



+ OPC 15 **EU21**

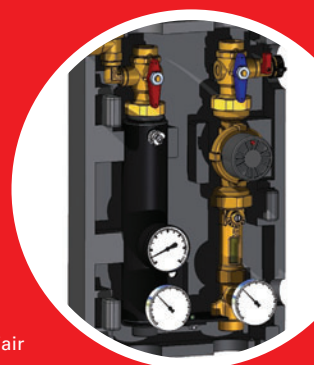


The First!

The first hybrid vacuum tube collector

Simultaneously produces thermal and electrical power

- Innovative technology
- High performance
- High efficiency
- High reliability
- Simple and economical mounting
- Autonomous system
- Maximum environmental compatibility
- No operating costs
- For hot water and heating backup



At the „International Fair of Installation

Technology and Industry“

(March 28 – 31 2006) in Poznan (Poland) OPC15 Edition EU21 has won the **gold medal** for a technical innovative development



Global innovation!

Developed by strong partners:



Development and enhancement of products for renewable energies, energy consulting and ecological use of energy – www.eu21.org



Development, production and distribution of thermal high-performance vacuum tube collectors – www.amk-solac.com



Production of pumps, control and deaeration units for thermal solar installations – www.taconova.com



The first hybrid vacuum tube collector – simultaneously produces thermal and electrical power

The AMK OPC15 EDITION EU21 is equipped with a high-quality power-generating CIS laminate. Technology developed by the German engineering consultants EU21 in collaboration with AMK enables the simultaneous production of thermal and electrical solar power.

The solar irradiation directly determines the output and thus the capacity of the solar installation. A solar control unit or external power connection is not necessary; the system runs even during a power failure. As a result of the optimally harmonised components, the system runs without problems and is intrinsically safe for AMK systems.

Advantages of components:

- No solar control unit required; performance-led speed control via modulating voltage adaptation.
- The collector hydraulics arranged according to Tichelmann ensure uniform flow through the collector field.
- The absorber tubes arranged in parallel have extremely low pressure loss.
- The high-quality power-generating CIS laminate excels with a high level of efficacy, good temperature co-efficiency and a broad light spectrum.
- The pump, control and deaeration units have a highly efficient, harmonised and maintenance-free direct current circulation pump.

- A function check is possible through direct reading of the flow quantity.

Constant air separation takes place during the operation of the unit in the closed system.

Optimum system pressures are ensured through the arrangement of the expansion tank on the suction side of the pump (intrinsically safe AMK system).

In this way, the pump is relieved, the capacity increased, the intrinsic safety guaranteed and the expansion tank treated with care.

Simple and cost-effective one-man mounting and filling are ensured.

Can be used for hot water and heating backup

Customer advantages:

- Simple, cost-effective mounting of the system
- High reliability through high-quality, harmonised components
- Can be integrated in existing AMK solar installations
- Completely autonomous solar operation possible
- No operating costs
- Maximum environmental compatibility as no auxiliary power is required
- No additional costs to the investment – a solar control unit and an electrical installation are not required
- Intrinsically safe AMK unit can be used

PV module	
Nominal capacity	16.0 W
Voltage in MPP	17.0 V
Electricity in MPP	0.92 A
Idle voltage	21.4 V
Short circuit electricity	1.1 A
Idle voltage at -10°	23.5 V
MPP voltage at +70°C	14.6. V
Cell type	CIS
Temperature co-efficient of the idle voltage	- 0.29 % /°C
Temperature co-efficient of the module power	- 0.36 % /°C
Length	1200 mm
Width	150 mm
Thickness	17.75 mm
Type of encapsulation	Glass/Glass
Connection	cabl 1m
Weight	2.86 kg

Solar station AMK EDITION EU21	
Maximum operating temp.	TB 110 °C
Maximum operating press.	PB 8 bar
Fittings housing parts	Brass
Inner parts	Rust-free steel, brass, plastic
Gauge-glass	Borosilicate
O-ring seals	EPDM
Flange seals	High-temperature resistant, solar-compatible
Insulation material	EPP
Thread according to	ISO 228
Measuring accuracy	10 % (of end value)
Flow media	- Heat transfer fluid with antifreeze and corrosion inhibitors can be vaporised without sediment

OPC15	
Length	1700 mm
Width	1250 mm
Height (incl. frame)	97 mm
Gross surface area	2.13 m ²
Active absorber surface 360°	2.50 m ²
Aperture area	1.72 m ²
Weight	48 kg
Absorber/Glass	360° Borosilicate 3.3
Frame	Aluminium
Coating	9-fold ALU-Nitrite/ALU/Steel
Connections	6 x 3/4"
Total contents	3.1 litres
Permissible operating press.	10 bar
Recommended volume flow	1.1 l/min./module
Yield	Up to 752 kWh/m ² p.a.



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