Power heat Future Solutions for Africa

Peter Hoenen – Product Manager Off Grid
Agenda

Company presentation

Solar power

Solar heat

Solutions
Wagner & Co 30 Years Ago

- Founded in 1979 in Marburg
- 9 university students
- Anti nuclear power movement
- Focused on solar technology
- Energy consulting and publication of books
- Development & production of collector self-construction kits
- Solar power systems
Wagner & Co Today

- Over 300 employees world wide
- Sales offices and partner network
- 100% employee owned
- Quality made in Germany
- Over 200 Million € turnover
- Among the largest flat plate collector manufacturers in Germany
- Reputable distributor of PV-systems
Subsidiaries & Partners

- 1979 Wagner & Co Solartechnik Marburg - Germany
- 2005 Wagner Solar S.L. Madrid - Spain
- 2007 Wagner & Co Solar France Simandre - France
- 2009 Wagner & Co Solar Italia Pizzighettone – Italy
- 2010 Wagner Solar Inc. Boston – USA
- 2010 Wagner Solar UK Ltd. Chichester – UK
- Worldwide Network of Partners
Why Wagner?

Proof of quality

- Stiftung Warentest = Independent Consumer Testing Organization
- Ökotest = Leading German eco-consumer magazine
- Environmental Label „Blue Angel“
- Solar Keymark – Quality for Europe
- CE-Certification with TÜV-Certification for Solar Collectors
- DGS German Solar Award 2005
- EUROSOLAR National Award 2005
- Ethics in Business Award 2005
- OTTI Innovation Award 2006 (SECUSOL)
Photovoltaic Grid-connected
Photovoltaic Off Grid
Heat
Domestic hot water systems
Large scale solar thermal
SECUterm - Thermosiphon System

• Highly efficient absorber L42 HTF
• No heat bridges
• Integrated return pipe
• Seamless side insulation
• No reverse flow at nighttime
• Overheat protection
• Solar Keymark certified
Mode of Operation

- Double jacket DHW storage cylinder
- Solar liquid
- Drinking water
- Electrical immersion heater
- Hot water out
- Cold water in
- Thermostatic overheating protection
- Solar safety glass 3.2 mm
- Laser welded aluminium absorber with selective surface
- 40 mm heat insulation
- Integrated return pipe

Temperature: 43.1°C

43.1°C

Temperature: 21.2°C
Standouts

- Top of the line solar collector
- Efficient insulation concept and straightforward setup
- Overheat protection
- Complete all-in-one delivery
SECUterm overheat protection
SECUterm Temperature Limitation

- a two way-valve closes at high fluid temperatures (approx. 90°C)
- during high irradiation, vapor forms in the collector
- the vapor forces the liquid into the storage heat exchanger
- remaining collector vapor gets overheated
- the pressure in the solar loop remains low
Highest yield: SECUterm at the location of Athens the system covers 78% of the annual hot water demand.
SECUterm = more Power

SECUterm product variety:
160l – 200l – 300l
Series connection

- max. 4 systems
- first and second system without electrical immersion heater
- inlet cold water, outlet hot water and connection with storage cylinder with 22 mm pipe
Parallel connection

- max. 3 systems
- the pressure decrease of hot water pipe and cold water pipe has to be similar
SECUterm large scale system

Combination of series and parallel connection
- max. 12 systems
SECUterm system in Uganda
Thank you very much!