

Heat pump energizers for district heating

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Agenda

- Introduction EVAPCO
 - EVAPCO EUROPE A/S
 - Short talk on facilities in DK
 - Different projects Evapco is involved in.
 - Indirect energy transfer
 - Direct energy transfer
 - Cooperation with EPCM contractor
 - Case stories
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EVAPCO WORLD WIDE



EVAPCO Europe A/S

Key facts

- Founded in 1992 (Flexcoil)
 - Acquired by EVAPCO in 2009
 - Renamed to EVAPCO Air Solutions a/s in 2016
 - Renamed to EVAPCO Europe A/S in 2021
- Aabybro, Jutland, DK
- Sales office in Garbsen, Hannover, GE
- 64 employees
 - Office: 18
 - Production: 46
- 6,000 m2 dedicated to manufacturing facilities and offices
- Site 22,000 m2



Short talk on facilities in DK

District heating facilities



Industrial processes



Cooperation with EPCM contractor



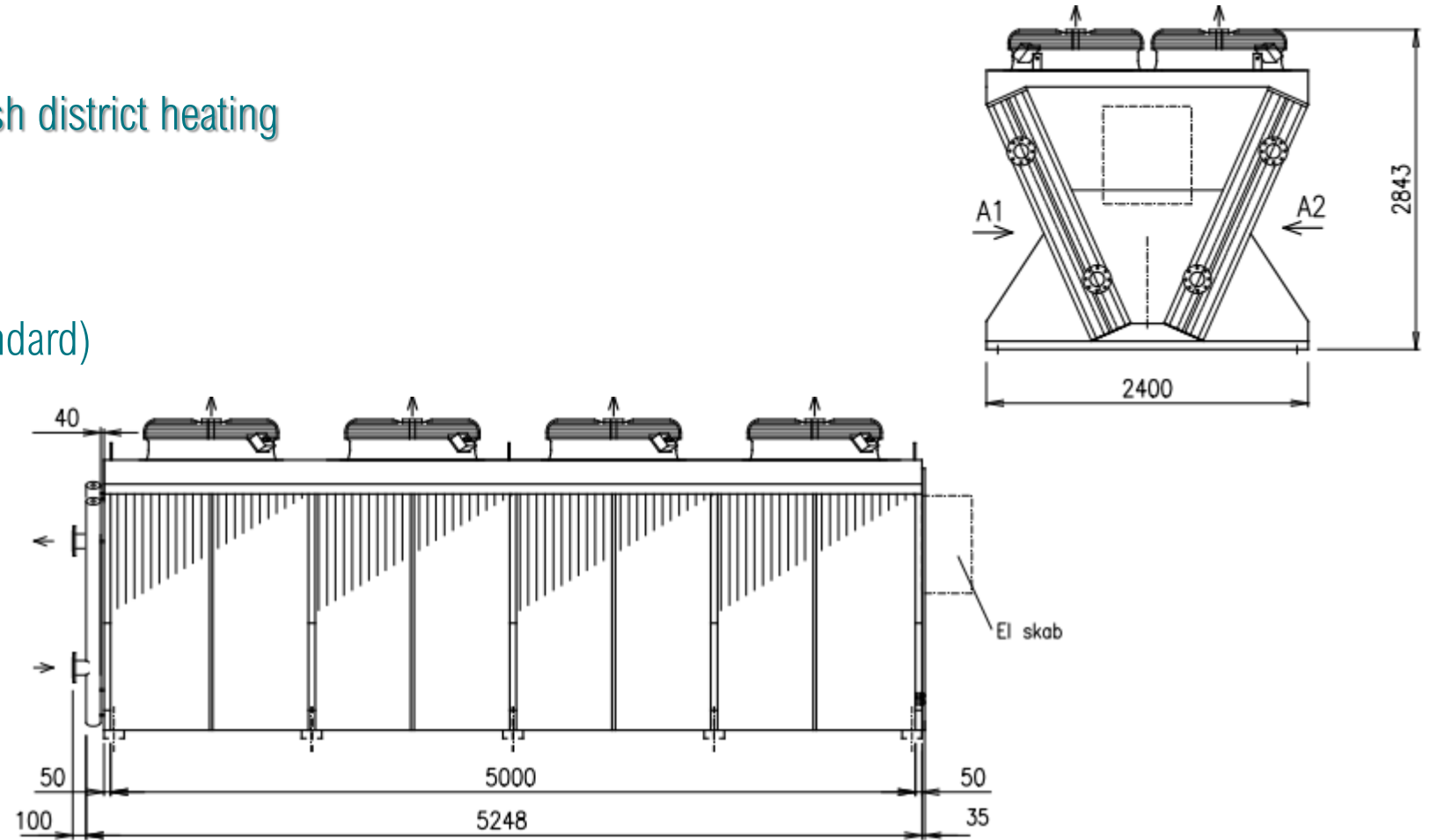
Different projects Evapco is involved in.

- Overview
 - Energizers or evaporators or reverse dry coolers
 - Indirect heat transfer
 - Glycol
 - Direct heat transfer
 - CO2 (DX solutions)
 - NH3 (Pump circulated solutions)
 - Heat recovery
 - “Economizers”

GLYCOL

Indirect energy transfer Glycol - Danish district heating

- V-units
- Design
 - Glycol mixture
 - PS: 10 barg / 110 C (Standard)
- EC compact fans
 - Low noise level
- Materials
 - Copper tubes
 - AlMg fins
 - Galvanized frame



Case Story – Heat pumps

Case

2.0 MW Air to Glycol heat pump system.

The energy from the ambient air is transferred to a glycol circuit, which is transferred to the heat pump.

Solution

9 custom designed “Energizers”, V type style

Result

- Reach of Noise limitations
- Reached all quality operation point
- Return on investment was less than 2 year
- Reduction of the CO2 footprint



Reference List – Heat pumps

Reference list:

- Asaa 9 “energizers” (Glycol)
- Stoholm 9 “energizers” (Glycol)
- Vig 7 “energizers” (Glycol)
- Højby – 9 “energizers” (Glycol)
- GEUS 8 “energizers” (Glycol)

Upcoming

- 9 “energizers” (CO2 DX)
- 12 “energizers” (NH3 pump circulated)



Direct CO2 DX - Danish district heating

- V-units

Please contact Evapco

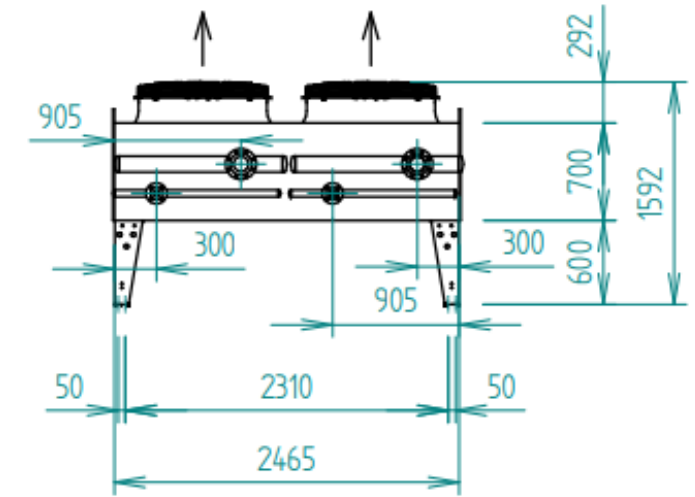
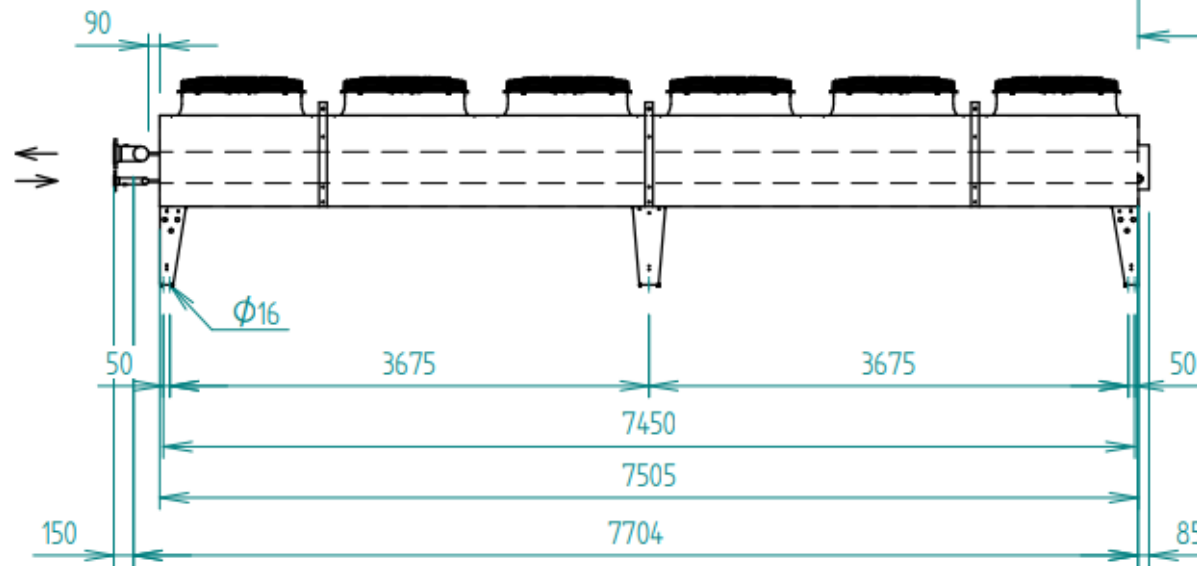
- Design

Please contact Evapco - Materials

NH3

Direct NH3 Pump circulated - Danish district heating

- Flatbed -units
 - 2 Sections + Hotgas defrosting
- Design
 - NH3
 - PS: 30 barg / 60 C
 - Kat. IV modul B+D
- EC compact fans
 - Low noise level
- Materials
 - SS316L tubes
 - AlMg fins
 - Galvanized frame



Case Story – Heat recovery

Case

Reduction of the CO₂ footprint and cost savings through an expensive washing process for cleaning items in an industrial process.

Solution

Heat recovery of 766 kW from 205°C exhaust gas by using a heat-exchanger to heat up the fluid from the washing process.

Result

- Improved energy and process efficiency
- Return on investment was less than 1 year
- Reduction of the CO₂ footprint



eurammon e. V. is always available as a sparring partner for questions on refrigeration with natural refrigerants.

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