

# Combined heat and power plant



**YEAR:** 2021

**MODEL:** H-1200 (AW-4+4B)

**APPLICATION:** Air-to-water heat pump

**CAPACITY (HEAT):** 1.2 MW (5°C ambient)

**HEAT SOURCE:** Air

**DEFROST METHOD:** Glycol

**COP:** 2.84



## THE CASE

Haderup Utility Company provides the city with district heating from a setup that comprises a combination of a heat pump, a gas motor, a gas boiler (CHP) and solar heat. The peak load on the demand side is 1.8 MW.

The operation depends on the heat demand from the consumers, the stored energy, the electricity prices and system services related to balancing the electrical grid. This makes the plant at Haderup Utility Company both efficient and flexible. The heat pump uses the latest ejector technology and together with the parallel compression, it results in an SCOP around 3.0.

## THE HEAT PUMP

The heat pump is installed inside the main building, positioned in a dedicated machine room next to the gas boiler and gas engine. It is equipped with the latest Fenagy ejector technology, FenEject, and controlled by the Fenagy PLC with algorithms for capacity control, evaporator control and defrost.

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