



THE COOLEST IDEA SINCE THE INTRODUCTION OF SOLAR ENERGY



Advanced Solar Cooling System

**Based on a Novel Technological Development
“SOLITEM Parabolic Through Collector PTC”**

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SOLITEM Group

Objective of the Enterprise:

Energy and Environmental Technologies

Long standing Experience with:

Environment, heat and process technology,
decentralized regenerative energy technology, bio-
energy

Main Emphasis: Integration of Renewable Energies, in particular
solar high temperature technologies, into the existing
energy infrastructure of buildings and plants

Implementation of modern energy conversion and
application processes for solar air conditioning, CHCP
process, heat generation and use as well as the
operation of micro turbines



SOLITEM today

- **Headquarters in Aachen/Germany**
- **Subsidiaries and production in Ankara/Turkey**
- **Ca. 50 employees in Germany and Turkey**
- **Subsidies founding: SPAIN, INDIA, USA**
- **Current projects
in the Mediterranean,
the Middle East, North Africa and Brazil**
- **Partner: Since May 2006 NEI, Switzerland
Since January 2008 MAN FERROSTAAL**



SOLITEM's CUSTOMER



- Hotels Cooling, Steam Processing, Heating
- Supermarkets Cooling, Heating
- Data Centers Cooling, Heating
- Breweries Cooling, Steam Processing
- Food Industry Cooling, Steam Processing, Heating
- Mining Cooling
- Airports Cooling



Targeted Groups



SOLITEM's COLLECTOR

PTC 1800

Collector Length	5.090 mm
Aperture	1.800 mm
Weight	ca. 120 kg
Concentration factor	$C = 40$
Temperature area	150°... 250°C
Tracking	Precision of tracking system 0.1 degrees
Medium	Water steam / Thermo oil
Kind of tracking	One axis
Reflector	Coated Aluminium



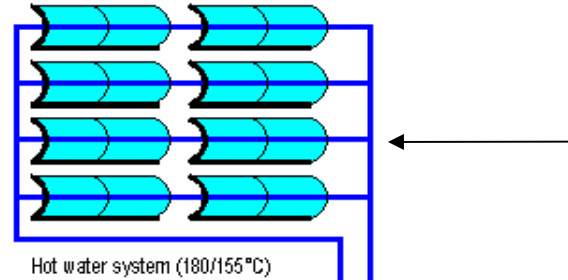
Technology



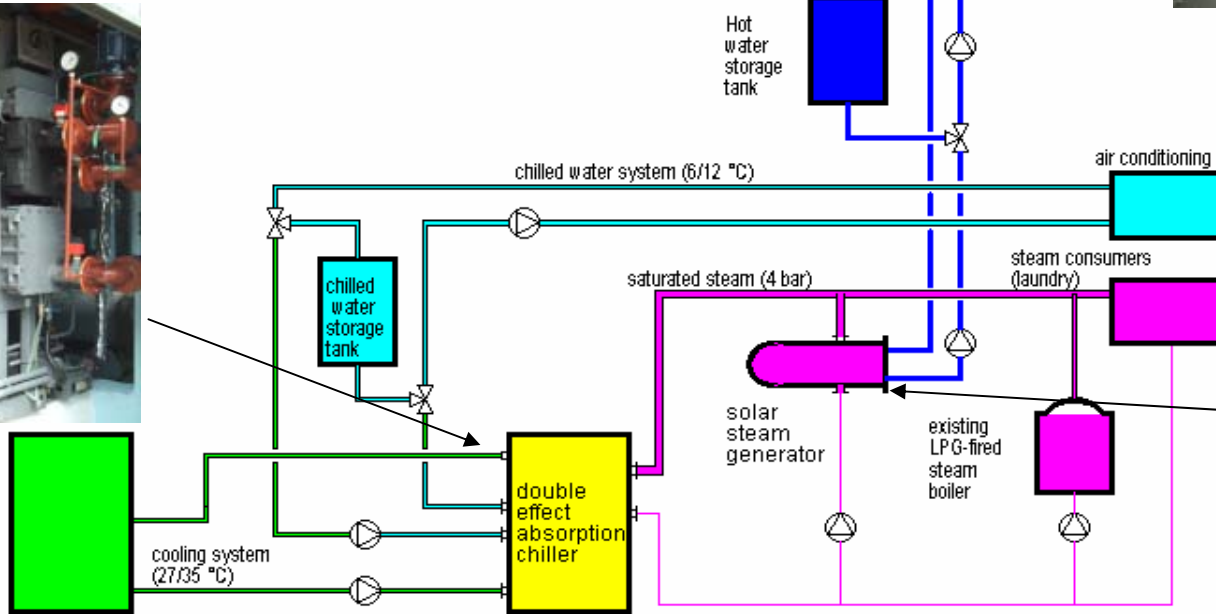
SOLITEM's COOLING SYSTEM



Parabolic trough collector field



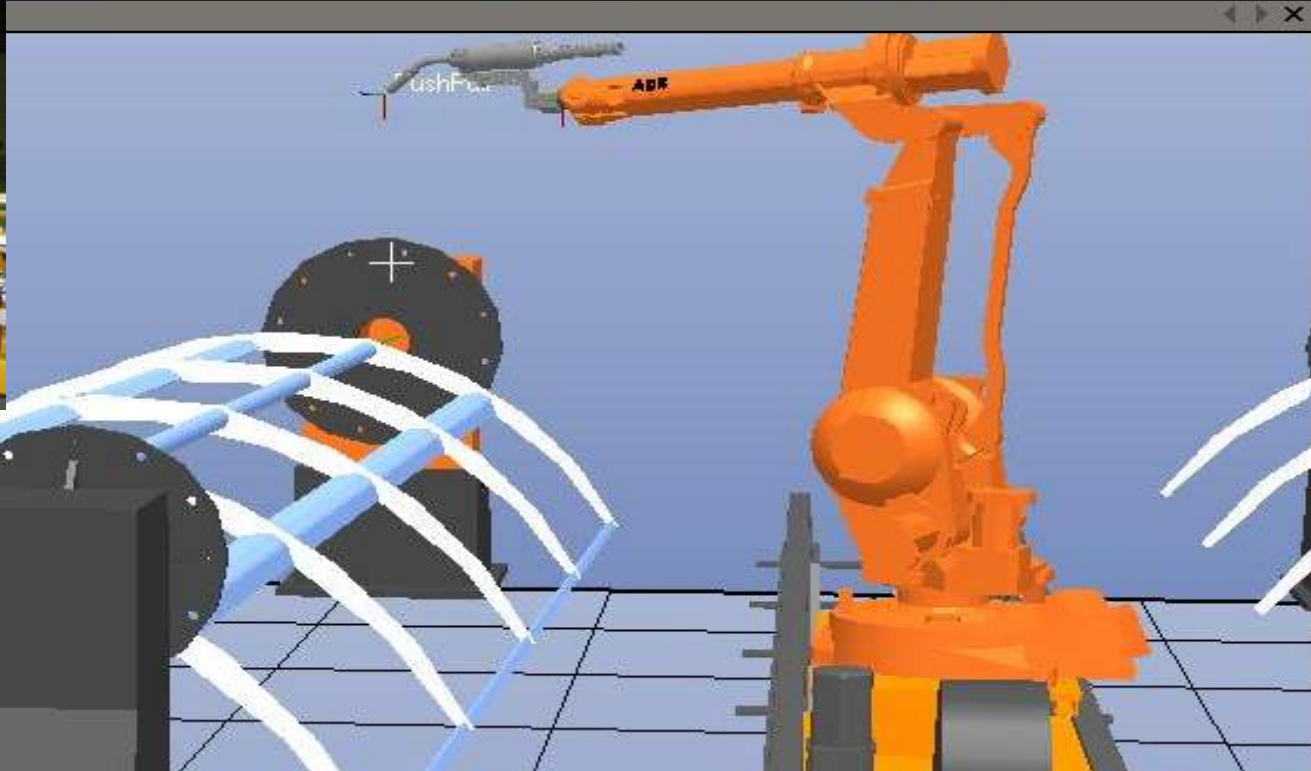
Hot water system (180/155 °C)



Technology



SOLITEM's NEW PRODUCTION LINE





SOLITEM's LOGISTIC

Who's responsible for what !



Installation will be under under the supervision of SOLITEM



Solitem



Solitem



Solitem /
Customer



Customer



Customer



Containers will get delivered and are marked in order



SOLITEM's ONLINE MONITORING SYSTEM

TURKCE

CHART

Antalya Metro Market SOLITEM



SYSTEM STATUS

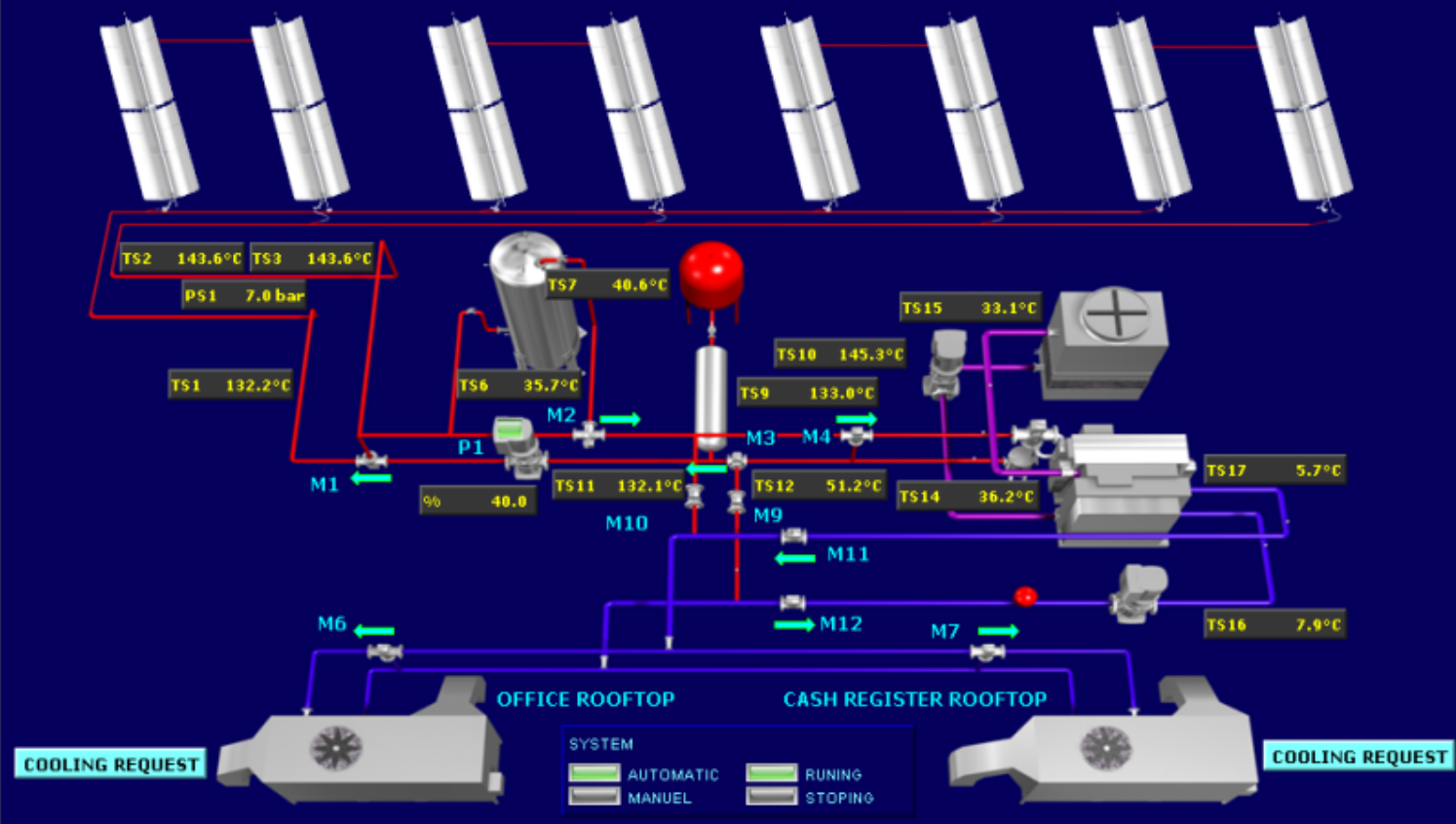
SYSTEM COOLING

WORKING MODE

COLLECTOR

TRACKING CARD

1	TRACKING POSITION
2	TRACKING POSITION
3	TRACKING POSITION
4	TRACKING POSITION
5	TRACKING POSITION
6	TRACKING POSITION
7	TRACKING POSITION
8	TRACKING POSITION



SYSTEM START TIME	7.00
SYSTEM STOP TIME	20.00
OFFICE STOP TIME	17.30
CASH REG. STOP TIME	20.00
TRACKING STOP TIME	18.50

HOT WATER ENERGY	
ACTUAL VALUE	104.57 kW
DAILY TOTAL	161.00 kWh
TOTAL	55.15 MWh
CO2 EMISION RECOVERY	71691.00 kg

COLD WATER ENERGY	
ACTUAL VALUE	62.10 kW
DAILY TOTAL	60.00 kWh
TOTAL	61.01 MWh
CO2 EMISION RECOVERY	79313.00 kg

WEATHER STATIONS VALUE	
TMP.	36.5 °C
WIND	1.1 m/sn
RAD.	837.0 W/m2
10 / 9 / 2009 11 : 22 : 37	



SOLITEM's PROJECTS

Further Systems:

- Ball-Bearing Factory, Ankara / Turkey
- Hotel Grand Kaptan, Alanya
- Iberotel, Dalaman
- Technology Institute, Gebze
- Metro Supermarket, Antalya
- FritoLay (PepsiCo): Solar steam generation
- Hospital in Morocco:
- Factory in Germany
- Hotel in Jordan:

Currently under construction / in planning:

- Metal factory in Germany:
- Shopping Center Istanbul / Turkey:



- Solar cooling and heating
- Cooling and heating
- Solar cooling and heating

- Steam generation
- Solar cooling

References



SOLITEM's PLANTS





Iberotel-Anlage



SOLITEM's AWARDS

Several awards and TV reports are showing the interest, respect, and hope, given to this new technology made by SOLITEM !

- R.I.O. Innovation Award
- Energy Globe Award
- Global 100 Eco-Tech Award
- European Solar Prize
- Sustainability Award
- Global Hero of the Environment
(*Time Magazin*)
- ZDF Heute Journal
Sonnenenergie zur Kälteerzeugung
- RTL II Welt der Wunder
- Euronews SOLITEM
- ZDF Reportage
Kälte aus Sonne, Klimaanlage der Zukunft

