

## SolabCascade

### Heat driven cooling

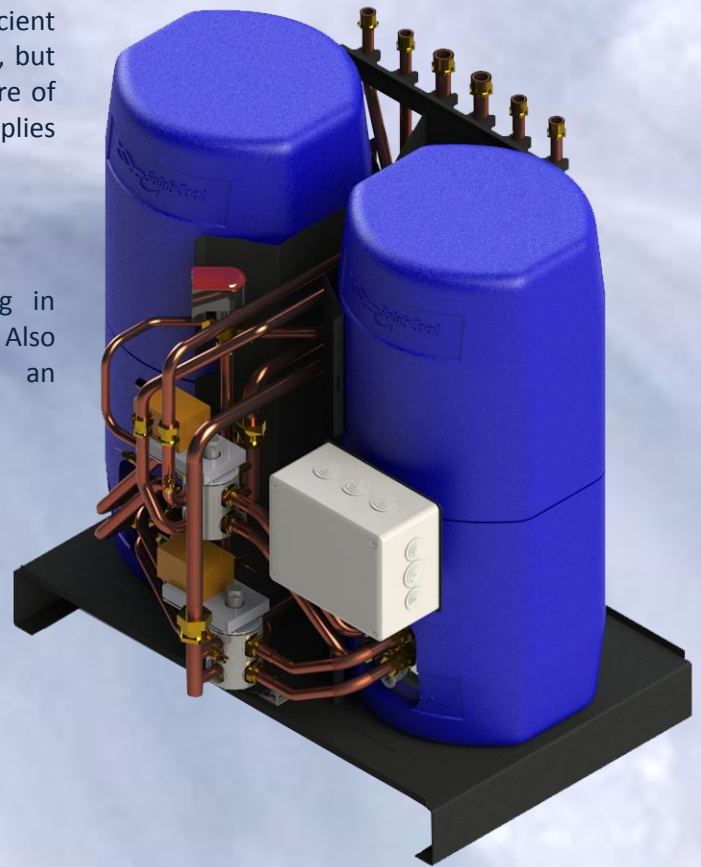
The SolabCascade uses heat to supply energy efficient cooling. The heat can be derived from district heating, but also from solar collectors or cogeneration. Temperature of this heat ranges from 60 to 95 °C. The SolabCascade applies adsorption technology to generate chilled water.

### For buildings

The SolabCascade is developed to provide cooling in buildings such as offices, nursing homes, hotels, etc. Also for apartment buildings the SolabCascade offers an attractive option.



Cooling office building AVR driven by waste heat from own incineration plant.



### Energy efficient cooling

The SolabCool technology uses excess heat. This leads to an energy efficient solution that reduces CO<sub>2</sub> emissions. Besides that, only environmentally save materials are applied in the system. Water functions as coolant for the distribution of cold in the building.



### Scalable cooling

Every building is different. The SolabCascade offers a solution by means of scalable cooling. The smallest maximum cooling power is 5 kW and is supplied by one single SolabPump. By combining multiple SolabPumps in a cascade configuration the maximum cooling power can be increased in 5 kW steps.

### Easy installation

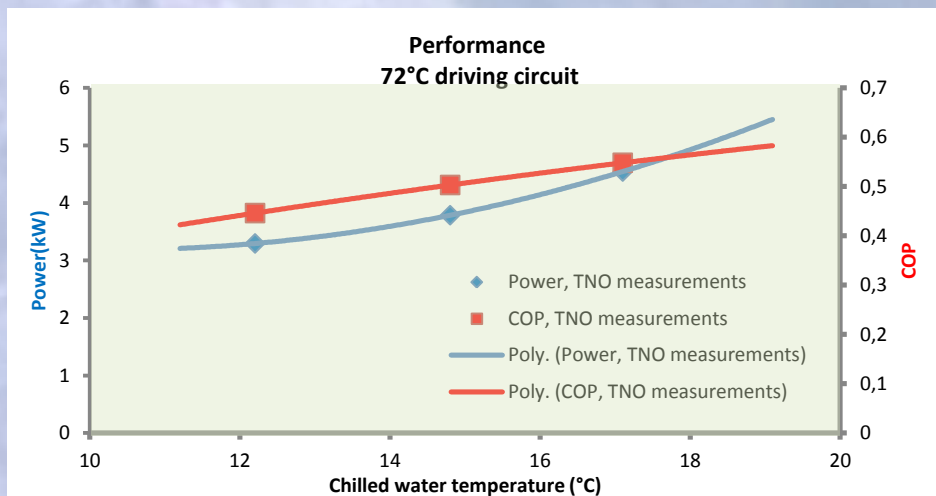
The SolabCascade can easily be connected to the (existing) distribution system for heat and/or cold in the building. This way the system can provide cooling to multiple rooms. To reject the heat extracted from the cooled spaces, a commercial outdoor cooler can be applied. The SolabCascade has a long lifetime and requires little maintenance.

### System integration

Each SolabPump is equipped with integrated hydraulics including a dedicated control unit. This unit communicates with the control system of the SolabCascade which can be configured depending on the specific application. According to your particular situation and wishes, system integration and installing can be arranged for you by SolabCool.

SolabCascade	Nominal conditions* – verified by TNO
Cooling power	4,5 kW (scalable in 4,5 kW steps)
Driving temperature	72 °C
Chilled water temperature	17 °C
Re-cool temperature	27 °C
COP <sub>thermal</sub>	0,6
Volume flow driving circuit	1000 l/h
Volume flow cooling circuit	1000 l/h
Volume flow re-cool circuit	2000 l/h

\* Water based system.



SolabCascade	Operational range	SolabPump	Dimensions
Cooling power	3 – 5 kW (scalable per 3-5 kW)	Size	86 x 76 x 60 cm (hwd)
Driving temperature	60 – 95 °C	Weight	140 kg
COP <sub>thermal</sub>	0,5 - 0,65	Electrical Power drawn	8 W