



Air-to-water heat pump for heating and cooling

Optimised for heating and cooling operation with waste heat recovery

Increased cooling requirements in buildings

Nowadays, in many buildings the cooling requirements are higher than the heating requirements. The reasons for the increasing cooling requirements with a simultaneous decrease in heat consumption are obvious. The heat consumption is lower in buildings which are thermally insulated to a relatively high standard, while the cooling requirements keep increasing due to higher solar energy gains, people's rising comfort awareness and larger internal heat loads. Cooling requirements are increasing especially in commercial buildings such as doctors' practices and offices due to the waste heat from electrical devices and the lighting.

The solution: the reversible heat pump from Dimplex - for heating and cooling

The reversible air-to-water heat pump from Dimplex is an energy-efficient heating and cooling device. The integrated regulation enables heating in winter and cooling in summer with fan convectors and panel heating. In cooling operation, an integrated additional heat exchanger uses the waste heat directly as a free energy source for domestic hot water and swimming pool water preparation. Especially high coefficients of performance can be achieved when the waste heat from cooling operation can be used permanently (e.g. for the preheating of a production process).



LA 35TUR+ with waste heat recovery in cooling operation

Reversible air-to-water heat pump

- ✓ Maximum flow temperature of 56°C
Minimum flow temperature for cooling 9°C
- ✓ Operating limits (outdoor air temperature) for heating - 25°C to 40°C, for cooling 10°C to 45°C
- ✓ Naturally quiet in operation thanks to its electronically regulated ventilator and thoroughly soundproofed compressor housing
- ✓ Regulation for combining fan convectors and silent cooling via floor, wall and ceiling surfaces with dew point monitoring
- ✓ Integrated thermal energy meter for heating, domestic hot water and swimming pool water preparation

Additional heat exchanger for parallel operation in heating/cooling and domestic hot water preparation mode

The integrated regulation enables permanent heating or cooling operation with parallel domestic hot water preparation. This means that heating/cooling operation does not have to be interrupted when a request for hot water is pending. In heating operation, the parallel domestic hot water preparation improves the coefficient of performance. What is more, domestic hot water preparation in cooling operation is free, since the waste heat can be used to heat the water.

Device information: reversible air-to-water heat pump

Order reference		LA 35TUR+
Design		universal
Connection voltage	V	400
Maximum flow temperature heating	°C	65
Minimum flow temperature cooling	°C	9
Heat output/COP according to EN 14511 at A2/W35	1. Comp.	13,6 kW / 4,0
Heat output/COP according to EN 14511 at A2/W35	2. Comp.	23,6 kW / 3,7
Cooling capacity/COP according to EN 14511 at A27/W18	1. Comp.	19,1 kW / 4,9
Cooling capacity/COP according to EN 14511 at A27/W18	2. Comp.	32,0 kW / 3,9
Width x Height x Depth	mm	1735 x 2100 x 980

Optimised heating and cooling operation via an external four-way valve

The LA 35TUR+ heat pump achieves very high COPs, both in heating and in cooling operation. This is made possible by a high-efficiency evaporator, an electronically regulated fan and an external four-way valve which is controlled by the regulation. This changes the direction of flow through the heat exchanger depending on the mode of operation. The heat output / cooling capacity is thus always transferred according to the efficient counter flow principle. This innovative process is unique to heat pump technology, and a patent has therefore already been applied for.



INNOVATIVE HEATING AND COOLING

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