

# Heat pump

*Design and delivery of energy solutions is one of our core areas of expertise*



Artec Aqua has core expertise in heat pumps and installation, and we have been responsible for some of the biggest new energy systems delivered to Norwegian aquaculture facilities in recent times. Our preferred supplier of heat pumps is Therma AS, which has a well-developed service and sales network in Norway. We guarantee a well-functioning energy system with optimum energy efficiency.

- High efficiency
- Long service life
- High-quality industrial product
- Favourable guarantee
- Service agreement option
- Efficiency of up to 9 times the input energy



**ARTEC**  
AQUA

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## WE DESIGN OPTIMUM HEAT PUMP INSTALLATIONS FOR THE NORWEGIAN AQUACULTURE INDUSTRY

- In the aquaculture industry, energy is mostly obtained from wastewater exchange systems, with heat pumps boosting the energy supply. For such applications, it is essential to establish a correct balance between heat exchangers, heat pumps, pump stations and filter stations.
- All systems are constructed in accordance with the European PED Directive and are CE-labelled.
- Only natural coolants such as ammonia and CO<sub>2</sub> are used.
- We primarily use high-quality compressors from Mycom, which stocks a wide range of spare parts and offers product competence to customers in Norway.

### Efficiency of up to 9 times the input energy

#### Examples of major deliveries we have made:

- Energy system to Sundsfjord Smolt AS, including heat exchangers and two heat pumps with a capacity of 1,300 kW for the start feed facility and two heat pumps with a capacity of approx. 230 kW for the hatchery.
- Energy system to Follasmolt AS, including heat exchangers and a heat pump with a capacity of 1,850 kW and a cooling/heating system for the hatchery, whereby even temperatures can be achieved independently in three separate loops. A total of 9 heat exchangers were installed for cooling, heating, heat recovery and pre-cooling.
- Energy system to Flatanger Settefisk, including heat exchangers and two heat pumps with a maximum capacity of 3,100 kW.
- Energy system to Forsan smolt facility, with a capacity of 4,300 kW for the smolt department and 300 kW for the hatchery.
- Energy system to NST/Aquagen, department Steigen, with heat effect of 1300 kW and cooling effect of 430 kW.
- Energy system to Silver Seed AS, with heating effect of 1230 kW.
- Energy system to Salmobreed AS, with heating effect of 1400 kW and cooling effect of 700 kW.