



INDUSTRY • AGRICULTURE • LOCAL COMMUNITIES



Solar energy concentration  
Heat storage



## Supplying Solar Heat

A solar concentrator from 100 kWh<sub>th</sub> to 10 MWh<sub>th</sub> supplying hot air at high temperature



**Sun beams** are reflected by **mirrors** towards a **receiver** trough which **air** is circulating.

Clean, dry and hygienized **hot air** in the 150-350°C range at atmospheric pressure is distributed to heat **storage** or **user process**

Optimal for **drying** and **deshydration** processes

**Cogeneration** of steam, cold, electricity, hot water is possible due to **high temperatures**

**Solar energy available 24h/24** with integrated HELIO STORE heat storage

**100% automated** control

**Simple and safe**

**No severe safety regulations** with hot air

**Sustainable**

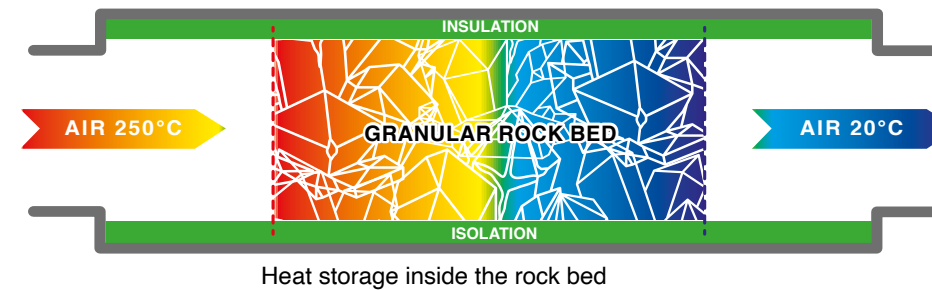
### DATA SHEET

- **Air at 250°C** 25 kg air for 1 kWh<sub>th</sub> produced
- **Peak power** 650 kW<sub>th</sub> for 1000 m<sup>2</sup> mirrors
- **Annual yield** from 400 to 950 kWh<sub>th</sub>/m<sup>2</sup>/year
- **Avoided carbon emission** up to 200kg CO<sub>2</sub>/m<sup>2</sup>/year



## Giving value to waste heat

A Thermal Energy Storage from 1 to 100MWh<sub>th</sub> into natural Pebble Bed to preserve environment



**Excellent yield for recovered heat** due to high transfer surface of the granular media

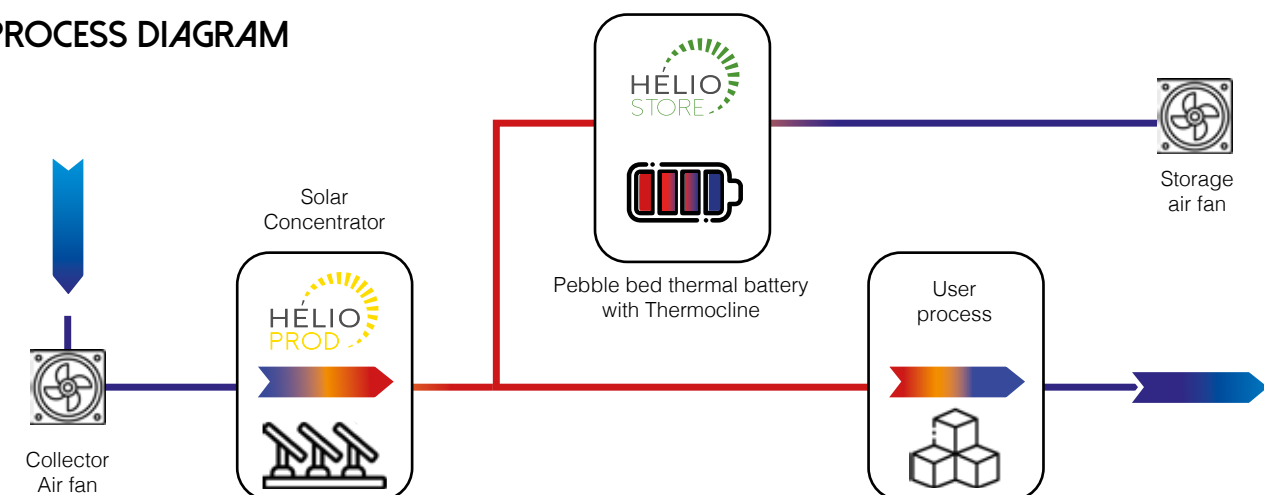
**High heat conservation capacity** due to air insulating nature

**Stable and high temperature level** for recovered heat due to **Thermocline technology**

### DATA SHEET

- **Natural or recycled materials:** Limestone, granite, basalt for a stored heat density up to 300 kWh<sub>th</sub>/m<sup>3</sup>
- Storage temperature range: **150-600°C** for exhausts / fumes up to 1000°C
- Storage duration: **1 hour to 10 days**
- Yield of recovered heat: **95-75%**

### PROCESS DIAGRAM





## OUR SERVICES



**DOMESTIC  
HOT WATER**



**HOT AIR  
HIGH TEMPERATURE**



**WASTE HEAT RECOVERY  
&  
POWER TO HEAT**



**COMBINED HEAT, STEAM,  
ELECTRICITY, HOT WATER  
PRODUCTION**

\*Photovoltaic electricity thermal storage.

## ADAPTED TO YOUR ACTIVITY



**VEGETABLE  
GREENHOUSE**



**BUILDING  
MATERIALS**



**WOOD  
INDUSTRY**



**AGROFOOD  
DRYING**

## A COMPLETE SUPPORT

Investing in solar energy and heat storage offers a green and reliable future  
IDHELIO will support your transition project from design to funding  
(Subsidies, Corporate Power Purchase Agreement) commissioning and operation



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