

## Air-to-water heat pump with two performance levels

### Order reference: LA 20AS

Max. flow temperature for heating: 58 °C

Casing colour: white aluminium

Air-to-water heat pumps for outdoor installation with external temperature controlled WPM 2006 plus heat pump manager and two compressors for output reduction when operating at partial load. Sound-optimised through the use of low-noise crescent wing axial-flow fans and deflector hoods. Energy-efficient defrosting by reverse circulation und inclined evaporator. Universal design with optional DHW preparation and the option of flexible expansion for:

- Bivalent or bivalent-renewable operating mode
- Distribution systems with unmixed and mixed heating circuits

Integrated flow sensor and soft starter, return flow sensor and external temperature sensor included in the scope of supply.

**Electric cable EVL ... to connect the heat pump and heat pump manager, must be ordered separately.**



### Technical data LA 20AS

#### Dimplex Air-to-water heat pump with two performance levels (Low temperature)

Order reference	LA 20AS	
Casing colour	white aluminium	
Max. flow temperature for heating	58 °C	
Temperature operating limits for air	-25 °C to 35 °C	
Heat output / COP at A-7/W35*	kW/-	1 compr.: 7,10 / 2,80 2 compr.: 12,70 / 2,80
Heat output / COP at A+2/W35*	kW/-	1 compr.: 9,30 / 3,20 2 compr.: 14,90 / 3,10
Heat output / COP at A+7/W35*	kW/-	1 compr.: 10,70 / 3,70 2 compr.: 17,10 / 3,50
Heat output / COP at A+10/W35*	kW/-	1 compr.: 12,80 / 4,00 2 compr.: 20,00 / 3,80
Electrical nominal power consumption at A+2/W35	kW	4,80
Sound pressure level at a distance of 10 m (air outlet side)	dB (A)	37
Sound power level	dB (A)	64
Refrigerant R404A	kg	3,70
Flow rate (heat source)	m <sup>3</sup> /h	5500
Heating water flow rate with an int. pressure differential of	m <sup>3</sup> /h / Pa	1,80 / 3700
Dimensions (W x D x H)**	mm	1550 x 850 x 1570
Weight (incl. packing)	kg	284
Voltage regulation	V	230
Connection voltage	3/N/PE ~400 V, 50 Hz	
Starting current with soft starter	A	23
Fuse protection	A	20
Type of defrosting	Reverse cycle	
Connection heating	1 1/4"	

\* Heat output and COP acc. to EN 255 (EN 14511) at A2/W35 (A2 = air inlet temp. +2 °C, W35 = heating water outlet temp. +35 °C)

\*\* Please note that additional space is required for pipe connections, operation and maintenance.

Description	Order ref.	Article number	Sample item	Item	Price
<b>Heat pumps</b>					
Air-to-water heat pump with two performance levels	LA 20AS	339970	1		
10m control line	EVL 996-1	321990			
20m control line	EVL 997-1	322000	1		
30m control line	EVL 998-1	322010			
<b>Hydraulic accessories</b>					
1 1/4" connecting hose*	AS 976-1	330530			
Floor-mounted buffer tank (200l)	PSW 200	339830	1		
Immersion heater CTHK 631	CTHK 631	336180			
Immersion heater CTHK 632	CTHK 632	335910			
Immersion heater CTHK 633	CTHK 633	322140			
Immersion heater CTHK 634	CTHK 634	322150	2		
Universal buffer tank (500 l)*	PSW 500	339210			
Compact manifold with overflow valve	KPV 25	346590	1		
EB KPV extension module	EB KPV	348650	1		
Circulating pump	UP 60	340300	1		
Circulating pump	UP 80	340310			
Manifold bar	VTB 25	339870			
Hot water module / unmixed heating circuit module	WWM 25	346600	1		
Mixed heating circuit module with temperature sensor*	MMH 25	348640			
Mixer module for bivalent systems	MMB 25	348880			
Dual differential pressureless manifold*	DDV 32	348450			
Dual differential pressureless manifold	DDV 25	358390			
<b>Heating accessories</b>					
Fan convector for heating/cooling with integrated thermostat	HL 11C	351730			
Fan convector for heating/cooling with integrated thermostat	HL 16C	351740			
Fan convector for heating/cooling with integrated thermostat	HL 26C	351750			
Fan convector for heating/cooling with integrated thermostat	HL 36C	351760			
Fan convector for heating/cooling with external thermostat	HL 11SK	351770			
Fan convector for heating/cooling with external thermostat	HL 16SK	351780			
Fan convector for heating/cooling with external thermostat	HL 26SK	351790			
Fan convector for heating/cooling with external thermostat	HL 36SK	351800			
Immersion heater pipe assembly*	HDLR 450	337450			
<b>DHW preparation accessories</b>					
Hot water cylinder (300l) with temperature sensor	WWSP 332	346610	1		
Flange heater for domestic hot water	FLH 60	338060			
Flange heater for domestic hot water	FLHU 70	338070	1		
FLH 25M flange heater	FLH 25M	349430			
Safety valve combination	SVK 852	326660			
Solar station for hot water	SST 25	348430			
Hot water cylinder (400l) with temperature sensor*	WWSP 880	337880			
Design hot water cylinder with sheet metal coverings and temperature sensor*	WWSP 442E	353370			
Hot water cylinder (500 l) with temperature sensor*	WWSP 900	339220			
Manifold bar	VTB 25	339870	1		
Hot water module / unmixed heating circuit module	WWM 25	346600	1		
Circulating pump	UP 60	340300	1		
Combo tank for heating and domestic hot water preparation with central flow*	PWD 750	349100			
<b>Control accessories</b>					
Modem plug-in card for heat pump manager 2006/2007	MWPM 300	355660			
Data bus plug-in card for heat pump manager	LWPM 410	339410			
External temperature sensor with casing	FG 3115	336620			
Swimming pool / remote fault indicator relay module	RBG WPM	339700			
FWPM 470 connection cable	AWPM 900	340210			
Temperature sensor	Norm NTC-2	353400			
Strap-on sensor	FA 550	338550			
Thermostat for heating and domestic hot water	KRRV 003	322070			
Remote control for the WPM 2006/2007*	AP PGD	356570			
<b>Solar thermal systems accessories</b>					
Solar collector 2 m <sup>2</sup> Al/Cu absorber, meander 4 connections	SOLK 1204 AM	356190			

Description	Order ref.	Article number	Sample item	Item	Price
Solar station	SOLPU 1	356230			
Solar station for hot water	SST 25	348430			
Expansion vessel Solar 8l	SOLEV 12	356240			
Expansion vessel Solar 18l	SOLEV 18	356250			
Heat carrier fluid	SOLHT 20	356260			
Test set	SOLH TTK	356270			
Purging and filling station	SOL FFP	356300			

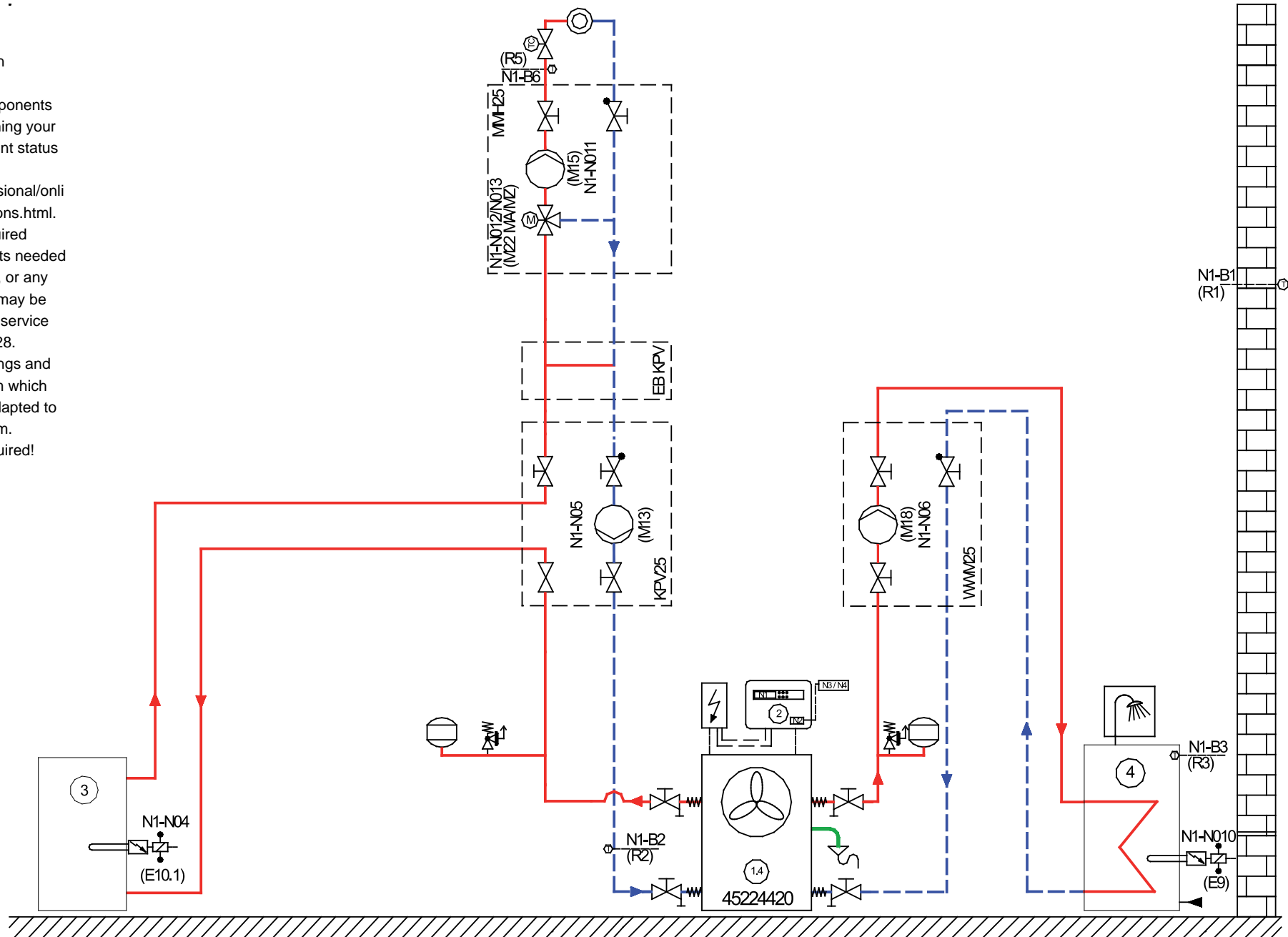
\* Other specific accessories available / required

**Important information:**

The combination of the components and the quantities indicated represent a non-binding sample system, which needs to be tested and individually adapted as required. Pump dimensioning must be reviewed according to the pressure loss of the system and the minimum heating water flow rate of the heat pump.

**Note:**

The given hydraulic integration schematic is a schematic representation of the key components and serves as an aid for planning your customized system. The current status is available at all times under [www.dimplex.de/nc/en/professional/online-planner/hydraulic-integrations.html](http://www.dimplex.de/nc/en/professional/online-planner/hydraulic-integrations.html). It does not contain all the required safety devices, the components needed to maintain constant pressure, or any other additional valves which may be required for maintenance and service work as stipulated by EN 12828. The heat pump manager settings and any external regulation system which may be connected must be adapted to the present integration diagram. Software updates may be required!



## Legend:

- 1. Heat Pump
- 1.1 Air-to-water heat pump
- 1.2 Brine-to-water heat pump
- 1.3 Water-to-water heat pump
- 1.4 Reversible air-to-water heat pump
- 1.5 Reversible brine-to-water heat pump
- 1.6 Reversible water-to-water heat pump
- 2. Heat pump manager
- 3. Parallel buffer tank
- 3.1 Buffer tank
- 4. Hot water cylinder
- 5. Swimming pool heat exchanger
- 6. Passive cooling station with cooling controller N6
- 7. Heating and silent or dynamic cooling
- 8. Fan convector with 4-wire connection
- 9. Cooling circuit only
- 10. Heating circuit only
- 13. Heat source

### Domestic hot water distribution system:

- DDV 32 Dual differential pressureless manifold (up to 2.5 m<sup>3</sup>/h)\*
- EB KPV Extension module for compact manifold (up to 2.0 m<sup>3</sup>/h)\*
- KPV 25 Compact manifold with overflow valve (up to 1.3 m<sup>3</sup>/h)\*  
In combination with EB KPV (up to 2.0 m<sup>3</sup>/h)\*
- MMB 25 Mixer module, bivalent (up to 2.0 m<sup>3</sup>/h)\*
- MMH 25 Mixer module for heating circuit
- SST 25 Solar station for hot water
- VTB 25 Manifold bar (up to 2.5 m<sup>3</sup>/h)\*
- WWM 25 Hot water module / unmixed heating circuit (up to 2.5 m<sup>3</sup>/h)\*

### \* Recommended max. heating waterflow

### Solarthermics:

- SOLK 1204 Collector field
- SOLPU 1 Solar station
- SOLCU 1 Solar controller
- SOLCU 2 Solar controller
- T1 Temperature sensor (collector sensor)
- T2 Temperature sensor (cylinder 1)
- T3 Temperature sensor (cylinder 2 / optional display function)

- B3 Hot water thermostat
- B4 Swimming pool thermostat
- E9 Flange heater, hot water
- E10 2nd heat generator (HG2)
- E10.1 Immersion heater
- E10.2 Oil/gas boiler
- E10.3 Solid fuel boiler
- E10.5 Solar energy system
- F7 Safety temperature monitor
- K20 Contactor for 2nd heat generator
- K21 Contactor for immersion heater hot water
- M11 Primary pump for heating operation
- M12 Primary pump for cooling operation
- M13 Heat circulating pump for main circuit
- M14 Heat circulating pump for heating circuit 1
- M15 Heat circulating pump for heating circuit 2
- M16 Auxiliary circulating pump
- M17 Cooling circulating pump
- M18 Hot water circulating pump
- M19 Swimming pool water circulating pump
- MA Mixer open
- MZ Mixer closed
- M21/M22 Mixer
- N1 Heating controller
- N2 Cooling controller for reversible heat pumps
- N3/N4 Room climate control stations
- N6 Cooling controller for passive cooling
- N12 Solar controller
- R1 External wall sensor
- R2 Return flow sensor
- R3 Hot water sensor
- R4 Return flow sensor for cooling water
- R5 Temperature sensor for heating circuit 2
- R9 Flow sensor (antifreeze)
- R11 Flow sensor for cooling water
- R13 Sensor for heating circuit 3 / bivalent-renewable
- TC Room temperature controller
- Y5 Three-way distribution valve
- Y6 Two-way valve
- Y7 Three-way mixing valve
- Y8 Three-way valve (closing time max. 10 sec.)