

# Product Range Overview 2009

## Innovations

valid from April 2009

# NEW 2009



Optimal integration



Innovative heating & cooling



Intelligent controls



Efficient combinations

**Renewable Energies | Domestic Heating Products**

## Innovations

valid from April 2009

### *Renewable Energies*

---

<b>Heat pump for heating purposes – air source – outdoor installation .....</b>	<b>1</b>
Air-to-water heat pump for universal installation.....	1
Special accessories for air-to-water heat pump installed outdoors .....	4
<b>Heat pump for heating – air source – indoor installation .....</b>	<b>6</b>
Air-to-water heat pump with 90° air deflection.....	6
Air-to-water heat pump with straight air flow.....	7
Special accessories for air-to-water heat pump installed indoors .....	8
<b>Heat pump for heating purposes – ground water source .....</b>	<b>9</b>
Special accessories for brine-to-water heat pumps .....	9
<b>Accessories for heat pump for heating purposes .....</b>	<b>10</b>
Distribution system for heat pumps .....	10
Heat pump regulation and accessories .....	11
Heat pump – air/waste heat as a heat source.....	12
Hot water heat pumps – heat source indoor air/exhaust air .....	12
<b>Solar collectors and accessories.....</b>	<b>13</b>
<b>Services .....</b>	<b>14</b>

### *Domestic Heating Products*

---

<b>Central domestic ventilation .....</b>	<b>15</b>
Central domestic ventilation with passive heat recovery .....	15
<b>Local domestic ventilation .....</b>	<b>16</b>
Local domestic ventilation without heat recovery .....	16
<b>Direct heating devices .....</b>	<b>18</b>
<b>AKO direct heating devices .....</b>	<b>19</b>

## Air-to-water heat pump for universal installation

### High-efficiency air-to-water heat pump for universal installation

Max. flow temperature for heating 58 °C  
Casing colour white aluminium



LA 9TU



LA 12TU

Heat pump for heating purposes, for outdoor installation with wall-mounted WPM EconPlus heat pump manager. The horizontal air circuit allows installation close to walls; for free-standing installation, the air outlet should be perpendicular to the main wind direction. Sound-optimised through the use of slow-running "owl's wing" fans with a low, natural-sounding noise, an encapsulated compressor housing with free-swinging compressor baseplate for solid-borne sound insulation; High coefficients of performance due to compliance with the requirements according to EN 14511 for larger volume flows on the heat consumption side and a high-performance evaporator. Sensor monitoring of the refrigerating circuit for energy-efficient defrosting; integrated thermal energy metering (display of the thermal energy volume for heating and domestic hot water preparation on the WPM EconPlus heat pump manager). Universal design with the option of flexible expansion for:

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

Integrated soft starter, flow and return-flow sensors; external sensor (standard NTC-2) included in the scope of supply.

**Electrical connection cable EVL . . U between heat pump and heat pump manager must be ordered separately.**

Lower operating limit heat source (heating operation) -25°C; Upper operating limit heat source (heating operation) 35°C; Refrigerant R404A; Connection heating 1¼"; Connection voltage 3/N/PE ~400 V, 50 Hz

Order reference	Item-No.	Heat output with 1 compressor/COP A2/W35	Width x Height x Depth mm	Gross weight kg	/ST
LA 9TU	358520	7.6/3.7 (3.6)	910 x 1460 x 750	208	
LA 12TU	358530	9.8/3.8 (3.7)	1250 x 1810 x 750	280	

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)

Available for delivery from July 2009 onwards

The stated technical data are reference values which may change by the time serial production begins.

### High-efficiency air-to-water heat pump for universal installation with two performance levels

Max. flow temperature for heating 58 °C  
Casing colour white aluminium



LA 17TU



LA 40TU

Heat pump for heating purposes for outdoor installation with wall-mounted heat pump manager WPM EconPlus and two compressors for output reduction when operating at partial load. The horizontal air circuit allows installation close to walls; for free-standing installation, the air outlet should be perpendicular to the main wind direction. Sound-optimised through the use of slow-running "owl's wing" fans with a low, natural-sounding noise, an encapsulated compressor housing with free-swinging compressor baseplate for solid-borne sound insulation; High coefficients of performance due to compliance with the requirements according to EN 14511 for larger volume flows on the heat consumption side and a high-performance evaporator. Sensor monitoring of the refrigerating circuit for energy-efficient defrosting; integrated thermal energy metering (display of the thermal energy volume for heating and domestic hot water preparation on the WPM EconPlus heat pump manager). Universal design with two compressors for modulating operation, optional DHW preparation and the possibility of flexible expansion for:

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

Integrated soft starter, flow and return-flow sensors; external sensor (standard NTC-2) included in the scope of supply.

**Electrical connection cable EVL . . U between heat pump and heat pump manager must be ordered separately.**

Lower operating limit heat source (heating operation) -25°C; Upper operating limit heat source (heating operation) 35°C; Refrigerant R404A; Connection voltage 3/N/PE ~400 V, 50 Hz

Order reference	Item-No.	Heat output with 1 compressor/COP A2/W35	Heat output with 2 compressors/COP A2/W35	Width x Height x Depth mm	Gross weight kg	/ST
LA 17TU	358540	8.2/3.9 (3.8)	14.7/3.8 (3.7)	1600 x 1950 x 955	436	
LA 25TU	358550	11.2/3.9 (3.8)	19.3/3.8 (3.7)		510	
LA 40TU	358560	17.1/4.0 (3.9)	30.4/3.9 (3.8)	1735 x 2100 x 890	585	

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)

Available for delivery from July 2009 onwards

The stated technical data are reference values which may change by the time serial production begins.

## Pipe assembly for high-efficiency air-to-water heat pumps

### for connection from the side



RBS ..U

The pipe assembly, which can be screwed directly onto the heat pump, consists of two pipes which are specially curved and matched to the high-efficiency air-to-water heat pumps; these pipes have connecting flanges for the connection to the heating water system. When the heat pump is installed close to the outer wall, these pipes assemblies – which are fed out from the side of the heat pump (base frame on the air outlet side, on the right and below the fan) – can be used to create an above-ground infeed into the building (thermal insulation required for frost protection). In this case, the underground pipework routing for feeding the pipes into the cellar is not required.

Order reference	Item-No.	for device type	Connection heating	Gross weight kg	/ST
RBS 9U	358820	LA 9TU	1¼	2.3	
RBS 12U	358830	LA 12TU		2.5	
RBS 17U	358840	LA 17TU		2.7	
RBS 25U	358850	LA 25TU			
RBS 40U	358860	LA 40TU LA 35TUR+	1½	3.0	

Available for delivery from July 2009 onwards

## Weather-proof protective cover for high-efficiency air-to-water heat pumps



WSH 40

Design weather-proof protective cover for retrofitting to high-efficiency air-to-water heat pumps; covers the fan on the air outlet side; deflects the air outflow downwards and to the side; recommended for installation locations with high wind exposure, for example.

Order reference	Item-No.	for device type	Width x Height x Depth mm	Gross weight kg	/ST
WSH 25	358970	LA 25TU Air outlet	1600 x 1225 x 568	35	
WSH 40	358240	LA 40TU Air outlet LA 35TUR+ Air outlet	1734 x 1385 x 628	40	

Available for delivery from June 2009 onwards.

## Reversible high-efficiency air-to-water heat pump

Max. flow temperature for heating 65 °C

Flow temperature cooling min. 7 °C

Casing colour white aluminium

### Optimised for heating and cooling



LA 35TUR+

Heat pump for heating and cooling purposes for outdoor installation with wall-mounted heat pump manager and two compressors for output reduction when operating at partial load. The horizontal air circuit allows installation close to walls; for free-standing installation, the air outlet should be perpendicular to the main wind direction. Sound-optimised by electronically-controlled fans and an encapsulated compressor housing with free-swinging compressor baseplate for solid-borne sound insulation; High coefficients of performance due to compliance with the requirements according to EN 14511 for larger volume flows on the heat consumption side and a high-performance evaporator. Optimised heating and cooling operation via an external four-way reversing valve which is activated by the controller (special accessory). Sensor monitoring of the refrigerating circuit for energy-efficient defrosting; integrated thermal energy metering (display of the calculated heat quantity for heating and DHW preparation on the heat pump manager WPM EconR). Reversible refrigerating circuit with additional heat exchanger for higher DHW temperatures in heating operation and waste heat recovery in cooling operation. Universal design with the option of flexible expansion for:

- Bivalent or bivalent-renewable operating mode
- combined distribution systems for heating and cooling
- unmixed and mixed heating and cooling circuits

Silent cooling via panel heating/cooling systems requires the use of the room climate control station (special accessory) to regulate the flow temperature on the basis of the air temperature and humidity of a reference room. Integrated soft starter, flow and return-flow sensors; external sensor (standard NTC-2) included in the scope of supply.

Electrical connection cable EVL .. U between heat pump and heat pump manager must be ordered separately.

Lower operating limit heat source (heating operation) –25 °C; Upper operating limit source (heating operation) 35 °C;

Refrigerant R417a; Connection heating 1½"; Connection voltage 3/N/PE ~400 V, 50 Hz

Order reference	Item-No.	Heat output with 1 compressor/COP A2/W35	Heat output with 2 compressors/COP A2/W35	Cooling capacity 1 compressor/EER A27/W7	Cooling capacity 2 compressor/EER A27/W18	Width x Height x Depth mm	Gross weight kg	/ST
LA 35TUR+	358570	14.0/4.3 (4.0)	24.2/4 (3.7)	15.0/4.2	32.0/3.9	1735 x 2100 x 890	595	

Available for delivery from May 2009 onwards.

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)

Operating a heat pump without external four-way reversing valve reduces the heat output by up to 12 % and the coefficient of performance in heating operation by up to 14 %.

## Pipe assembly for reversible high-efficiency air-to-water heat pumps for connection from the side



RBS ..U

The pipe assembly, which can be screwed directly onto the heat pump, consists of two pipes which are specially curved and matched to the high-efficiency air-to-water heat pumps; these pipes have connecting flanges for the connection to the heating water system. When the heat pump is installed close to the outer wall, these pipes assemblies – which are fed out from the side of the heat pump (base frame on the air outlet side, on the right and below the fan) – can be used to create an above-ground infeed into the building (thermal insulation required for frost protection). In this case, the underground pipework routing for feeding the pipes into the cellar is not required.

Order reference	Item-No.	for device type	Connection heating "	Gross weight kg	/ST
RBS 40U	358860	LA 40TU LA 35TUR+	1½	3	
RBS 40ZWT	358330	LA 35TUR+ additional heat exchanger			

Available for delivery from May 2009 onwards.

The RBS 40ZWT pipe assembly for the additional heat exchanger is only required when waste heat recovery with separate pipework routing is used for domestic hot water preparation!

## Electric connecting line heat pump – heat pump manager

### Essential accessories



EVL ..U

Separate control lines (24V and 230V) between WPM EconPlus heat pump manager and the high-efficiency air-to-water heat pump for outdoor installation. Wired ready for use and with coded plug connections on both ends (non-confusable) for installation in a protection tube (diameter min. 70 mm).

Order reference	Item-No.	for device type	Length m	Gross weight kg	/ST
EVL 10U	355900	LA 9TU–LA 40TU LA 35TUR+	10	5	
EVL 20U	355910		20	9	
EVL 30U	355920		30	14	
EVL 40U	355930		40	19	

Available for delivery from July 2009 onwards

Essential accessory for high-efficiency air-to-water heat pumps. Should be installed separately from the mains cable  
Extension of the control line by the owner is not allowed!

## Four-Way reversing valve

### Special hydraulic accessories for cooling



VWU ..



EMS VWU

The four-way reversing valve (1¼" internal thread and/or 1½" internal thread) for integration into the heating flow allows optimised heating and cooling operation of the LA 35TUR+ reversible air-to-water heat pump. Switching takes place via an electromotive actuator (essential accessory) which is activated by the WPM EconR heat pump manager. The actuator is fitted to the reversing valve using a mounting set which is included in the scope of supply of the EMS VWU.

Order reference	Item-No.	for device type	Maximum volume flow m³/h	Features	Gross weight kg	/ST
VWU 32	358600	LA 35TUR+	16	Four-way reversing valve for switching from heating to cooling operation in flow and/or return flow. Essential accessories: EMS VWU	2.6	
VWU 40	358610		25		2.9	
EMS VWU	358580	VWU 32 VWU 40		Actuator for 4-way reversing valves VWU, 3-point control signal, 1/N/PE ~230V, 50/60 Hz for short switching times (set time 30 s at 50 Hz), delivery includes mounting set.	1.5	

### Hydraulic tower with heat pump manager

Casing colour white



HPK 2005

The hydraulic tower (W = 680mm; H = 1660; D = 775) with integrated regulation WPM 2006 plus enables the fast and simple connection of an externally mounted air-to-water heat pump to a heating system with an unmixed heating circuit. The following components are mounted and wired in a space-saving way in a white sheet steel casing with red-brown design screen:

- Buffer tank (200 l) with installation option for an additional immersion heater (up to CTHK 634)
- Electronically regulated circulating pump for unmixed heating circuits (consumer circuit)
- Expansion vessel (24l) with safety module and switchable pipe heater (2,4,6 kW)
- The hydraulic isolation of the generator circuit and the consumer circuit is done via two differential pressureless manifolds (bypass pipes), which are each fitted with a check valve.

The unregulated circulating pump in the generator circuit is only operated when the compressor is running in order to reduce the run-times. The uniform flow through the buffer tank connected in series extends the runtimes of the compressor and ensures the required heating water flow in all operating situations. Access for service work from the front, no minimum clearances required on the sides. Integration option for hot water circulating pump and an additional mixed heating circuit (special accessories).

Order reference	Item-No.	Features	Gross weight kg	/ST
HPL 8AS	356720	LA 8AS heating package and HPK 2005 hydraulic tower	353	
HPL 11AS	356730	LA 11AS heating package and HPK 2005 hydraulic tower	406	
HPL 16AS	356740	LA 16AS heating package and HPK 2005 hydraulic tower	451	
HPL 20AS	356750	LA 20AS heating package and HPK 2005 hydraulic tower	471	
HPL 24AS	356760	LA 24AS heating package and HPK 2005 hydraulic tower	538	
HPL 28AS	356770	LA 28AS heating package and HPK 2005 hydraulic tower	542	
HPL 9PS	356780	LA 9PS heating package and HPK 2005 hydraulic tower	355	
HPL 11PS	356790	LA 11PS heating package and HPK 2005 hydraulic tower	446	
HPL 17PS	356800	LA 17PS heating package and HPK 2005 hydraulic tower	517	
HPL 22PS	356810	LA 22PS heating package and HPK 2005 hydraulic tower	547	
HPL 26PS	356820	LA 26PS heating package and HPK 2005 hydraulic tower	558	
HPL 22HS	356830	LA 22HS heating package and HPK 2005 hydraulic tower	598	
HPL 26HS	356840	LA 26HS heating package and HPK 2005 hydraulic tower	605	

**Electric cable EVL . . . to connect the heat pump and the hydraulic tower must be ordered separately.**

The hydraulic tower cannot be ordered separately due to the integrated heat pump manager.

For every combinable heat pump there is a sales package consisting of the heat pump without regulation and the hydraulic tower.

Not useable with high-efficiency air-to-water heat pump.

### Mixer module for HPK 2005 hydraulic tower



MMH HPK

Extension module for integration of an additional mixed heating circuit into the HPK 2005 hydraulic tower, consisting of ready-to-use pipe set with strap-on sensor, electronically controlled circulating pump (delivery height max. 6 m) and mixer module (3-way mixer with actuator, 140 s runtime, connection voltage 1/N/PE ~230 V, 50 Hz, degree of protection IP 40); useable for a hot water flow of up to 2 m<sup>3</sup>/h.

Order reference	Item-No.	Short text	for device type	Gross weight kg	/ST
MMH HPK	356930	Mixer module for HPK 2005 hydraulic tower	HPK 2005	10.9	

## Heating water connection line, heat pump – heating system

### Optimised for connection to a heat pump



HVL ..

Isolated 2-pipe system (suitable for ground-laying) with ready-to-use 90° bend for connection to a heat pump installed outdoors. Suitable for heat pumps for heating and cooling; maximum operating temperature 95 °C; maximum operating pressure 6 bar (at 65 °C–9 bar). Consists of PE-Xa medium pipes with EVOH barrier layer to prevent oxygen diffusion, closed-cell crosslinked PE foam and a highly-flexible corrugated PE-HD cover pipe; includes a ready-to-use 90° connection pipe (length 1.2m) for quick and easy connection to the heat pump, including four screw fittings (2 x 1¼" internal thread, 2 x 1¼" external thread) and two PE end caps.

Order reference	Item-No.	Short text	Connection heating "	Features	Gross weight kg	/ST
HVL 25-50	358650	Pipe type 32+32/145 with ready-to-use 90° bend	1¼	Length 5 m + 1.2 m connection pipe, Ø cover pipe 145 mm	29	
HVL 25-75	358660			Length 7.5 m + 1.2 m connection pipe, Ø cover pipe 145 mm	33	
HVL 25-100	358670			Length 10 m + 1.2 m connection pipe, Ø cover pipe 145 mm	38	
HVL 25-150	358880			Length 15 m + 1.2 m connection pipe, Ø cover pipe 145 mm	42	
HVL 32-150	358680	Pipe type 40+40/175 with ready-to-use 90° bend		Length 15 m + 1.2 m connection pipe, Ø cover pipe 175 mm	61	
HVL 32-200	358690			Length 20 m + 1.2 m connection pipe, Ø cover pipe 175 mm	74	
HVL 32-250	358700			Length 25 m + 1.2 m connection pipe, Ø cover pipe 175 mm	88	

Available for delivery from May 2009 onwards.

Additional, transitional screw connections (1½" thread-sealing to 1½" flat-sealing) are required for high-efficiency heat pumps.

The pressure drops required for pump dimensioning can be found in the installation instructions.

## House infeeds for heating water connection lines

### For pressuring and non-pressuring water



MDM ..



MDF ..

House infeeds as an accessory for HVL 25 and HVL 32 heating water connection lines. The MDM sealing collars, consisting of a protection tube with shrink hose, are suitable for non-pressuring water (rain water, surface water and leakage water). The MDF sealing flange (stainless steel V2A) is suitable for pressuring water (slope water, ground water, plain tracts and water veins).

Order reference	Item-No.	Short text	Features	Gross weight kg	/ST
MDM 145	358890	Wall-sealing collar (protection tube with shrink hose)	Sealing collar for HVL 25 (cover Ø 145 mm) as a house infeed (recommended drilling Ø 160 mm) through brickwork	1.3	
MDM 175	358900		Sealing collar for HVL 32 (cover Ø 175 mm) as a house infeed (recommended drilling Ø 200 mm) through brickwork	1.5	
MDF 145	358910	Wall-sealing flange (stainless steel V2A)	Wall-sealing flange for HVL 25 (cover Ø 145 mm), sealing width 80 mm, recommended drilling Ø 200 mm	2.3	
MDF 175	358920		Wall-sealing flange for HVL 32 (cover Ø 175 mm), sealing width 80 mm, recommended drilling Ø 250 mm	2.6	

Available for delivery from May 2009 onwards.

Note on brick walls: So that water cannot penetrate the house infeeds, these must be painted with a bitumen-based protective coating.

The house feed-through (MDF) must additionally be stabilised with a casing tube to seal it against pressuring water.

## Air-to-water heat pump with 90° air deflection

### Medium-temperature air-to-water heat pump

Max. flow temperature for heating 65 °C  
Casing colour white

#### Compact design



LIKI 14TE

Heat pump for indoor installation with integrated regulation WPM 2007 plus. The control panel is integrated into a brown-red design screen and can also be used as wired remote control using the wall mounting set (special accessories MS PGD). The integrated air flow with 90° air deflection enables direct corner installation without air ducts or wall installation with air ducts on the air outlet side. High coefficients of performance due to compliance with EN 14511 for larger volume flows on the heat consumption side, optimised high-performance evaporator for heating operation and dual differential pressureless manifold for the reduction of the pump operating times. Sound-optimised through low-noise ventilator and insulated metal casing; integrated solid-borne sound insulation for direct connection to the heating system with free-swinging compressor base plate.

Compact design with optional domestic hot water preparation and integrated components for direct connection of an unmixed heating circuit (must not be used for bivalent systems):

- Heat circulating pump (note the free compression)
- Expansion vessel (24l)

Buffer tank (120 l, can be dismantled) with integrated switchable supplementary heating 3/6 kW, safety module. Integrated soft starter, flow and return-flow sensors; external sensor (standard NTC-2) included in the scope of supply.

A heat circulating pump not included in the scope of supply is required for the distribution system.

Lower operating limit heat source (heating operation) -25°C; Upper operating limit heat source (heating operation) 35°C; Refrigerant R417a; Connection heating 1¼"; Connection voltage 3/N/PE ~400 V, 50 Hz

Order reference	Item-No.	Heat output with 1 compressor/ COP A2/W35	Air outlet	Width x Height x Depth mm	Gross weight kg	/ST
LIKI 14TE	356010	10.1/3.6 (3.4)	right	960 x 2100 x 780	365	

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)

For the air circuit, varying duct dimensions are to be used (air intake side 800, air outlet side 600)!

### Air connection plate for air outlet side LIKI 14TE

#### for modification of the air outlet side



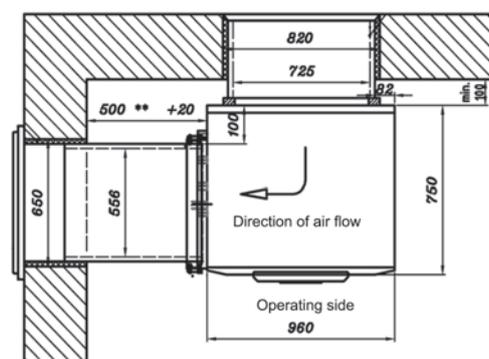
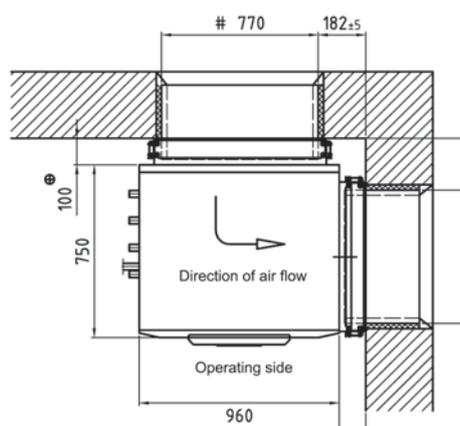
ABL 14

Air connection plate for mounting on the air-to-water heat pump LIKI 14TE. By mounting the side covering panel onto the left side of the heat pump, the air outlet side can be moved from the standard right-side air circuit to the opposing left side; side wall painted (white, similar to RAL 9003) with assembly material.

Order reference	Item-No.	for device type	Gross weight kg	/ST
ABL 14	358210	LIKI 14	3.5	

### LIKI 14TE corner installation

### Corner installation with modified air circuit, special accessory ABL 14



## Air-to-water heat pump with straight air flow

### Low-temperature air-to-water heat pump for wall installation with two performance levels

Max. flow temperature for heating 58 °C  
Casing colour white



LI 40AS

Heat pump for heating purposes for indoor installation with wall-mounted heat pump manager and two compressors for output reduction when operating at partial load. The air is drawn in via the heat pump installed directly in front of the wall. The air circuit on the air outlet side is established via air ducts. Sound-optimised through low-noise, low-speed axial-flow fan and encapsulated compressor housing; energy-efficient defrosting by reverse circulation. High coefficients of performance due to compliance with the requirements according to EN 14511 for larger volume flows on the heat consumption side and a high-performance evaporator. Universal design with two compressors for modulating operation, optional DHW preparation and the possibility of flexible expansion for:

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

Integrated soft starter and flow sensors; return flow and external sensors (standard NTC-2) included in the scope of supply. Electrical connection line EVL 996-1 (10m) between heat pump and heat pump manager included in the scope of supply.

Lower operating limit heat source (heating operation) -25°C; Upper operating limit heat source (heating operation) 35°C; Refrigerant R404A; Connection heating 1½"; Connection voltage 3/N/PE ~400 V, 50 Hz

Order reference	Item-No.	Heat output with 1 compressor/COP A2/W35	Heat output with 2 compressors/COP A2/W35	Air outlet	Width x Height x Depth mm	Gross weight kg	/ST
LI 40AS	358300	17.1/4.0 (3.9)	30.4/3.9 (3.8)	ventilation side	1735 x 2100 x 890	590	

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)

### Air duct for air outlet side LI 40AS



LKL ...

Optimally suited for air-to-water heat pump air circuits; GFRC exterior; thermally insulated and sound-insulated on the inside to prevent the formation of condensate and considerably reduce sound transmission. The ducts must be protected against driving rain and can, if necessary, be cut to length and/or painted with waterproof emulsion paint on site. Minor damage to the outer surface has no effect on the efficiency and can be repaired with standard plaster.

Order reference	Item-No.	for device type	Short text	Length mm	Width x Height mm	Gross weight kg	/ST
LKL 900	358260	LI 40	Long air duct	1250	950 x 950	37	
LKK 900	358250		Short air duct	625		19	
LKB 900	358270		90° air duct bend	1100		40	

For solid-borne sound insulation, the air ducts are not screwed directly onto the heat pump. They must be mounted (i. e. suspended) on site. The dimension drawings of the air ducts are available at [www.dimplex.de/luftkanaele](http://www.dimplex.de/luftkanaele) for downloading!



LKB ...

### Sealing collar 900

Circumferential rubber gasket for vibration-free connection of the air duct to the air intake and air outlet side of the heat pump. The component is attached via a screwed fastening frame (packaging unit 1).

Order reference	Item-No.	for device type	/ST
DMK 900-1	358280	Air duct 900	



DMK ...

### Heat pump rain guard



RSG ...

Order reference	Item-No.	for device type	Width x Height x Depth mm	Gross weight kg	/ST
RSG 900	358290	LI 40 Air outlet	1128 x 1128 x 70	9	
RSG 1500	358350	LI 40 Air intake	1726 x 1440 x 70	14	

### Installation hardware 900

Installation hardware for sealing the cut edges, where ducts need to be cut to length. Consisting of channel-section frame (U profile) and fitting compound.

Order reference	Item-No.	for device type	Gross weight kg	/ST
VSK 900	358310	LI 40	4.5	



VSK ...

### Deflection hood for air-to-water heat pumps installed indoors



LUH ..

Deflector hood for reducing the air outlet noise of air-to-water heat pumps installed indoors; fastening frame (included in the scope of supply) mounted for fitting the deflector hood to the external building wall (rain guard not required), casing colour: white aluminium structured (similar RAL 9006), can be painted.

Order reference	Item-No.	for device type	Width x Height mm	Gross weight kg	/ST
LUH 600	358620	LI 11...(R) LIK 8 LI 9 LIKI 14	794 x 676	17	
LUH 700	358630	LI 16...(R) LI 20	886 x 794	25	
LUH 800	358640	LI 24 LI 28	926 x 944	37	

Available for delivery from June 2009 onwards.

### Plate heat exchanger for the use of polluted heat sources



WTE 20

Screwed stainless steel plate heat exchanger. Max. operating pressure 10 bar, max. temperature 80 °C. Intermediate heat exchanger for polluted heat sources or heat sources with poor water quality. Screw connections for the cold and warm side with external thread (exception: WTE 130–flange with rubber bushing)

Order reference	Item-No.	for device type	Heat source connection "	Width x Height x Depth mm	Gross weight kg	/ST
WTE 20	358400	SI 21/SIH 20	1¼	200 x 748 x 270	74	
WTE 30	358410	SI 30		200 x 748 x 320	80	
WTE 37	358420	SI 37		200 x 748 x 420	87	
WTE 40	358430	SIH 40	2	300 x 994 x 437	161	
WTE 50	358440	SI 50			164	
WTE 75	358450	SI 75		300 x 994 x 537	186	
WTE 100	358460	SI 100			197	
WTE 130	358470	SI 130	2½	395 x 946 x 443	284	

Delivery time 3–4 weeks!

If, due to water quality, an intermediate heat exchanger is necessary, a brine-to-water heat pump should be used! If, due to the quality of the water, an intermediate heat exchanger is required, brine-to-water heat pumps are usually used, in order to expand the range of operating temperatures to include lower temperatures (intermediate circuit with monoethylene glycol).

### Titanium plate heat exchanger

#### Heat source sea water



WTT ..

Screwed titanium plate heat exchanger for using aggressive heat sources (e.g. saline liquids such as sea water) in combination with brine-to-water heat pumps. Screw connections for the cold and the warm side: Flange with rubber bushing.

Order reference	Item-No.	for device type	Heat source connection "	Width x Height x Depth mm	Gross weight kg	/ST
WTT 40	358480	SIH 40	2½	395 x 946 x 443	223	
WTT 50	358490	SI 50			227	
WTT 75	358500	SI 75			234	
WTT 100	358510	SI 100			240	

Delivery time 6–8 weeks!

Note on the heat source system:

When the limit values for iron (Fe up to 0.2 mg/l) or manganese (Mn up to 0.1 mg/l) are exceeded, the heat source system is in danger of iron ochre sedimentation. This is also true for titanium heat exchangers.

## Distribution system for heat pumps

### Module for connecting the buffer tank and ensuring the heating water flow



DDV ..

#### Dual differential pressureless manifold

Combinable module with insulation jackets for installation-friendly connection of the heat pump, buffer tank, hot water cylinder (using the tee joint included) and heating system. Consisting of 2 stop-cocks, 2 bypass pipes with return flow inhibitor (2000 Pa start-to-leak pressure), safety module with pressure gauge and connection option for an expansion vessel. Installation option for a circulating pump (pump not included in the scope of supply) with 1" internal thread pipe unions (DN 25) for DDV 25 and 1¼" internal thread pipe unions (DN 32) for DDV 32.

Recommended for connecting heat pumps with a heating water flow rate of up to 2.0 m<sup>3</sup>/h (DDV 25) or 2.5 m<sup>3</sup>/h (DDV 32) and external energy infeed (e.g. wood/solar) into the buffer tank connected in series (see project planning documentation). To reduce the pump operating times, the heat circulating pump can only be used with the compressor. In this case, the return flow sensor included in the scope of supply must be installed in the immersion sleeve provided, and connected. The consumer circuit requires a separate circulating pump due to the hydraulic isolation.

Order reference	Item-No.	for device type	Short text	Width x Height x Depth mm	Gross weight kg	/ST
DDV 25	358390	up to LI 20 up to LA 20 up to SI 21/SIH 20 up to WI 22	Dual differential pressureless manifold	340 x 540 x 275	11.2	
DDV 32	348450	up to LI(H) 28 up to LA(H) 28 up to SI 24 up to WI 27			12.2	

### Circulating pump for consumer circuit



UPE 60

Electronically-controlled heat circulating pump with integrated flexible capacity via freely-adjustable rotational speed, micrometer 180 mm, low energy consumption thanks to energy efficiency class A (fulfils the requirements of EnEV, §14 (3)), automatic lowering of temperature at night, type of regulation (controlled or constant rotational speed) and the control curve can be set automatically via Softtouch, including pump plug for easy installation of the electrical connection cable.

Order reference	Item-No.	for device type	Nominal width	Features	Gross weight kg	/ST
UPE 60	358870	MMH 25 WWM 25	25	Maximum delivery height 3.2 m at a volume flow of 2 m <sup>3</sup> /h	2.3	

The use of an electronically-regulated circulating pump in the consumer circuit requires a manifold without differential pressure. An unregulated circulating pump must be used in the main heat pump circuit in order to ensure the minimum heating water flow rate.

**Pump dimensioning must be checked according to the pressure drop and volume flow!**

## Heat pump regulation and accessories

### Heating controller – heat pump manager



WPM EconPlus

Controller for the heat pump heating system with large back-lit LC display, time-controlled lowering and raising of the heating characteristic curve, time functions for DHW preparation according to need using the heat pump, with optional targeted reheating by flange heater. "Bivalent-renewable" operating mode for combining the heat pump with additional renewable energy sources such as wood or solar heat; dynamic input menus with different levels for technicians as well as users. Two independent mixer outputs for controlling an additional heat generator and a maximum of two mixed heating circuits. Automatic program for targeted heat drying of screed floors. PC, modem and bus connection via plug-in cards (special accessories); external sensor (standard NTC-2) included in the scope of supply.

Order reference	Item-No.	Features	Width x Height x Depth mm	Gross weight kg	/ST
WPM EconPlus	355950	Delivered as a wall mounted controller in the scope of supply of the air-to-water heat pump installed outdoors. Integrated thermal energy meter with separate evaluation for heating and domestic hot water preparation. Simplified electrical connection with separate terminal blocks for 24 V and 230 V.	303 x 489 x 120	5	

### Heat pump manager extension module



NWPM



EWPM

The NWPM extension module acts as an interface between the heat pump manager and an Ethernet network. This extension allows the remote setting and remote monitoring of the heat pump. A PC with a network card or a home network is required for this. The module can record and save data. This extension is independent of the operating system. A data exchange with a KNX/EIB bus system, and thus the connection of the heat pump manager to a building management technology system is provided via the EWPM extension module. This extension makes it possible to set and monitor the heat pump via an installation bus.

Order reference	Item-No.	for device type	Features	/ST
NWPM	356960	WPM 2004/2006/2007	Heat pump manager extension module for connection to an Ethernet network.	
EWPM	356970	WPM 2006/2007	Heat pump manager extension module for connection to the KNX/EIB bus.	

Extension modules can be used from software version H\_H5x onwards!

### General accessories for the heat pump manager



AP PGD



AWPM 900

Order reference	Item-No.	Short text	Features	/ST
AP PGD	356570	Remote control for WPM 2006/2007	For connection to the wall-mounted WPM 2006/2007 heat pump manager with integrated display. The remote control has an LC-Display with identical menu navigation and backlighting. The AWPM 900 connecting line must be ordered separately.	
AWPM 900	340210	FWPM 470/AP PGD connection cable	Heat pump manager/remote control connecting line, 6-core cable. Can also be used as a connecting line for the removable control panel of the WPM 2007 (Length 15 m).	

### Hot water heat pump with foil cladding for utilisation of indoor air

Hot-water temp. up to max. 60 °C  
Lower operating limit heat source (heating operation) 15 °C  
Upper operating limit heat source (heating operation) 35 °C



BWP 20A

Hot water heat pumps for using 20 °C indoor air for domestic hot water preparation, installation dimension 60 cm; Insulated foil cladding, radial fan, exhaust air stub and outgoing air stub for optional connection of a duct system with a maximum length of 10 m, freely adjustable hot water temperature for total volume of 200 l, switch for permanent fan operation, steel cylinder enamelled according to DIN 4753, protection anode against corrosion, medium heat pump output 910 W, hot water temperature selectable during heat pump operation (23 to 60 °C), heating up to 65 °C with standard heating element (1.5 kW) possible, can be either manually controlled or, for example, via an external timer, connection option for an external block of heat pump operation, refrigerant designation R 134A, colour white (similar to RAL 9003).

Order reference	Item-No.	Connection voltage	COP according to EN 255 for heating up from 15 °C to 45 °C	Ø x Height mm	Gross weight kg	/ST
BWP 20A	358230	1/N/PE ~230 V, 50 Hz	3.26	550 x 1700	96	

DN 125 outgoing air stubs for optional connection to an exhaust air system.

The maximum hot water temperature reachable and the lower operating limit vary by +/- 2K due to component tolerances!

## Solar controller and solar station



SOLPU 1



SOLPU 2

Order reference	Item-No.	Short text	Features	/ST
SOLPU 1	356230	Solar station	Two-cable solar station pre-mounted as a connecting element between the collector field and the hot water cylinder with integrated heat exchanger for solar fluid, consisting of a 3-level standard pump (WILO-STAR ST 20/6), all-metal dial thermometer in flow and return flow, flow volume display 1-20 l/min, safety valve 6 bar, manometer 0-6 bar high-temperature proof, gravity control in flow and return flow, integrated air scoop for continuous air extraction during operation, integrated purging and filling unit, elastic insulation casing (EPP), wall mounting with sheet-steel wall bracket, connections 3/4" flat sealing.	
SOLPU 2	359070	Solar station 1 inch	Two-cable solar station for higher volume flow rates, pre-mounted as a connecting element between the collector field and the hot water cylinder with integrated heat exchanger for solar fluid, consisting of a 3-level circulating pump (WILO ST 25/7), all-metal dial thermometer in flow and return flow up to 160 °C, flow volume display 5-40 l/min, safety valve 6 bar, manometer 0-6 bar high-temperature proof, gravity control in flow and return flow, integrated air scoop for continuous air extraction during operation, integrated purging and filling unit, elastic insulation casing (EPP), wall mounting with sheet-steel wall bracket, connections 1" flat sealing. Supplied with overvoltage protection for solar sensor and sensor sleeve for the collector field.	

### Parallel connection of heat pumps

Creation of a regulation concept with hydraulic integration for parallel connection of Dimplex heat pump systems for heating and cooling purposes with a maximum of 14 heat pumps and taking into consideration the preparation of domestic hot water and swimming pool water. Load-dependent connection of up to 30 performance levels of a monovalent, mono-energy or bivalent system with external temperature-dependent switching of operating modes. When heat pumps of different types are combined, air-to-water heat pumps are preferred when the external temperature is high. In systems for heating and cooling purposes, heat pumps with additional heat exchangers are preferred, so that the waste heat can be used for domestic hot water and swimming pool water preparation.



WPM Master

### Start-up and planning support

#### Heat pump for heating purposes

Order reference	Item-No.	Short text	Features	/ST
IN 01 WP	341750	Start-Up	Start-up of a heat pump heating system by the authorised complete systems after-sales service. Testing of the connected special accessories (Dimplex manufacture) and the heating water flow, adjusting the heat pump manager according to the manufacturers instructions, extending the guarantee of the heat pumps for heating purposes from two to three years (for details, see the general supply and payment conditions and the start-up form).	
PU 01 WP	352230	Daily rate	Planning support for the integration of heat pumps with special hydraulics/regulation requirements are to be met, or in coordination meetings on site with planners or equipment installers. Billing consists of actual costs including travel time. Where more than eight hours are needed per day, a daily rate charge shall apply. The costs schedule is valid within Germany. The kilometres travelled will be invoiced separately.	
PU 02 WP	352240	Invoicing on an hourly basis on a time and material basis		
PU 03 FK	352250	Travel costs (km)		

Services provided are fixed priced and are not subject to discount!

### Central domestic ventilation unit

#### with automatic bypass circuit



ZL 300

Domestic ventilation unit for de-aeration and ventilation of living quarters of up to approx. 140 m<sup>2</sup>/200 m<sup>2</sup> (air exchange 0.6/0.4 at 200 m<sup>3</sup>/h). Three ventilation levels switchable via a separate control panel, air volumes adjustable for each level from 50 m<sup>3</sup>/h in intervals of 10m<sup>3</sup>/h. Heat recovery from the exhaust air using a cross counter current heat exchanger; degree of heat recovery approx. 90%. Automatic summer bypass with adjustable switching temperature 18–26 °C for interrupting heat recovery in summer. Optional connection of a humidity sensor and CO<sub>2</sub> sensor for higher-level fan control according to need, independent of the set fan level. Integrated filter for fresh air/exhaust air/bypass, filter class G4. 4 x DN 160 air duct connections on the top of the device, wall-mounting.

Order reference	Item-No.	Short text	Width x Height x Depth mm	Gross weight kg	/ST
ZL 300	358750	Central domestic ventilation unit with heat recovery	752 x 654 x 466	38	

Available for delivery from May 2009 onwards.

### Remote control for central domestic ventilation unit

#### Essential accessories

For setting the fan levels of the ZL 300 central domestic ventilation device, a **control panel** is required as an essential accessory.



PFB 03 UP



KFB 04



KFB FS



KFB FE



CARBON



HYGROS

Order reference	Item-No.	Features	Width x Height x Depth mm	Gross weight kg	/ST
PFB 03 UP	358760	Standard remote control unit (flush-mounting version) for installation in flat switch mounting frames (not included in the scope of supply) for the ON/OFF functions and three ventilation levels. Connection 1/N/PE ~ 230 V, 50 Hz, wall-mounting, 5-pole connection line to ventilation unit (1.5 mm <sup>2</sup> ).	50 x 50 x 15	0.1	
KFB 04	358960	Comfort remote control unit, timer for automatic operation, ventilation, selector switch (OFF, normal operation, lower operation, automatic, party), filter change indication (timer), 1/N/PE~230 V, 50 Hz connection, 5-pole connecting cable to ventilation unit (1.5 mm <sup>2</sup> ).	150 x 90 x 36	0.3	
KFB FS	358980	Radio remote control for controlling three fan levels in connection with a radio receiver (KFB FE).	81 x 81 x 21		
KFB FE	358990	Radio receiver for controlling three fan levels in connection with a radio transmitter (KFB FS). A maximum of six transmitters can be used together with one receiver; priority is allocated to the highest set fan level.	53 x 112 x 26	0.1	

Available for delivery from May 2009 onwards.

### Sensors for central domestic ventilation units

The sensors can be used in combination with a central domestic ventilation unit in order to regulate the air volumes independently of the set fan level.

Order reference	Item-No.	Features	/ST
CARBON	358940	CO <sub>2</sub> sensor for controlling central domestic ventilation units according to need. Sensor is maintenance-free thanks to a closed measuring cell.	
HYGROS	358950	Humidity sensor for controlling central domestic ventilation units according to need. Suitable for installation in an air distribution system, maximum immersion depth 230 mm.	

## Local domestic ventilation without heat recovery

### Ventilators for small rooms



DXL 100

Ventilators for small rooms—for controlled ventilation of bathrooms and toilets. White interior grid in appealing design, automatic outer grid in white. Suitable for installation in outer walls or single-glazed windows (max. 6 mm), scope of delivery includes universal mounting accessories for wall and window installation. Maximum wall thickness for wall installation with the included mounting accessories is 300 mm.

Order reference	Item-No.	Air volume flow m <sup>3</sup> /h	Sound pressure level in 3 m dB (A)	Features	Width x Height x Depth mm	Gross weight kg	/ST
DXL 100	358070	76	35	Switching via a standard ON/OFF switch or hygrostat (must be provided by the customer).	165 x 155 x 43	1.2	
DXL 100H	358080			With integrated, adjustable time delay relay (2–20 minutes) and hygrostat (50–90% relative humidity).			
DXL 100T	358720			Switching via a standard ON/OFF switch. With integrated, adjustable time delay relay (2–20 minutes).			

Measurements correspond to the dimensions of the indoor component

### Window fans



GXL 6



GXL 9

Window fan for use in private, commercial and industrial buildings. Suitable for installation in single and double-glazed windows with 4–40mm thickness. Variable distance compensation is achieved by using or omitting the spacer frames (included). Exterior cover is a flat rain guard (does not obstruct roller blinds). Casing components within the building can be removed for cleaning without tools. Inner assembly and outer rainguard are made of high-quality, break-proof white plastic. Tight-closing electric interior latch with noiseless function. Closed motor in splash-proof casing, maintenance-free. Maximum air temperature +40 °C.

Order reference	Item-No.	Air volume flow m <sup>3</sup> /h	Sound pressure level in 3 m dB (A)	Features	Width x Height x Depth mm	Gross weight kg	/ST
GXL 6	358110	266	37	Switching via an ON/OFF switch (must be provided by the customer).	210 x 226 x 112	1.9	
GXL 9	358120	728	50	Essential accessories: GXL CK .	294 x 312 x 117	4.0	
GXL 12	358140	1614	55		380 x 408 x 161	7.9	

### Remote control for window fans



GXL CK

Order reference	Item-No.	Short text	Features	Width x Height x Depth mm	Gross weight kg	/ST
GXL CK	358160	Control panel for GXL 9 and GXL 12	Control panel for surface mounting, suitable for GLX fans. Three slide switches with the following functions: ON/OFF with operating display, reversing switch for de-aeration and ventilation and selection of reduced/full volume flow.	210 x 85 x 55	1.2	

### Wall opening for window fans

Order reference	Item-No.	Features	Depth mm	Gross weight kg	/ST
GXL 9 WK	358130	Wall opening including screw fastenings for application as a wall fan.	280	1.5	
GXL 12 WK	358150			1.8	

## Radial fans

Shaft fan in radial design, directly driven, for installation on vertical shafts and long pipework. Casing made of break-proof plastic with rear air outlet stubs (can be inserted into pipes with nominal width DN 100), automatic return air blocking flap integrated in outlet stub.



DXL 200



DXL 200EC

Order reference	Item-No.	Air volume flow m <sup>3</sup> /h	Sound pressure level in 3 m dB (A)	Features	Width x Height x Depth mm	Gross weight kg	/ST
DXL 200	358090	108	50	Two fan levels (50/108 m <sup>3</sup> /h) settable via a standard switch.	222 x 252 x 118	1.8	
DXL 200EC	358100	216	55	Efficient, low-wear EC motor with constant volume flow rate control for a defined extraction volume flow. Various operating parameters, e.g. humidity control and run-down, are set directly on the device. Switching via a standard ON/OFF switch.	252 x 300 x 116	2.1	

## Bathroom fan heater

Connection voltage 1/N/PE ~230 V, 50 Hz  
 Degree of protection IP 24  
 Protection class I



EF 12/20



EF 12/20 TI

Solid sheet-steel casing, infinitely variable room thermostat, protection against overheating, antifreeze mode, connection cable with plug.

Order reference	Item-No.	Rated power W	Features	Width x Height x Depth mm	Weight kg	/ST
EF 12/20	357050	2000		300 x 405 x 120	3.2	
EF 12/20 TI	357060		With 60-minute timer		3.3	
EF 12/20 TID	357070		With 24-hour timer.			
EF 12/10	358710	1000			3.2	

Available for delivery from April 2009 onwards.

## Free-standing convectors

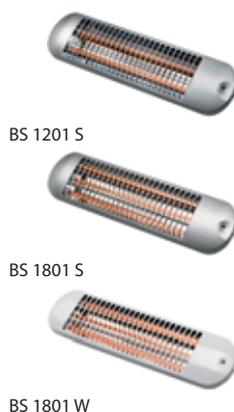
Connection voltage 1/N/PE ~230 V, 50 Hz  
Degree of protection IP 20  
Protection class I



Order reference	Item-No.	Rated power W	Features	Width x Height x Depth mm	Weight kg	/ST
K 811	358050	2000	Free-standing convector with freely adjustable thermostat, two performance levels, 1.0 and 2.0 kW, indicator lamp for heating operation, connection line approx. 1.0 m with plug, wall mounting possible using the accessories provided.	575 x 418 x 200	4.1	
K 821	358060		Free-standing convector with turbo blower and cold air level, freely adjustable thermostat, two performance levels, 1.0 and 2.0 kW, indicator lamp for heating operation, connection line approx. 1.0 m with plug, wall mounting possible using the accessories provided.			

## Infrared heater (compact range)

Connection voltage 1/N/PE ~230 V, 50 Hz  
Degree of protection IP 24  
Protection class I



Infrared heaters (compact range) with quartz heating elements for horizontal installation, switchable via a cord switch on the device, pivoting angle 20°–40°, fixed connection, VDE certification.

Order reference	Item-No.	Rated power W	Number of heating elements pcs	Features	Width x Height x Depth mm	Weight kg	/ST
BS 1201 S	356650	1200	2	Three control levels OFF/0.6/1.2 kW, colour silver.	526 x 140 x 92	1.6	
BS 1801 S	356640	1800	3	Four control levels OFF/0.6/1.2/1.8 kW, colour silver.		1.7	
BS 1801 W	356630			Four control levels OFF/0.6/1.2/1.8 kW, colour white.			

Available for delivery from June 2009 onwards.

## Infrared heaters (low profile range)

Connection voltage 1/N/PE ~230 V, 50 Hz  
Degree of protection IP 24  
Protection class I



Infrared heaters (low profile range) with quartz heating elements for horizontal installation, switchable via a cord switch on the device, pivoting angle 20°–40°, fixed connection, VDE certification.

Order reference	Item-No.	Rated power W	Number of heating elements pcs	Features	Width x Height x Depth mm	Weight kg	/ST
BK 1201 S	356670	1200	1	Infrared heater (low profile range) for horizontal wall mounting, fixed connection, 1 quartz radiator bar, pivoting angle 20-40°, 2 performance levels OFF/1.2 kW, controllable with a pull switch on the device, colour silver, VDE certification.	768 x 100 x 92	1.6	
BK 2001 S	356660	2000	2	Infrared heater (low profile range) for horizontal wall mounting, fixed connection, 2 quartz radiator bars, pivoting angle 20-40°, 4 performance levels OFF/0.6/1.2/2.0 kW, controllable with a pull switch on the device, colour silver, VDE certification.		1.7	

Available for delivery from June 2009 onwards.

## Infrared heater for changing table

Connection voltage 1/N/PE ~230 V, 50 Hz  
Degree of protection IP 24  
Protection class I



BY 801 S

Order reference	Item-No.	Rated power W	Number of heating elements pcs	Features	Width x Height x Depth mm	Weight kg	/ST
BY 801 S	356680	500	1	Changing table heater for horizontal wall mounting, connection cable with connector, 1 safety quartz radiator bar, pivoting angle 20-40°, two performance levels OFF/0.5 kW, colour silver, VDE certification, controllable with a pull switch on the device.	768 x 100 x 92	1.8	

Available for delivery from June 2009 onwards.

## Bathroom fan heater

Connection voltage 1/N/PE ~230 V, 50 Hz  
Degree of protection IP 24  
Protection class I



H 260/4

Bathroom fan heater with metal casing for wall mounting, thermostat, protection against overheating, antifreeze function.

Order reference	Item-No.	Rated power W	Width x Height x Depth mm	Weight kg	/ST
H 260/4	356700	2000	300 x 405 x 120	3.2	

Available for delivery from April 2009 onwards.

## Fan heater

Connection voltage 1/N ~230 V, 50 Hz  
Degree of protection IP 20  
Protection class II



H 450 TS

Order reference	Item-No.	Rated power W	Features	Width x Height x Depth mm	Weight kg	/ST
H 450 TS	357890	2000	Floor-mounted fan heater with radial blower, thermostat, frost protection and protection against overheating. Connection line approx. 1.0 m with plug, four control levels OFF/Cold/1.0/2.0 kW, colour light grey with black air outlet grid.	253 x 123 x 245	1.2	

Available for delivery from June 2009 onwards.

## Frost protection convector

Connection voltage 1/N/PE ~230 V, 50 Hz  
Degree of protection IP 20  
Protection class I



FW 550 S

Antifreeze convector for wall mounting, freely adjustable temperature regulation, frost protection, protection against overheating, indicator lamp for heating operation, colour white, VDE certification. Switch-on temperature in frost protection setting approx. +5 °C.

Order reference	Item-No.	Rated power W	Width x Height x Depth mm	Weight kg	/ST
FW 550 S	356710	600	260 x 242 x 121	1.2	

Available for delivery from July 2009 onwards





Visit [www.dimplex.de](http://www.dimplex.de) and  
[www.heating-with-heatpump.com](http://www.heating-with-heatpump.com)  
for further up-to-date information

 **Dimplex**

**INNOVATIVE HEATING AND COOLING**

Glen Dimplex Deutschland GmbH  
Dimplex Division  
Am Goldenen Feld 18  
D-95326 Kulmbach  
Phone: +49 9221 709-201  
Fax: +49 9221 709-233  
[export@dimplex.de](mailto:export@dimplex.de)  
[www.dimplex.de](http://www.dimplex.de)