

Commercial/Industrial

Air Source Heat Pumps

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 **CLIMAVENETA**

Commercial/Industrial Air Source Heat Pumps

Heat pumps are increasing in popularity due to their sustainability credentials. Burning fossil fuels to provide heating and hot water is no longer a necessity; while boiler efficiencies have reached a practical maximum heat pumps provide efficiencies well in excess of these traditional technologies. Heat pumps provide the carbon savings that are increasingly demanded and these are only limited by the cleanliness of the electricity generation stations and their distribution grid.

Ground source heat pumps have traditionally been preferred due to the higher operating COPs that they can achieve due to the relatively high winter ground temperatures when collectors are buried deep into the earth. Advances in heat pump technology now mean that air source heat pumps can achieve COPs close to those of ground source for a fraction of the installed cost. This has been recognised by the inclusion of air source heat pumps as approved products on the Microgeneration Certification Scheme.

The SPC De-Longhi Climaveneta range of air source heat pumps is described on the following pages. All the units offered are optimised heat pumps rather than reversible chillers and cover a range of capacities from 5 to 200kW. The range covers heating only/hot water heat pumps, reversible heat pumps for chilled water production, twin units for simultaneous heating and cooling and energy recovery and a new range of high temperature heat pumps to suit all heat emitters. Environmentally friendly refrigerants are used in all the heat pumps and the range now also includes a carbon dioxide unit with capacity of up to 120kW, the SPC Ifomic.

BRAN 4.5kW to 14kW



Cost effective heat pumps providing heating and hot water up to 55°C. Ideal for small commercial applications where reversible chiller operation is not required. All units are single phase with capacities ranging from 4.5kW to 14kW.

- Cost effective
- High efficiency
- Circulation pump and hydronic kit included
- Full heating and domestic hot water control incorporated.

MTD 5kW to 18kW



Reversible heat pumps to suit all year round heating and air conditioning applications. Units can be used to provide heating only, heating and domestic hot water, cooling only or cooling and domestic hot water.

The MTD is the ideal, flexible heat pump for small commercial applications requiring the production of hot or cold water for air conditioning. Units are single phase up to 14kW and 3 phase above.

- High efficiency
- Circulation pump and hydronic kit included
- Reverse cycle operation
- 55°C output temperature
- Full heating/cooling and domestic hot water control incorporated.

HT 9kW to 20kW

High efficiency units capable of delivering hot water at up to 65°C. Individual unit capacity up to 20kW with the possibility of linking units together via a single controller to provide up to 100kW modules. The units take advantage of enhanced vapour injection technology to allow the compressor to generate hot water at elevated temperatures.

The high delivery temperatures open the heat pipe up for use with conventional high temperature heat emitters. Fully weather compensated, the flow temperature can be matched to the heat load to maximise seasonal efficiencies and maximise the unit COP. The units are perfect for both new and retrofit applications with no need to change the existing heat emitters.

- Efficient high temperature heat pump up to 65°C
- Circulation pump and hydronic kit included
- Units ganged together under single controller to give enhanced capacities
- Full heating and domestic hot water control incorporated
- Ideal for new and retrofit applications.



DHW Twin 7kW to 35kW



The DHW is equipped with two heat exchangers to provide the possibilities of simultaneous heating and domestic hot water, simultaneous cooling and domestic hot water and simultaneous heating and cooling.

The unit is ideal for commercial and public buildings which require simultaneous heating and cooling of different areas. It is also perfectly suited to premises which require active cooling in the summer combined with domestic hot water generation. In heat recovery mode the unit takes advantage of the heat removed at one heat exchanger to provide heating at the second heat exchanger.

- Simultaneous heating and cooling or cooling and hot water
- High efficiency heat recovery operation
- Circulation pump and hydronic kit included
- High single unit output up to 35kW.

MICS N

20kW to 200kW

This is the heat pump of choice for high capacity applications. Any combination of sizes of unit up to a maximum of four can be used together to generate capacities of up to 200kW with delivery temperatures up to 50°C.

The units are designed for maximum efficiency operation when connected in parallel and controlled by a single master controller. The units have an extremely small footprint and vertical discharge airflow to give ease of installation. All units are reversible for summer chiller operation.

- 20-50kW modules, ganged for up to 200kW packaged applications
- Twin compressors for efficient part load operation
- Compact footprint with vertical discharge
- Circulation pump and hydronic kit included
- Reversible operation.



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ATOMIC

CO₂ HIGH TEMP

20kW to 120kW

Delivery temperatures of up to 90°C can be achieved with zero global warming potential. The carbon dioxide unit is best suited to hot water applications where large volumes of water are required. Mains water is heated and stored to be tapped-off as required.

When combined with suitably sized storage tanks the units can take advantage of off-peak electricity to maximise savings.

- Up to 90°C output temperature with high COP
- Temperature rise from 9°C to 90°C with a COP of 3.3 (7°C ambient temperature)
- Reduces costs & significantly reduce carbon emissions
- Ideal overnight hot water production on economy tariffs
- Units can be ganged together to give outputs of up to 120kW
- Can be supplied with 3500 litre thermal storage units

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