



SorTech AG

System Dimensioning

Presentation SolarCombi+
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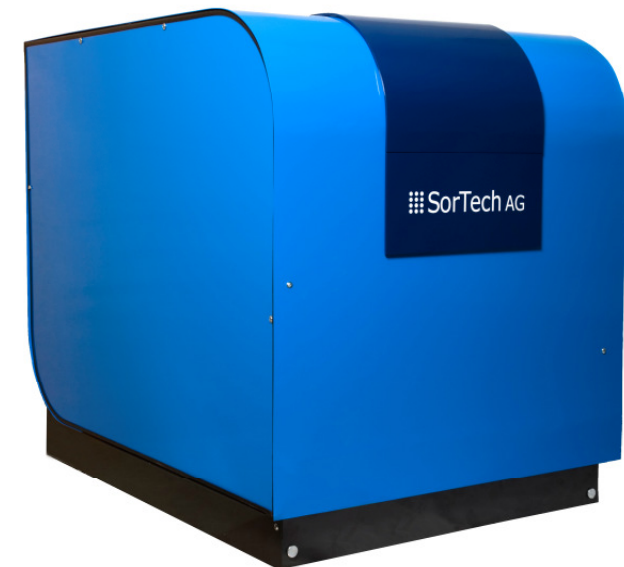
Product enhancement: ACS 08 – increased performance and less volume and weight

- 2007: Development of a first prototype (ACS 05) which meets the requirements of solar cooling with a cooling capacity of 5.5 kW
- 2008: Launch of small series production with improved model ACS 08

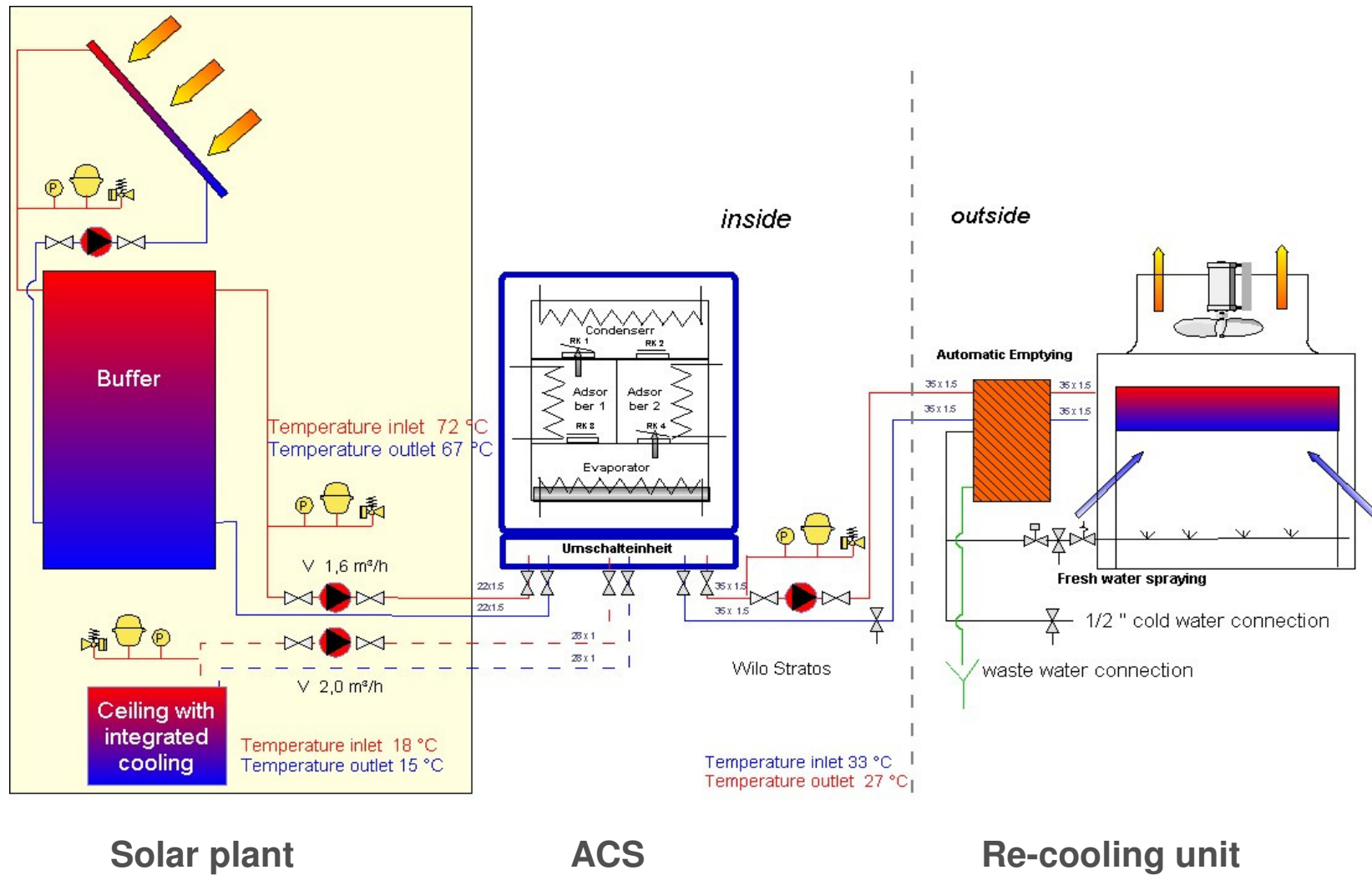
Technical Data

- Cooling capacity 7.5 kW
- COP nominal 0.56
- Working pair Silica gel / Water
- Temperatures of heat supply: 70-95 °C
- Dimensions (w×l×h) 790 x 1060 x 940 (mm)

- Available March 2008



Package solution: Adsorption Chiller in combination with a suitable re-cooler



Realization of the system: Advantages of packaging Adsorption Chiller and re-cooler

- Main characteristics**
- dry re-cooler with water spraying system
 - 2 EC fans
 - speed of fans and water spraying system are controlled by the ACS control unit
 - speed control of fans leads to relatively low electrical power consumption especially under partial load
 - a specific water injection integrated within the re-cooler allows a time-adjusted and regulated spraying of the fins, so that water consumption is optimized



→ Performance of the re-cooler matches the needs of the ACS exactly

Objective: overall annual electrical COP > 10
- Estimates of overall annual performance data -

preliminary

- Example**
- Spain, Barcelona
 - Domestic application

- Assumptions**
- cooling hours: 2976
 - driving temperatures: 85°C and 75°C
 - radiant cooling (°C): 15 / 18
 - FanCoil (°C): 10 / 15

**Preliminary
calculated
results**

Overall annual systems performance:

	Radiant Cooling	FanCoil
COP _{elec}	11-13	8-10

→ Reaching higher re-cooling performance