

Air-to-water heat pump in combination with a wood chip boiler and storage tank



YEAR: 2021
MODEL: H-1200 (AW 3+3D)
APPLICATION: Air-to-water heat pump
CAPACITY (HEAT): 1.2 MW (5°C ambient, 36/70°C hot water)
HEAT SOURCE: Air
COP: 2.8
DEFROST METHOD: Glycol



THE CASE

The district heating company in Vestervig has expanded its production facilities with an electrically driven heat pump and a large water storage tank. They wanted to be less dependent on the wood chip boilers and be able to shut down the boilers for maintenance during summer. Due to limited space and a location in the town centre, low noise and prevention of cold air recirculation were high priorities. For this reason, the evaporators are elevated 5 metres above the ground with noise barriers installed around them.

THE HEAT PUMP

The heat pump is installed in a Fenagy premium sound enclosure outside the existing buildings. 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. The measured capacity without defrost is 1,493 kW with an ambient temperature of 6.5°C, hot water temperatures 33/70°C and a relative humidity of 70%. This gives the heat pump a COP of 3.05.

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