



**DC Dimplex®**

Making life comfortable

heat pumps

using nature's **energy**

## INDOOR AIR SOURCE HEAT PUMPS LI MS / LI AS

### EVEN COLD AIR IS FULL OF ENERGY

Drawing freely available heat from the ambient air, even at chilly outside temperatures as low as  $-20^{\circ}\text{C}$  Dimplex LI MS and LI AS air source heat pumps are the cost effective and energy efficient heating and hot water solution of the future.

The heat pump is designed for installation indoors, with air ducts or hoses providing inlet/outlet air from the outside. For space saving, a built-under buffer tank is also available.

#### LI MS / LI AS RANGE KEY FEATURES:

- Range of 2 models with nominal heating capacities of 11kW (single phase) and 16kW (three phase).
- Indoor installation in a basement, utility room or garage.
- Air ducting kits provided as accessories.
- Complementary built-under buffer tank for space saving.
- Operational temperatures from  $+35^{\circ}\text{C}$  down to  $-20^{\circ}\text{C}$ .
- Energy optimised, auto adaptive defrosting cycle.
- Variable heating water flow temperatures up to  $55^{\circ}\text{C}$ .
- Typical CoP (A2/W35): 3.2 – 3.4 (depending on model).
- Supplied complete with wall mountable WPM 2004 Plus Heat Pump Manager.
- Scroll compressor, providing efficient, low noise running.
- Economiser, providing high co-efficients of performance.
- Electronic soft starter controls to reduce starting currents.



## EVERYTHING IS UNDER CONTROL

Dimplex LI MS and LI AS air source heat pumps utilise the WPM2004 Plus Heat Pump Manager designed to regulate, control and monitor the entire heating system.

The heat pump, heating and hot water pumps, mixer motor and supplementary heating sources are all automatically activated by the wall mounted WPM2004 Plus unit.

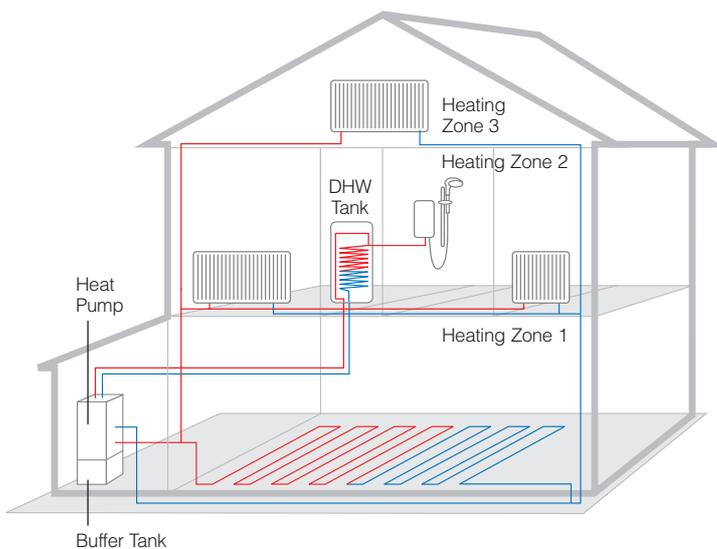


Water temperatures for up to 3 space heating circuits plus domestic hot water are individually programmable, providing maximum comfort and efficiency.

Simple to understand 'warmer / cooler' buttons adjust the temperature settings, while the heating system can be programmed to operate on a timed basis if required.

### Key features:

- Simple 6 key operation.
- Large, well laid out illuminated display with indication of present operating status and service messages.
- Dynamic menu-based user guidance, adapted to the configuration of the heat pump system.
- Interface for remote control unit with identical menu options.
- Outdoor temperature controlled heating cycle.
- Control over 3 heating circuits and domestic hot water.
- Priority control:
  - Water heating takes priority over space heating.
- Automatic actuation of supplementary heat sources (electric immersion heater or gas/oil boiler).
- Automatic actuation of mixer valves for supplementary heat source (gas/oil boiler or solar energy storage system).



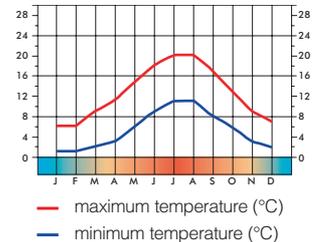
The WPM2004 Plus Heat Pump Manager allows Dimplex LI MS and LI AS air source heat pumps to provide full control over 3 separate heating circuits as well as the preparation of domestic hot water.

## AIR SOURCE HEAT PUMPS – BENEFITS OF THE UK CLIMATE

Compared with central Europe (where air source heat pumps are already very popular), the UK has a relatively moderate winter climate.

With average winter temperatures of around 5°C, seasonal coefficients of performance comparable with ground source heat pumps are achievable, without the additional cost of expensive ground loop systems having to be installed.

### Average UK temperatures over 12 month period



## DIMPLEX HEAT PUMP ACCESSORIES

Dimplex heat pumps offer a variety of services—providing the home with comfortable warmth is only one of them. It can also produce all the hot water needed for the kitchen or bathroom.



Dimplex provides all the components needed for these applications, including buffer tanks, hot water cylinders, heating system manifolds and hydraulic accessories.

### 1. WPM2004 Plus Heat Pump Manager

With air source heat pumps the Heat Pump Manager is supplied in its own housing for wall mounting.

### 2. Buffer tank

A 140L under-unit buffer tank is available for use with Dimplex LI MS and LI AS heat pumps, providing the benefit of minimising the space required.

A buffer tank extends operating times and ensures a minimum water flow rate through the heat pump in all operating conditions. Where the heat pump provides the sole source of heating, an electric immersion element can also be integrated to provide supplementary heating if required.

### 3. Heating system connections

A range of compact accessories are available to ensure a professional and trouble-free heat pump installation, with all the connections and individual components combined and assembled in the minimum of space. Options include:

- Compact manifold with shell-type insulation and integrated hot water connection.
- Hot water module for connection of an additional heating circuit (e.g. hot water heating).
- Simultaneous connection of compact manifold and hot water module to the heat pump via a manifold bar.

### 4. Hot water cylinder

For the central hot water supply Dimplex offers a range of unvented hot-water cylinders, sized correctly for the maximum heating capacity of the heat pump.

An integrated temperature sensor is connected to the heat pump manager, allowing the heat pump to automatically control the production of hot water as and when it is required.

## TECHNICAL DATA

EQUIPMENT DATA for air source heat pumps for heating purposes					
<b>1</b>	<b>TYPE AND COMMERCIAL DESCRIPTIONS</b>			LI11MS	LI16AS
<b>2</b>	<b>MODEL</b>				
2.1	Enclosure type acc to EN 60 529 for compact unit or heating element IP 21			IP 21	IP 21
2.2	Installation site			Indoors	Indoors
<b>3</b>	<b>PERFORMANCE DATA</b>				
3.1	Operating temperature limits:				
	Heating water supply / return <sup>3)</sup>	°C / °C		Max. 55 / min. 18	Max. 55 / min. 18
	Air	°C		-20 to +35	-20 to +35
3.2	Heating water temperature difference at A2 / W35			7.5	7.5
3.3	Heating capacity/coeff.of perform.				
	at A-7 / W35 <sup>1)</sup>	kW/---		7.6 / 2.9	9.8 / 2.6
	at A2 / W35 <sup>1)</sup>	kW/---		9.1 / 3.4	12.2 / 3.2
	at A2 / W50 <sup>1)</sup>	kW/---		9.0 / 2.5	11.5 / 2.4
	at A7 / W35 <sup>1)</sup>	kW/---		10.9 / 4.1	15.4 / 3.7
	at A10 / W35 <sup>1)</sup>	kW/---		12.0 / 4.6	16.1 / 3.8
3.4	Sound power level of unit / outside			55 / 61	57 / 62
3.5	Heating water flow rate at internal pressure difference			1.0 / 3000	1.4 / 4500
3.6	Air flow rate at external static pressure difference				
		m <sup>3</sup> /h/Pa		4200 / 0	5200 / 0
		m <sup>3</sup> /h/Pa		2500 / 25	4000 / 25
3.7	Refrigerant: total charge weight			R404A / 2.5	R404A / 3.1
<b>4</b>	<b>DIMENSIONS, CONNECTIONS AND WEIGHT</b>				
4.1	Equipment dimensions			H x W x L mm	1360 x 750 x 850
4.2	Equipment connections for heating system			inches	G 1" ext. thread
4.3	Air duct inlet and outlet (min. inside dimensions)			L x W mm	500 x 500
4.4	Weight of transport unit(s) incl. packaging			kg	200
<b>5</b>	<b>ELECTRICAL CONNECTIONS</b>				
5.1	Nominal voltage; fusing			V/A	230 / 25
5.2	Nominal power consumption <sup>1)</sup> A2 W35			kW	2.65
5.3	Starting current with soft starter			A	38
5.4	Nominal current A2 W35/cos			A /---	14.4 / 0.8
<b>6</b>	<b>COMPLIES WITH EUROPEAN SAFETY REGULATIONS</b>			<sup>4)</sup>	<sup>4)</sup>
<b>7</b>	<b>OTHER DESIGN CHARACTERISTICS</b>				
7.1	Defrosting			Automatic	Automatic
	Type of defrosting			Cycle reversal	Cycle reversal
	Defrost pan available			Yes (heated)	Yes (heated)
7.2	Heating water inside unit protected against freezing <sup>2)</sup>			Yes	Yes
7.3	Performance settings			1	1
7.4	Controller internal / external			External	External

<sup>1)</sup> This data characterises the size and performance capacity of the system. For economic and energy consumption reasons, additional factors such as defrosting behaviour, bivalence point and control need to be taken into consideration. Abbreviations have the following meaning e.g. A2 / W55: heat source temperature 2°C and heating water supply temperature 55°C.

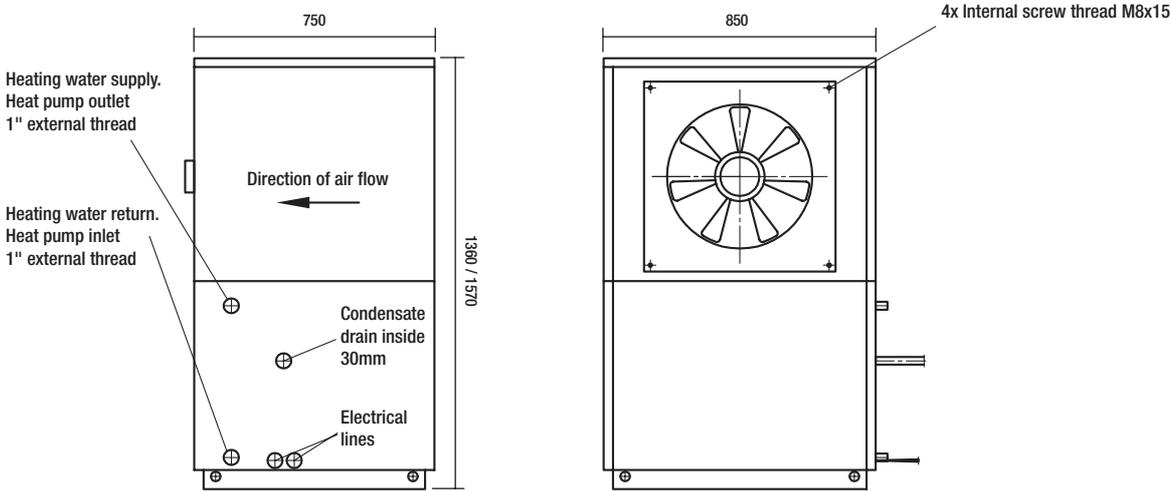
<sup>2)</sup> The heat circulating pump and the controller of the heat pump must be on standby at all times.

<sup>3)</sup> See operating limits diagram.

<sup>4)</sup> See CE Declaration of Conformity.

Subject to technical modifications

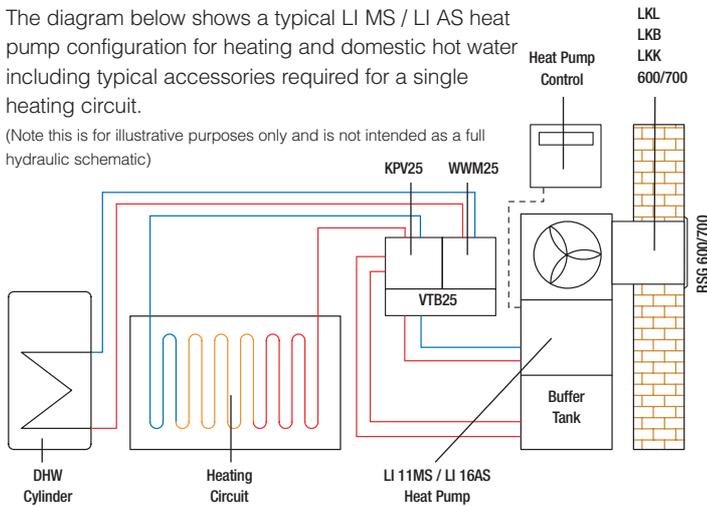
# DIMENSIONS AND CONNECTIONS



# TYPICAL SYSTEM CONFIGURATION AND ACCESSORIES

The diagram below shows a typical LI MS / LI AS heat pump configuration for heating and domestic hot water including typical accessories required for a single heating circuit.

(Note this is for illustrative purposes only and is not intended as a full hydraulic schematic)



Heat Pump		Qty
LI 11 MS or	Indoor air source heat pump (single phase)	1
LI 16 AS	Indoor air source heat pump (three phase)	1
Heating and Hot Water Accessories		
PSP 890	140L built-under buffer tank	1
KPV25	Compact manifold	1
WWM25	Heating circuit/hot water module	1
VTB25	Manifold bar	1
Controller Accessories		
EVL 995/6/7/8 - 1	Heat pump/controller connecting cable	1
Ducting Accessories		
LKL 600/700	Long, short or 90° elbow ducts (dependent on requirement)	1 or 2
LKB 600/700		
LKK 600/700		
DMK 600/700	Sealing collar	1 pair
RSG 600/700	Rain guard	2

## TRUST OUR EXPERIENCE

As the world's largest manufacturer of electrical heating technology, Dimplex has been at the forefront of product development and innovation for nearly 60 years. We are well respected within the construction industry for producing products of the highest specification and quality and for our pre and post sales support. At our manufacturing plant in Kulmbach, Germany, we have been developing and producing innovative heat pumps for over 30 years.

## EVERYTHING'S A MATTER OF PROPER PLANNING

Heat pumps are one of the most efficient and economical heating systems provided the individual components of the heat pump system, including the heat source, heat pump and connected heating system are properly matched. Dimplex can provide advice and guidance on the correct heat pump for your application and our network of experienced, fully trained installers will provide complete system planning assistance, installation and comprehensive after-sales service.



## CERTIFIED QUALITY

Maximum operational reliability of all Dimplex appliances is ensured at all times due to continuous quality assurance during production and quality certification to EN ISO 9001. The international heat pump quality label for heat pump heating systems guarantees highest safety and quality standards. The tests conducted by recognised testing institutes provide comparability of results, ensure compliance with standards and guarantee an extensive after-sales network with at least 10-year spare parts availability. Dimplex is also a member of the UK Heat Pump Association.



## SPECIFICATIONS

Dimplex policy is one of continuous improvement; the Company therefore reserves the right to alter specifications without notice. Although every care has been taken in the reproduction of product finishes in this brochure, photographs should be taken only as a guide. The information is correct at the time of printing.

## CE MARK

Products carrying the CE mark comply with European safety standards and the European Standard for electro-magnetic compatibility.

## FURTHER INFORMATION

For more information on Dimplex heat pumps please speak to your local Dimplex Installer Partner or contact us directly:

Tel: 0870 077 7117 Fax: 0870 727 0114  
 Email: marketing@glendimplex.com Website: www.dimplex.co.uk

## ADDITIONAL LITERATURE

In addition to this publication we have separate, more detailed brochures on the following products: • domestic heating • water heating • fires and surrounds • portable heating • commercial heating

Please ring our Brochureline for your copy:  
 Brochureline: Tel: 0870 727 0115 Fax: 0870 727 0123

Please note – these phone numbers are charged at standard rate, they are NOT premium rate numbers.



Printed on FSC accredited paper.



© Glen Dimplex UK Limited  
 All rights reserved. Material contained in this publication may not be reproduced in whole or in part, without prior permission in writing of Glen Dimplex UK Limited.