

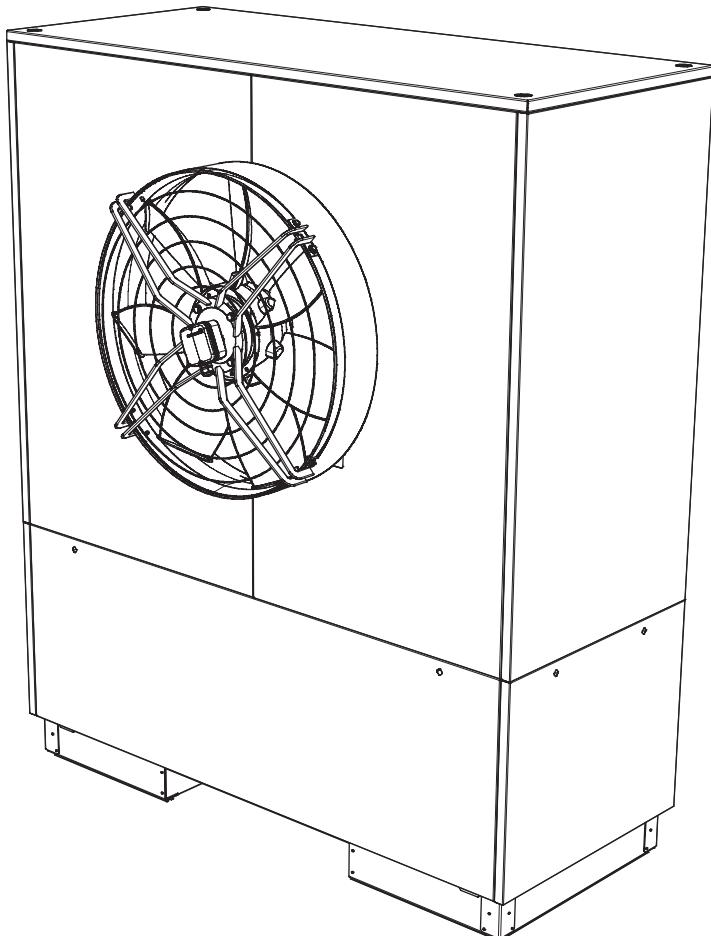
LA 35TUR+

 Dimplex

**Montage- und
Gebrauchsanweisung**

**Installation and
Operating Instructions**

**Instructions d'installation
et d'utilisation**



**Reversible
Luft/Wasser-
Wärmepumpe für
Außenaufstellung**

**Reversible
Air-to-Water Heat
Pump for Outdoor
Installation**

**Pompe à chaleur
air-eau réversible
pour installation
extérieure**

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1 Please Read Immediately

1.1 Important Information

⚠ ATTENTION!

For devices with a refrigerant quantity of 6 kg or more, the refrigerating circuit must be checked for leaks each year in compliance with regulation (EC) No. 842/2006.

⚠ ATTENTION!

The device is not suitable for operation with a frequency converter.

⚠ ATTENTION!

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

⚠ ATTENTION!

The transport securing device is to be removed prior to commissioning.

⚠ ATTENTION!

Do not restrict or block up the area around the air inlet or outlet.

⚠ ATTENTION!

Ensure that there is a clockwise rotating field: With incorrect wiring the starting of the heat pump is prevented. A corresponding warning is indicated on the display of the heat pump manager (adjust wiring).

⚠ ATTENTION!

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

⚠ ATTENTION!

We recommend the installation of a suitable corrosion protection system to prevent the formation of deposits (e.g. rust) in the condenser of the heat pump.

⚠ ATTENTION!

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

⚠ ATTENTION!

Any work on the heat pump may only be performed by authorised and qualified after-sales service technicians.

1.2 Intended Use

This device is only intended for use as specified by the manufacturer. Any other use beyond that intended by the manufacturer is prohibited. This requires the user to abide by the manufacturers product information. Please refrain from tampering with or altering the device.

1.3 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 adhered to. Any further connection requirements stipulated by the network operator must also be observed.

When connecting the heating and/or cooling system, all applicable regulations must be adhered to.

Persons, especially children, who are not capable of operating the device safely due to their physical, sensory or mental abilities or due to their inexperience or lack of knowledge, must not operate this device without supervision or instruction by the person in charge.

Children must be supervised to ensure that they do not play with the device.

⚠ ATTENTION!

For devices with a refrigerant quantity of 6 kg or more, the refrigerating circuit must be checked for leaks each year in compliance with regulation (EC) No. 842/2006.

More information can be found in the chapter Maintenance / Cleaning.

1.4 Energy-Efficient Use of the Heat Pump

With the purchase of this heat pump you are helping to protect the environment. A prerequisite for energy-efficient operation is the correct design of the heat source system and heating system.

It is particularly important for the efficiency of a heat pump to keep the temperature difference between heating water and heat source as small as possible. For this reason, it is advisable to design the heat source and heating system very carefully. **A temperature difference of approx. one Kelvin increases the power consumption by around 2.5%.** When designing the heating system, it should be borne in mind that special consumers such as e.g. domestic hot water preparation should also be taken into consideration and dimensioned for low temperatures. **Underfloor heating systems (panel heating)** are optimally suited for heat pump use on account of the low flow temperatures (30 °C to 40 °C).

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.

Correct adjustment of the heat pump manager is also important for energy-efficient use of the heat pump. Further information can be found in the operating instructions of the heat pump manager.

2 Purpose of the Heat Pump

2.1 Application

The brine-to-water heat pump is to be used exclusively for the heating and cooling of heating water. It can be used in new or already-existing heating systems.

The heat pump is suitable for mono energy and bivalent operation down to an external temperature of -25 °C.

Proper defrosting of the evaporator is guaranteed by maintaining a heating water return flow temperature of more than 18 °C during continuous operation.

The heat pump is not designed for the increased heat consumption required when a building is being dried out. For this reason, the additional heat consumption should be met using special devices provided by the customer. If a building is to be dried out in autumn or winter, we recommend installing an additional electric heating element (available as an accessory).

In cooling operation, the heat pump is suitable for air temperatures ranging from +10°C to + 45°C.

It can be used for silent and dynamic cooling. The minimum water temperature is +7°C.

ATTENTION!

The device is not suitable for operation with a frequency converter.

2.2 Operating Principle

Heating

Surrounding air is drawn in by the fan and fed through the evaporator (heat exchanger). The evaporator cools the air, i.e. it extracts heat from it. This extracted heat is then transferred to the working medium (refrigerant) in the evaporator.

The heat is brought to a higher temperature level by increasing its pressure with the aid of the electrically driven compressors. It is then transferred to the heating water via the liquefier (heat exchanger).

Water for domestic use and swimming pool water can be prepared simultaneously or separately via the additional heat exchanger.

Electrical energy is used to raise the temperature of the heat in the environment to a higher level. As the energy extracted from the air is transferred to the heating water, this type of device is called an air-to-water heat pump.

The air-to-water heat pump consists of the main components evaporator, fan and expansion valve, as well as the low-noise compressors, the liquefier and the electrical control system.

At low ambient temperatures, humidity accumulates on the evaporator in the form of frost, reducing the transfer of heat. The evaporator is defrosted automatically by the heat pump as required. Steam may be emitted from the air outlet depending on the atmospheric conditions.

Cooling

The functions of the evaporator and the liquefier are reversed in the "Cooling" operating mode.

The heating water transfers its heat to the refrigerant via the liquefier, which is now functioning as an evaporator. The refrigerant is brought to a higher temperature level using the compressor.

Heat is transferred to the surrounding air via the liquefier (which, in heating operation, functions as an evaporator).

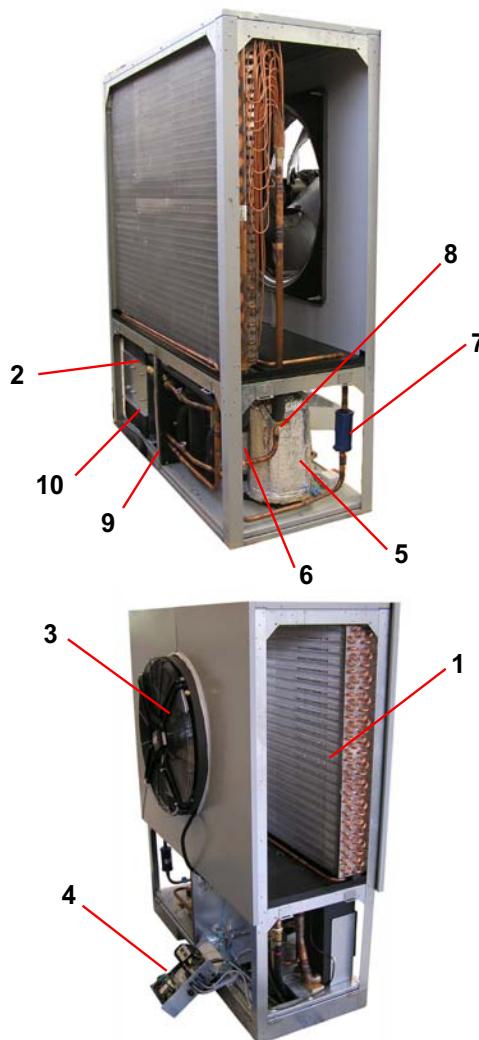
The waste heat can also be used for hot water preparation, swimming pool or bathroom heating, via the additional heat exchanger.

3 Scope of supply

3.1 Basic Device

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

The refrigerant circuit is "hermetically sealed". It contains the Kyoto protocol-approved refrigerant R417A with a GWP value of 1950. It is CFC-free, does not deplete ozone and is non-flammable.



- 1) Evaporator
- 2) Liquefier
- 3) Ventilator
- 4) Switch box
- 5) Compressor 1
- 6) Compressor 2
- 7) Filter dryer
- 8) Expansion valve
- 9) Collector
- 10) Hot water liquefier

3.2 Switch box

The switch box is located in the heat pump. It can be swung out after removing the lower front cover and loosening the fastening screw located in the upper left-hand corner.

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

The plug connectors for the control line are located on the switch box panel near the pivotal point.

3.3 Heat pump manager

Use the heat pump manager for reversible heat pumps included in the scope of supply to operate the reversible air-to-water heat pump.

The heat pump manager is a convenient electronic regulation and control device. It controls and monitors the entire heating and cooling system on the basis of the external temperature, including domestic hot water preparation and safety systems.

The external temperature sensor, including fixing accessories, is included in the scope of supply of the manager and must be installed by the customer.

The enclosed operating instructions describe the function and use of the heat pump manager.

4 Accessories

4.1 Electrical connection line

The electrical connection line is an accessory required for the functioning of the system. It connects the heat pump to the heat pump manager and it is available in various lengths.

4.2 External four-way reversing valve

The external four-way reversing valve (Y12) enables optimised heating and cooling operation of the reversible air-to-water heat pump. The reversal of the flow direction ensures an optimum flow through the heat exchanger in the heat pump in heating operation as well as in the opposite direction in cooling operation. The electrical actuator required for the automatic switching is controlled by the heat pump manager. (max. permissible switching current 2A).

If the external four-way reversing valve is not used, the heat outputs and the COPs are reduced as specified in the device information. With heating-only operation without an external four-way valve, the hydraulic connection should be carried out such that the heat exchanger is loaded in the opposite direction (observe note in section 7.2 "Connection on heating side").

The external four-way reversing valve with a set time of max. 30 seconds, which is available as special accessory, ensures switching of the water flow over the complete range of operating temperatures without any mixing losses. Provision of a dirt trap with a mesh size of 0.6 mm is recommended at a suitable location.

The hydraulic and electrical circuit diagrams in the Appendix show the basic design. Detailed installation instructions are provided with the four-way reversing valve.

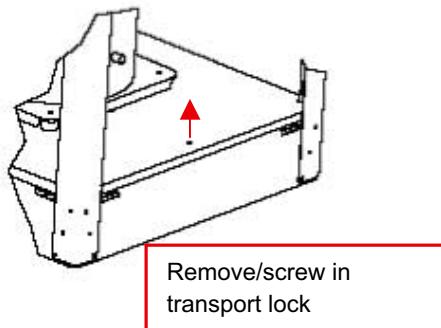
5 Transport

⚠ ATTENTION!

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

Use a wooden pallet for transporting the heat pump to the final installation location. The basic device can be transported either with a lift truck or a crane. The transport eyebolts must be removed after crane transport and the sheet metal openings closed with the closing plugs supplied.

After the transport, the transport securing device is to be removed on either side at the bottom of the unit.



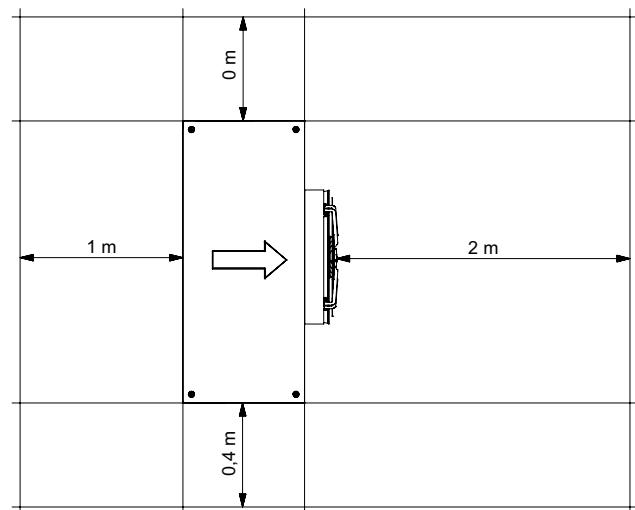
⚠ ATTENTION!

The transport securing device is to be removed prior to commissioning.

6 Set-up

6.1 General

The device should always be installed on a permanently smooth, even and horizontal surface. The entire frame should lie directly on the ground to ensure a good soundproof seal and to prevent the water-bearing components from becoming too cold. If this is not the case, additional insulation measures may be necessary. Furthermore, the heat pump should be set up so that the air outlet direction of the ventilator is perpendicular to the main wind direction to allow unrestricted defrosting of the evaporator. It must be possible to carry out maintenance work without hindrance. This is ensured when observing the distances to solid walls as shown in the figure.



The specified dimensions are only valid for stand-alone installation.

⚠ ATTENTION!

Do not restrict or block up the area around the air inlet or outlet.

6.2 Condensed Water Pipe

Condensed water that forms during operation must be drained off frost-free. To ensure proper drainage, the heat pump must be mounted horizontally. The condensed water pipe must have a minimum diameter of 50 mm and should be fed frost-free into a sewer. Condensed water should not be discharged directly into clearing tanks and cesspits because the aggressive vapours could destroy the evaporator.

7 Installation

7.1 General

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

- Heating system flow and return flow
- Hot water circuit flow and return flow
- Condensate outflow
- Control line to the heat pump manager
- Power supply

7.2 Connection on heating side

The heating system connections on the heat pump have a 1 1/2" external thread. Route the connection hoses out of the device in a downwards direction. Use a spanner to firmly grip the transitions when connecting the heat pump.

Before connecting the heating water system to the heat pump, the heating system must be flushed to remove any impurities, residue from sealants, etc. Any accumulation of deposits in the liquefier could cause the heat pump to completely break down.

Once the heat pump has been connected to the heating system, it must be filled, de-aerated and pressure-tested. We recommend water treatment according to VDI 2035.

Use of the optionally available four-way reversing valve is recommended. A detailed installation description can be found in the instructions included in the scope of supply of the valve.

The following is true for heating-only operation of the heat pump:

If the heat pump is used for heating purposes only, the hydraulic connections at the liquefier can be connected the opposite way round. In this case, the attached device label can be ignored. Connection [A] is connected to the heating flow; connection [B] is connected to the heating return flow.

Important: The notes/settings in the instructions of the heat pump manager must always be observed and carried out accordingly; not doing so will lead to malfunctions.

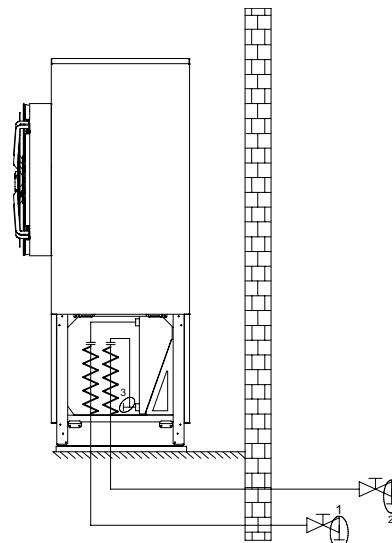
With this type of operation, cooling operation is not possible. The system can only be operated in heating mode. The performance ratings are valid as specified in the device information.

Minimum heating water flow

The minimum heating water flow through the heat pump must be assured in all operating states of the heating system. This can be accomplished, for example, by installing a differential pressure-less manifold.

Antifreeze

A method of manual drainage (see illustration) should be provided for heat pumps which are exposed to frost. The antifreeze function of the heat pump manager is active whenever the manager and the heat circulating pump are ready for operation. If the heat pump is taken out of service or in the event of a power failure, the system has to be drained. The heating circuit should be operated with a suitable antifreeze if heat pump systems are implemented in buildings where a power failure cannot be detected (holiday homes).



7.3 Electrical Connection

A standard four-core cable is used for connecting the heat pump to the power supply.

The cable must 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.

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 circuit breaker with common tripping for all external conductors must be installed in the power supply (tripping current in compliance with the Device Information). When connecting, ensure that the incoming supply has a clockwise rotating field.

Phase sequence: L1, L2, L3.

ATTENTION!

Ensure that there is a clockwise rotating field: With incorrect wiring the starting of the heat pump is prevented. A corresponding warning is indicated on the display of the heat pump manager (adjust wiring).

The control voltage is supplied via the heat pump manager.

The heat pump manager has a 230 V AC-50 Hz power supply and is connected in compliance with its own operating instructions (16 A fuse).

The control lines (not included in the scope of supply) have rectangular plug connectors on both ends. One end is connected to the heat pump manager, and the other end is connected to the switch box in the heat pump. The plug connections to the heat pump are located on the bottom of the switch box.

Two separate lines are used as control lines. One of the lines is designed for the 230 V control voltage level, the other for the signal and/or extra-low voltage level.

More detailed information can be found in the operating instructions of the heat pump manager.

For detailed information, see circuit diagrams in the Appendix.

8 Start-Up

8.1 General

To ensure that start-up is performed correctly, it should only be carried out by an after-sales service technician authorised by the manufacturer. This may be a condition for extending the guarantee (see Warranty Service).

Start-up should be carried out in heating operation.

8.2 Preparation

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

- The heat pump must be fully connected, as described in Chapter 7.
- All valves that could impair the proper flow of the heating water in the heating circuit must be open.
- The air intake and air outlet paths must be clear.
- The fan must turn in the direction indicated by the arrow.
- The settings of the heat pump manager must be adapted to the heating system in accordance with the manager's operating instructions.
- Ensure the condensate outflow functions properly.

8.3 Procedure

The heat pump is started up via the heat pump manager. Adjustments should be made in compliance with the instructions.

Any faults occurring during operation are also displayed on the heat pump manager, and can be corrected as described in the operating instructions of the heat pump manager.

At hot water temperatures under 7 °C, start-up is not possible. The water in the buffer tank must be heated to a minimum of 18 °C with the second heat generator.

To ensure a problem-free start-up, the following procedure is to be implemented:

- 1) Close all consumer circuits.
- 2) Ensure that the heat pump has the correct water flow rate.
- 3) Use the manager to select the automatic operating mode.
- 4) In the special functions menu, start the "Start-up" program.
- 5) Wait until a return flow temperature of at least 25 °C has been reached.
- 6) Now slowly reopen the heating circuit valves in succession so that the heating water flow is constantly raised by slightly opening the respective heating circuit. The heating water temperature in the buffer tank must not be allowed to drop below 20 °C during this process. This ensures that the heat pump can be defrosted at any time.
- 7) When all heating circuits are fully opened and a return flow temperature of at least 18 °C is maintained, set a minimum volume flow quantity on the overflow valve (where present) and on the heat circulating pump.

9 Maintenance / Cleaning

9.1 Maintenance

To protect the paintwork, avoid leaning anything against the device 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 sediment in the heat exchanger of the heat pump, ensure that the heat exchanger in the heating system can not be contaminated. In the event that operating malfunctions due to contamination still occur, the system should be cleaned as described below.

9.2 Cleaning the Heating System

The ingress of oxygen into the heating water circuit may result in the formation of oxidation products (rust), particularly if steel components are used. These products enter the heating system via the valves, the circulating pumps and/or plastic pipes. It is therefore essential - in particular with respect to the piping of underfloor heating systems - that only diffusion-proof materials are used.

ATTENTION!

We recommend the installation of a suitable corrosion protection system to prevent the formation of deposits (e.g. rust) in the condenser of the heat pump.

Residue from lubricants and sealants may also contaminate the heating water.

In the case of severe contamination leading to a reduction in the performance of the liquefier in the heat pump, the system must be cleaned by a heating technician.

According to current information, we recommend using a 5% phosphoric acid solution for cleaning purposes. However, if cleaning needs to be performed more frequently, a 5% formic acid solution should be used.

In either case, the cleaning fluid should be at room temperature. We recommend flushing the heat exchanger in the direction opposite to the normal flow direction.

To prevent acidic cleaning agents from entering the heating system circuit, we recommend connecting the flushing device directly to the flow and return flow of the liquefier of the heat pump.

It is important that the system be thoroughly flushed using appropriate neutralising agents to prevent damage caused by cleaning agent residue remaining in the system.

Acids must be used with great care and all relevant regulations of the employers' liability insurance associations must be adhered to.

If in doubt, contact the manufacturer of the chemicals!

9.3 Cleaning the Air System

Evaporator, ventilator and condensate outflow should be cleaned of contamination (leaves, twigs, etc.) before each new heating period.

ATTENTION!

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

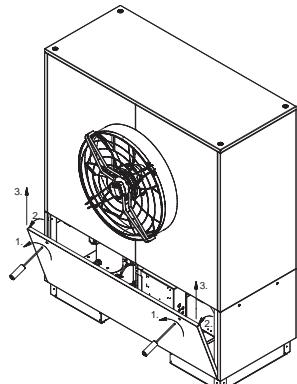
To prevent the evaporator and the condensate tray from being damaged, do not use hard or sharp objects for cleaning.

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

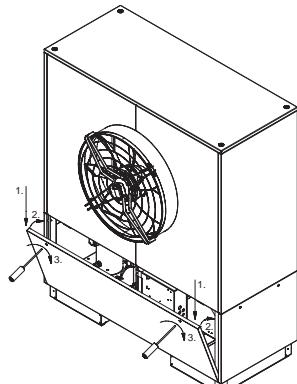
To ensure proper drainage from the condensate tray, it must be regularly inspected and cleaned, if necessary.

All panelling can be removed to allow accessing the inside of the device. Note that the upper covers can only be removed after the lower covers have been taken off.

The two sash fasteners must be opened for this purpose. The cover must then be slightly tilted forward and lifted off toward the top.

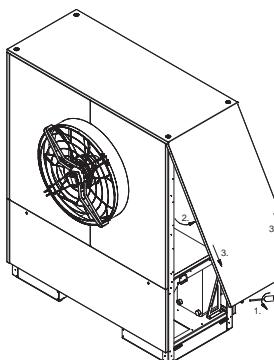


Opening the lower covers

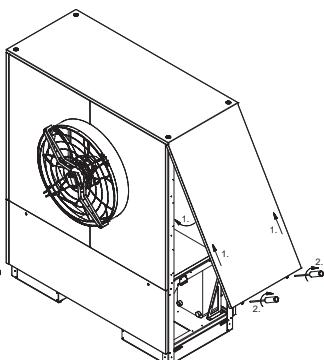


Closing the lower covers

The lateral and rear panels are hooked into the cover panel. Loosen the two screws for dismantling and unhook the panels by pulling them back.

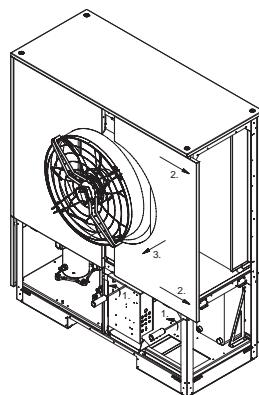


Opening the lateral and rear cover panels on top

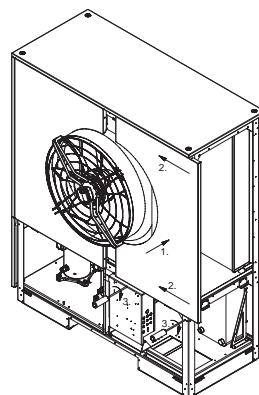


Closing the lateral and rear cover panels on top

The cover panels on the ventilator side can be dismantled after the two upper lateral side panels have been removed. Loosen the screws for this purpose, slide the panel slightly to the right or left and then lift it off towards the front.



Opening the upper front covers



Closing the upper front covers

9.4 Maintenance

Refrigerating circuits with a minimum refrigerant quantity of 3kg, or "hermetically sealed" refrigerating circuits with a minimum refrigerant quantity of 6 kg must be tested for leaks yearly by the operator according to regulation (EC) No. 842/2006.

The leak test is to be documented and archived for a minimum of 5 years. The test is to be carried out by certified personnel only according to regulation (EC) No. 1516/2007. The attached table can be used as a basis for the documentation.

10 Faults / Trouble-Shooting

This heat pump is a quality product and designed for trouble-free and maintenance-free operation. In the event that a fault should occur, it will be indicated on the heat pump manager display. Simply consult the Faults and Trouble-Shooting page in the operating instructions of the heat pump manager. If you cannot correct the fault yourself, please contact your after-sales service technician.

ATTENTION!

Any work on the heat pump may only be performed 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.

12 Device information

1 Type and order code	LA 35TUR+		
2 Design			
2.1 Model	Reversible with additional heat exchanger		
2.2 Controller	External		
2.3 Thermal heat metering	Integrated		
2.4 Installation location / degree of protection according to EN 60529	Outdoor / IP24		
2.5 Antifreeze condensate tray / heating water	Heated / yes ¹		
2.6 Performance levels	2		
3 Operating limits			
3.1 Heating water flow / return flow	°C	up to 65 ² ± 2 / from 18	
Cooling water flow	°C	+7 to +20	
Air (heating)	°C	-25 to +40	
Air (cooling)	°C	+10 to +45	
4 Performance ratings³ / flow rate			
4.1 Heating water flow rate / internal pressure differential	A7/W35/50	m³/h / Pa	5.2 / 2900
	A7/W45/38	m³/h / Pa	3.5 / 1400
	A7/W55/45	m³/h / Pa	2.4 ⁴ / 700
4.2 Heat output / COP ^{5 6 7}		EN 255	EN 14511
at A7 / W35	kW / ---	8	17.8 / 2.9
	kW / ---	9	10.1 / 3.0
at A2 / W35	kW / ---	8	24.2 / 4.0
	kW / ---	9	14.0 / 4.3
at A7 / W35	kW / ---	8	30.2 / 4.5
	kW / ---	9	17.3 / 4.8
at A7 / W55	kW / ---	8	27.1 / 2.8
	kW / ---	9	15.4 / 3.1
at A10 / W35	kW / ---	8	33.4 / 5.1
	kW / ---	9	18.3 / 5.3
4.3 Cooling water flow rate / internal pressure differential	m³/h / Pa	5.2 ¹⁰ / 2900	
4.4 Cooling capacity / COP ¹¹	at A27 / W9	kW/---	27.3 / 3.6
	at A27 / W7	kW / ---	15.0 / 4.2
at A27 / W18	kW / ---	8	32.0 / 3.9
	kW / ---	9	19.1 / 4.9
at A35 / W9	kW/---	8	24.9 / 2.8
	at A35 / W7	kW / ---	13.6 / 3.3
at A35 / W18	kW / ---	8	29.7 / 3.1
	kW / ---	9	17.6 / 4.0
4.5 Sound power level energy / sound optimised	dB(A)	up to 72 / up to 70	
4.6 Sound pressure level at a distance of 10 m (air outlet side) ¹²	dB(A)	Up to 43	
4.7 Flow rate of additional heat exchanger / internal pressure differential	m³/h / Pa	2.5 / 9400	
4.8 Air flow (controlling range) ³	m³/h	5000 - 15000	

5 Dimensions, connections and weight		
5.1 Device dimensions without connections	H x W x L mm	2100 x 1735 x 980 (750)
5.2 Device connections for heating system	Inch	1 1/2" internal thread
5.3 Device connections for additional heat exchanger (waste heat recovery)	Inches	1 1/4" external thread
5.4 Weight of the transportable unit(s) incl. packaging	kg	595
5.5 Refrigerant; total filling weight	type / kg	R417A / 22.0
5.6 Lubricant; total filling quantity	type / litres	Polyolester (POE) / 4.1
6 Electrical connection		
6.1 Nominal voltage; fuse protection	V / A	400 / 25
6.2 Starting current with soft starter	A	30
6.3 Nominal power consumption A2 W35/ max. consumption ^{5 8}	kW	6.4 / 12.4
6.4 Nominal current A2 W35 / cos φ ⁸	A / ---	11.5 / 0.8
6.5 Max. power consumption of compressor protection (per compressor)	W	70; thermostatically controlled
7 Complies with the European safety regulations		13
8 Additional model features		
Type of defrosting (according to need)		Reverse circulation

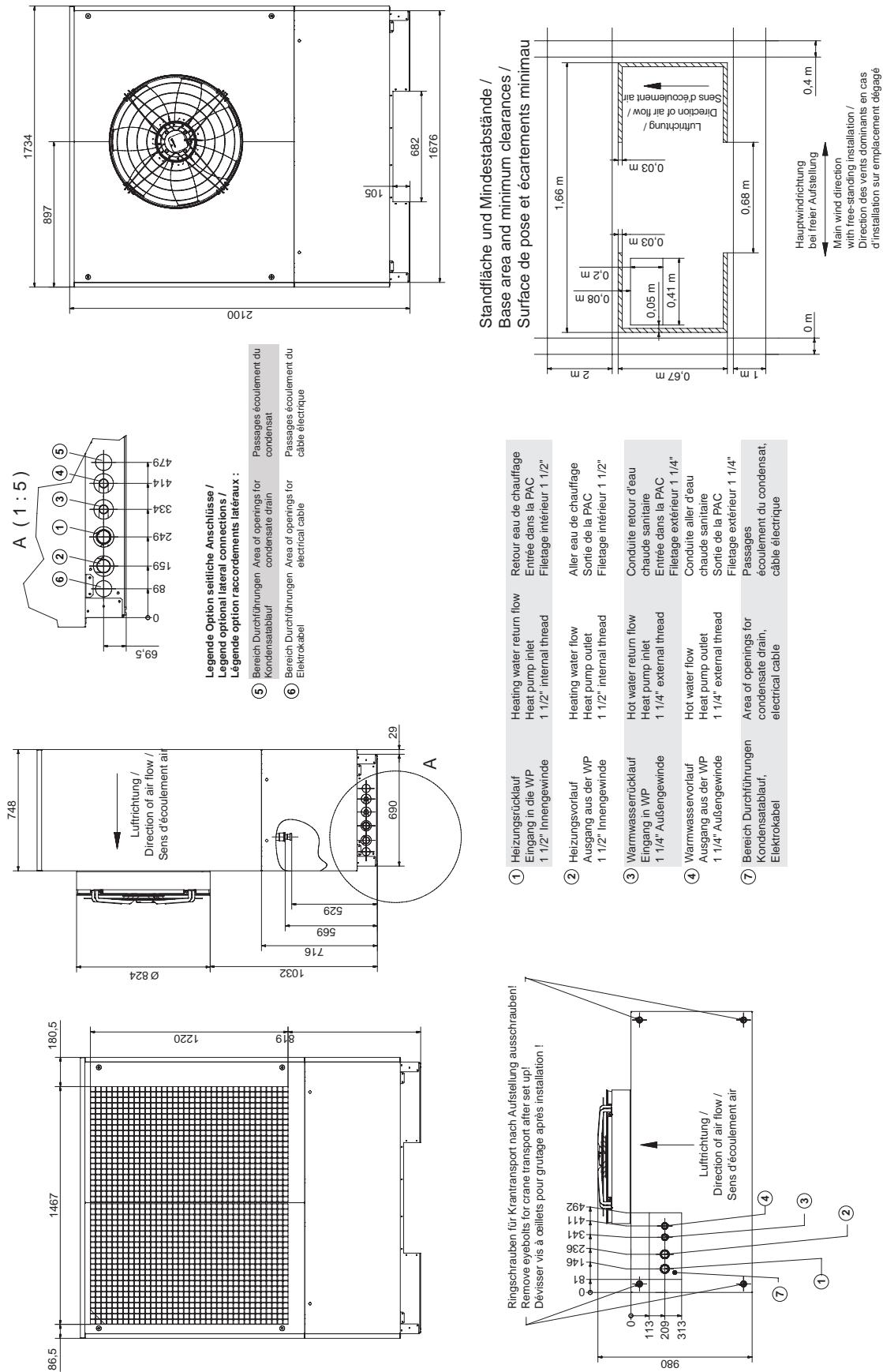
1. The heat circulating pump and the heat pump controller must always be ready for operation.
2. For air temperatures between -25 °C and 0 °C, flow temperature increasing from 50 °C to 65 °C.
3. The fan speed is regulated according to need. It is freely adjustable and enables energy-optimised operation.
4. Minimum heating water flow
5. This data indicates the size and capacity of the system according to EN 14511 (5K at A7) and/or EN 255 (10K at A2) without weather-proof protective cover. For an analysis of the economic and energy efficiency of the system, other parameters, such as, in particular, defrosting capacity, bivalence point and regulation, should also be taken into consideration. The specified values have the following meaning, e.g. A7 / W35: external air temperature 7 °C and heating water flow temperature 35 °C.
6. The specified coefficients of performance are also achieved in parallel hot water preparation via additional heat exchangers.
7. In order to obtain the values specified, the optionally available hydraulic 4-way reversing valve (external) must be used.
Without the reversing valve, the heat output is reduced by approximately 10%, the COPs by approximately 12%.
8. 2-compressor operating mode
9. 1-compressor operating mode
10. Minimum cooling water flow
11. Considerably higher COPs are achieved by means of cooling operation and waste heat recovery using additional heat exchangers.
12. The specified sound pressure level corresponds to the operating noise of the heat pump in heating operation with a flow temperature of 35 °C.
13. See CE declaration of conformity

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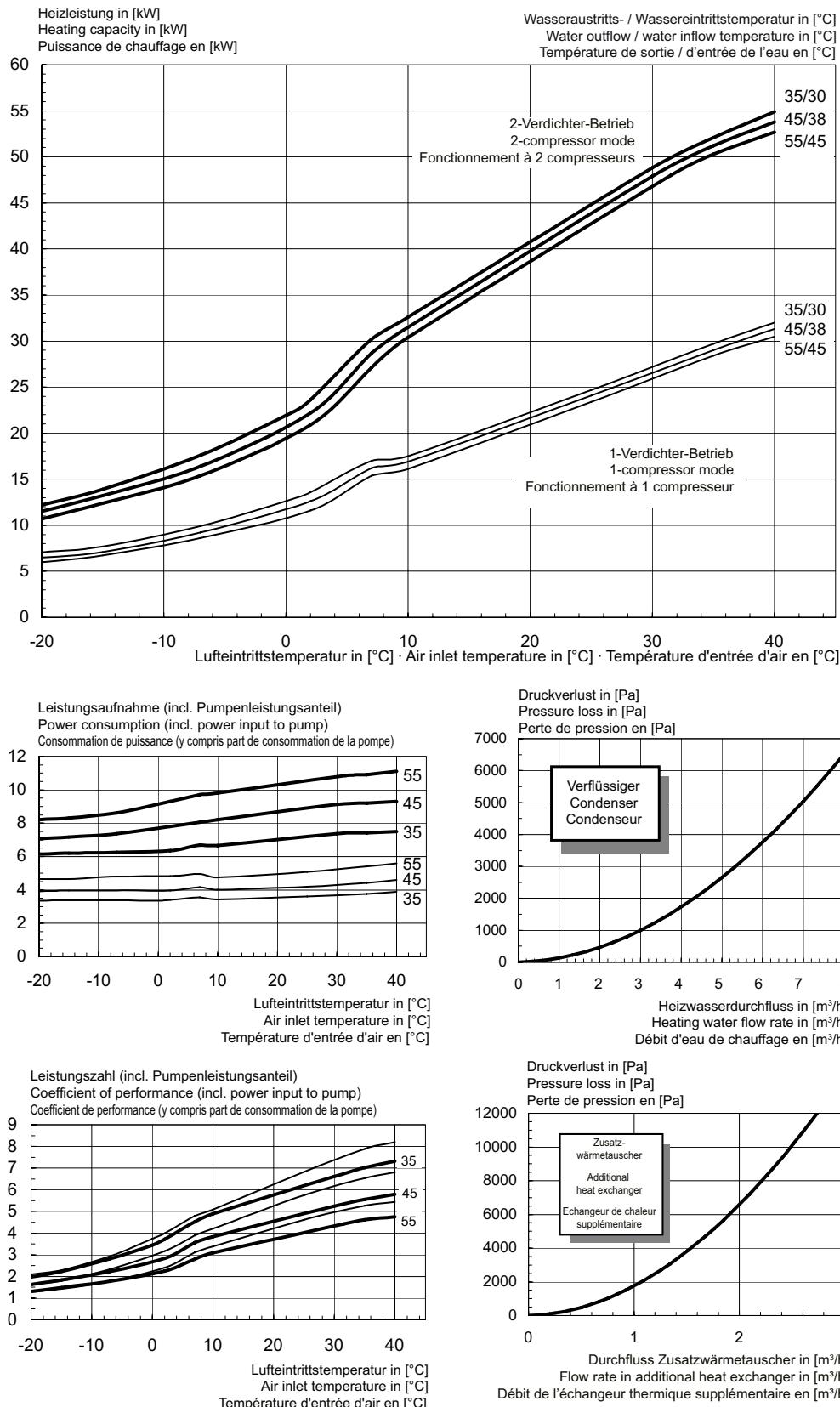
1 Maßbilder / Dimension Drawings / Schémas cotés

1.1 Maßbild / Dimension Drawing / Schéma coté

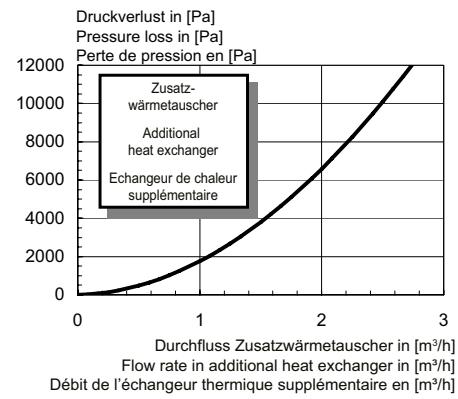
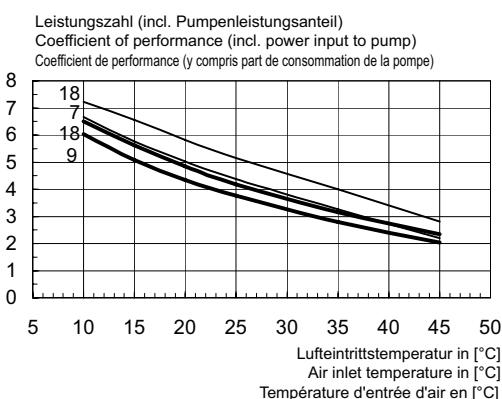
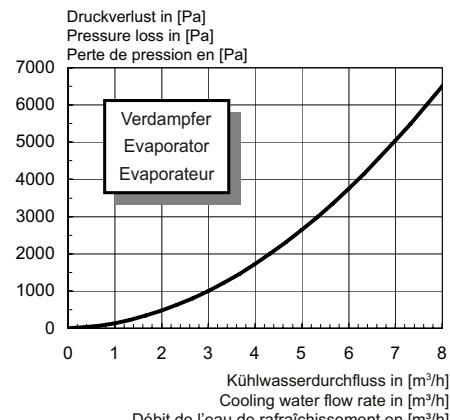
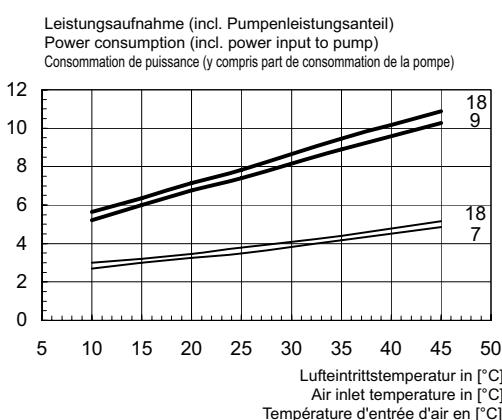
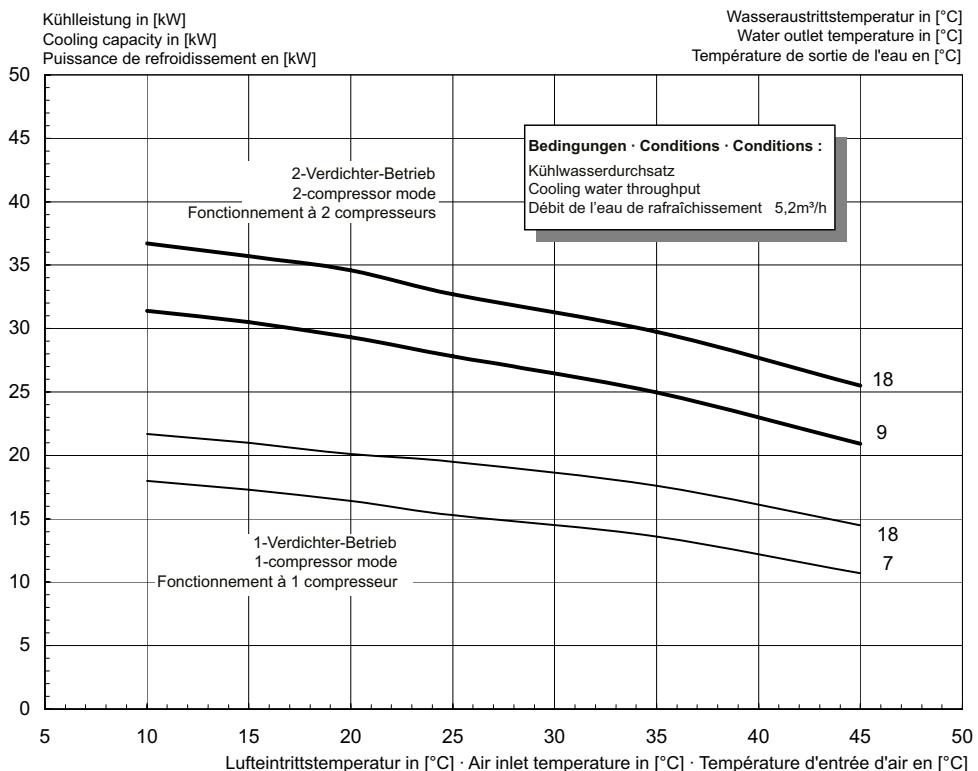


2 Diagramme / Diagrams / Diagrammes

2.1 Kennlinien Heizbetrieb / Characteristic curves for heating operation / Courbes caractéristiques mode chauffage

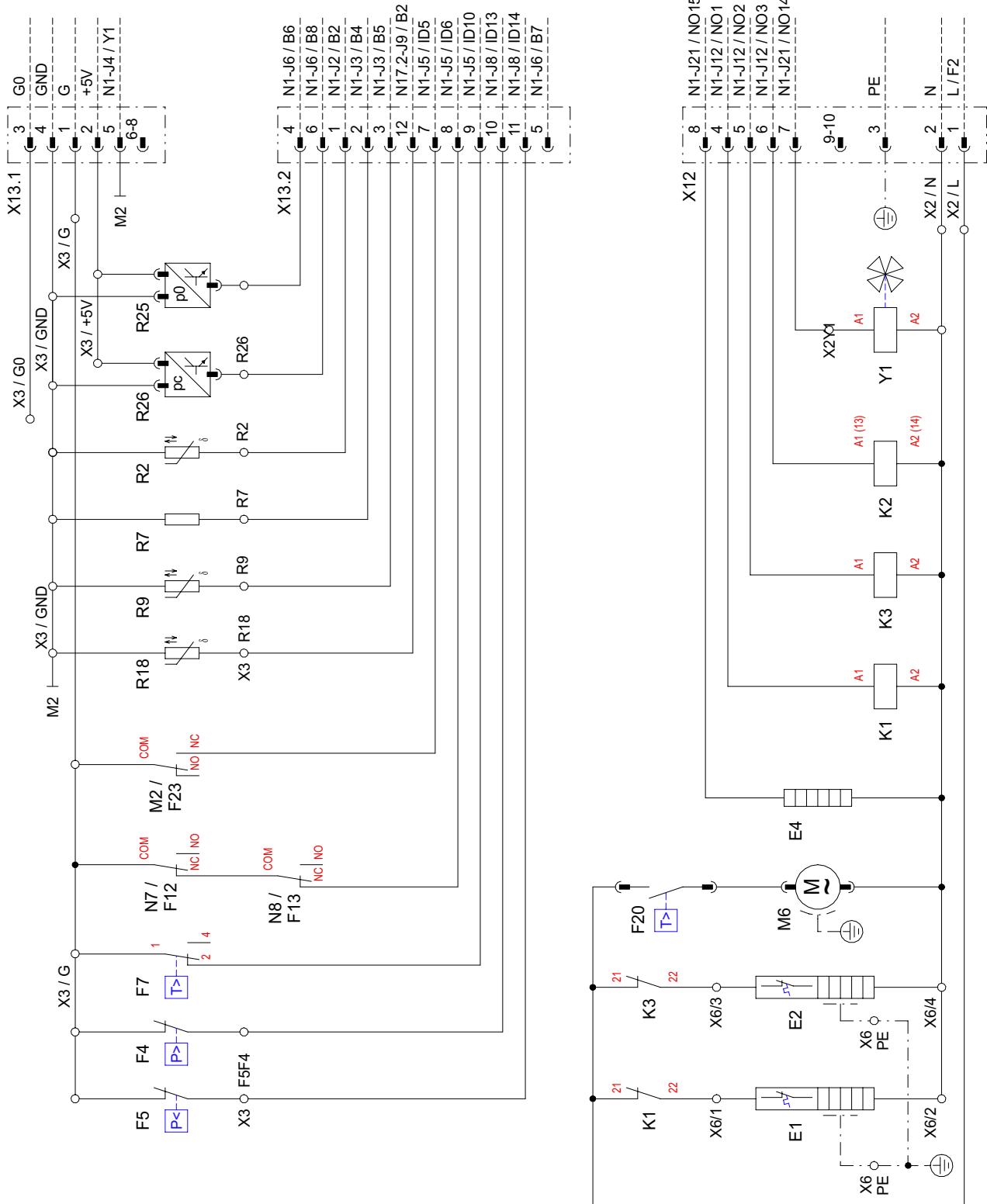


2.2 Kennlinien Kühlbetrieb / Characteristic curves for cooling operation / Courbes caractéristiques mode rafraîchissement

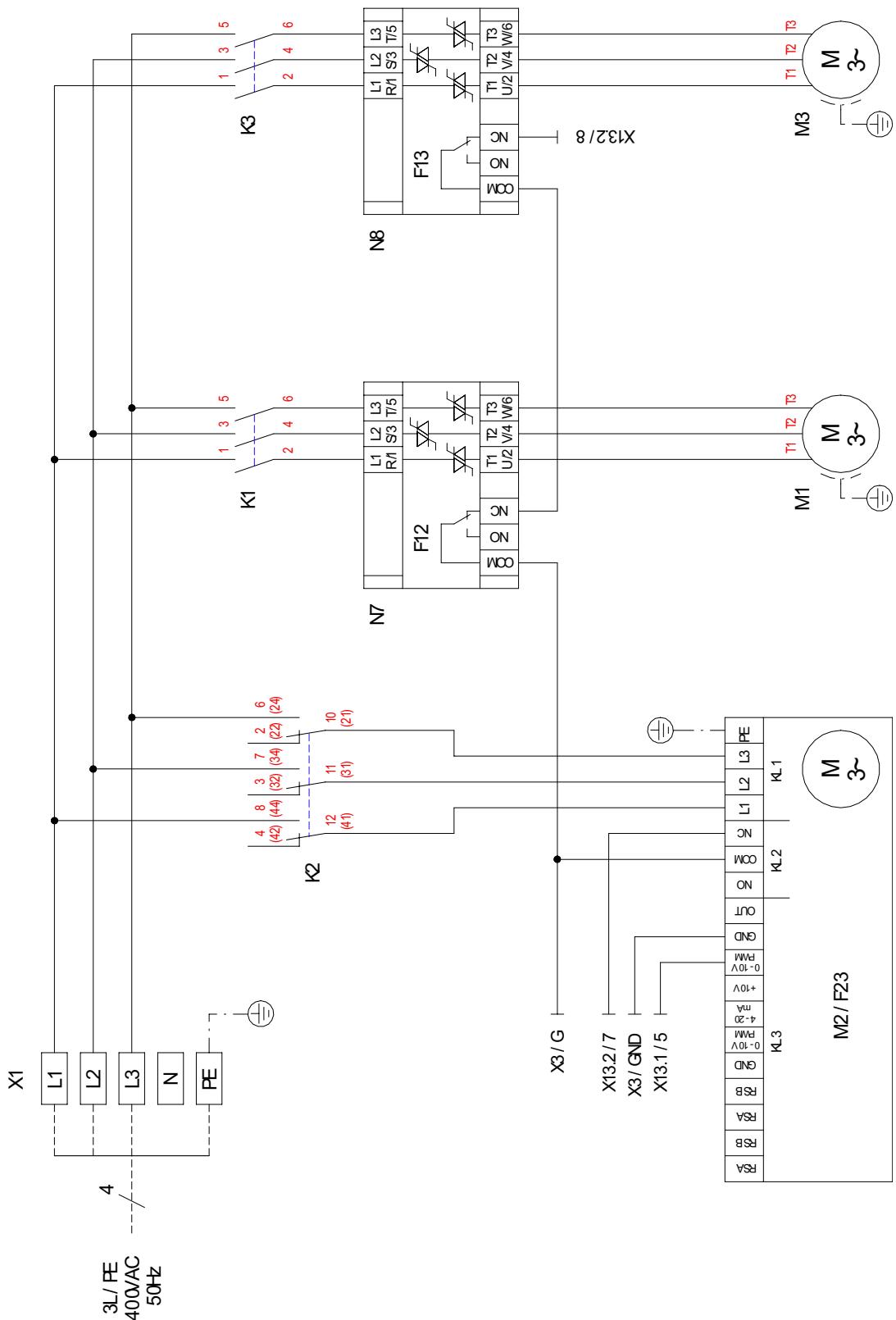


3 Stromlaufpläne / Circuit Diagrams / Schémas électriques

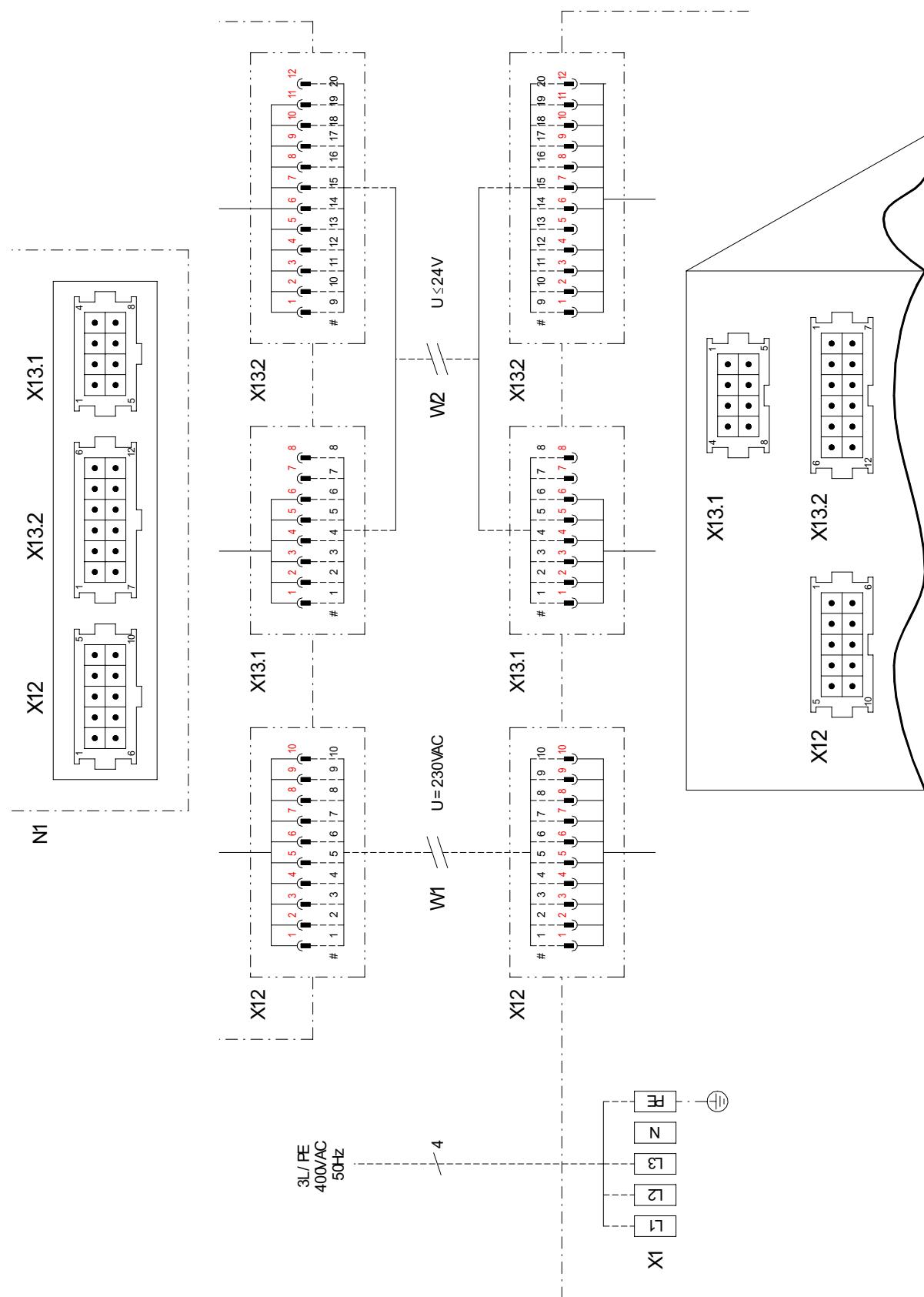
3.1 Steuerung / Control / Commande



3.2 Last / Load / Charge



3.3 Anschlussplan / Circuit Diagram / Schéma électrique

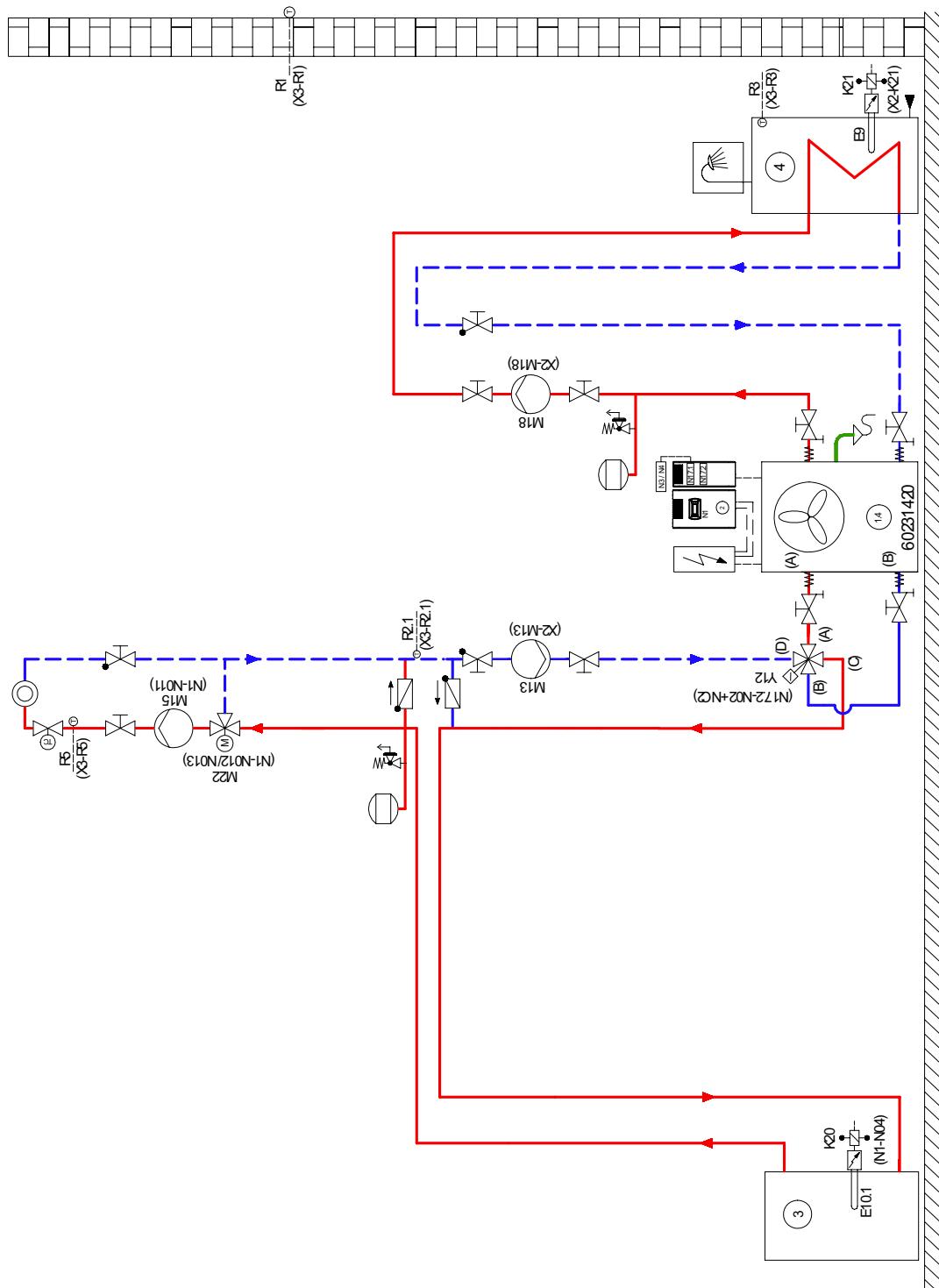


3.4 Legende / Legend / Légende

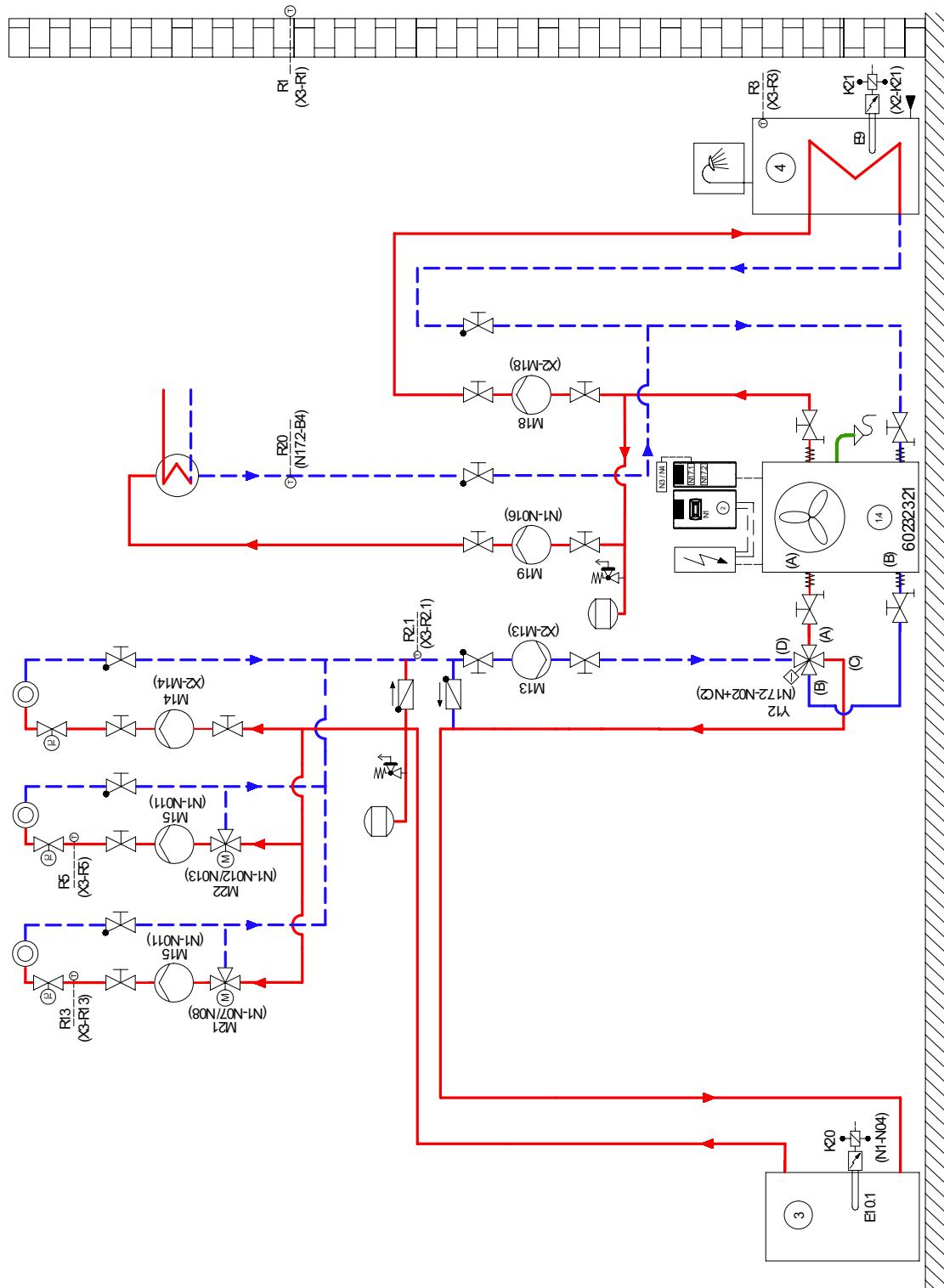
E1	Ölsumpfheizung Verdichter 1	Oil sump heater for compressor 1	Chauffage à carter d'huile compresseur 1
E2	Ölsumpfheizung Verdichter 2	Oil sump heater for compressor 2	Chauffage à carter d'huile compresseur 2
E4	Düsenringheizung Ventilator	Nozzle ring heater for fan	Chauffage à couronne perforée ventilateur
F4	Pressostat Hochdruck	High-pressure controller	Pressostat haute pression
F5	Pressostat Niederdruck	Low-pressure controller	Pressostat basse pression
F7	Thermostat Heißgasüberwachung	Thermostat for hot gas monitoring	Thermostat surveillance gaz de chauffage
F12	Störung N7	Fault N7	Défaut N7
F13	Störung N8	Fault N8	Défaut N8
F20	Thermostat Schaltkasten	Thermostat switch box	Thermostat boîtier électrique
F23	Störung Ventilator	Fan fault	Défaut ventilateur
K1	Schütz Verdichter 1	Contactor for compressor 1	Contacteur compresseur 1
K2	Lastrelais Ventilator	Load relay for fan	Relais de charge ventilateur
K3	Schütz Verdichter 2	Contactor for compressor 2	Contacteur compresseur 2
M1	Verdichter 1	Compressor 1	Compresseur 1
M2	Ventilator	Fan	Ventilateur
M3	Verdichter 2	Compressor 2	Compresseur 2
M6	Schaltschränkluft	Control cabinet fan	Ventilateur armoire électrique
N1	Wärmepumpenmanager	Heat pump manager	Gestionnaire de pompe à chaleur
N7	Sanftanlaufsteuerung Verdichter 1	Soft start control for compressor 1	Commande de démarrage progressif compresseur 1
N8	Sanftanlaufsteuerung Verdichter 2	Soft start control for compressor 2	Commande de démarrage progressif compresseur 2
N17.2	Modul „Kühlung aktiv“	Module "Cooling active"	Module « Rafraîchissement actif »
R2	Rücklauffühler	Return flow sensor	Sonde sur circuit de retour
R7	Kodierwiderstand	Coding resistor	Résistance de codage
R9	Vorlauffühler	Flow sensor	Sonde aller
R18	Heißgasfühler	Hot gas sensor	Sonde gaz chaud
R25	Drucksensor Kältekreis - Niederdruck (p0)	Pressure sensor for refrigerating circuit - low pressure (p0)	Capteur de pression circuit rafraîchissement - basse pression (p0)
R26	Drucksensor Kältekreis - Hochdruck (pc)	Pressure sensor for refrigerating circuit - high pressure (pc)	Capteur de pression circuit rafraîchissement - haute pression (pc)
W1	Verbindungsleitung Wärmepumpe - Manager 230V	Connecting cable heat pump - manager 230V	Ligne de raccordement PAC - gestionnaire 230V
W2	Verbindungsleitung Wärmepumpe - Manager <25V	Connecting cable heat pump - manager < 25V	Ligne de raccordement PAC - gestionnaire < 25V
X1	Klemmenleiste: Lasteinspeisung	Terminal strip: Incoming supply	Bornier : alimentation de charge
X2	Klemmenleiste: interne Verdrahtung = 230V	Terminal strip: Internal wiring = 230V	Bornier : câblage interne = 230 V
X3	Klemmenleiste: interne Verdrahtung < 25V	Terminal strip: Internal wiring < 25V	Bornier : câblage interne < 25 V
X6	Klemmenleiste: Ölsumpfheizung	Terminal strip: Oil sump heater	Bornier : chauffage à carter d'huile
X12	Steckverbinder: Verbindungsleitung Wärmepumpe - Manager = 230V	Plug connector: Connecting cable Heat pump - manager = 230V	Connecteur : ligne de raccordement PAC - gestionnaire = 230 V
X13.1	Steckverbinder: Verbindungsleitung Wärmepumpe - Manager < 25V	Plug connector: Connecting cable Heat pump - manager < 25V	Connecteur : ligne de raccordement PAC - gestionnaire < 25 V
X13.2	Steckverbinder: Verbindungsleitung Wärmepumpe - Manager < 25V	Plug connector: Connecting cable Heat pump - manager < 25V	Connecteur : ligne de raccordement PAC - gestionnaire < 25 V
Y1	4-Wege-Umschaltventil	Four-way reversing valve	Vanne d'inversion 4 voies
#	Adernummer	Core number	Numéro du fil
—	werkseitig verdrahtet	Wired ready for use	câblé en usine
---	bauseits nach Bedarf anzuschliessen	To be connected by the customer as required	à raccorder par le client si besoin

4 Hydraulische Prinzipschemen / Hydraulic Plumbing Diagram / Schémas hydrauliques

4.1 Monoenergetische Anlage Heizen und Kühlen und Warmwasser / Mono energy system for heating and cooling and domestic hot water / Installation mono-énergétique de chauffage, de rafraîchissement et de production d'eau chaude sanitaire



4.2 Monoenergetische Anlage Heizen und Kühlen und Warmwasser und Schwimmbad / Mono energy system for heating and cooling, domestic hot water and swimming pool water / Installation mono-énergétique de chauffage, de rafraîchissement et de production d'eau chaude sanitaire et d'eau de piscine



4.3 Legende / Legend / Légende

	Absperrventil	Shut-off valve	Vanne d'arrêt
	Überstromventil	Overflow valve	Souape différentielle
	Sicherheitsventilkombination	Safety valve combination	Jeu de vannes de sécurité
	Umwälzpumpe	Circulating pump	Circulateur
	Ausdehnungsgefäß	Expansion vessel	Vase d'expansion
	Raumtemperaturgesteuertes Ventil	Room temperature-controlled valve	Vanne commandée par température ambiante
	Absperrventil mit Rückschlagventil	Shut-off valve with check valve	Vanne d'arrêt avec clapet anti-retour
	Absperrventil mit Entwässerung	Shutoff valve with drainage	Vanne d'arrêt avec vidange
	Wärmeverbraucher	Heat consumer	Consommateur de chaleur
	Vierwegeumschaltventil	Four-way reversing valve	Vanne d'inversion 4 voies
	Temperaturfühler	Temperature sensor	Sonde de température
	Flexibler Anschlussschlauch	Flexible connection hose	Tuyau de raccordement flexible
	Rückschlagklappe	Check valve	Clapet anti-retoure
	Dreiwegemischer	Three-way mixer	Mélangeur 3 voies
	Luft/Wasser-Wärmepumpe reversibel	Reversible air-to-water heat pump	Pompe à chaleur air/eau réversible
	Wärmepumpenmanager	Heat pump manager	Gestionnaire de pompe à chaleur
	Reihen-Pufferspeicher	Buffer tank connected in series	Réservoir tampon en série
	Warmwasserspeicher	Hot water cylinder	Réservoir d'eau chaude sanitaire
E9	Flanschheizung Warmwasser	Flange heater, hot water	Cartouche chauffante ECS
E10.1	Tauchheizkörper	Immersion heater	Résistance immergée
K20	Schütz 2. Wärmeerzeuger	Contactor for HG2	Contacteur du 2ème générateur de chaleur
K21	Schütz Flanschheizung	Contactor for flange heater	Contacteur cartouche chauffante
M13	Heizungsumwälzpumpe Hauptkreis	Heat circulating pump for main circuit	Circulateur de chauffage circuit principal
M14	Heizungsumwälzpumpe 1. Heizkreis	Heat circulating pump for heating circuit 1	Circulateur de chauffage 1er circuit de chauffage
M15	Heizungsumwälzpumpe 2. Heizkreis	Heat circulating pump for heating circuit 2	Circulateur de chauffage 2ème circuit de chauffage
M18	Warmwasserumwälzpumpe	Hot water circulating pump	Circulateur d'eau chaude sanitaire
M19	Schwimmbadwasserumwälzpumpe	Swimming pool water circulating pump	Circulateur d'eau de piscine
M21	Mischer Hauptkreis od. 3. Heizkreis	Mixer for main circuit or heating circuit 3	Mélangeur circuit principal ou 3ème circuit de chauffage
M22	Mischer 2. Heizkreis	Mixer for heating circuit 2	Mélangeur 2ème circuit de chauffage
N1	Wärmepumpenmanager	Heat pump manager	Gestionnaire de pompe à chaleur
N3	Raumklimastation 1	Room climate control station 1	Station de climatisation de pièce 1
N4	Raumklimastation 2	Room climate control station 2	Station de climatisation de pièce 2
N17.1	Modul: Kühlung allgemein	Module: Cooling, general	Module : rafraîchissement général
N17.2	Modul: Kühlung aktiv	Module: Cooling, active	Module : rafraîchissement actif
R1	Außenwandfühler	External wall sensor	Sonde sur mur extérieur
R2.1	Zusatrzücklauffühler	Additional return flow sensor	Sonde supplémentaire sur circuit de retour
R3	Warmwassergleichrichter	Hot water sensor	Sonde sur circuit d'eau chaude sanitaire
R5	Temperaturfühler 2. Heizkreis	Temperature sensor for heating circuit 2	Sonde de température 2ème circuit de chauffage
R13	Fühler 3. Heizkreis / Fühler regenerativ	Sensor for heating circuit 3 / renewable sensor	Sonde 3ème circuit de chauffage / sonde mode régénératif
R20	Schwimmbadfühler	Swimming pool sensor	Sonde de piscine
Y12	Umkehrventil Heizkreis	Reversing valve for heating circuit	Vanne d'inversion circuit de chauffage

5 Konformitätserklärung / Declaration of Conformity / Déclaration de conformité



EG - Konformitätserklärung EC Declaration of Conformity Déclaration de conformité 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

EG - Richtlinien / EC Directives / Directives CEE

Luft/Wasser-Wärmepumpen
für Außenaufstellung mit R417A

EG- Niederspannungsrichtlinie / EC Low Voltage Directive / Directive CEE relative à la basse tension (2006/95/EG)

Air-to-water heat pumps
for outdoor installation, containing R417A

EG-EMV-Richtlinie / EC EMC Directive / Directive CEE relative à la compatibilité électromagnétique (2004/108/EG)

Pompes à chaleur air/eau
pour installation extérieure avec R417A

Druckgeräterichtlinie / Pressure Equipment Directive / Directive CEE relative aux appareils sous pression (97/23/EG)

Typ(e):

Harmonisierte EN / Harmonized EB Standards / Normes EN harmonisées:

AL 35TUR+

EN 255 / EN 14511
EN 378
DIN 8901
DIN EN 60335-1 (VDE 0700 T1):2007-02
DIN EN 60335-2-40 (VDE 0700 T40):2006-11
DIN EN 55014-1 (VDE 0875 T14-1):2003-09
DIN EN 55014-2 (VDE 0875 T14-2):2002-08
DIN EN 61000-3-2 (VDE 0838-2):2006-10
DIN EN 61000-3-3 (VDE 0838-3):2006-06

EN 60335-1:2002+A11+A1+A12+
Corr.+A2:2006
EN 60335-2-40:2003+A11+A12+A1+Corr.:2006
EN 55014-1:2000+A1:2001+A2:2002
EN 55014-2:1997+A1:2001
EN 61000-3-2:2006
EN 61000-3-3:1995+A1:2001+A2:2005

Nationale Richtlinien / National Directives / Directives nationales

D
BGR 500

A

CH
SVTI

Clemens Deveschkowitz
Geschäftsführer/Managing Director

Mathias Hubrich
Produktionsleiter / Production Manager

Kulmbach, 06.02.2009

CE01W01E.doc

6 Wartungsarbeiten / Maintenance work / Opérations de maintenance

Folgende Wartungsarbeiten und Dichtheitsprüfungen gemäß Verordnung (EG) Nr. 842/2006 wurden durchgeführt:
The following maintenance and leak-proof tests have been carried out according to (EG) Nr. 842/2006:
Les opérations de maintenance et les contrôles d'étanchéité suivants ont été effectués selon la directive (EG) n° 842/2006:

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Irrtümer und Änderungen vorbehalten.
Subject to alterations and errors.
Sous réserve d'erreurs et modifications.
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