



## GENERAL INFORMATION

enerdrape commercialises the world's first prefabricated geothermal panel technology.

Thanks to an installation without drilling, enerdrape panels make it possible to turn underground structures, such as car parking or tunnels, into sources of renewable thermal energy for the heating and cooling of buildings, thus achieving CO<sub>2</sub> savings.

Modular, thin, flexible, made of recyclable materials, and compatible with all heat pumps.

enerdrape panels represent an effective retrofit solution for existing buildings but also an opportunity for new constructions turn newly constructed ones.

Committed to unlocking the energy potential that lies underground, enerdrape aims to act as a global leader in urban cleantech solutions, providing sustainable contemporary heating and cooling supply to smart cities.

enerdrape provides a scalable solution to enable the timely decarbonization of cities.

### Application

Commercial, administrative, residential assets with underground parking lot facilities

District heating systems and other thermal networks

Pre-heating systems

Back up to other heating systems (e.g., geothermal boreholes, fuel-, gas- or pellet heating)

Stand-alone ground source heat pumps for heat extraction/injection

Underground thermal energy storage systems

Direct cooling applications

### Advantages

Supplies renewable energy available 24/7

Operation independent of external climate conditions

Applicable to both new and existing constructions

No drilling or boring required (i.e., non-invasive installation)

Easy and quick to install and maintain

No direct CO<sub>2</sub> emissions involved

Plug & play solution with heat pumps

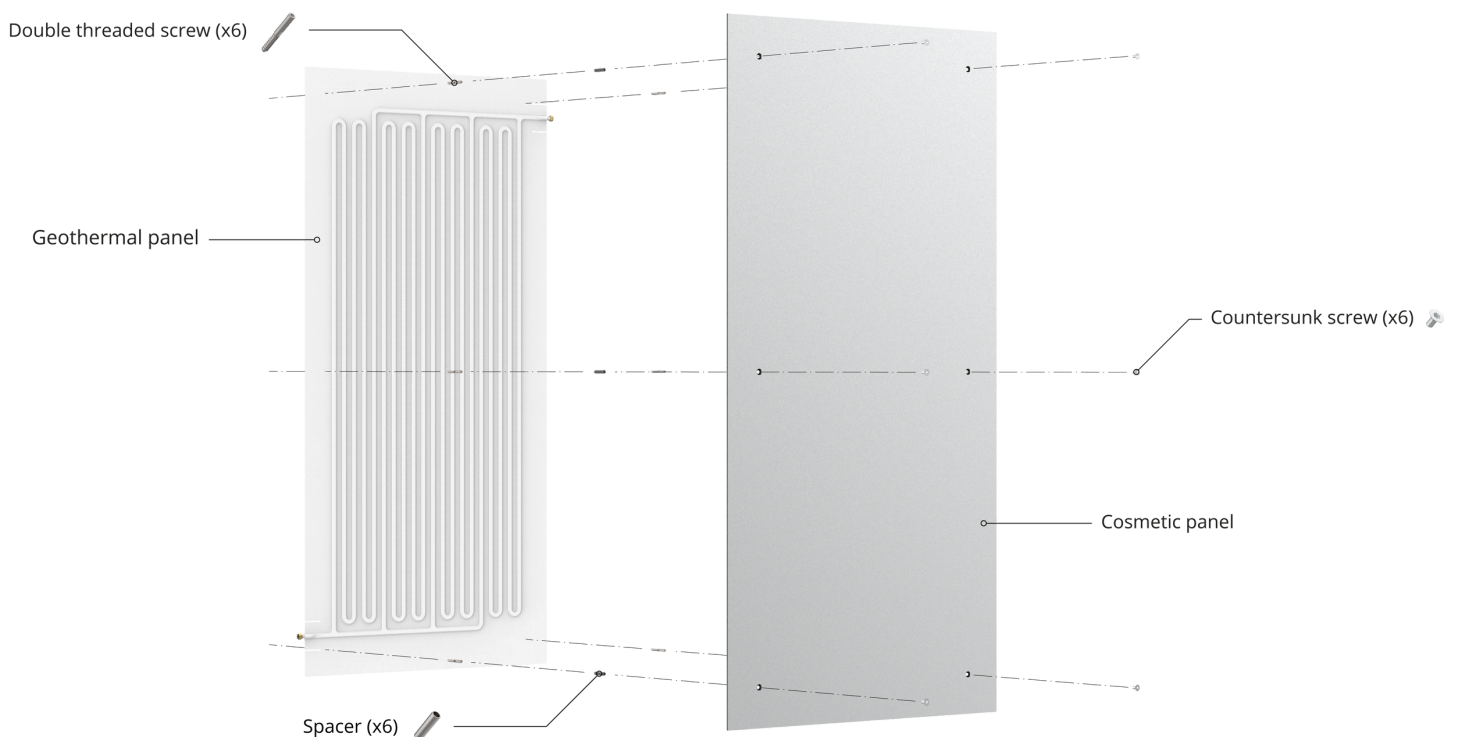
## PRODUCT INSTALLATION DATA

enerdrape systems are composed of:

- Multiple interconnected geothermal heat exchanger panels.
- Cosmetic panels offering optimal architectural integration of the heat exchanger panels. This element can be customised for branding, advertisement etc (more details on demand).
- Universal plug and play hydraulic connections that link the heat exchanger panels and can be positioned in horizontal and vertical positions.

	Geothermal Panel	Cosmetic Panel
Height	1440 mm	1445 mm
Width	740 mm	740 mm
Thickness	4 mm	3 mm
Surface	0,98 m <sup>2</sup>	1,08 m <sup>2</sup>
Weight	6 kg	2 kg

COMPONENT			
	Hydraulic connectors	QS-12	2 pcs
	Inter-connecting pipes	10	1.6 m
	Anchor dowel	M6x50	5 pcs
	Cosmetic panel screw	M6X16	6 pcs
	Cosmetic panel cylinder spacer	M6X20	6 pcs



## TECHNICAL DATA

### Characteristic supplied thermal power of 100 W/m<sup>2</sup> \*

For a constant flow rate and a given heat carrier fluid circulating within enerdrape, the harvested/injected thermal power depends on the difference between the inlet temperature of the heat carrier fluid and the average temperature of the wall.

### Fast operational reactivity over time

enerdrape systems are very reactive to changes in the operational conditions, thus quickly responding to shifts in operational needs and achieving steady operational conditions in short timeframes (typically, over 3 to 5 hours).

### Stable efficiency over time

The coefficient of performance of enerdrape systems is markedly stable over time.

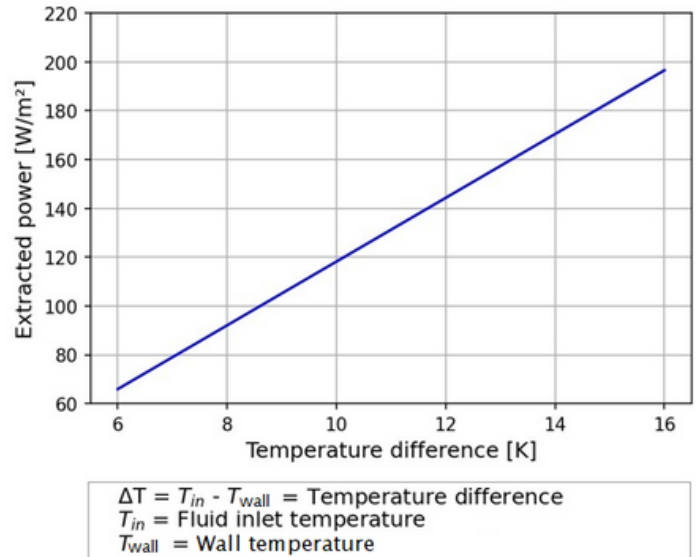
### Ability to reduce cooling consumption of underground infrastructures

By harnessing aerothermal energy and waste heat, enerdrape systems offer to reduce the cooling consumption of underground structures and infrastructures (e.g., tunnels).

### Satisfactory long-term operation

enerdrape systems provide optimal performance even beyond 50 years of operation when resorting to an appropriate design and installation.

*\*Value of performance for typical underground conditions (inflow heat carrier fluid temperature = 2 °C; initial wall temperature = 13 °C), averaged over a 50-year long operation. This information is indicative and has no legal responsibility or value.*



### Negligible sensitivity to indoor conditions in the underground

The air temperature in underground structures hosting enerdrape systems has a limited influence on their performance (up to 10%), unless significant airflows are present.



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