energy heats space directly and quickly, it reduces energy to a great extent. It also has drying-heat characteristics.
- Unlike ordinary heat, far infrared heats up a large space through the resonance of the wavelength even at the same heat, feeling warm like sunlight.



Classification	Unit Supply Price	Monthly Usage	Monthly Heating Expenses	Heating Index
Electric Carbon Heating panel	KRW 92.3/Kwh	2469Kwh	KRW 227,889	53%
Electric heating film	KRW 92.3/Kwh	2365Kwh	KRW 218,290	62%
Carbon Heating Board	KRW 92.3/Kwh	1848Kwh	KRW 170,570	29%

The monthly usage figures are subject to change depending on the conditions of the site, and the monthly heating expense of the carbon heating board is calculated using a temperature controller. (If set to 6-7 stages of the controller (40-45°C), 70% electric current (compensation) rate is applied)

I Safety

Maintains a constant temperature

Prevents fire by maintaining a uniform temperature at all times

Heat-resistant material

Demonstrated prevention of ignition at a source through fire resistance test

Electrical safety

Demonstrated the prevention of electric leakage by acquiring electrical appliance safety certification

I High quality



Even if damaged, it works normally

Even if a hole in the Carbon Heating Board works normally because the product has a parallel structure



It does not break

The Carbon Heating Board works normally even if there is a strong external impact due to the nature of the materials



It is resistant to shock and damage

Since the Carbon Heating Board boasts a high strength of carbon boards, it does not get damaged

I Eco-friendly

Test Items	Elapsed Time (Min)	Black Concentration (ppm)	Sample Concentration (ppm)	Deodorisation Rate (%)	Sample name
Deodorisation test	Early stage	500	500	-	Carbon Board
	30	480	110	77	
	60	460	90	80	
	90	450	80	82	
	120	440	65	85	
Test Items	Elapsed Time (Min)	Black Concentration (ppm)	Sample Concentration (ppm)	Deodorisation Rate (%)	Sample name
Deodorisation test	Early stage	500	500	-	General heating wire
	30	480	270	44	
	60	460	250	46	
	90	450	240	47	
	120	440	230	48	
Test Items	Elapsed Time (Min)	Black Concentration (ppm)	Sample Concentration (ppm)	Deodorisation Rate (%)	Sample name
Deodorisation test	Early stage	500	500	-	Carbon surface heating
	30	480	200	58	
	60	460	170	63	
	90	440	150	66	
	120	130	140	67	
Test Items	Elapsed Time (Min)	Black Concentration (ppm)	Sample Concentration (ppm)	Deodorisation Rate (%)	Sample name
Deodorisation test	Early stage	500	500	-	Carbon line heating
	30	480	310	35	
	60	460	290	37	
	90	440	270	39	
	120	430	250	42	

I Timeline of Major Construction Projects

- 2016.08

Asan Rural Housing Complex in Chungnam
- 2016.09

Dangin Rural Housing Complex in Chungnam
- 2017.02

Supplied materials for and built dormitory office for SK E&C Incheon-Mungyeong Express Project Team
- 2017.04

Office at the Diplomatic Centre
- 2017.04

Dormitory for TECC Co., Ltd
- 2017.05

Jimjilbang Demonstration Project for Welfare Centre in Chorak1-ri, Dangjin-si
- 2017.08

Community Centre in Wonbuk-myeon, Taean-gun
- 2018.01

Village Hall in Nanjido 1-ri
- 2018.03

Gimha Jeil Church in Cheorwon
- 2018.05

Jogye Jonghanyasa Temple in Nonsan-si
- 2018.06

Anheungsa Temple in Anyang-si, Gyeonggi-do
- 2018.09

Office for SK Mungyeong
- 2019.08

Village Hall in Dunbang 2-ri, Dunnae-myeon, Hoengseong-gun, Gangwon-do
- 2019.09

Village Hall in Chorak 2-ri, Dangjin-si
- 2019.11

Waiting room for road maintenance workers in Munam-ri, Ucheon-myeon, Hoengseoung-gun, Gangwon-do
- 2019.12

Soksa Elementary School under Pyeongchang Branch, Gangwond-do Office of Education
- 2019.12

Bijarim Youth Training Centre, Jeju-si, Jeju Special Self-Governing Province
- 2019.12

Nature Healing Centre for Yanggu Health Centre, Gangwon-do
- 2019.12

Soddongryeong Natural School in Goseong-gun, Gangwon-do
- 2020.01

Mutipurpose room at kingdergarten attached to Bukwon Elementary School in Wonju-si, Gangwon-do
- 2020.01

Recreational Forest in Jipdaigol, Chuncheon-si
- 2020.03

Remodeling of kindergarten attached to Musil Elementary School in Wonju-si, Gangwon-do
- 2020.03

Kindergarten attached to Chiak Elementary School in Wonju-si, Gangwon-do
- 2020.04

Kindergarten attached to Hwacheon Elementary School in Hwacheon-gun, Gangwon-do
- 2020.05

Remodeling of kindergarten School in Wonju-si, Gangwon-do
- 2020.05

Gwaneumsa Temple on Jeju-do Island

I History

- 2013

08 Established Pitchcable Inc

11 Acquired Quality Management system Certification ISO 9001:2008
- 2014

04 Registered a patent (heater element using carbon heating element)

04 Selected as a prototype (heated bench) production support business

04 Registered a patent (carbon heating element, surface heating element and chairs using these elements)

08 Selected as e-biz marketing (website) production support business
- 2015

01 Registered a patent (heated chair using carbon heating element)

02 Registered a patent (device preventing torsion of boundary stones)

04 Acquired KC Certification –carbon heated cushion

04 Acquired Q Mark Quality Certification –carbon heated bench

06 Registered a patent (heated chair using carbon heating element)

07 Established and registered a dedicated research and development division (approved)

09 Issued a certificate for verification of direct production (outdoor bench)

10 Acquired performance verification (Small and Medium Business Administration)–carbon heated bench

12 Entered into a contract as a mass supplier for Nara Market of Public Procurement Service: Carbon heated bench
- 2016

12 Designated as an excellent product for procurement (Public Procurement Service): Carbon heated bench (#2015203)

07 Designated as a cultural product for procurement: Hanji carbon thermal cushion

11 Registered as an electric construction business

11 Carbon heating element- acquired performance certification for snow melting system
- 2017

01 Exported carbon heated bench overseas

02 Acquired KC Safety Certification: Carbon heated bench

05 Received Excellent SME Award

06 Designated as a promising company to enter overseas procurement market (G-Pass company)

07 Received commendation from the Public Procurement Service

07 Designated as a Global Star Company in Jeonju-si

09 Achieved snow-melting export

We present **eco-friendly** products

That puts heat efficiency and health first



High energy
efficiency



Stability



Excellent
durability



Functionality



We have put sincerity in warmth.

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