LAS 10MT
LAS 15MT
LAS 22TT

Dimplex

Montage- und Gebrauchsanweisung

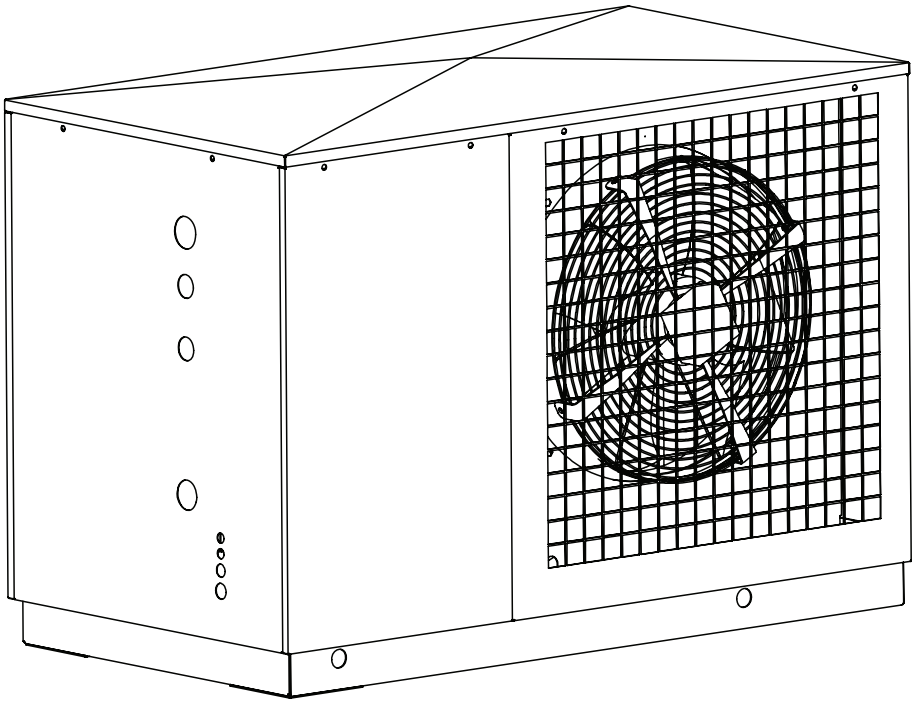
Deutsch

Installation and Operating Instructions

English

Instructions d'installation et d'utilisation

Français



Luft/Wasser-Wärmepumpe für Schwimmbad-erwärmung zur Außenaufstellung

Air-to-Water Heat Pumps for Swimming Pool Heating (Outdoor Installation)

Chauffage de piscine par pompe à chaleur air/eau montée à l'extérieur

Bestell-Nr. / Order no. / N° de commande : 452159.66.11

FD 8704

Table of contents

English

1 Please Read Immediately

1.1 Important Information:

⚠ ATTENTION!
When transporting the heat pump, ensure that it is not tilted more than 45° (in any direction).

⚠ ATTENTION!
The heat pump and transport pallet are only joined by the packing film.

⚠ ATTENTION!
Do not restrict or block the area around the air intake or outlet.

⚠ ATTENTION!
Ensure that there is a clockwise rotating field (for multiphase devices): Operating the compressor in the wrong rotational direction could cause damage to the compressor. Incorrect phase sequence causes wrong rotational direction of the ventilator and, thus, a significantly reduced performance.

⚠ ATTENTION!
Never use cleaning agents containing sand, soda, acid or chloride as these can damage the surfaces.

⚠ ATTENTION!
Before opening the device, ensure that all circuits are isolated from the power supply.

⚠ ATTENTION!
The warranty does not cover damage caused by inadequate lay-up measures during the winter.

⚠ ATTENTION!
Work on the refrigerating circuit may only be performed by competent personnel.

1.2 Legal Regulations and Directives

The construction and design of the heat pump complies with all relevant EU directives, DIN/VDE regulations (see CE declaration of conformity).

When connecting the heat pump to the power supply, the relevant VDE, EN and IEC standards are to be fulfilled. Any further connection requirements stipulated by local utility companies must also be observed.

When connecting the heating system, all applicable regulations must also be adhered to.

1.3 Energy-Efficient Use of the Heat Pump

To maintain heat pump efficiency, it is particularly important to keep the temperature difference between the domestic hot water and heat source to a minimum.

Suitable heating water temperature, a carefully chosen location for the open-air pool, and the use of heat insulating pool covers are just some of the measures used to reduce heat energy requirements.

It is important to ensure that the heat exchangers are not contaminated during operation because this increases the temperature difference, in turn reducing the COP.

2 Purpose of the Heat Pump

2.1 Application

The swimming pool heat pump is suitable for heating swimming pool water or saline water.

The heat pump is equipped with an automatic evaporator defrosting (de-icing) system. The heat pump may also be operated in frosty external air temperatures, providing operating limits and conditions are observed.

2.2 Operating Principle

The surrounding air is drawn in by the ventilator and fed via a finned heat exchanger, which extracts heat from the air. This energy difference is then transferred to the working medium (refrigerant) in the heat exchanger.

An electrically driven compressor “pumps” this extracted heat to a higher temperature level by increasing its pressure. The heat is then transferred to the water via a titanium heat exchanger.

During heating operation, electrical operating energy is used to raise the temperature of the heat in the environment to a higher level. Because energy extracted from the air is transferred to the water that is to be heated, this device is referred to as an air-to-water heat pump.

The swimming pool heat pump consists of the main components: evaporator, ventilator and expansion valve, as well as the low-noise compressor, liquifier (titanium heat exchanger) and the electrical control system.

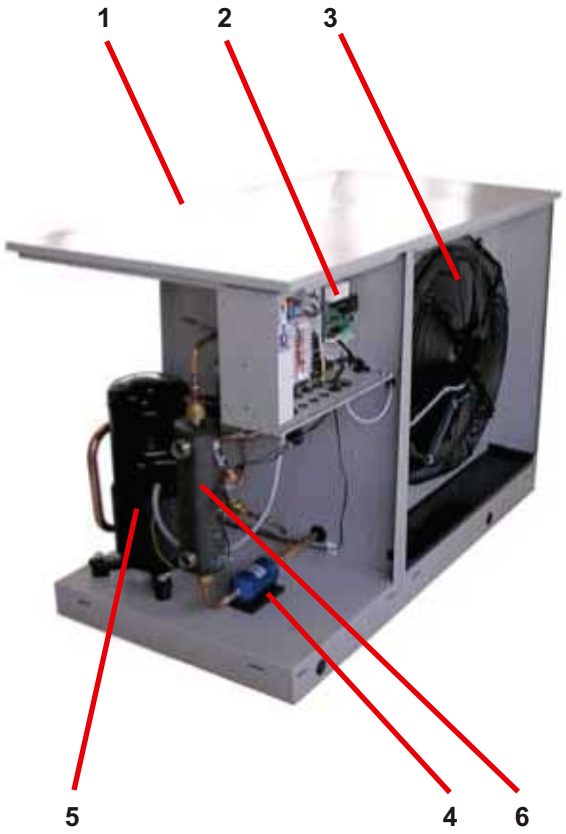
During heating operation at low ambient temperatures, humidity accumulates on the evaporator in the form of frost, impairing heat transfer. The evaporator is automatically defrosted according to need. Depending on atmospheric conditions, steam (water vapour) may be briefly visible in the immediate vicinity of the air inlet or outlet when restarting.

3 Scope of Delivery

3.1 Basic Device

The heat pump is of compact design and is supplied complete with the components listed below.

R407C is used as refrigerant.



1) Evaporator
2) Switch box
3) Ventilator
4) Filter dryer
5) Compressor
6) Titanium heat exchanger

(Illustration: Front casing removed)

3.2 Switch Box

The switch box is located in the heat pump and can be accessed by removing the covering panel assembly (the panel assembly screw-holes are sealed by cover caps).

The switch box contains the supply connection terminals, as well as the power contactors, the soft starter unit and the remote control connection terminals.

Heat pump control is via the remote control provided in the scope of supply (see also Section 8).

4 Transport

⚠ ATTENTION!

When transporting the heat pump, ensure that it is not tilted more than 45° (in any direction).

Use the wooden pallet for transporting the heat pump to its final installation location. Either a lifting truck or 3/4" pipes fed through the holes in the base plate or frame can be used for transporting the heat pump.

⚠ ATTENTION!

The heat pump and transport pallet are only joined by the packing film.

To avoid injuring your hands, ensure that the pipes cannot slip when being used to lift the pump.

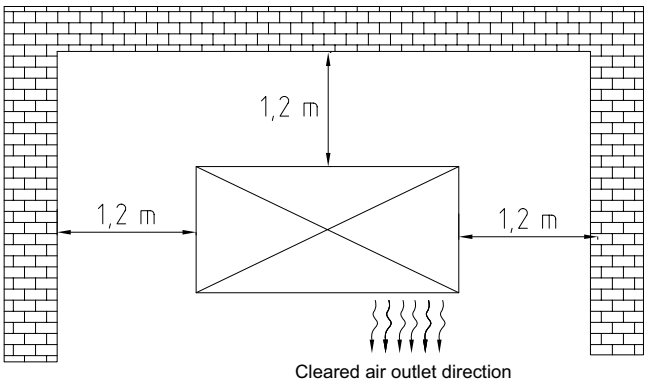
When inserting the pipes through the frame, ensure that the components are not damaged (especially the plastic condensate tray and/or the drain stubs).

English

5 Installation

5.1 General Information

The device should always be installed on a permanently smooth, even and horizontal surface. To counteract development of any solid-borne sound, the entire frame (and its supporting surface) should be in contact with the floor. If this is not possible, additional constructional measures to improve sound insulation may need to be provided by the customer. It must be possible to carry out maintenance work without hindrance. This can be ensured by maintaining a clearance of 1.2 m around the device.



⚠ ATTENTION!

Do not restrict or block the area around the air intake or outlet.

5.2 Condensed Water Pipe

Condensed water that forms during operation must be drained off frost-free. The heat pump must be mounted on a level plane to guarantee proper drainage. The condensed water pipe must have a minimum diameter of 50 mm and must be fed frost-free into a sewer or a suitably dimensioned, deep gravel drainage pit.

The condensate pipe should be centrically placed under the drain stubs of the condensate tray (see also the dimension drawing in the Appendix). Alternative means of condensate drainage are to be agreed upon with the manufacturer.

Condensate should not be drained directly into clearing tanks and cesspits because any rising, aggressive vapours could destroy the evaporator.

6 Installation

6.1 General Information

The following connections need to be established on the swimming pool heat pump:

- Flow and return flow of the swimming pool system
- Condensate outflow
- Control line to remote control
- Power supply

6.2 Swimming Pool Connections

The water pipe connections on the heat pump have 1" and/or 1 1/2" external threads. A pipe wrench must be used to firmly grip the transitions when connecting the heat pump.

The water pipes are connected via a bypass on the filter circuit of the swimming pool located downstream of the filter and upstream of the water preparation system.

Before the water pipes are connected to the heat pump, the swimming pool water system must be flushed to remove any impurities, sealant residue, etc. We strongly recommend installing a filter system in the water circuit. Any accumulation of deposits (leaves, grass or other organic contaminants) in the liquifier may cause total breakdown of the heat pump. Suitable hydraulic installation, adjustment and dimensioning of the filter/circulating pump ensures the minimum water flow rate through the heat pump for trouble-free operation.

Once the water pipes have been installed, the system must be filled, de-aerated and pressure-tested.

Minimum water flow rate

The swimming pool heat pump does not have an integrated circulation pump. The required water flow rate must be provided by an external filter pump and signalled back to the heat pump via the respective input.

Antifreeze (frost protection)

Manual drainage (see “Hydraulic Plumbing Diagram” in the Appendix) should be provided for heat pumps exposed to frost. To ensure frost protection, a method of allowing the heat pump to activate the filter pump must be installed (see the information in Chapter 9.4 on winter shutdown/lay-up measures).

6.3 Electrical Connection

Depending on device type, the heat pump is connected to the power supply via a standard 3-core cable (1-phase devices) or standard 5-core cable (3-phase devices).

The cable(s) is(are) to be provided by the customer. The conductor cross section is selected in accordance with the power consumption of the heat pump (see Appendix Device Information) and the applicable VDE (EN) and VNB regulations.

Both an all-pole disconnecting device with a contact gap of at least 3 mm (e.g. utility blocking contactor or power contactor), as well as a 3-pole and/or 1-pole circuit breaker with common tripping for all external conductors (tripping current in compliance with the Device Information) must be installed.

Ensure that the incoming supply has a clockwise rotating field when connecting multiphase devices.

Phase sequence: L1, L2, L3.

⚠ ATTENTION!

Ensure that there is a clockwise rotating field (for multiphase devices): Operating the compressor in the wrong rotational direction could cause damage to the compressor. Incorrect phase sequence causes wrong rotational direction of the ventilator and, thus, a significantly reduced performance.

The device supplies the control voltage to the remote control.

The connecting cable (control line) from the remote control to the heat pump (not included in the scope of supply) must be suitable for a 230 V supply voltage. The cable must be 6-core (at least) and have a single-core cross section of at least 0.5 mm².

The heat pump power supply is in accordance with the technical data of the device: 1/N/PE ~ 230 V, 50 Hz or 3/N/PE ~ 400 V, 50 Hz.

The heat pump is connected via the terminal strips in the switch box. For detailed information see Circuit Diagrams in the Appendix.

7 Start-Up

7.1 General Information

To ensure that start-up is performed correctly, it should only be carried out by an after-sales service technician authorized by the manufacturer. Only then can an extended warranty period of 3 years in total be granted (see Warranty Service).

7.2 Start-Up

The following items need to be checked prior to start-up:

- The heat pump must be fully connected, as described in Chapter 6.
- Any valves that might impair proper water flow in the water circuit must be opened.
- The air intake and air outlet paths must be clear.
- The ventilator must turn in the direction indicated by the arrow.
- The remote control must be operational.
- Ensure the condensate outflow functions.
- After connecting the operating voltage and switching on the swimming pool heat pump, there will be a pre-programmed 5-minute compressor pause time before the heat pump starts up.
- The bypass and regulator valves must be set so that the minimum water flow is in accordance with the Device Information. The following maximum temperature spreads between water inlet and water outlet are set for the operating point.

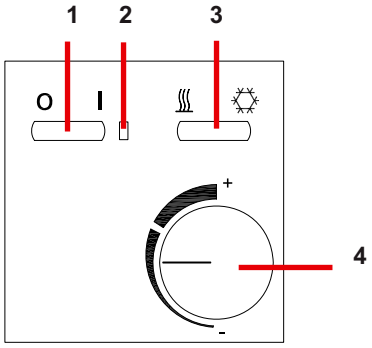
External air temperature		Max. temperature spread between water inlet and water outlet
From	To	
18° C	20° C	6-7 K
15° C	18° C	5-6 K

English

8 Description of Functions

8.1 Heat Pump Remote Control

The heat pump can be switched on and off inside the building via the remote control. In this context, switching off means the device is switched to a “standby” function, i.e. the frost protection function remains active as long as voltage is supplied to the heat pump. The filter pump runs when the air temperature is <5 °C. The heat pump runs when the water temperature is <10 °C. The temperature of the swimming pool water is adjusted via the adjustable transformer on the remote control.



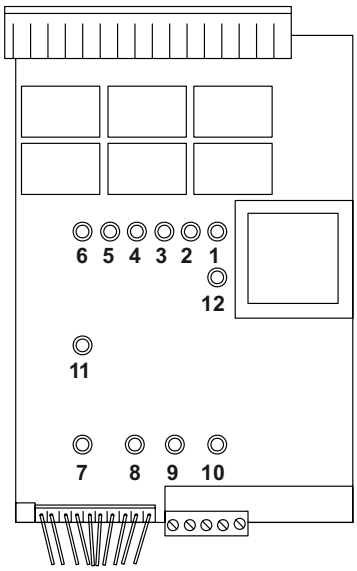
1) Switch on / standby
2) The green LED lights up independent of the switch position (indicating the heat pump is operationally ready)
3) Has no function
4) Setpoint regulator for water temperature

Position max. (right-hand stop), hot water set temperature: 40 °C.

Position min. (left-hand stop), hot water set temperature: 10 °C.

The setting knob has two setting rings for mechanically limiting the setting range. (Note: before adjusting the setting rings, the setting knob must be set to the approximate middle of the desired setting range.)

8.2 Controller Board



1) On = Compressor running
2) On = Ventilator running
3) On = Defrost heater on
   Off = Defrost heater off
4) On = Filter pump request
5) Off = Output of heat generator 2 - off
6) On = Frost protection request
   Off = Frost protection request - off
7) On = Low-pressure switch in working order
8) Not used
9) Not used
10) Not used
11) Flashes when the controller board is in use
12) Flashes in the case of a fault

8.3 Heating Function

Start the heat pump by moving the switch (1) to the On position (I). The desired return temperature is set via the rotary knob (4). This is requested via the potentiometer and lies within a range of 10 °C min. and 40 °C max. Once the set temperature is reached, the heat pump switches off. It switches on again when the return temperature sinks to 1 Kelvin below the set value. It is not possible to re-start the heat pump until after a minimum pause time of 20 minutes (after defrosting of the evaporator). The heat pump switches off at a maximum flow temperature of 45 °C, or when the air temperature is too low (lower operating limit -10 °C).

9 Maintenance / Cleaning

9.1 Maintenance

To protect the paintwork, avoid leaning or putting objects on the device. External heat pump parts can be wiped with a damp cloth and domestic cleaner.

⚠ ATTENTION!
Never use cleaning agents containing sand, soda, acid or chloride as these can damage the surfaces.

To prevent faults due to sediments in the titanium heat exchanger of the heat pump, ensure that the heat exchanger cannot be contaminated (water treatment and filter system necessary). In the event that operating malfunctions due to contamination still occur, the system should be cleaned as described below. (Warning: the fins on the finned tube heat exchanger are sharp-edged -> danger of being cut!)

9.2 Cleaning the Pipe System in the Heat Exchanger

Contamination in the pipes and heat exchanger can reduce the performance of the heat pump's titanium heat exchanger. If this is the case, the pipe system and heat exchanger must be cleaned by a technician.

Use only pressurised drinking water for cleaning.

9.3 Cleaning the Air System

The finned heat exchanger, ventilator and condensate outflow should be cleaned of contaminants (leaves, twigs, etc.) before each new heating period. These types of contaminants can be manually removed using compressed air or by flushing with clean water.

It may be necessary to remove the device cover and air inlet grid first.

⚠ ATTENTION!
Before opening the device, ensure that all circuits are isolated from the power supply.

To prevent the evaporator and the condensate tray from being damaged, do not use hard or sharp objects for cleaning.

Under extreme weather conditions (e.g. snow drifts), ice may form on the air intake and exhaust air outlet grids. If this happens, the ice must be removed in the vicinity of the air intake and exhaust air outlet grids to ensure that the minimum air flow rate is maintained.

9.4 Winter Shutdown / Lay-Up

If there is a chance of frost after the bathing-season has ended when the swimming pool heating is switched off and the external temperature is expected to drop below the operating limit, the water circuit of the heat pump should be completely drained. Otherwise, suitable constructional measures should be taken by the customer to protect the heat pump against damage from frost.

⚠ ATTENTION!
The warranty does not cover damage caused by inadequate lay-up measures during the winter.

10 Faults / Trouble-Shooting

This heat pump is a quality product and is designed for trouble-free and maintenance-free operation. However, if a fault does occur, use the following information to check whether you can eliminate the fault yourself.

The heat pump will not run!

Please check whether:

- There is supply voltage (tripped fuse, power failure).
- The operating switch on the remote control is switched on, and whether the correct setpoint temperature has been set.

The set temperature level cannot be reached!
Please check whether:

- The permissible operating conditions for the heat pump have been adhered to (air temperatures too high or too low).
- The air inlet or outlet area is blocked, restricted or very dirty.
- There are closed valves or stop-cocks in the water pipes.

If you cannot correct the fault yourself, please contact your after-sales service technician (see Warranty Certificate).

Work on the heat pump may only be carried out by authorised and qualified after-sales service technicians.

11 Decommissioning/ Disposal

Before removing the heat pump, disconnect it from the power source and close all valves. Observe all environmentally-relevant requirements regarding the recovery, recycling and disposal of materials and components in accordance with all applicable standards. Particular attention should be paid to the proper disposal of refrigerants and refrigeration oils.

English

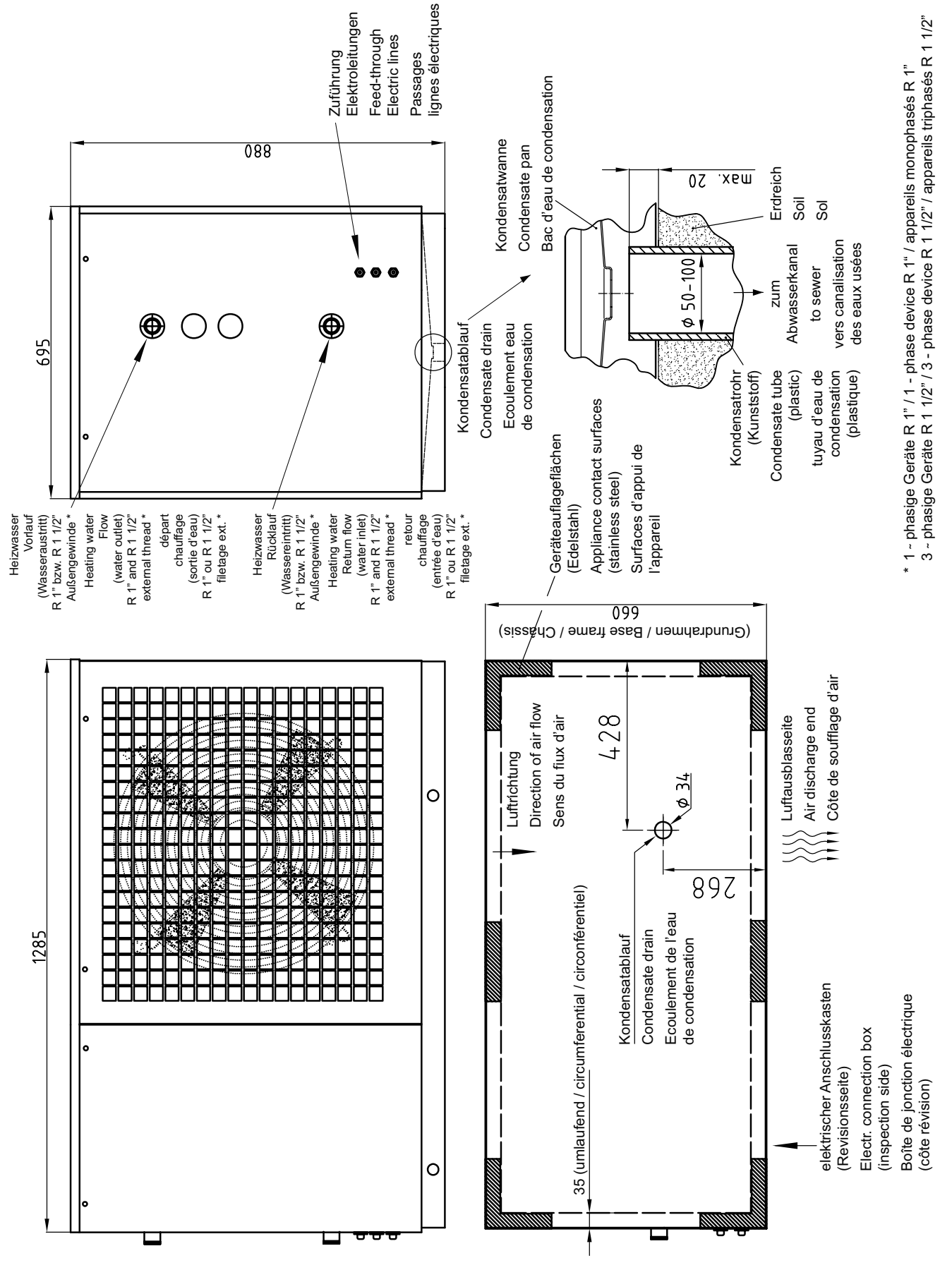
12 Device Information

			LAS 10MT	LAS 15MT	LAS 22TT
1	**Type and order code**				
2	**Design**				
2.1	**Degree of protection according to EN 60 529 for compact devices and heating components**		IP 24	IP 24	IP 24
2.2	**Installation location**		Outdoors	Outdoors	Outdoors
3	**Performance data**				
3.1	**Operating temperature limits:**				
	Heating water flow / return flow [1]	°C / °C	Up to 40 / above 10	Up to 40 / above 10	Up to 40 / above 10
	Air	°C	-10 to +35	-10 to +35	-10 to +35
3.2	**Heat output / power consumption at A20 / W24 [2]**	**kW / kW**	12.1 / 2.9	16.6 / 3.5	22.3 / 4.4
3.3	**Sound power level**	**dB(A)**	70	70	71
3.4	**Sound pressure level at a distance of 10 m (air outlet side)**	**dB(A)**	45	45	46
3.5	**Pool water flow with an internal pressure differential of**	**m³/h / Pa**	1.6 / 7200	2.0 / 12000	2.5 / 8000
3.6	**Refrigerant; total filling weight**	**type / kg**	R407C / 1.5	R407C / 1.6	R407C / 2.5
3.7	**El. output of defrost heater**	**kW**	1.8	2.4	3.0
4	**Dimensions, connections and weight**				
4.1	**Device dimensions**	**H x W x L cm**	86 x 127 x 67	86 x 127 x 67	86 x 127 x 67
4.2	**Device connections to heating system**	**Inch**	G 1" external	G 1" external	G 1 1/2" external
4.3	**Weight of the transportable unit(s) incl. packing**	**kg**	147	155	162
5	**Electrical Connection**				
5.1	**Nominal voltage; fuse protection**	**V / A**	230 / 20	230 / 25	400 / 16
5.2	**Nominal power consumption [2] A15 / W32**	**kW**	3.3	4.0	5.1
5.3	**Starting current with soft starter**	**A**	33	43	25
5.4	**Nominal current A15 / W32 / cos φ**	**A / ---**	17.0 / 0.8	21.0 / 0.8	10.0 / 0.8
6	**Complies with the European safety regulations**		[3]	[3]	[3]
7	**Additional model features**				
7.1	**Defrosting**		Automatic	Automatic	Automatic
	Type of defrosting		Electrical	Electrical	Electrical
	Defrosting tray included		Yes (heated)	Yes (heated)	Yes (heated)
7.2	**Heating water in device protected against icing [4]**		Yes	Yes	Yes
7.3	**Performance levels**		1	1	1

1. See operating limits diagram
2. This data indicates the size and capacity of the system. For an analysis of the economic and energy efficiency of the system, other parameters, such as, in particular, the defrosting capacity, the bivalence point and regulation, should also be taken into consideration. E.g. A20 / W24 have the following meaning: external air temperature 20°C and swimming pool flow temperature 24 °C.
3. See CE declaration of conformity
4. The heat circulating pump and the heat pump controller must always be ready for operation.

Anhang / Appendix / Annexes

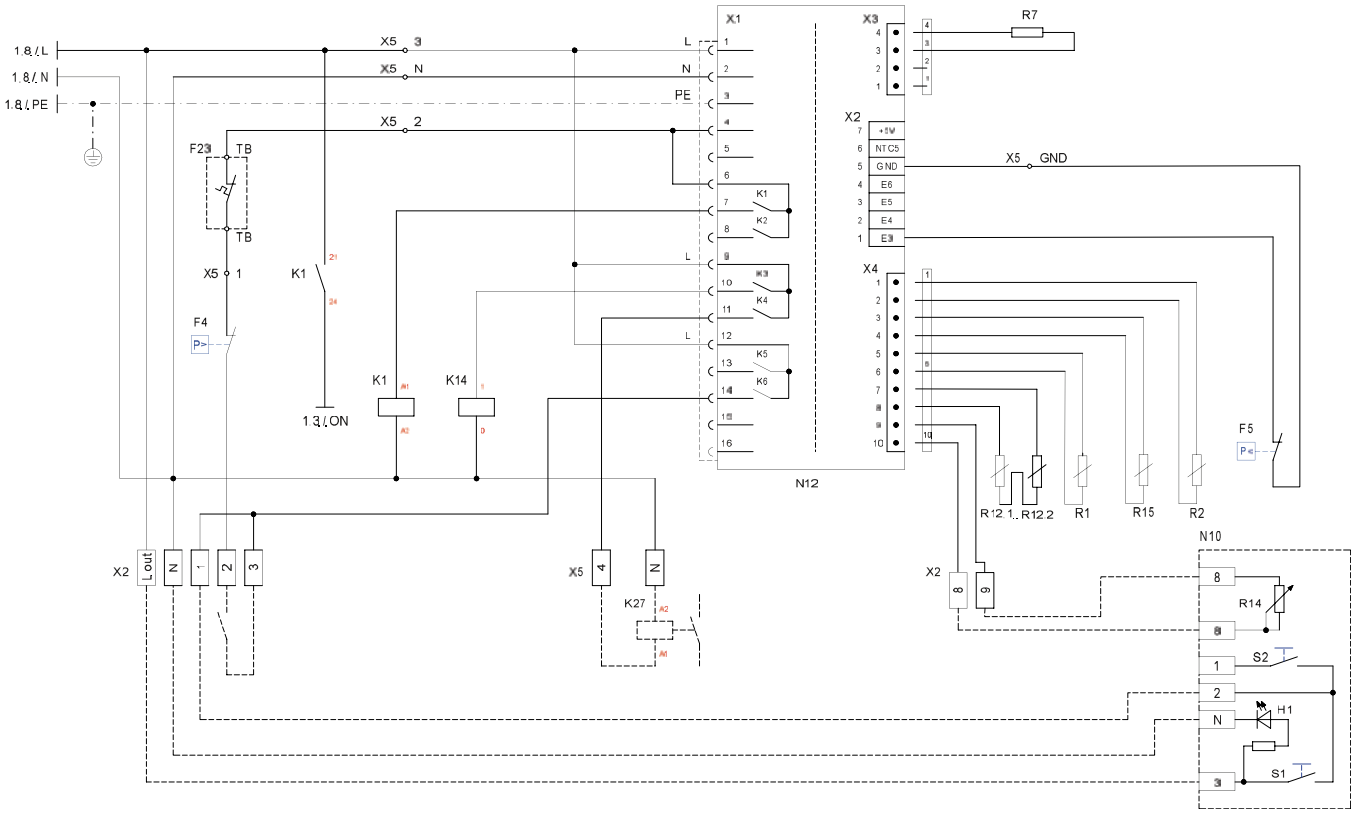
1 Maßbild / Dimension drawing / Schéma coté



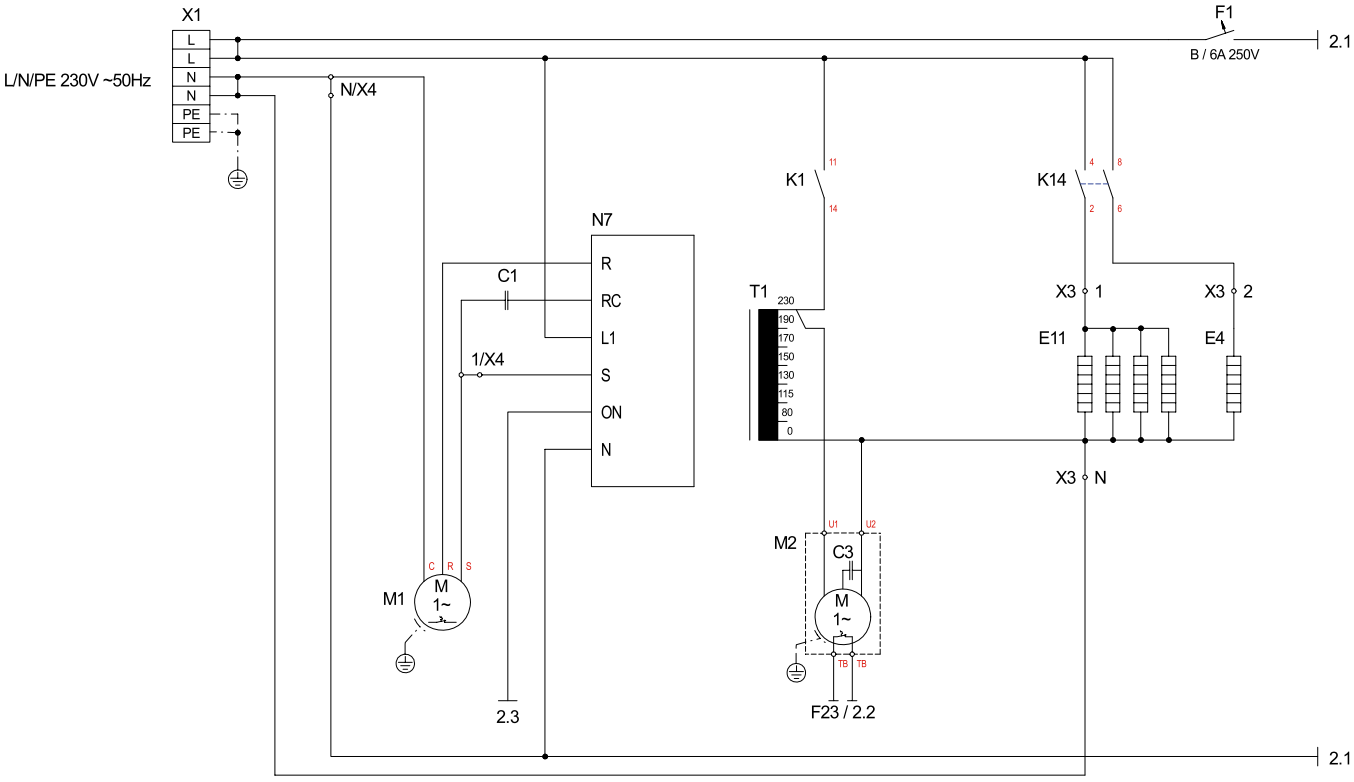
* 1 ~ phasige Geräte R 1" / 1 - phase device R 1" / appareils monophasés R 1"
3 ~ phasige Geräte R 1 1/2" / 3 - phase device R 1 1/2" / appareils triphasés R 1 1/2"

2 Stromlaufpläne / Circuit diagrams / Schémas électriques

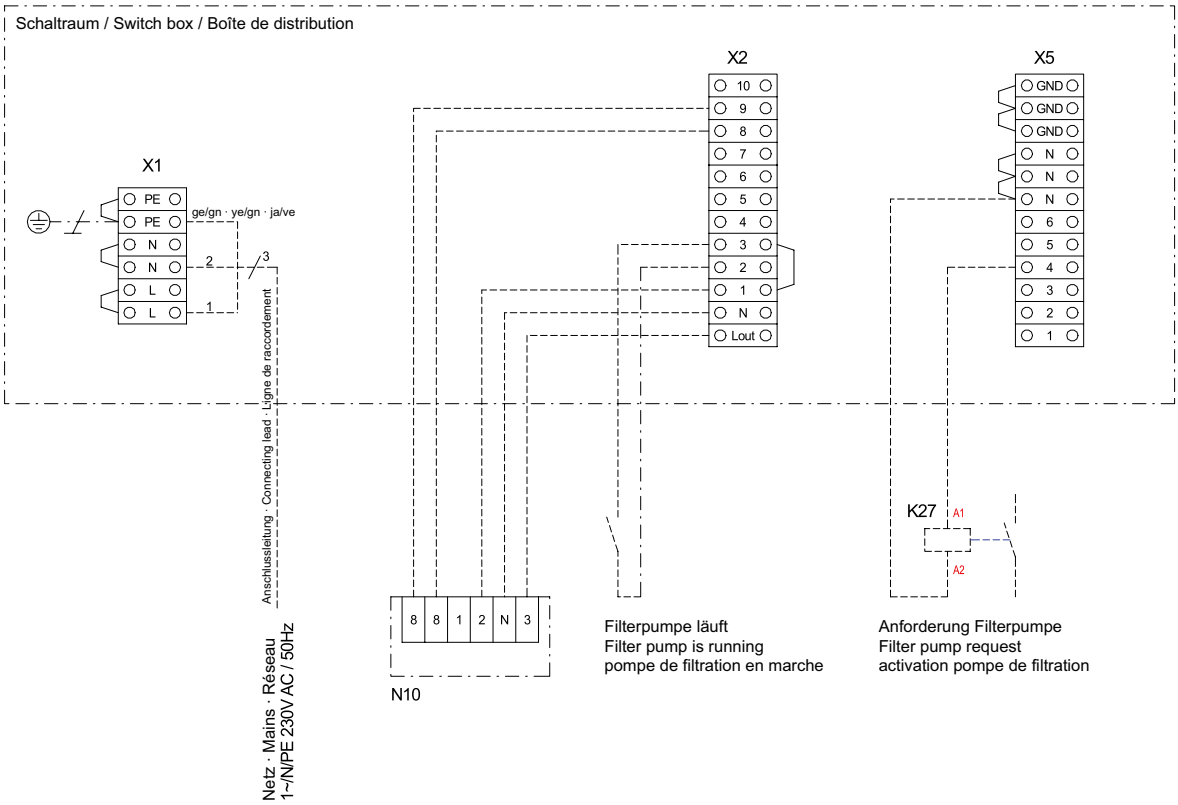
2.1 Steuerung / Control / Commande LAS 10MT - LAS 15MT



2.2 Last / Load / Charge LAS 10MT - LAS 15MT



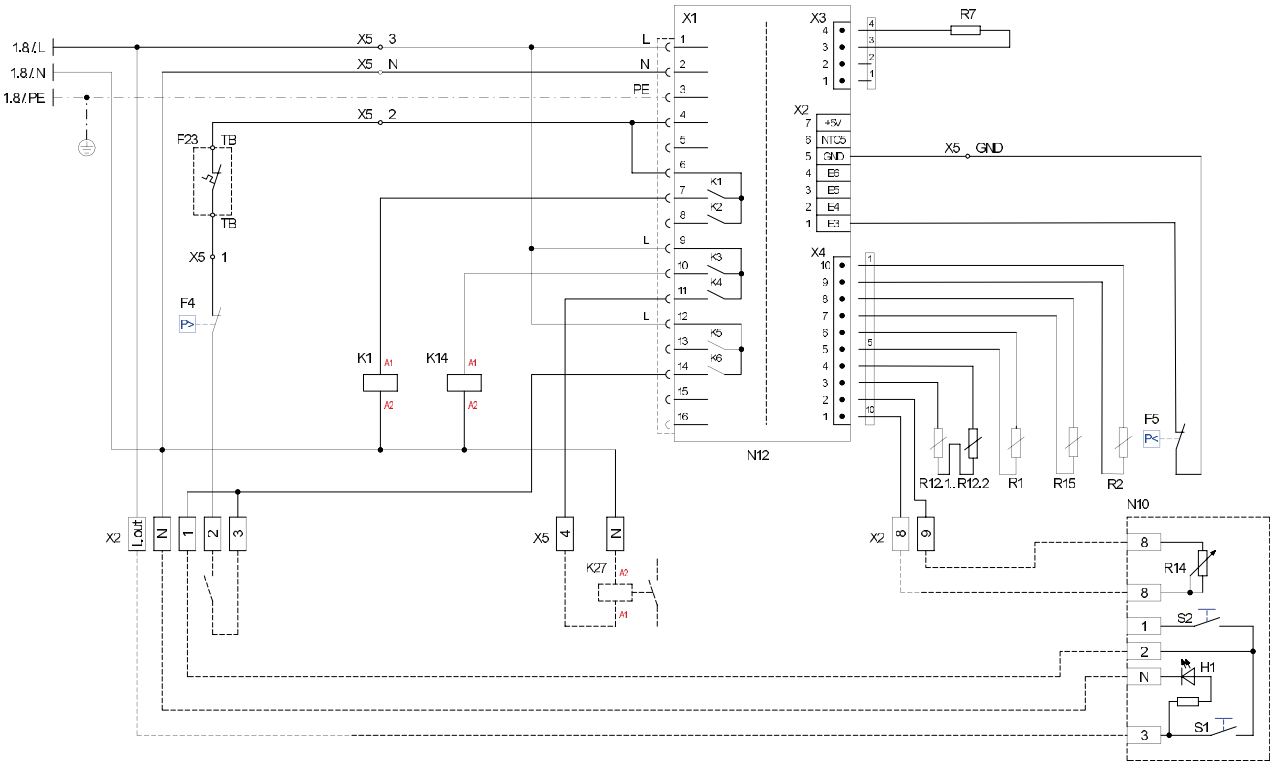
2.3 Anschlussplan / Terminal diagram / Schéma de branchement LAS 10MT - LAS 15MT



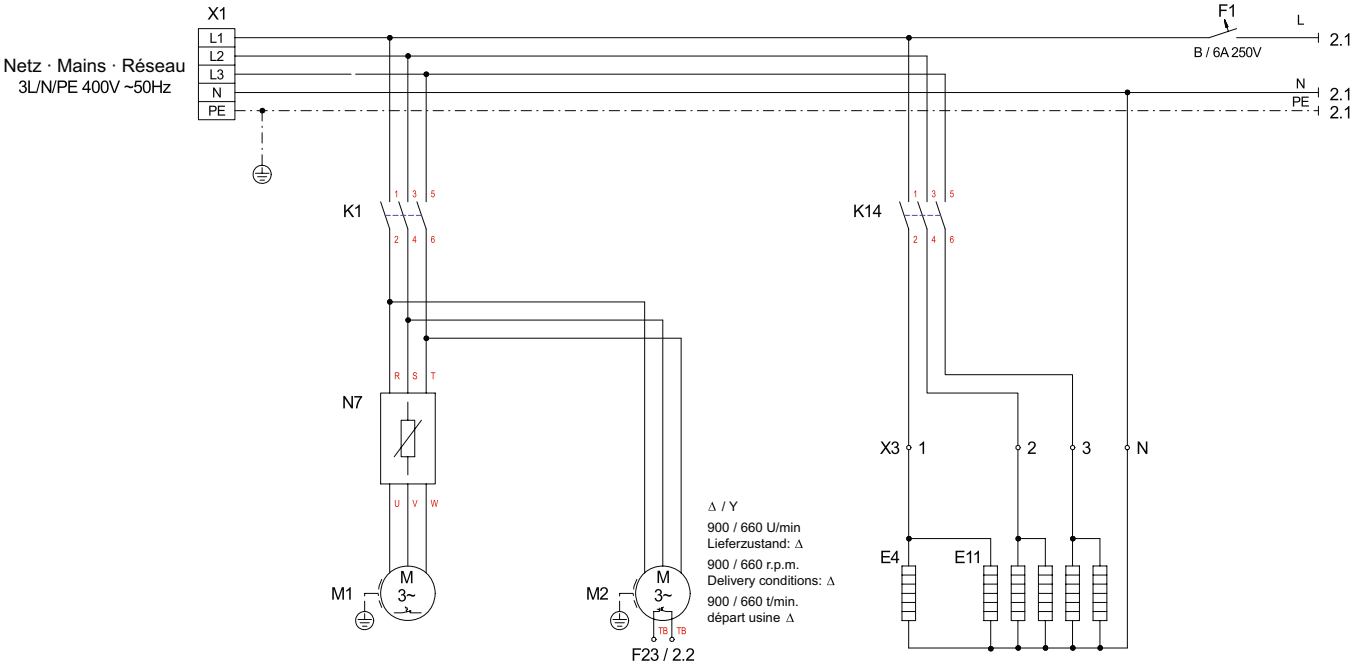
2.4 Legende / Legend / Légende LAS 10MT - LAS 15MT

C1	Betriebskondensator-Verdichter	Operating condenser - compressor	Compresseur du condensateur
E4	Düsenringheizung	Nozzle ring heater	Chauffage à faisceau tubulaire
E11	Abtauheizung (bei LAS 10MT entfällt eine Heizung)	Defrost heater (Only three heaters required for LAS 10MT)	Chauffage de dégivrage (LAS 10MT, un chauffage de moins)
F1	Steuersicherung	Control fuse	Fusible de commande
F4	Pressostat Hochdruck	High-pressure switch	Pressostat haute pression
F5	Pressostat Niederdruck	Low-pressure switch	Pressostat basse pression
F23	Thermokontakt Ventilator	Thermal contact for ventilator	Contact thermique ventilateur
H1**	Leuchte Betriebsbereit	Indicator lamp, ready for operation	Lampe “prêt à fonctionner”
K1	Relais Verdichter / Lüfter	Relay for compressor / ventilator	Relais compresseur / aérateur
K14	Relais Abtauheizung	Relay for defrost heater	Relais dégivrage
K27*	Relais Anforderung Filterpumpe	Relay for filter pump request	Relais activation pompe de filtration
M1	Verdichter	Compressor	Compresseur
M2	Ventilator (nicht unter 170V betreiben!)	Ventilator (Do not operate below 170 V!)	Ventilateur (ne pas faire fonctionner avec moins de 170 V)
N7	Softstarter	Soft starter	Démarreur progressif
N10	Fernbedienung	Remote control	Commande à distance
N12	Steuerungsplatine	Control PCB	Panneau de commande
R1	Außenfühler	External sensor	Sonde extérieure
R2	Rücklauffühler	Return flow sensor	Sonde circuit de retour
R7	Kodierwiderstand	Coding resistor	Résistance de codage
R12.1	Abtauende	Defrost end	Fin de dégivrage
R12.2	Abtauende	Defrost end	Fin de dégivrage
R14**	Sollwert Potentiometer	Setpoint potentiometer	Consigne potentiomètre
R15	Vorlauffühler	Flow sensor	Sonde circuit de départ
T1	Transformator	Transformer	Transformateur
S1**	Steuerschalter WP-EIN/AUS	Control switch HP ON/OFF	Interrupteur de commande MARCHE/ARRET PAC
S2**	Umschalter HEIZEN/KÜHLEN	Changeover switch HEATING/COOLING	Commutateur CHAUFFAGE/REFROIDISSEMENT
X1	Klemmenleiste Netz- L/N / PE-230VAC-50 Hz / externe Komponenten	Terminal strip for power supply L/N/PE-230 V AC-50Hz / external components	Bornier réseau L/N/PE-230V AC-50Hz / composants externes
X2	Klemmenleiste externe Verdrahtung	Terminal strip for external wiring	Bornier câblage extérieur
X3	Klemmenleiste Abtauheizungen	Terminal strip for defrost heater	Bornier dégivrage
X4	Klemmenleiste Verdichter	Terminal strip for compressor	Bornier compresseur
X5	Klemmenleiste interne Verdrahtung	Terminal strip for internal wiring	Bornier câblage intérieur
———	werksseitig verdrahtet	Wired ready for use	câblé départ usine
- - - - - -	bauseits bei Bedarf anzuschließen	To be connected by the customer as required	à raccorder par le client au besoin
*	Bauteile sind extern beizustellen	Components to be supplied from external sources	Pièces à fournir par le client
**	Bauteile sind in der Fernbedienung	Components are in the remote control	Pièces intégrées au boîtier de commande à distance

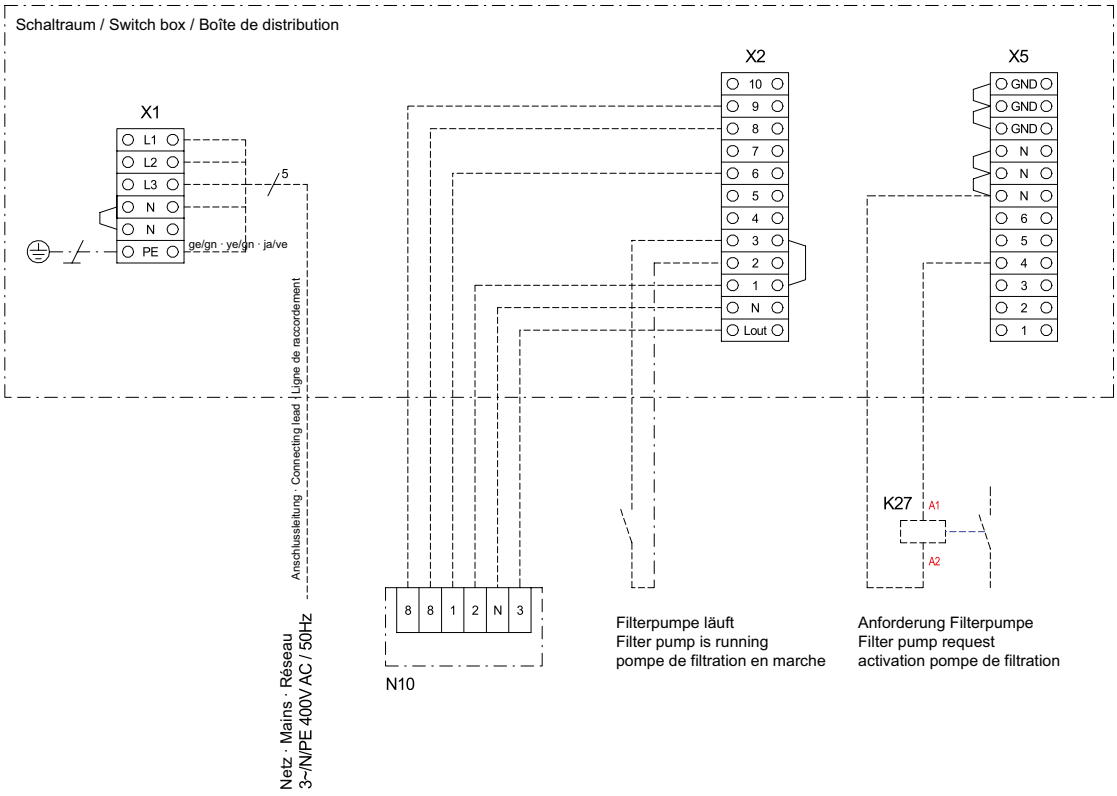
2.5 Steuerung / Control / Commande LAS 22TT



2.6 Last / Load / Charge LAS 22TT



2.7 Anschlussplan / Terminal diagram / Schéma de branchement LAS 22TT

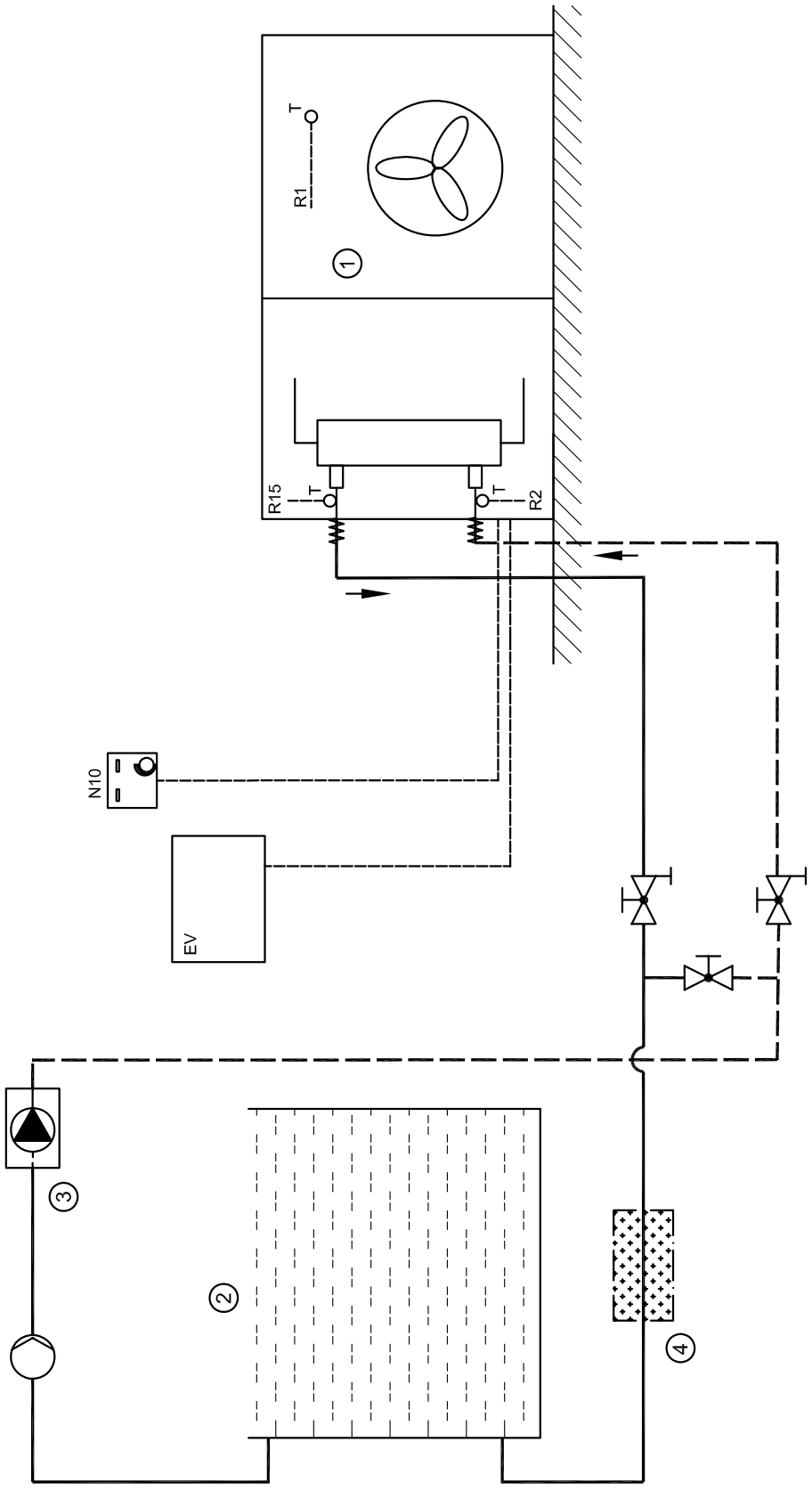


2.8 Legende / Legend / Légende LAS 22TT

E4	Düsenringheizung	Nozzle ring heater	Chauffage à faisceau tubulaire
E11	Abtauheizung	Defrost heater	Dégivrage
F1	Steuersicherung	Control fuse	Fusible de commande
F4	Pressostat Hochdruck	High-pressure switch	Pressostat haute pression
F5	Pressostat Niederdruck	Low-pressure switch	Pressostat basse pression
F23	Thermokontakt Ventilator	Thermal contact for ventilator	Contact thermique ventilateur
H1**	Leuchte Betriebsbereit	Indicator lamp, ready for operation	Lampe “prêt à fonctionner”
K1	Schütz Verdichter / Lüfter	Contactor for compressor / ventilator	Contacteur compresseur / aérateur
K14	Schütz Abtauheizung	Contactor for defrost heater	Contacteur dégivrage
K27*	Relais Anforderung Filterpumpe	Relay for filter pump request	Relais activation pompe de filtration
M1	Verdichter	Compressor	Compresseur
M2	Ventilator	Ventilator	Ventilateur
N7	Softstarter	Soft starter	Démarreur progressif
N10	Fernbedienung	Remote control	Commande à distance
N12	Steuerungsplatine	Control PCB	Panneau de commande
R1	Außenfühler	External sensor	Sonde extérieure
R2	Rücklauffühler	Return flow sensor	Sonde circuit de retour
R7	Kodierwiderstand	Coding resistor	Résistance de codage
R12.1	Abtauende	Defrost end	Fin de dégivrage
R12.2	Abtauende	Defrost end	Fin de dégivrage
R14**	Sollwert Potentiometer	Setpoint potentiometer	Consigne potentiomètre
R15	Vorlauffühler	Flow sensor	Sonde circuit de départ
S1**	Steuerschalter WP-EIN/AUS	Control switch HP ON/OFF	Interrupteur de commande MARCHE/ARRET PAC
S2**	Umschalter HEIZEN/KÜHLEN	Changeover switch HEATING/COOLING	Commutateur CHAUFFAGE/REFROIDISSEMENT
X1	Klemmenleiste Netz- ~3/N/PE - 400 V AC / 50 Hz	Terminal strip for mains ~3/N/PE - 400 V AC / 50 Hz	Bornier réseau - ~3/N/PE - 400 V AC / 50 Hz
X2	Klemmenleiste externe Verdrahtung	Terminal strip for external wiring	Bornier câblage extérieur
X3	Klemmenleiste Abtauheizungen	Terminal strip for defrost heaters	Bornier dégivrage
X5	Klemmenleiste interne Verdrahtung	Terminal strip for internal wiring	Bornier câblage intérieur
———	werksseitig verdrahtet	Wired ready for use	câblé départ usine
- - - - - -	bauseits bei Bedarf anzuschließen	To be connected by the customer as required	à raccorder par le client au besoin
*	Bauteile sind extern beizustellen	Components to be supplied from external sources	Pièces à fournir par le client
**	Bauteile sind in der Fernbedienung	Components are in the remote control	Pièces intégrées au boîtier de commande à distance

3 Hydraulische Prinzipschemen / Hydraulic block diagrams / Schémas hydrauliques

3.1 Darstellung / Schematic view / Représentation schématique



3.2 Legende / Legend / Légende

	Umwälzpumpe	Circulating pump	Pompe de circulation
	Absperrventil mit Entwässerung	Shutoff valve with drainage	Vanne d’arrêt et évacuation de l’eau
	Temperaturfühler	Temperature sensor	Sonde de température
	Flexibler Anschlussschlauch	Flexible connection hose	Tuyau de raccordement
①	Luft/Wasser-Wärmepumpe	Air-to-water heat pump	PAC air/eau
②	offener Wasserspeicher (Bassin)	Open water storage (basin)	Réservoir d’eau à ciel ouvert (bassin)
③	Filteranlage	Filter system	Installation de filtration
④	Wasseraufbereitung	Water treatment	Installation de traitement de l’eau
N10	Fernversteller - für Innenraummontage	Remote control - for interior installation	Régleur à distance - pour montage intérieur
R1	Außenfühler	External sensor	Sonde extérieure
R2	Rücklauffühler	Return flow sensor	Sonde du circuit de retour
R15	Vorlauffühler	Flow sensor	Sonde du circuit de départ
EV	Elektroverteilung	Electrical distribution system	Distribution électrique

Je nach Einsatzfall und Aufstellungsort ist der Einsatz zusätzlicher Absperr- und Regelventile in der Nähe der Wärmepumpe empfehlenswert.

Depending on the installation location and application, we recommend installing additional shut-off valves and control valves in the vicinity of the heat pump according to need.

Suivant le type d’utilisation et l’emplacement, l’emploi de vannes d’arrêt et de régulation supplémentaires au droit de la PAC est recommandé.

4 Konformitätserklärung / Declaration of Conformity / Déclaration de conformité

EG - Konformitätserklärung
EC Declaration of Conformity
Déclaration de conformité CE ©

CE

Der Unterzeichnete
The undersigned
La société soussignée,

Glen Dimplex Deutschland GmbH
Geschäftsbereich Dimplex
Am Goldenen Feld 18
D - 95326 Kulmbach

bestätigt, dass das (die) nachfolgend bezeichnete(n) Gerät(e) aufgrund seiner (ihrer) Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Anforderungen der EG-Richtlinien entspricht (entsprechen).

Bei einer nicht mit uns abgestimmten Änderung des (der) Gerät(e)s verliert diese Erklärung ihre Gültigkeit.

hereby confirm that the design and construction of the product(s) listed below, in the version(s) placed on the market by us, conform to the relevant requirements of the applicable EC directives.

This declaration becomes invalidated if any modifications are made to the product(s) without our prior authorisation.

certifie que l'appareil / les appareils ci-après, par leur conception et leur mode de construction ainsi que par la définition technique avec laquelle il(s) sont mis en circulation par notre société, est / sont conforme(s) aux directives fondamentales CEE afférentes.

Ce certificat perd sa validité pour tout appareil modifié sans notre consentement.

Bezeichnung / Designation / Désignation

***Luft/Wasser/-Wärmepumpen zur Schwimmbaderwärmung** mit R407C*
***Air-to-water heat pumps for pool heating**, containing R407C*
***Pompes à chaleur air/eau pour piscines** avec R407C*

EG - Richtlinien / EC Directives / Directives CEE

EG- Niederspannungsrichtlinie / EC Low Voltage Directive / Directive CEE relative à la basse tension (73/23/EWG)
EG-EMV-Richtlinie / EC EMC Directive / Directive CEE relative à la compatibilité électromagnétique (89/336/EWG)
Druckgeräterichtlinie / Pressure Equipment Directive / Directive CEE relative aux appareils sous pression (97/23/EG)

Typ(e):

LAS 10MT
LAS 15MT
LAS 22TT

Harmonisierte EN / Harmonized EB Standards / Normes EN harmonisées:

EN 255:1997
EN 378:2000
DIN 8901

DIN EN 60335-1 (VDE 0700 T1):2005-07	*EN 60335-1:2002+A11:2004+A1:2004*
DIN EN 60335-2-40 (VDE 0700 T40):2004-03	*EN 60335-2-40:2003*
DIN EN 55014-1 (VDE 0875 T14-1):2003-09	*EN 55014-1:2000+A1:2001+A2:2002*
DIN EN 55014-2 (VDE 0875 T14-2):2002-08	*EN 55014-2:1997+A1:2001*
DIN EN 61000-3-2 (VDE 0838 T2):2001-12	*EN 61000-3-2:2000*
DIN EN 61000-3-3 (VDE 0838 T3):2002-05	*EN 61000-3-3:1995+Corr.:1997+A1:2001*

Nationale Richtlinien / National Directives / Directives nationales

D	***A***	***CH***
VBG20		*SVTI*

Kulmbach, 05.05.2006

CE11W05E.doc

Wolfgang Weinhold
Geschäftsführer / Managing Director

Andreas Tüch
Spartenleiter / Head of business unit

Glen Dimplex Deutschland GmbH
Geschäftsbereich Dimplex
Am Goldenen Feld 18
D-95326 Kulmbach

+49 (0) 9221 709 565
www.dimplex.de