

EKW

water-to-water heat pump for high temperature water source



Power capacity: 20 ÷ 610 kW

Compressors: from 2 to 6 scroll

Refrigerant: R134a

Exchangers: brazed plate heat exchangers

Versions: high temperature heat pump (only heating)

Sound proofing: available as optional

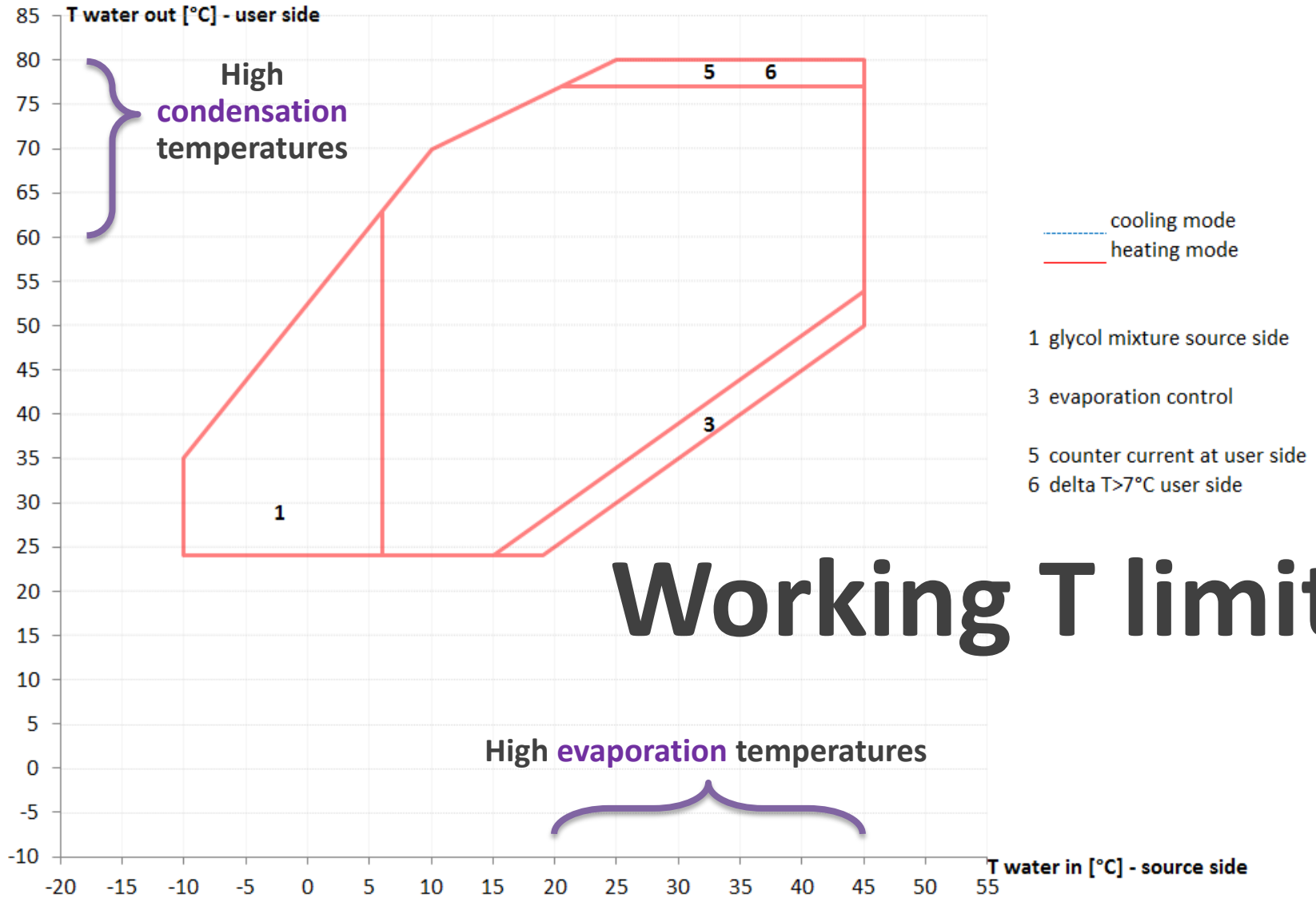
Max T water production : 80 °C



2 – 4 compr.



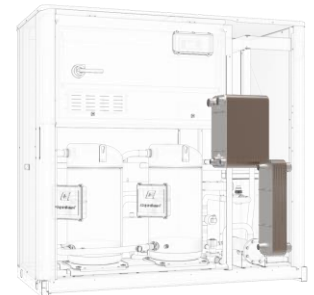
6 compr.



Working T limits

Features:

- Refrigerant: R134A
- Exchangers: brazed plate heat exchangers
- Configuration: only heating (high temperature)
- Compressors specifically designed for high condensing and high evaporating temperatures
- Hot water production up to 80°C with sources at up to 45°C
- Integrated electrical energy-meter with ModBus interface, allowing to:
 - Set a maximum absorbed current from remote
 - Monitor absorbed current and connect it to a recorder to obtain an efficiency measurement
- Electronically controlled Electric expansion Valve (EEV).
- Source-side and User-side pumps (optional, assembled in a hydronic external unit) with variable speed motors to adapt flow-rates to actual operating speed and allow significant savings on pumping costs.
- ON/OFF Scroll compressors.
- AISI 316 Stainless steel high efficiency brazed plate heat exchangers.



Brazed plate heat exchangers in series:

Condensator → Desuperheater

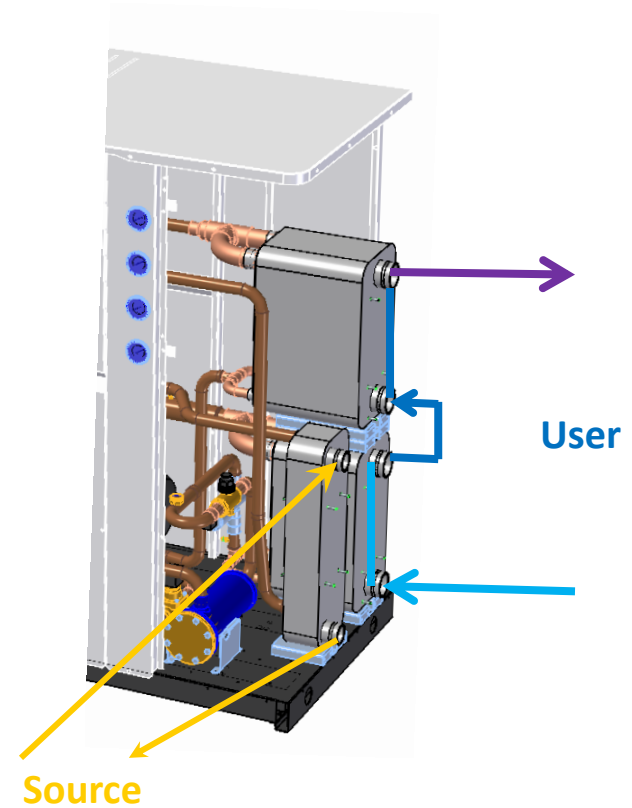
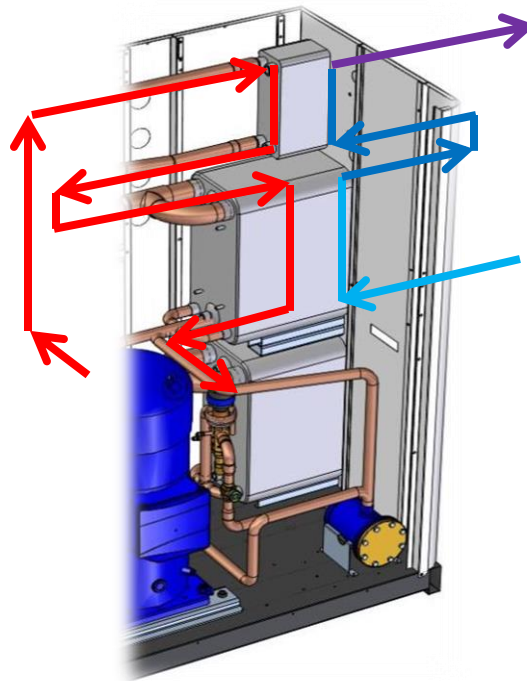
To optimise heat exchange efficiency with low water flowrate

REFRIGERANT flow:

- Compressor
- Desuperheater
- Condensator
- Liquid line
- Filter
- Expansion valve

WATER flow:

- Inlet at 70°C
- Outlet from cond. at 78°
- Inlet in desuperheater
- Outlet from desup. at 80°

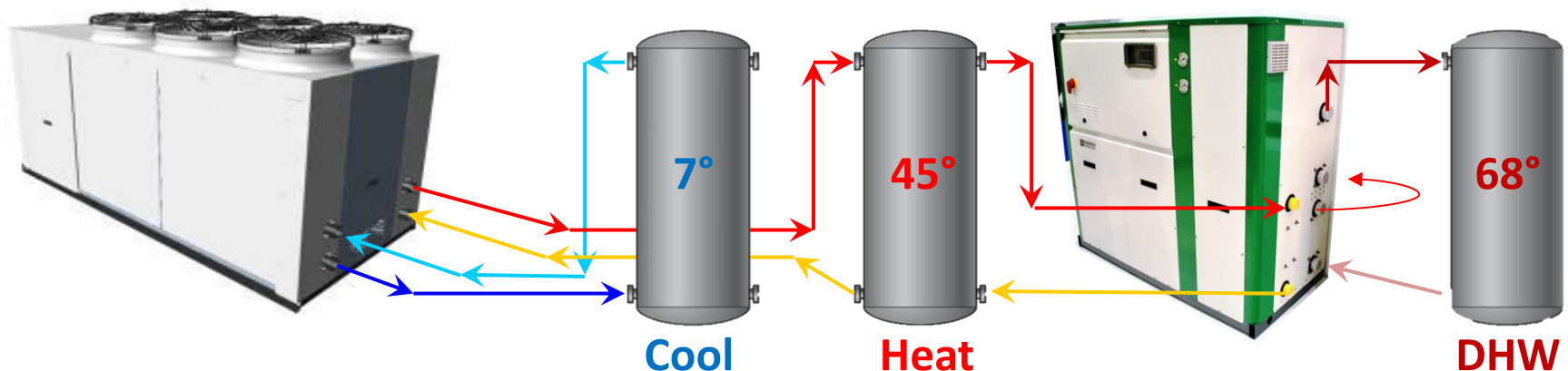


Applications

Tertiary, residential, hotel: and air-to-water can provide water at 40/45°C, to be used for the building's heating requirement and/or as a source for the EKW, which in turn heats it up to 80°C for radiators (retrofit of heating systems) or 65°C for Domestic Hot Water with anti-legionella cycles.

Industrial processes: wastewater from industries at 30° or 45°C can be heated to 80°C and used again with high efficiency. A state-of-the-art Datacentre for example produces water with >30°C.

Thermal anomalies: Low-enthalpy geothermal heat pumps coupled to hot underground.



Photos from MCE 2016



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