

# Modular Solar Thermal Large Scale Systems

- easy, efficient and economic



In cooperation with:



## 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 FKC-2 flat collector 2.37 m<sup>2</sup>

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

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## The Support Structure

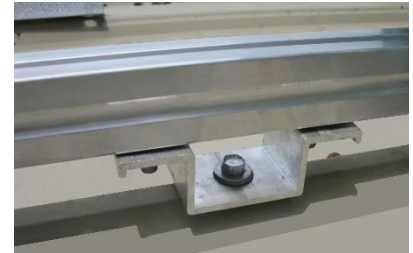
**Standard solutions for flat or pitched roof**

Flexible fastening solutions for every roof covering

High class aluminium profiles as support structure

Reliable clamping technique for collector fastening

**Durable, stable and reliable**



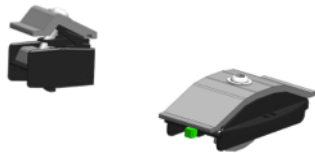
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## The Fastening and Connection Technique

### Reliable technique by Bosch/Buderus

Collector holdings and clamps  
for simple and safe assembly

Connection and combination sets  
for durable safety



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## 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**



## 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



## 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





## 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



## 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



## The Safety Technique

**Pressure maintenance and safety  
on high level**

Top quality from selected manufacturers

Expansion tanks or pressure maintenance  
stations according to system size



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## The Control

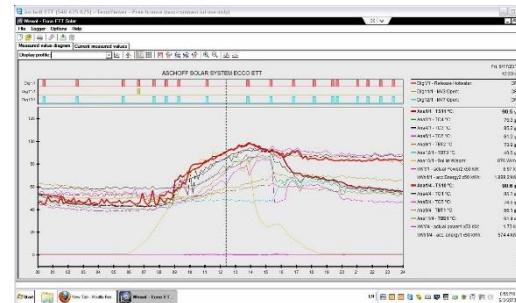
Graphic display and touch service

Apart control and power unit for optimal assembly and handling

Modular configuration

Internet connection with system portal for monitoring of operation and yields

**Optionally and on customer request, the BOSCH MEC Controller will be attached as monitoring system.**



## The Operation Monitoring

Intuitive User Interface:

- Standard web browser technology
- Access via all usual tablets, desktop computers and smartphones
- Safe access, anytime and anywhere

Modular Setting:

- Individual customer solutions with low engineering effort
- Multi protocol ability
- Connections to building control, energy management and virtual power plant systems



## The Installation

**Assembly and startup by experienced and qualified teams**

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

Qualified technicians for a quick and smooth assembly



**aschoff**  
solar

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