



## Heat Pump Module

### for utilisation of waste heat

#### Simultaneous cooling and heating requirements

All year round server rooms, cooling systems or production processes generate waste heat, which is often simply released into the atmosphere without being utilised. At the same time separate heat generators are operated for domestic hot water preparation or heating, since a combination of both systems is seen as too complex or unprofitable. With the oil and gas prices permanently increasing, however, the demand for simple but effective systems for waste heat recovery is also increasing.

#### The simple way to waste heat recovery

The LI 2M heat pump module enables the use of waste heat from unpolluted air. In the simplest case the plug-in device draws the warm air directly via the integrated radial fan and cools it down. The refrigerating circuit “pumps” the recovered heat to a usable temperature level and transfers the heat via a heat exchanger. The externally connected heating water circuit transfers the prepared waste heat to the heating system or a hot water cylinder with integrated heat exchanger. The highest efficiency is reached when the heat pump module is operated at a low temperature level to, e.g., heat a preheating stage for domestic hot water preparation.

 **Dimplex**

INNOVATIVE HEATING AND COOLING



### Heat pump module

- ✓ Heat output 1.5 kW at A15/W45
- ✓ Min. temperature of the air (heat source): 0 °C
- ✓ Max. temperature of the air (heat source): +40 °C
- ✓ Max. flow temperature 70 °C
- ✓ Exhaust and outgoing air stubs (DN 160) for optional connection of a duct system (max. 10 m)

### Regulation of the heating water outlet temperature

The max. permissible heating water inlet temperature is set via the temperature controller that can be set at the casing. If this temperature is exceeded, the compressor is switched off. When the compressor is running, the heat output leads to an increase of the heating water outlet temperature, which depends on the heating water inlet temperature and the volume flow. When heating a hot water cylinder, the heating water outlet temperature is higher than the current cylinder temperature. It can be approximately 20 °C during loading and up to 70 °C at the end.

LI 2M heat pump module

### Heat pump module

Order reference		LI 2M
Connection voltage	V	230
Maximum flow temperature	°C	70
Heat output / COP at A20 / W45	kW / -	1,7 / 2,5
Heat output / COP at A35/ W45	kW / -	2,3 / 3,0
COP (t) EN 255 at A20/45 °C (heating up 300l cylinder)		3,7
Heating water flow rate	m³/h	0,25
Air flow	m³/h	450
Width	mm	450
Height	mm	725
Depth	mm	550

### Waste heat recovery in industry and business

When dimensioning systems for heat recovery, it must be considered that the waste heat should be available on a permanent basis and that the heat consumer can dissipate the heat output generated by the heat pump. A high number of hours per year of full-potential operation with short amortisation times can be achieved when peak demands are not taken into consideration during system dimensioning. Apart from the heat pump module, air-to-water heat pumps with a heat output of up to 50 kW can also be used for the use of the air as a heat source. When waste heat is recovered from cooling water, brine-to-water heat pumps with a heat output of approximately 150 kW can be used.