

# Modular Thermal Storage and Air Cooler Unit for Solar Powered Cold Rooms



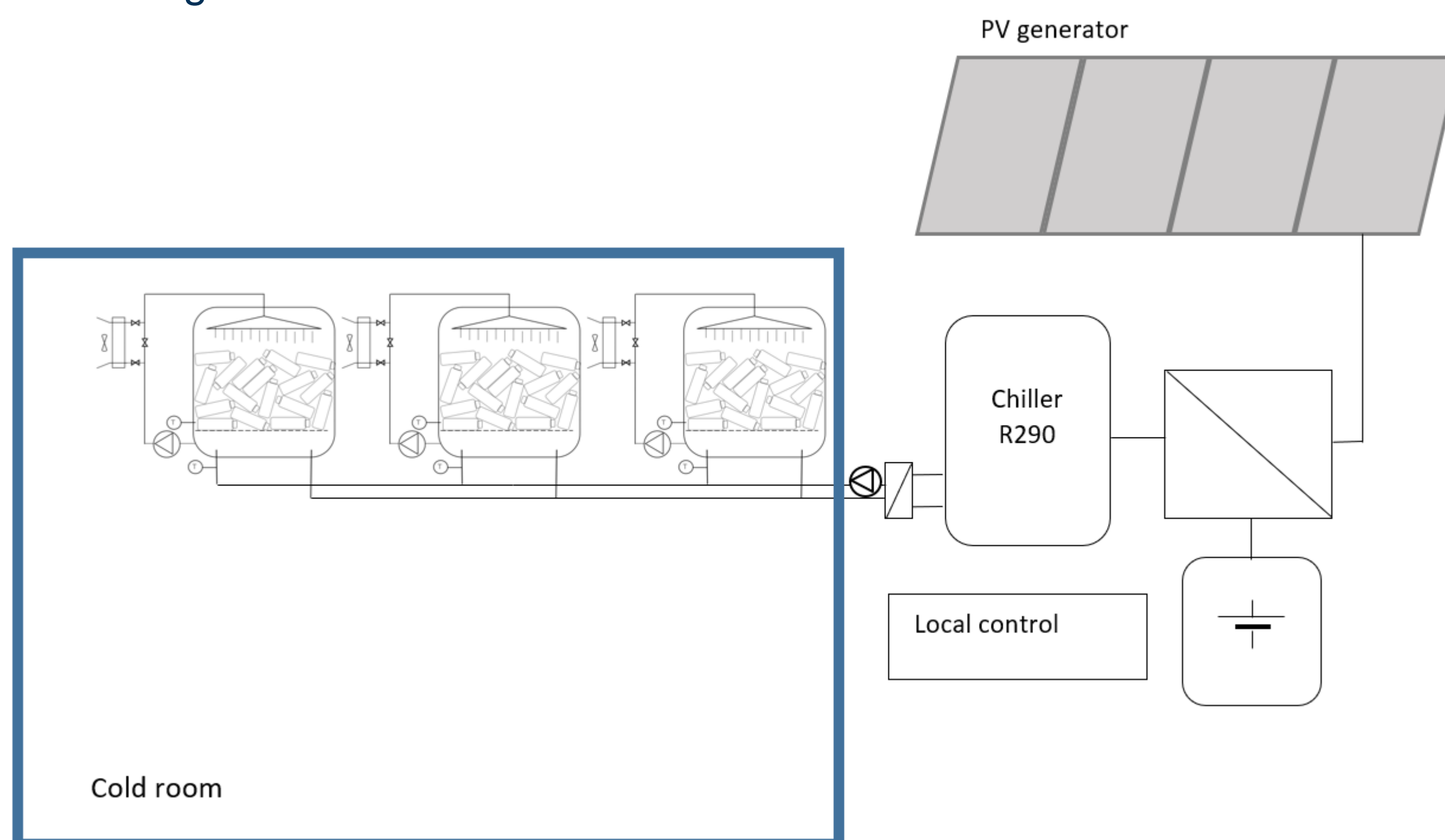
## Datasheet

### Features

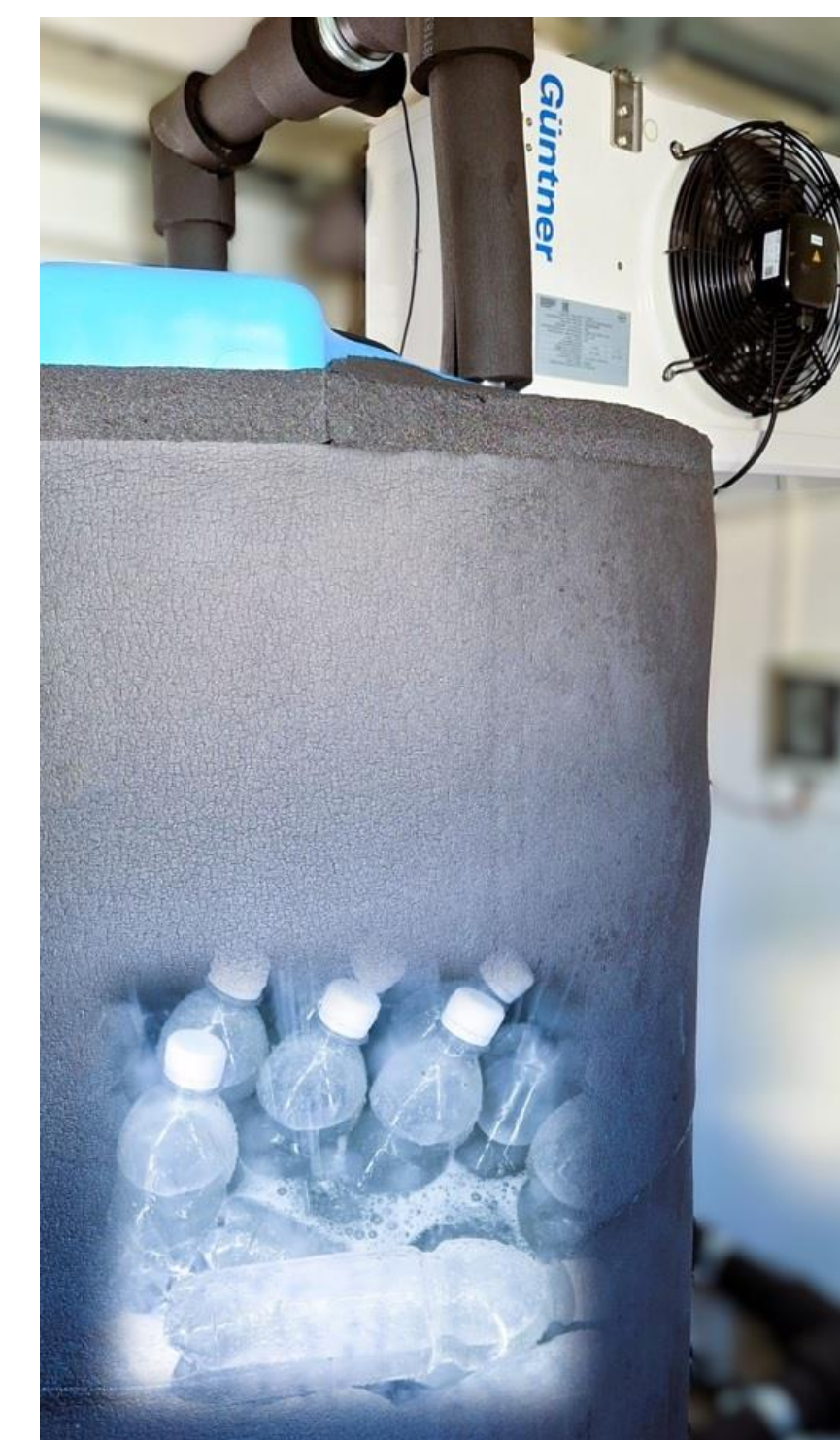
- Thermal storage for solar supplied off-grid cold rooms
- Modular design with integrated air cooler and pump for different cold room sizes
- Indirect cooling with minimized heat transfer fluid volume
- PET bottles as storage elements
- Integrated optimized control of charging and discharging with interface to energy management
- Configuration software

### Technical data one module

- Thermal capacity: 30 kWh
- Tank volume: 750 l
- Charging: 2...4 kW<sub>th</sub>
- Discharging: 1...2 kW<sub>th</sub>
- PCM: Water
- Heat transfer fluid: Propylene glycol, 50 l
- Auxiliary power: 150 W (pump, fan)
- Room temperature: +5...+15 °C adjustable
- Control interface: Modbus TCP



Schematic of application



Storage module with PET bottles

### Benefits

- Storage module stackable for large cold rooms
- Natural water as storage with high energy density
- Minimized volume of heat transfer fluid
- Low cost and local manufacturing option
- R290 ready