



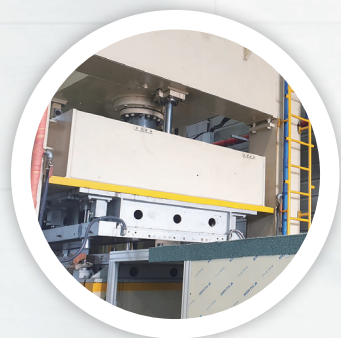
The sincerity on top of the warmth

Creates the eco-friendly carbon heating living space –

PITCH&GLOVIS



The sincerity on top of the warmth



About Us

Pitch & Glovis Co., Ltd.

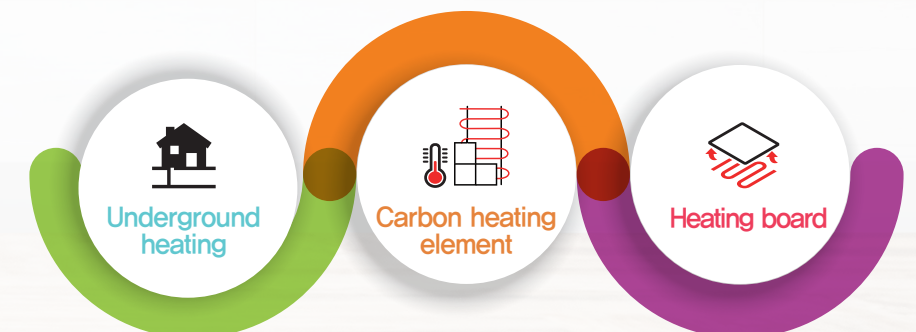
We are contributing to the production of high-quality products through product development based on the future cash cow of carbon materials, communicating with the world through excellent products, and continuously pursuing research and development through emotional management philosophy. While corporate social responsibility aims at making profits, we will create a vision as a 21st century's strongest company based on mutual trust in labor-management cooperation, convergence through technology integration, and a corporate culture to grow with society.

Product Overview

Our carbon-heating products are in the spotlight as building materials in the construction industry for their high energy efficiency, excellent durability, safety, and functionality. We produce a variety of products such as carbon heating boards, carbon heating mats, carbon heating radiating plates, carbon heating Korean dry sauna, and facility house underground heating. In order to promote the energy performance improvement of aged public buildings, we will create a pleasant and healthy in-house living environment through Green Remodeling Activation Project (a project of 2020 Ministry of Land, Infrastructure and Transport) and improved insulation and energy performance. Our products will make a big difference in the green building certification business policy through energy-saving eco-friendly housing certification.

Company History

- 2017. 03 Founded Daehwan Glovis Co., Ltd.
- 2017. 03 Signed a MOU with the Mongolian Government's Energy Agency
- 2017. 05 Signed MOU with Sungkyunkwan University for carbon material heating element
- 2017. 09 Registered as a development partner of Samsung Electronics Co., Ltd.
- 2017. 11 Signed an export contract with Hanye Science & Technology Co., Ltd. in Guangzhou, China
- 2018. 11 Change of CEO (Won-Chul Choi → Dong-wook Lim)
- 2019. 02 2 new patents applied
- 2019. 12 Relocation and of expansion to Jeonju Carbon Special Zone, preparation of full-scale automatic facility
- 2019. 12 Change of company name [Daehwan Glovis Co., Ltd. → Pitch & Glovis Co., Ltd.]
- 2020. 03 ISO 9001, 14001 Certified
- 2020. 05 Smart Factory Designation Agreement (Ministry of SMEs and Startups)
- 2020. 06 Venture Business Certification (Ministry of SMEs and Startups)



2016

Major Construction Cases

- 2016. 08 Rural Housing Complex, Asan, Chungnam
- 2016. 09 Rural Housing Complex, Dangjin, Chungnam

2017

- 2017. 02 Delivery and installation of products for the dormitory and office of SK E&C project team for Icheon-Mungyeong Expressway project
- 2017. 04 Diplomatic Center Office
- 2017. 04 Dormitory of TECC Co., Ltd.
- 2017. 08 Community Center, Wonbuk-myeon, Taean-gun
- 2017. 05 Welfare Center Korean Dry Sauna Pilot Project, Chorak 1-ri, Dangjin

2018

- 2018. 01 Town Hall, Nanjido 1-ri
- 2018. 03 Cheolwon Gimhwa Jeil Church
- 2018. 05 Banyasa Temple of Jogyejong, Nonsan
- 2018. 06 Anheungsa Temple, Anyang, Gyeonggi-do
- 2018. 09 SK Mungyeong Office

2019

- 2019. 08 Town Hall, Dunbang 2-ri, Dunnae-myeon, Hoengseong-gun, Gangwon-do
- 2019. 09 Town Hall, Chorak 2-ri, Dangjin
- 2019. 11 Road maintenance service station in Munam-ri, Ucheon-myeon, Hoengseong-gun, Gangwon-do
- 2019. 12 Soksa Elementary School, Pyeongchang Office of Education, Gangwon Provincial Office of Education
- 2019. 12 Bijarim Youth Training Center, Jeju, Jeju-do
- 2019. 12 Natural Healing Center, Yanggu Health Center, Gangwon-do
- 2019. 12 Sotongyeong Nature School, Gosung-gun, Gangwon-do

2020

- 2020. 01 Utility room at a kindergarten attached to Bukwon Elementary School, Wonju, Gangwon-do
- 2020. 01 Remodeling of a kindergarten attached to Musil Elementary School, Wonju, Gangwon-do
- 2020. 01 Jipdarigol Recreational Forest, Chuncheon
- 2020. 03 A kindergarten attached to Chiak Elementary School, Wonju, Gangwon-do
- 2020. 03 Musil Kindergarten, Wonju
- 2020. 04 Kindergarten at Hwacheon Elementary School, Hwacheon-gun, Gangwon-do
- 2020. 04 Samdo 1-dong Welfare Center, Jeju
- 2020. 05 Remodeling of a kindergarten attached to Gyodong Elementary School, Wonju-si, Gangwon-do
- 2020. 05 Gwaneumsa Temple, Jeju-do



Products

Product Name	Product	Specification Standard(mm)
Carbon heating board (PG-CHB-01)		900X1800X7mm
Carbon heating Korean dry sauna (PG-CHS-01)		(Fixed Korean dry sauna) (Movable Korean dry sauna) Single : 900X900X1980mm Double : 1100X1000X1980mm Triple : 1300X1300X1980mm (outdoor Korean dry sauna)
Facility house carbon underground heating (PG-CHU-01)		12cm width roll

Certificates



| Patent Certificate |
 Manufacturing method for carbon heating board with carbon heating element

| Patent Certificate |
 Natural convection underground heating unit and agricultural convection heating device

| ISO 9001 |

| ISO 14001 |

Carbon Heating Board

(PG-CHB-01)

The carbon heating board of Pitch & Glovis is an eco-friendly product, the core technology of Pitch & Glovis, which puts the heating industry’s long-cherished desire of economic thermal efficiency and human health as the top priority.



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Features

- Carbon heating element product
- Space heating with radiant heat
- Discharging far infrared rays and negative ions
- Durable, waterproof, antiseptic, sound absorption effect
- Convenient construction

Construction cases



Advantages

- Safe from fire
- (Pleasant indoor air with deodorizing effect
- No freezing
- Semi-permanent
- Economical heating product
- Fine dust reduction heating product

Comparison between film heating and Electric panel heating

Item	Carbon Heating Element	Electric Panel	Flat Film
Heating material	Carbon heating element	Nickel iron chromium wire	Carbon
Electromagnetic wave	Rare	High	Low
Far-infrared radiation	91%	None	90%
Overheating	Constant temperature	Potential overheating	Potential overheating
Durability	High load strength	Corrosion arises	Low load strength
Room temperature deviation	Heating indoor space with radiant heating (No temperature deviation)	The upper part is low temperature, the lower part is high temperature (Large temperature deviation)	Heating only extremely short distances (Some temperature deviation)
Connection structure	Parallel	Serial	Parallel

Monthly heating cost comparison

Category	Supply cost	Monthly usage	Monthly heating cost	Heating index
Oil boiler	950Won/L	350L	332,500Won	100%
City gas	750Won/Nm³	285Nm³	213,750Won	59%
Electric ondol panel	92,3Won/Kwh	2,496Kwh	230,381Won	53%
Electric heating film	92,3Won/Kwh	2,365Kwh	218,290Won	62%
Carbon heating board	92,3Won/Kwh	1,848Kwh	170,570Won	29%

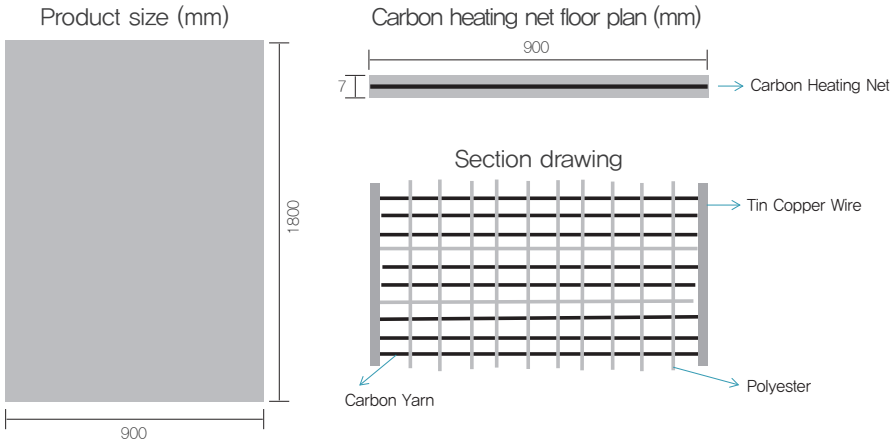
*Monthly usage figures may change according to local conditions, and monthly heating costs for carbon heating boards are based on the use of a temperature controller.

1. Based on 10 hours/day, 30days/month (based on 20 pyeong(66m2), progressive rate system not applied)

2. Monthly usage may vary slightly depending on the insulation and efficiency of the equipment used.

3. City gas supply unit price applied for business heating (source: <http://www.citygas.or.kr/>) / (insulation of 600Kcal/h per pyeong applied)

Structure and Specification



Carbon heating board specification

Power consumption(W)		Maximum temperature	Width(mm)	Length(mm)	Thickness(mm)
Maximum power consumption	General power consumption				
220	154	60℃	900	1800	7

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Carbon Heating Korean Dry Sauna (PG-CHS-01)

Pitch & Glovis' carbon heating Korean Dry Sauna has two types of fixed and movable. This product is beneficial for health with excellent sweating effect and promoting blood circulation even at low temperature (45°C~60°C).



Features

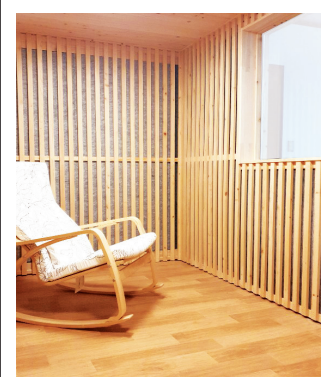
- Blood circulation stimulation
- Easy installation
- Maintenance cost reduction
- Better use of space, indoor installation available

Advantages

- Excellent thermal conductivity
- Can be moved after assembly
- Sweating well and not sticky even at low temperature.

Model

Fixed Korean dry sauna

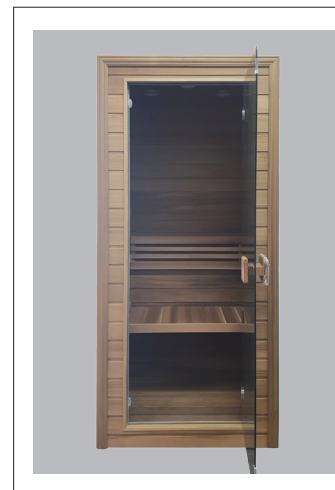


Movable Korean dry sauna



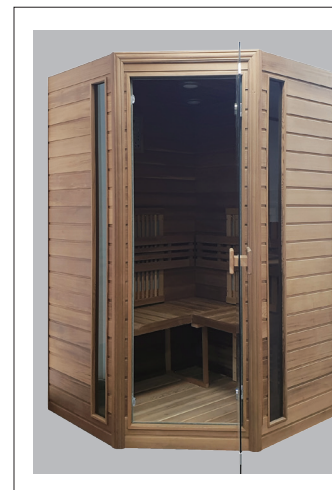
H-KY002 Hamlockwood
R-KY002 Red pine

- Single
- 900X900X1980mm



H01-K5 Hamlockwood
R01-K5 Red pine

- Double
- 1100X1000X1980mm



H03-B61 Hamlockwood
R03-B61 Red pine

- Triple
- 1300X1300X1980mm

Facility House Carbon Underground Heating (PG-CHU-01)

For Pitch & Glovis' carbon underground heating, a carbon heating net is installed at a depth of 50cm at the bottom of the house, to maintain the temperature at the roots of the crops at 15~25°C, to promote nutrient absorption and soil micro-organisms activities, and growth of the crops.



Features

- Carbon heating element product
- Heating the rooting zone of the crops.
- Culture cost reduction with growth promotion
- Power saving with self-control function

Advantages

- Eliminating high heating cost issue
- Growth promotion with far-infrared radiation effect
- Disease prevention and yield increases with anion sterilization

Construction Cases

