soliterm group

A worldwide leading company for Concentrated Solar System Solutions

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The coolest idea since the introduction of solar energy – the hotter it gets the cooler we become

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Welcome Message From CEO

Dr.-Ing. Ahmet Lokurlu

"High temperature solar-thermal processes have great economical advantages compared to conventional processes in the area of **solar cooling and air conditioning, heating** and **process steam generation**, as well as **electricity production**. We are currently at a state within which the **profitability**, advance technical development and sustainability made regenerative energy cheaper than all other kinds of energy."

ABOUT US

SOLITERM Group

Has been established in 1999 by our CEO Dr.-Ing. Ahmet Lokurlu, in Aachen. With headquarters and a production unit in Germany and offices in Turkey, the company is a multi-level establishment. In order to meet the rising demand for renewable energy supply, Soliterm introduced the world's first robotic and fully automated production unit.

With our ISO 9001:2015, ISO 14001, TÜV Solar Key Mark and CE certificates, we are able to supply parabolic trough collector systems with high international standards & quality. Reducing the carbon footprint, while offering feasible solutions to clients is the key to success in a rapidly globalizing dynamic environment.

`` The Coolest Idea Since The Introduction Of Solar Energy! ´´

- Dr.-Ing. Ahmet Lokurlu

A LITTLE HISTORY

About us - Since and beyond

Foundation

1999

Soliterm Group was formed in 1999

The initial starting point was a sunburn Dr. Lokurlu suffered from – heating for cooling

ISO

2000

ISO 9001:2000, ISO 14001

The first collectors were certified and manual manufacturing began

First Plant

2003

First plant was commissioned in Turkey

The first plant to be ever installed in history for cooling through sun energy

Automation

2011

Production unit at Ankara was fully automated

Robotic production line with elements of Artificial Intelligence

Strategy & Infrastructure Adjustments

2023

Scaling Up and getting ready for increasing demand

Significantly increasing demand led to the decision of optimizing the infrastructure and our strategy

PROVIDED OUTPUTS

FRESH WATER

Desalination plants

ELECTRICITY

CSP power plant

STEAM

Steam generation

SPACE HEATING

District heating concept

COOLING

Absorption chillers

Worldwide the second largest manufacturer and supplier of Parabolic Trough Collectors with an installed capacity of ›50.000 m² (2023)

Technology

Tracking System

Based on high quality standards of the industry and with a precision of 0.01°, enabling the sleeping position of the collectors system which servers as prevention from certain climate conditions.

Parabolic mirrors

Lightweight aluminium construct with a weight of 13kg/m² allows facade and rooftop. We achieve outputs of 500-700 kWh/m2 depending on the boundary conditions

Capacity

Capacity is very flexible from 50kW – 100MW capacity in only restricted by available installation area; implementation into existing energy system and system extension are possible and common

Online Monitoring

The energy consumption is monitored and optimized through our online SCADA system energy costs and emission are reduced drastically

Outputs

We offer our clients, based on their demand, various different outputs ranging from cooling, heating, steam, electrictiy up to potable water sea-water desalination.

Technology

Production Line

Our robotic production line is based on elements of artificial intelligence and fully automated, consisting of six sections.

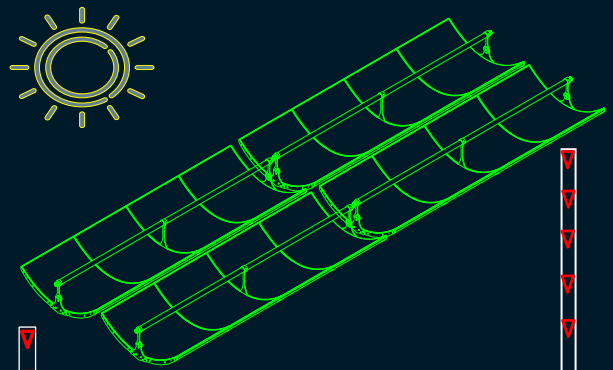
Capacity

The annual production capacity is around 250 MW, which is equivalent to 40.000 Collectors

Flexible processes

Essential for a continuous product quality, as well as scalability of the output – Optimal for all project sizes

Technology



Summer Mode

Winter Mode

Steam

Storage

Steam Generator

Double effect absorption chiller

Cooling

Heat Exchanger

Hot Water & Heating

Technology

OUR CORE SERVICES

- ✓ Production & installation of turnkey PTC Systems.
- ✓ Site specific maintenance – First two years of maintenance within warranty of contract.
- ✓ Repairments in case if unexpected damages directly at the site through our engineers.
- ✓ Concept development & Consulting in energy related fields.
- ✓ Techno – economic feasibility studies & detailed engineering work.
- ✓ Development of financial concepts – contracting, leasing - & Financing models (IFC, kfW etc.).

Technology

INTEGRABLE INTO ANY INFRASTRUCTURE

- ✓ PTC systems can be used as a primary as well as a secondary source of energy supply for larger industrial processes and diverse applications
- ✓ Simple installation on the floor and roof, as well as simple integration into the existing infrastructure
- ✓ Can be combined with conventional components such as cooling towers, chillers, heat pumps, gas turbines, etc.
- ✓ Our system leads to high energy and monetary savings - short payback times
- ✓ Can be integrated with other renewable technologies such as geothermal energy, PV, biomass etc.

Regular Product range

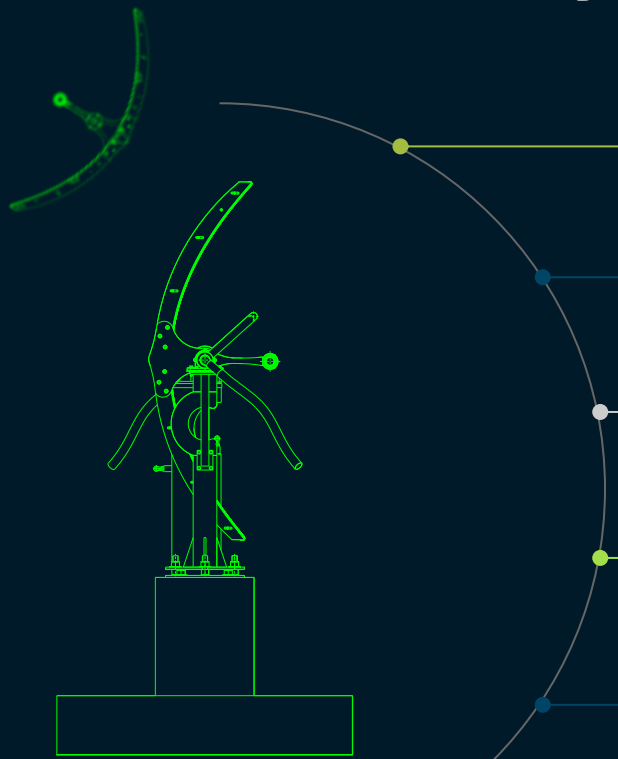
PTC1100

PTC1800

PTC3000

PTC4000

Our Flag-Ship model - ``PTC1800´´



01 Aperture X Length
1,8 m X 5,0 m

02 Collector surface
9,0 m^2

03 Installation Area
18,0 m^2

04 Thermal Performance
56 – 74 %

05 Thermal capacity
4,0 – 5,5 kW

05 Heat exchanger eff.
98 %

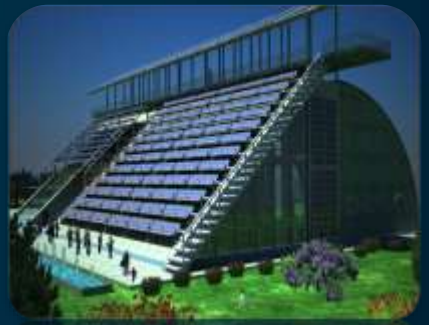
The Novel Product range

Floating System

Coastal application with space advantage

Solarthermal – Geothermal Systems

For lower sun irradiation regions with storage advantage



PTC – PV Combination

Many possibilities as 100% autonomous systems

Target Groups

Industry specific data

High production flexibility

Our PTC offer a wide spectrum of outputs: process and ambient cooling and heating, steam, sludge drying, electricity and desalination or any combination of those products.

Customised to your requirements

With different collector sizes and heat mediums, we can offer very flexible solutions in regards to your needs in outputs, temperatures and pressure levels.

Industrial applications

Industry	Process	Avg. temperature
Foods and beverages	Drying Washing Pasteurizing Boiling Cleaning Preheating	30 °C - 90 °C 40 °C - 80 °C 80 °C - 110 °C 95 °C - 105 °C 140 °C - 150 °C 40 °C - 60 °C
Textiles	Washing Bleaching Dyeing	40 °C - 80 °C 60 °C - 100 °C 100 °C - 160 °C
Chemicals	Boiling Distilling Other chemichal processes	95 °C - 105 °C 110 °C - 300 °C 120 °C - 180 °C
General industry	Preheat boiler feed water Production site heating Process-cooling	30 °C - 100 °C 30 °C - 80 °C Down to - 60 °C

Our Esteemed Clients

Comparison Between PTC & PV

SAMPLE CALCULATION – BASED ON REAL LIFE DATA

The PTC technology offers economic, as well as technical advantages compared to the PV technology - the calculations at hand refer to the specifications of a cooling demand of 500 kW and a DNI (Direct Normal Irradiance) of 2000

According to the dimensions stated above, we would need an available surface of around 1.400 m² , whereas the process efficiency of the PV technology is less than 15 %

In case of a PTC application, 66 PTC modules and therefore only a surface of 540 m² would be required – the process efficiency is around 70 % in this case

Achievements

Soliterm´s Success

soliterm group

Do you have any questions?
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Sleeping position on sunset

Tracking sun from sunrise


METRO