

Modular Solar Thermal Large Scale Systems

- easy, efficient and economic



In cooperation with:

aschoff
solar

EXPORTPREIS
BAYERN 2012

The Collector Units

Standardized collector fields with reliable BOSCH flat collectors

Simple hydraulic by standardized collector fields

High redundancy and reliability by modular design



The Collectors

High-performance and reliable The Bosch flat collector

Full-surface absorbers, made of ultrasonic welded aluminium/copper and effective PVD coating for high performance values and optimal cost/performance ratio.

Collector housing made of fiberglass tightened synthetic, arranges extra stability at low weight

Simple assembling of the collectors on several roof coverings. Connection among each other without tools via fabric tube and spring band clamp

BOSCH



The Support Structure

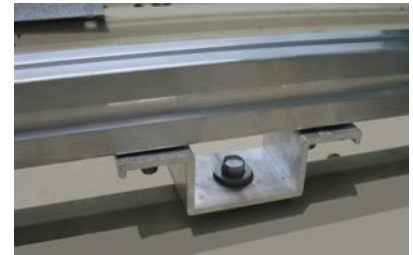
Standard solutions for flat or pitched roof

Flexible fastening solutions for every roof covering

High class aluminium profiles as support structure

Reliable clamping technique for collector fastening

Durable, stable and reliable



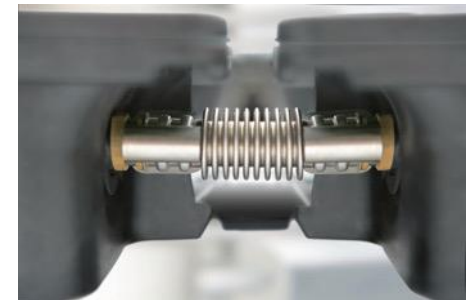
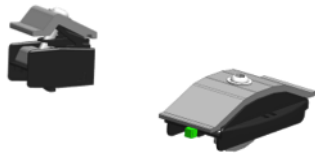
BOSCH

The Fastening and Connection Technique

Reliable technique by Bosch/Buderus

Collector holdings and clamps
for simple and safe assembly

Connection and combination sets
for durable safety



BOSCH

The Modular Control and Drive System

Industrial control box solutions for

Control and performance electronics

Solar pump lots

Heat transfer and recording of
heat quantity

Ready for connection and tested



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The *Solar Command Central*

The solar regulation and control system

Online regulation and monitoring

Regulation of solar and secondary circuit

Recording of heat quantity and monitoring of the system use

High class performance electronics for high Durability and reliable operation



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The Solar Drive Unit

**Active hydraulic components,
only in best quality**

Separate pump lots for every collector field

All pumps speed-controlled

Components only from selected
European manufacturers

Integrated safety devices

Application of maintenance free pumps



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The Heat Transfer Unit

Individual adjusted heat transfer and distribution

Efficient sheet heat exchangers

Qualitative high class switch valves and sensor technology for optimal storage loading

High class secondary circuit pumps, speed-controlled and efficient

Reliable recording of heat quantity



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The Storage Unit

Individual calculated and adjusted storage concepts

- Optimized storage volume for every demand profile
- Individual concepts for weekend and night operation
- With integrated drive and heat transfer units
- Standard heat storage in sea freight containers



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The Safety Technique

Pressure maintenance and safety on high level

Top quality from selected manufacturers

Expansion tanks or pressure maintenance stations acc. to system size



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The System Control

Graphic display and touch service

Apart control and power unit for optimal assembly and handling

Modular configuration

Internet connection with system portal for monitoring of operation and yields



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Bitumen Factory in Germany



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Modular Solar Thermal Large Scale Systems

Energy Provider in Germany



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Modular Solar Thermal Large Scale Systems

Severin Sea Lodge in Kenya



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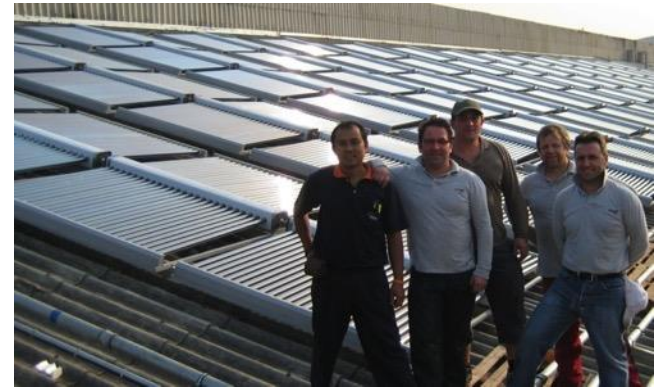
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The Installation

Assembly and start-up by experienced and qualified teams

Long-term experience with turn key installations on the international market

Qualified technicians for a quick and smooth assembly



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