

SI 75ZSR

Dimplex

**Montage- und
Gebrauchsanweisung**

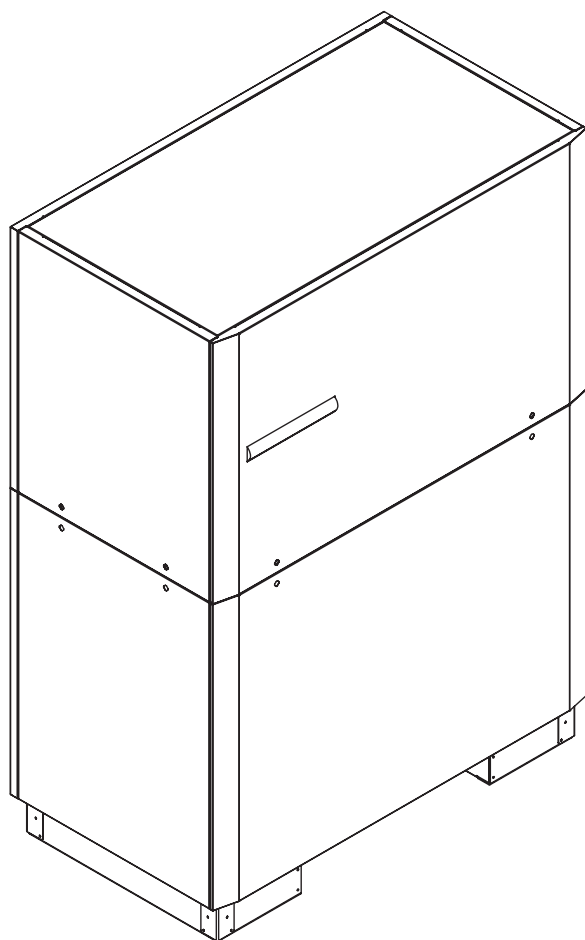
Deutsch

**Installation and
Operating Instructions**

English

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

Français



**Sole/Wasser-
Wärmepumpe für
Innenaufstellung**

**Brine-to-Water
Heat Pump for
Indoor Installation**

**Pompe à chaleur
eau glycolée-eau
pour installation
intérieure**

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1 Read immediately

1.1 Important Information

⚠ ATTENTION!

Any work on the heat pump may only be performed by an authorised and qualified customer service.

⚠ ATTENTION!

The heat pump must not be tilted more than max. 45° (in either direction).

⚠ ATTENTION!

The transport securing devices must be removed prior to commissioning.

⚠ ATTENTION!

The heating system must be flushed prior to connecting the heat pump.

⚠ ATTENTION!

The supplied strainer must be fitted in the heating water inlet of the heat pump in order to protect the condenser against the ingress of impurities.

⚠ ATTENTION!

The supplied strainer must be fitted in the heat source inlet of the heat pump in order to protect the evaporator against the ingress of impurities.

⚠ ATTENTION!

The brine solution must contain at least 25 % of an antifreeze agent on a mono-ethylene glycol or propylene glycol basis and must be mixed prior to filling.

⚠ ATTENTION!

The clockwise phase sequence must be observed when connecting the load lines (the heat pump will deliver no output and will be very noisy when the phase sequence is incorrect).

⚠ ATTENTION!

Commissioning is to be effected in accordance with the installation and operating manual of the heat pump controller.

⚠ ATTENTION!

To prevent the accumulation of deposits (e.g. rust) we recommend using a suitable corrosion protection system.

⚠ ATTENTION!

Disconnect all electrical circuits from the power supply before opening the enclosure.

1.2 Legal Provisions and Guidelines

This heat pump conforms to all relevant DIN/VDE regulations and EU directives. For details refer to the EC Declaration of Conformity in the appendix.

The electrical connection of the heat pump must be performed according to and conforming with all relevant VDE, EN and IEC standards. Beyond that, the connection requirements of the local utility companies have to be observed.

The heat pump is to be connected to the heat source system and the heating or cooling system in accordance with all applicable regulations.

⚠ ATTENTION!

Any work on the heat pump may only be performed by an authorised and qualified customer service.

1.3 Energy-Efficient Use of the Heat Pump

By operating this heat pump you contribute to the protection of our environment. The heating or cooling system and the heat source must be properly designed and dimensioned to ensure efficient operation. In particular, it is important to keep water flow temperatures as low as possible. All energy consumers connected should therefore be suitable for low flow temperatures. A 1 K higher heating water temperature corresponds to an increase in power consumption of approx. 2.5 %. Low-temperature heating systems with flow temperatures between 30 °C and 50 °C are optimally suited for energy-efficient operation.

2 Purpose of the heat pump

2.1 Application

The brine-to-water heat pump is designed for use in existing or newly built heating systems. Brine is used as the heat carrier in the heat source system. Ground coils, ground collectors or similar systems can be used as the heat source.

2.2 Principle of Operation

Heating

The heat generated by the sun, wind and rain is stored in the ground. This heat stored in the ground is collected at low temperature by the brine circulating in the ground collector, ground coil or similar device.

A circulating pump then conveys the warmed brine to the evaporator of the heat pump. There, the heat is given off to the refrigerant in the refrigeration cycle. When so doing, the brine cools so that it can again take up heat energy in the brine circuit.

The refrigerant is drawn in by the electrically driven compressor, is compressed and "pumped" to a higher temperature level. The electrical power needed to run the compressor is not lost in this process, but most of the generated heat is transferred to the refrigerant.

Subsequently, the refrigerant is passed through the condenser where it transfers its heat energy to the heating water. Based on the thermostat setting, the heating water is thus heated to up to 60 °C.

Cooling

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

The heating water gives up its heat to the refrigerant via the liquifier which is now functioning as an evaporator. The refrigerant is pumped to a higher temperature level using the compressor. Heat passes into the brine via the liquifier (evaporator in heating operation) and consequently into the ground.

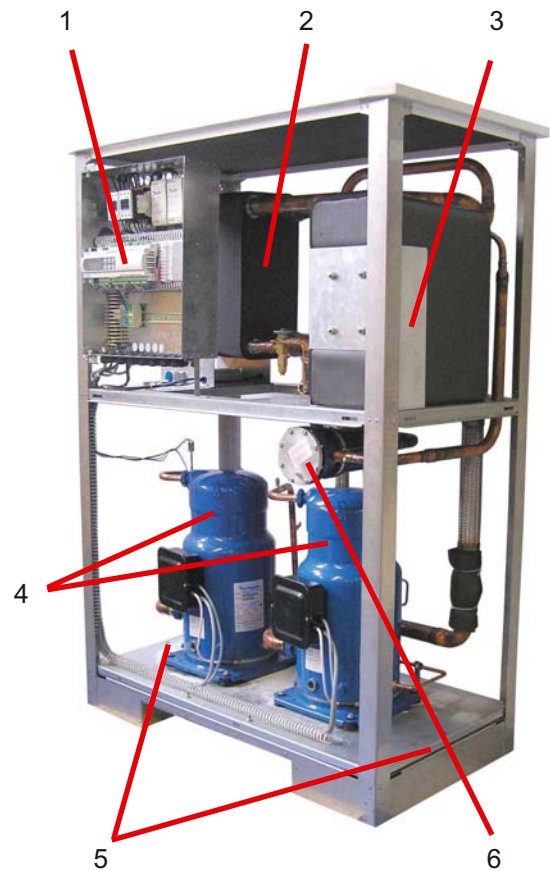
3 Baseline Unit

The baseline unit consists of a heat pump, ready for connection, for indoor installation, complete with sheet metal cabinet, control box and integrated controller. The refrigeration cycle contains the refrigerant R404A. Refrigerant R404A is CFC-free, non-ozone depleting and non-combustible.

All components required for the operation of the heat pump are located in the control box. A sensor for the external wall temperature including mounting hardware as well as a strainer are supplied with the heat pump. The voltage supply for the load and control current must be provided by the customer.

The control wire of the brine pump (to be provided by the customer) is to be connected to the control box. When so doing, a motor protecting device is to be installed, if required.

The collector including the brine manifold must be provided by the customer.



- 1) Control
- 2) Evaporator
- 3) Condenser
- 4) Compressor
- 5) Transport securing devices
- 6) Filter drier

4 Accessories

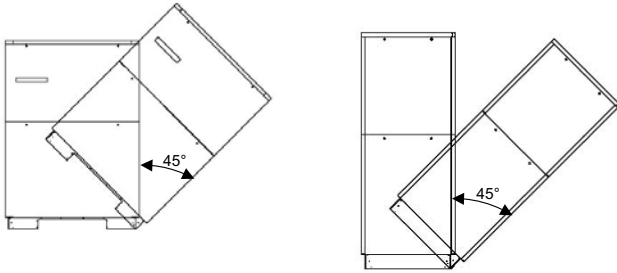
4.1 Connecting Flanges

The use of flat-sealing connecting flanges allows the unit, as an option, to be connected by means of flanges.

5 Transport

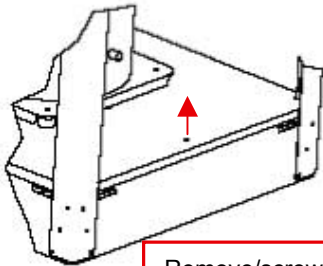
For the transport by means of a hand truck or boiler trolley, position the latter under the front end of the unit below the transport security device.

For transport on a level surface, the unit can be lifted from the rear or from the front by means of a lift truck or forklift. In this case, the transport securing device is not imperative.



⚠ ATTENTION!

The heat pump must not be tilted more than max. 45° (in either direction).



Remove/screw in
transport lock

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.

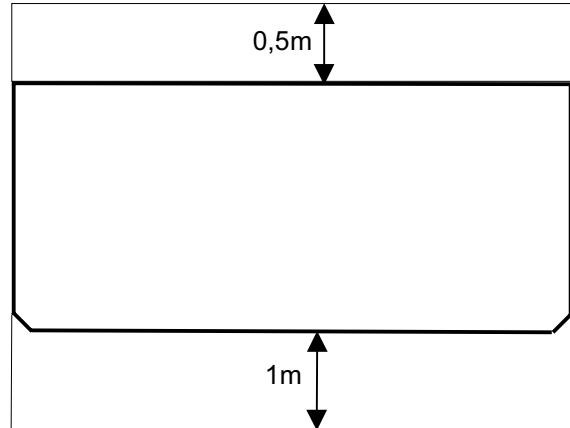
To remove the panelling, open the individual covers by unscrewing the respective turn-lock fasteners and then gently tilting the covers away from the device. Then lift them up out of the mountings.

6 Installation

6.1 General Information

As a rule, the unit must be installed indoors on a level, smooth and horizontal surface. The entire base frame should make full contact with the surface in order to ensure adequate sound insulation. Failing this, additional sound insulation measures may become necessary.

The heat pump should be installed to allow easy maintenance/service access. This is ensured if a clearance of approx. 1 m in front of the heat pump is maintained.



6.2 Sound Emissions

The heat pump offers silent operation due to efficient sound insulation. Any vibration transmission to the foundation or the heating system can be largely prevented by internal sound decoupling measures.

7 Mounting

7.1 General Information

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

- supply/return flow of the brine system
- supply/return flow of the heating system
- power supply

7.2 Connection on Heating Side

⚠ ATTENTION!

The heating system must be flushed prior to connecting the heat pump.

Before completing the heat pump connections on the heating water side, the heating installation must be flushed in order to remove any impurities that may be present, as well as residues of sealing material, and the like. Any accumulation of deposits in the condenser may result in a total failure of the heat pump.

⚠ ATTENTION!

The supplied strainer must be fitted in the heating water inlet of the heat pump in order to protect the condenser against the ingress of impurities.

Once the installation on the heating side has been completed, the heating system must be filled, de-aerated and pressure-tested.

Heating water minimum flow rate

The heating water minimum flow rate 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-free manifold or an overflow valve. The procedure for setting an overflow valve is described in the Chapter Commissioning.

Frost protection for installations prone to frost

Provided the controller and heating circulating pumps are ready for operation, the frost protection feature of the controller is active. If the heat pump is taken out of service or in the event of a power failure, the system has to be drained. In heat pump installations where a power failure cannot be readily detected (holiday house), the heating circuit must contain a suitable antifreeze product.

7.3 Connection on Heat Source Side

The following procedure must be observed when making the connection:

Connect the brine line to the flow and return pipe of the heat pump.

The hydraulic plumbing diagram must be observed here.

⚠ ATTENTION!

The supplied strainer must be fitted in the heat source inlet of the heat pump in order to protect the evaporator against the ingress of impurities.

In addition, a microbubble deaerator must be installed in the heat source system.

The brine liquid must be produced prior to charging the system. The brine concentration must be at least 25 %. Freeze protection down to -14°C can thus be ensured.

Only antifreeze products on the basis of mono-ethylene glycol or propylene glycol may be used.

The heat source system must be vented (de-aerated) and checked for leaks.

⚠ ATTENTION!

The brine solution must contain at least 25 % of an antifreeze agent on a mono-ethylene glycol or propylene glycol basis and must be mixed prior to filling.

7.4 Electrical Connection

The following electrical connections must be established on the heat pump:

- Connection of the control wire to terminals X1: L/N/PE in the control box of the heat pump.
- Connection of the load wire to terminals X5: L1/L2/L3/PE in the control box of the heat pump.
- Connection of the brine pump (to be supplied by the customer) to terminal PE and pump contactor K5: 2/4/6 on the control panel of the HP.

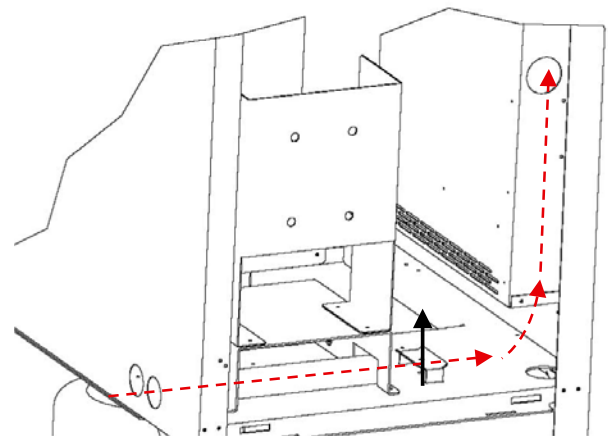
All electrical components required for the operation of the heat pump are located in the control box.

For more detailed instructions concerning the connection and functioning of the heat pump controller (e.g. the supplied external wall sensor) please refer to the enclosed operating manual of the controller.

An automatic circuit-breaker with simultaneous tripping of all external conductors is to be provided in the load power supply. The circuit-breaker must be an all-pole disconnect device with a contact gap of at least 3 mm. The same applies to any additional dis-able contactors that may be required, e.g. during shut-off periods imposed by the utility company. The required cross-sectional area of the conductors is to be selected according to the power consumption of the heat pump, the technical connection requirements of the relevant utility company and all applicable regulations. Power consumption data of the heat pump is provided in the product literature and on the nameplate. The terminals are designed for a max. conductor cross-section of 35 mm².

⚠ ATTENTION!

The clockwise phase sequence must be observed when connecting the load lines (the heat pump will deliver no output and will be very noisy when the phase sequence is incorrect).



The power cable must be run through the guide tubes, inserted into the side of the control box and secured by means of the strain relief.

8 Commissioning

8.1 General Information

To ensure proper commissioning it should be carried out by a customer service authorised by the manufacturer. This will lead, under certain circumstances, to an extension of the warranty period (cf. Warranty). Start-up should be carried out in heating operation.

8.2 Preparatory Steps

Prior to commissioning, the following items need to be checked:

- All connections of the heat pump must have been made as described in Chapter 7.
- The heat source system and the heating circuit must have been filled and checked.
- The strainer must have been fitted in the sole inlet of the heat pump.
- In the brine and heating circuits all valves that might impair the proper flow must be open.
- The settings of the heat pump controller must be adapted to the heating installation in accordance with the instructions contained in the controller's operating manual.

8.3 Commissioning Procedure

The start-up of the heat pump is effected via the heat pump controller.

⚠ ATTENTION!

Commissioning is to be effected in accordance with the installation and operating manual of the heat pump controller.

Where an overflow valve is fitted to assure the minimum heating water flow rate, the valve must be set in accordance with the requirements of the heating installation. An incorrect setting may result in various error symptoms and an increased electric power consumption. To correctly set the overflow valve, the following procedure is recommended:

Close all of the heating circuits which may also be closed during operation (depending on the type of heat pump usage) so that the least favourable operating state - with respect to the water flow rate - is achieved. Normally, these heating circuits are those of the rooms located on the south and west sides of buildings. At least one heating circuit must remain open (e.g. bathroom).

The overflow valve is to be opened to such an extent that based on the current heat source temperature the maximum temperature difference between heating supply and return flow temperature is obtained, as indicated in the table below. The temperature difference should be measured as closely to the heat pump as possible. In mono-energetic systems, the electric heating element is to be deactivated.

Heat source temperature		max. difference between heating supply and return temperature
from	to	
-5° C	0° C	10 K
1° C	5° C	11 K
6° C	9° C	12 K
10° C	14° C	13 K
15° C	20° C	14 K
21° C	25° C	15 K

Any malfunctions occurring during operation are displayed on the heat pump controller and can be corrected as described in the operating manual of the heat pump controller.

9 Care/Cleaning

9.1 Care

The heat pump is maintenance-free. To prevent malfunctions due to sediments in the heat exchangers, care must be taken that no impurities can enter the heat source system and the heating installation. In the event that operating malfunctions due to contamination occur nevertheless, the system should be cleaned as described below.

9.2 Cleaning og Heating Side

⚠ ATTENTION!

Hier Satz „Im Heizwassereintritt der Wärmepumpe ... Verunreinigungen zu schützen.“ einfügen!!!

The ingress of oxygen into the heating water circuit, in particular if it contains steel components, may result in the formation of oxidation products (rust). These can enter the heating system via valves, circulating pumps or plastic tubing. It is therefore important - in particular with respect to the piping of underfloor heating systems - that the installation be executed in a diffusion-proof manner.

⚠ ATTENTION!

To prevent the accumulation of deposits (e.g. rust) we recommend using a suitable corrosion protection system.

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

Based on current knowledge, we recommend cleaning with a 5% phosphoric acid solution or, in the case that cleaning needs to be performed more frequently, with a 5% formic acid solution.

In either case, the cleaning fluid should be at room temperature. It is recommended that the heat exchanger be cleaned in the direction opposite to the normal flow direction.

To prevent acidic cleaning agents from entering the circuit of the heating installation we recommend that the flushing device be fitted directly to the supply and return lines of the condenser of the heat pump.

Thereafter the system must be thoroughly flushed using appropriate neutralising agents in order to prevent any damage caused by cleaning agent residues that may still be present in the system.

All acids must be used with great care, 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 of Heat Source Side

⚠ ATTENTION!

The supplied strainer must be fitted in the heat source inlet of the heat pump in order to protect the evaporator against the ingress of impurities.

The filter screen of the strainer should be cleaned one day after commissioning, thereafter every week. If no more contamination can be noticed any more, the strainer filter can be removed in order to reduce pressure losses.

10 Malfunctions / Troubleshooting

This heat pump is a quality product and designed for trouble- and maintenance-free operation. In the event that a malfunction occurs nevertheless, it will be indicated on the display of the heat pump controller. Simply consult the Malfunctions and Troubleshooting table contained in the installation and operating manual of the heat pump controller (manager).

If you cannot correct the malfunction yourself, please contact the after-sales service agent in charge.

⚠ ATTENTION!

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

⚠ ATTENTION!

Disconnect all electrical circuits from the power supply before opening the enclosure.

11 Decommissioning / Disposal

Before removing the heat pump, disconnect the unit from the power source and close all valves.

Environment-relevant requirements regarding the recovery, recycling and disposal of service fuels and components in accordance with all relevant standards must be adhered to. Particular attention must hereby be paid to the proper disposal of refrigerants and refrigeration oils.

12 Device Information

Device information for brine-to-water heat pumps (heating only)					
1	Type and order code			SI 75ZSR	
2	Design				
2.1	Model			Reversible	
2.2	Degree of protection according to EN 60 529			IP 21	
2.3	Installation location			Indoors	
3	Performance data				
3.1	Operating temperature limits:				
	Heating water flow	°C		Up to 55	
	Cooling, flow	°C		+7 to +20	
	Brine (heat source, heating)	°C		-5 to +25	
	Brine (heat sink, cooling)	°C		+5 to +30	
	Antifreeze			Monoethylene glycol	
	Minimum brine concentration (-13 °C freezing temperature)			25%	
3.2	Temperature spread of heating water (flow/return flow) at B0 / W35K			5	
3.3	Heat output / COP	at B-5 / W55 ¹	kW / ---	2	54.9 / 2.0
			kW / ---	3	27.3 / 2.1
		at B0 / W50 ¹	kW / ---	2	62.3 / 2.5
			kW / ---	3	31.3 / 2.5
		at B0 / W35 ¹	kW / ---	2	65.3 / 3.5
			kW / ---	3	35.1 / 3.8
3.4	Cooling capacity / COP	at B20 / W8	kW / ---	2	82.1 / 5.0
			kW / ---	3	44.9 / 6.4
		at B20 / W18	kW / ---	2	100.0 / 5.6
			kW / ---	3	55.0 / 7.4
		at B10 / W8	kW / ---	2	86.6 / 6.1
			kW / ---	3	47.4 / 7.7
		at B10 / W18	kW / ---	2	98.2 / 6.3
			kW / ---	3	53.2 / 8.2
3.5	Sound power level	dB(A)			69
3.6	Sound pressure level at a distance of 1 m	db(A)			54
3.7	Heating water flow with an internal pressure differential of m ³ /h / Pa			11.5 / 7300	
3.8	Brine throughput with an internal pressure differential			20.5 / 17800	
3.9	Refrigerant; total filling weight	type / kg			R404A / 16.1
4	Dimensions, connections and weight				
4.1	Device dimensions without connections ⁴	H x W x L mm			1890 × 1350 × 750
4.2	Device connections to heating system	Inch			G 2" internal/external
4.3	Device connections to heat source	Inch			G 2 1/2" internal/external
4.4	Weight of the transportable unit(s) incl. packing	kg			607
5	Electrical Connection				
5.1	Nominal voltage; fuse protection	V / A			400 / 63
5.2	Nominal power consumption ¹	B0 W35	kW		18.86
5.3	Starting current with soft starter		A		105
5.4	Nominal current B0 W35 / cos φ ²		A / ---		34.03 / 0.8
6	Complies with the European safety regulations			5	
7	Additional model features				
7.1	Water in device protected against freezing ⁶			Yes	
7.2	Performance levels			2	
7.3	Controller internal/external			Internal	

1. This data indicates the size and capacity of the system. For an analysis of the economic and energy efficiency of the system, both the bivalence point and the regulation should also be taken into consideration. The specified values, e.g. B10 / W55, have the following meaning: Heat source temperature 10 °C and heating water flow temperature 55 °C.

2. Operation with 2 compressors

3. Operation with 1 compressor

4. Note that additional space is required for pipe connections, operation and maintenance.

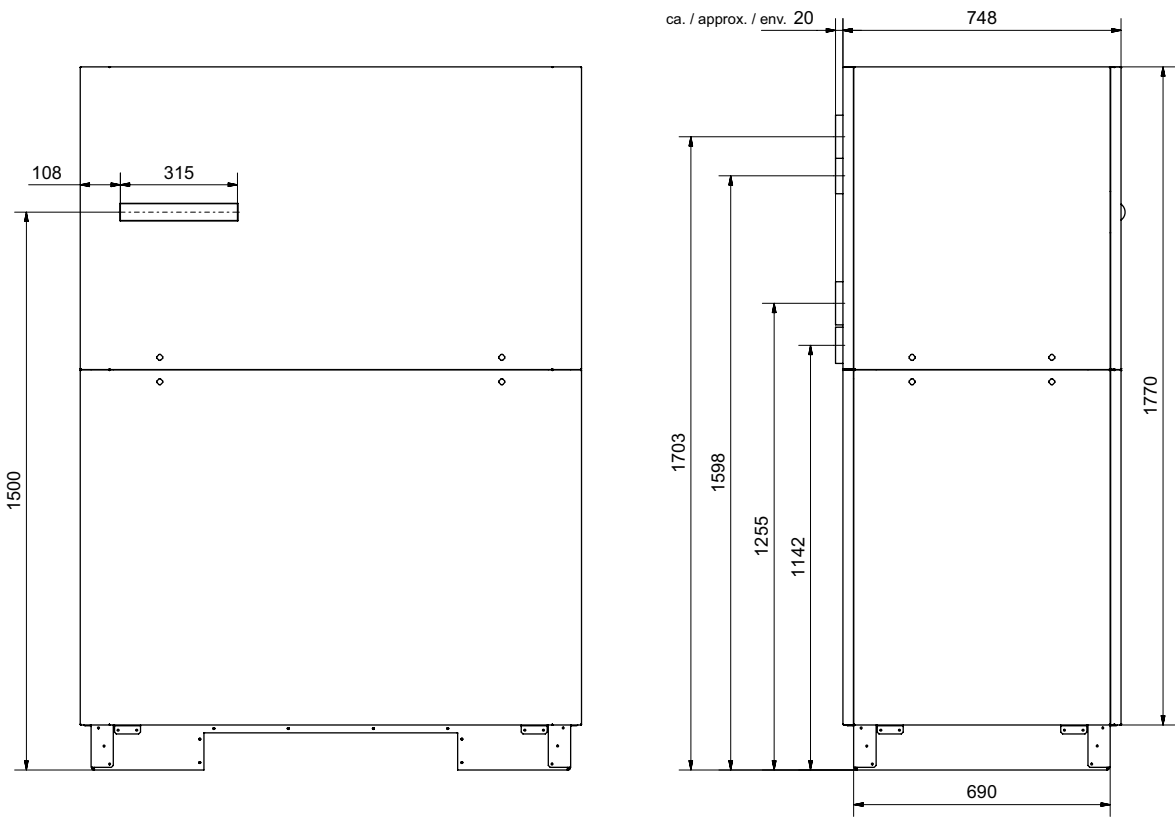
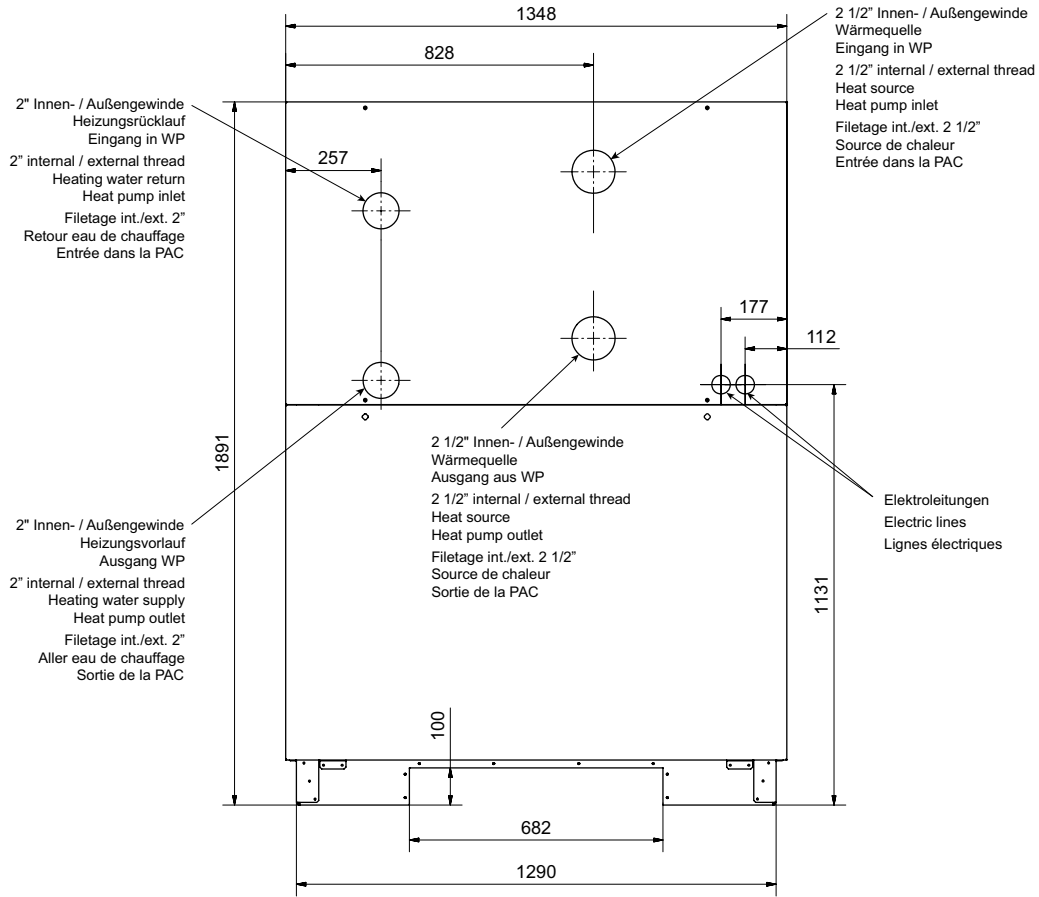
5. See CE declaration of conformity

6. The heat circulating pump and the heat pump controller must always be ready for operation.

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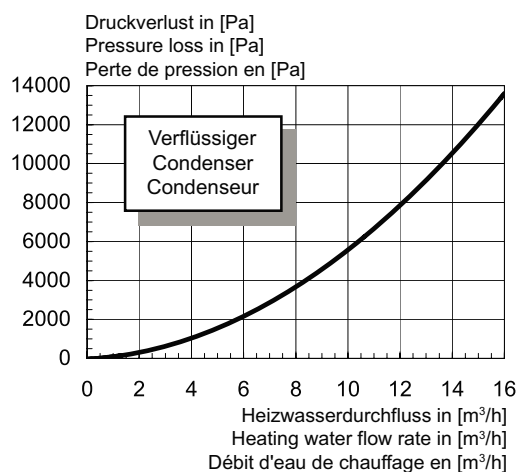
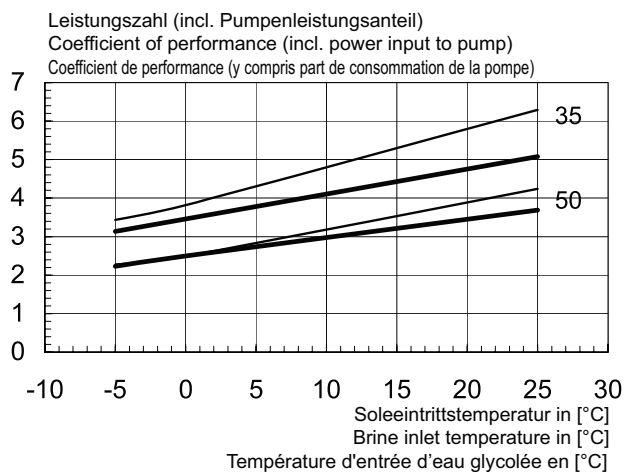
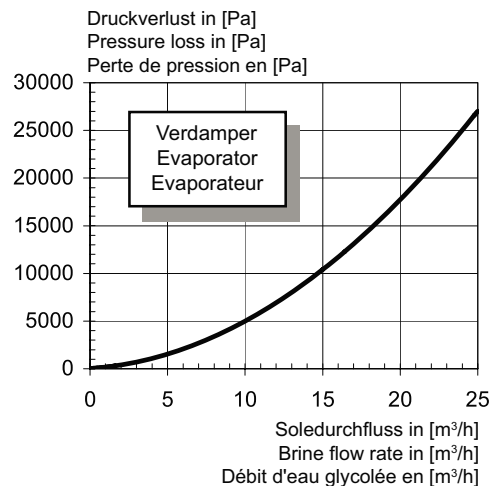
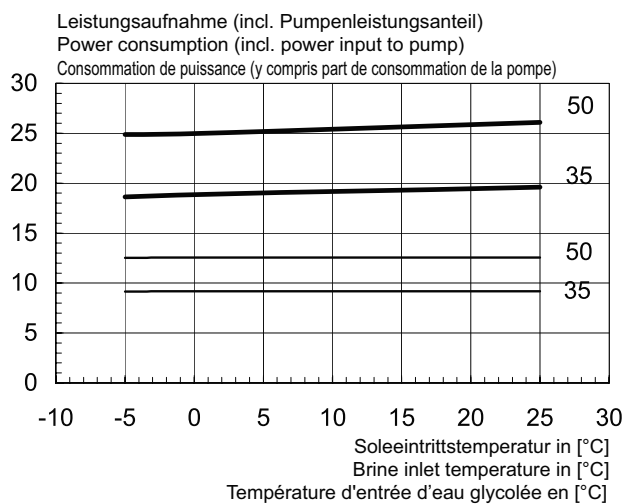
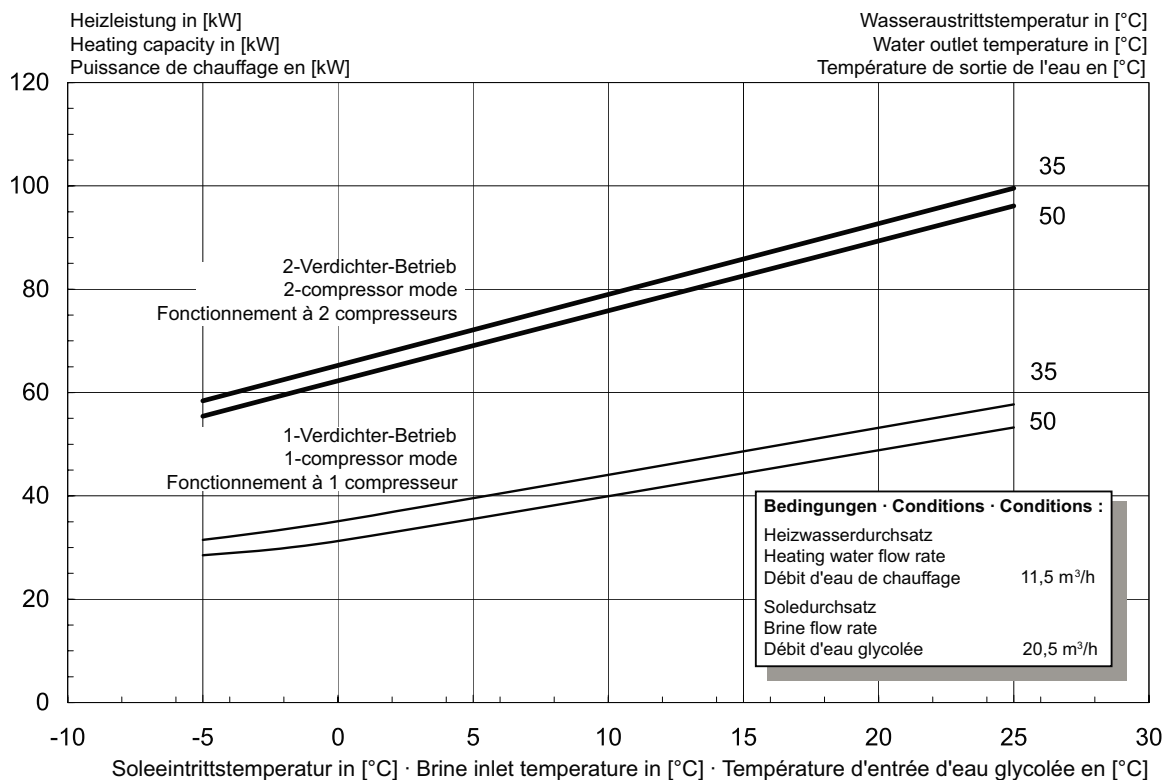
1 Maßbild / Dimension drawing / Schéma coté



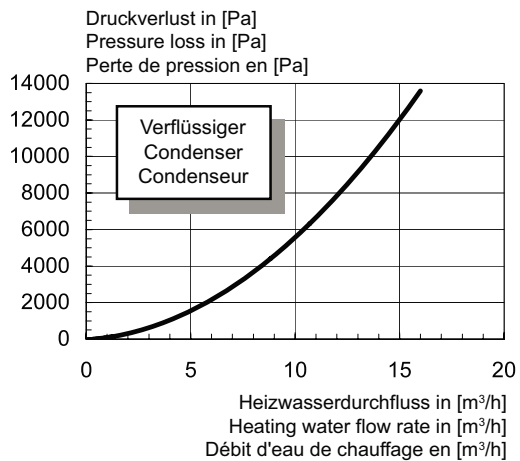
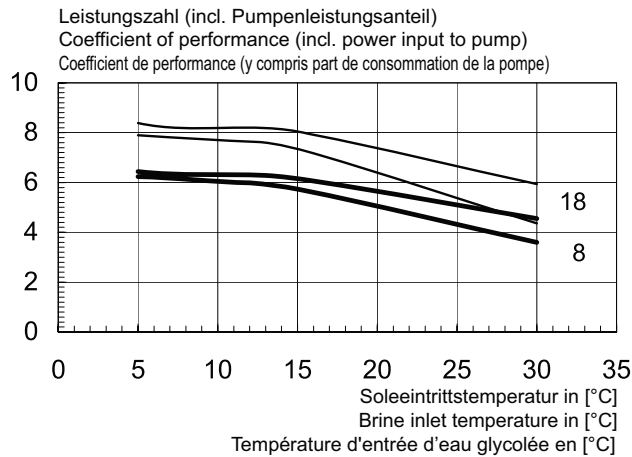
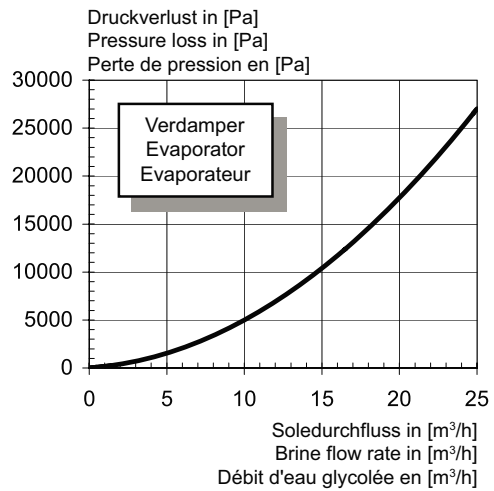
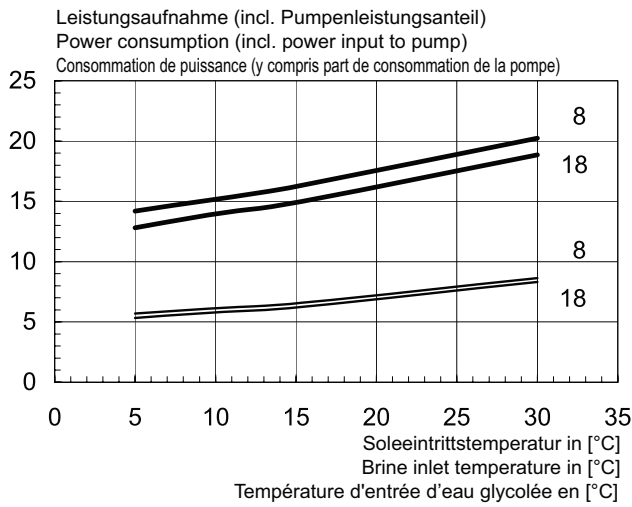
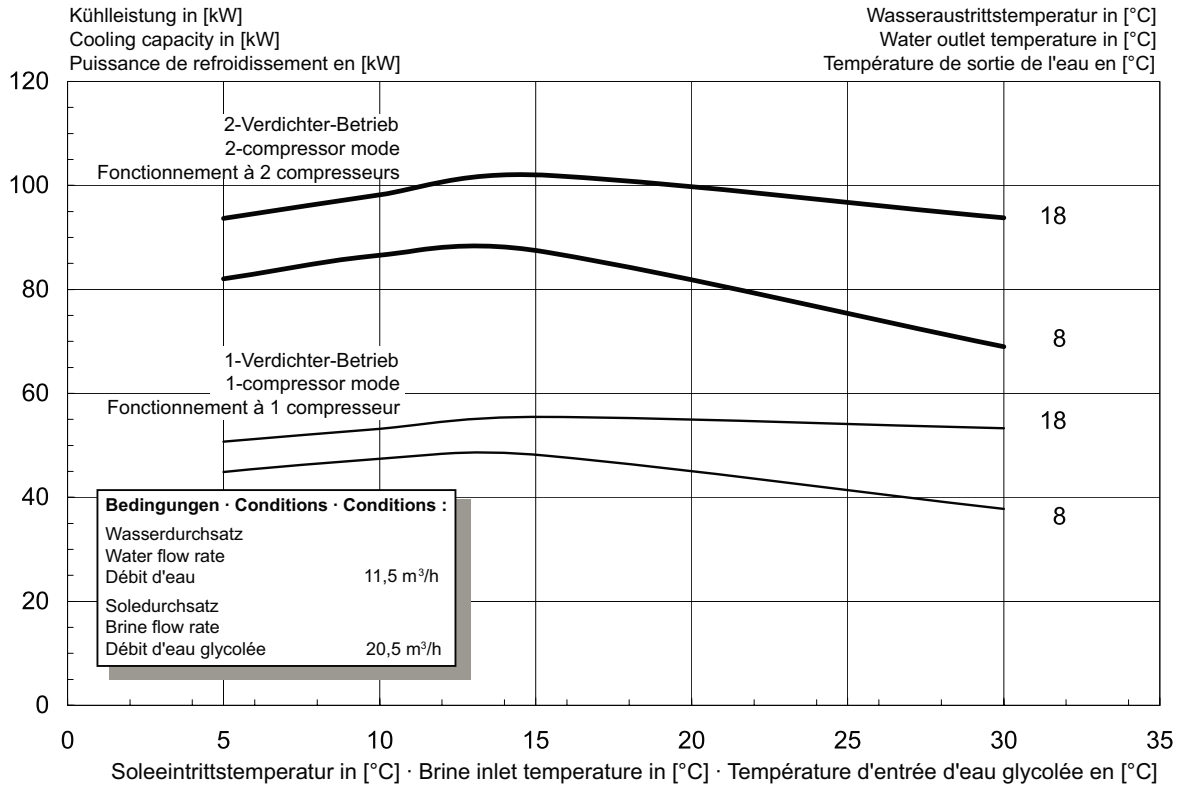
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2 Diagramme / Schematics / Diagrammes

2.1 Heizbetrieb / Heating operation / Mode chauffage



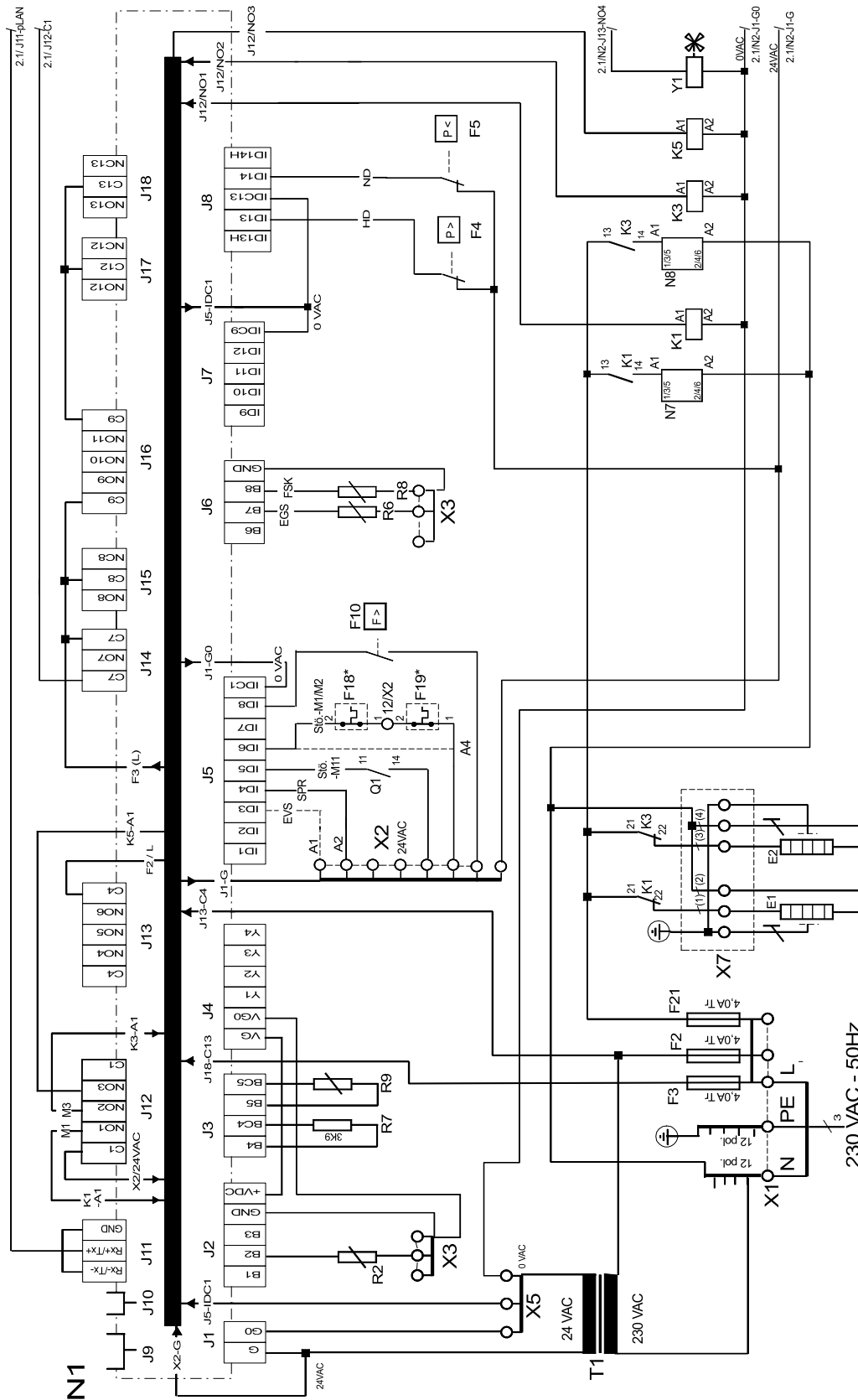
2.2 Kühlbetrieb / Cooling operation / Mode refroidissement



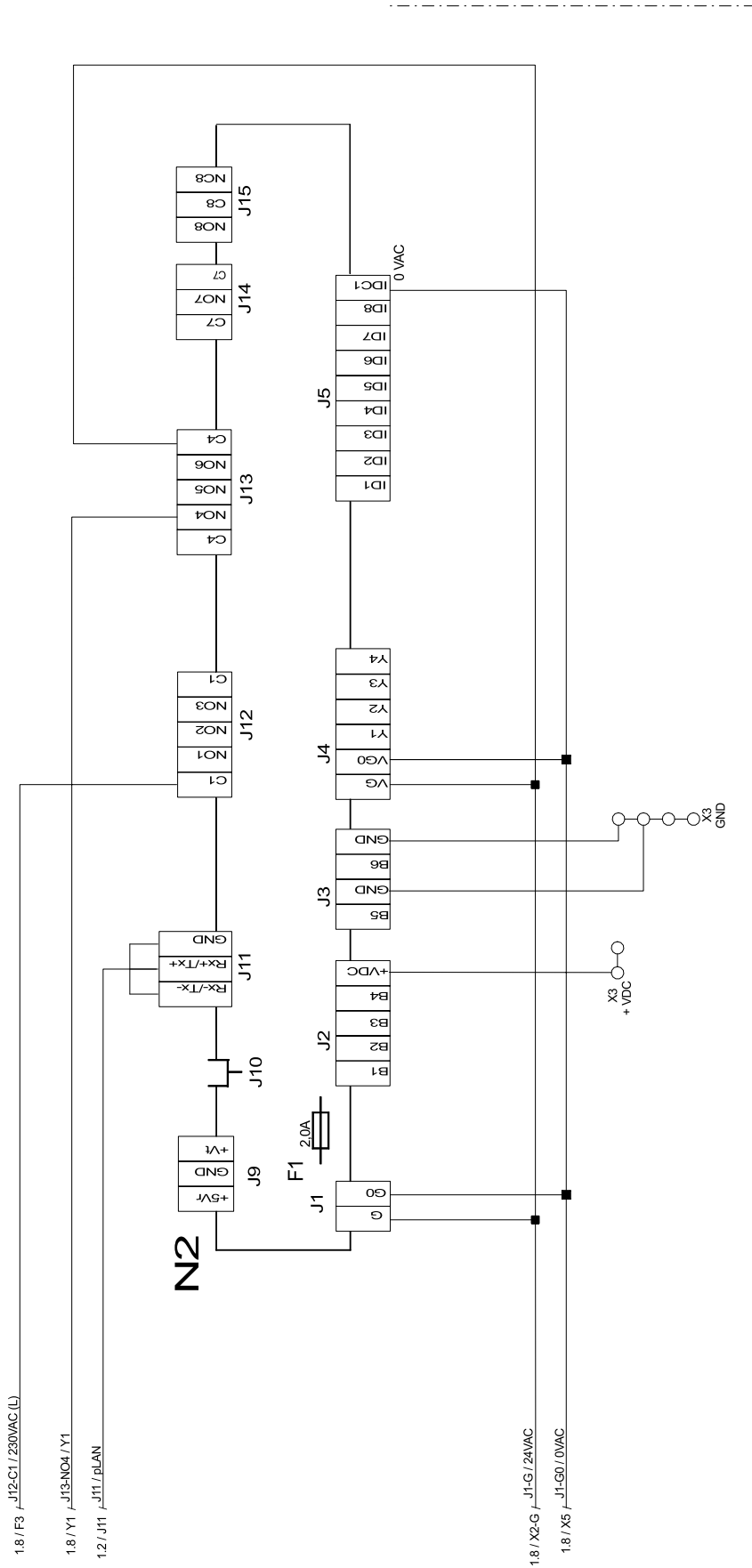
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3 Stromlaufpläne / Wiring diagrams / Schémas électriques

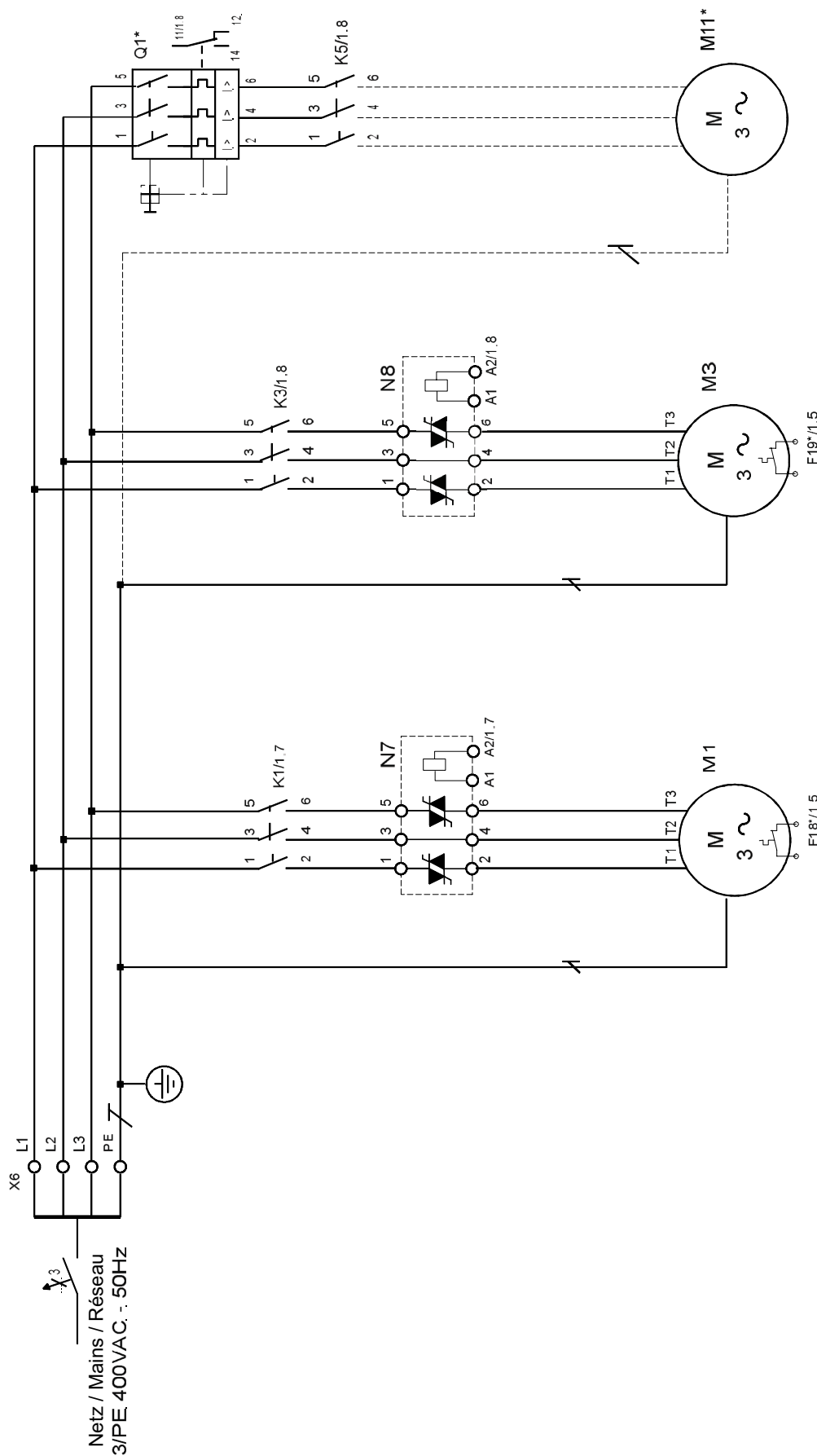
3.1 Steuerung Standardregler / Control via the standard controller / Commande régulateur standard



3.2 Steuerung Kühlgelager / Control via the cooling controller / Commande régulateur refroidissement



3.3 Last / Load / Charge

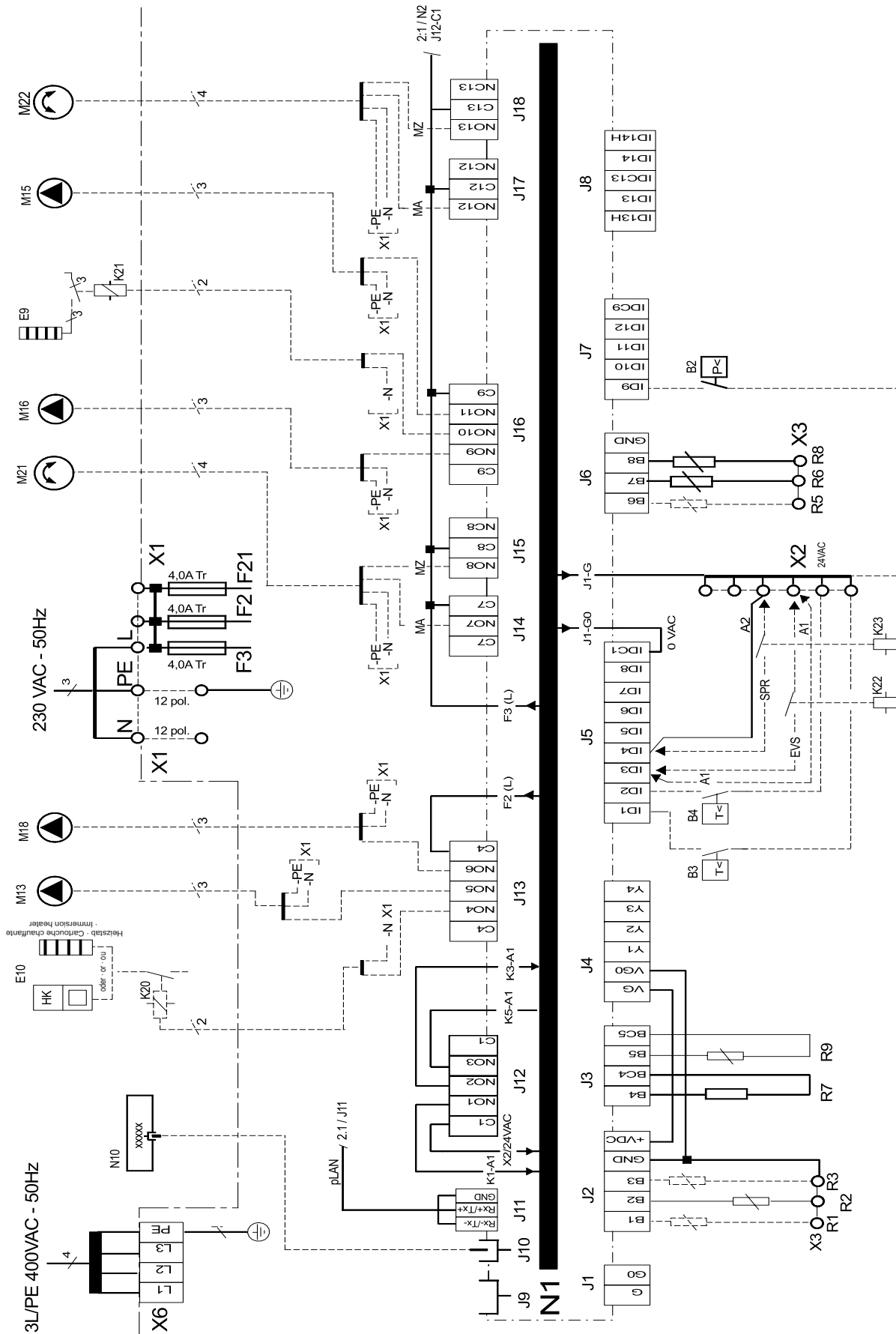


F18 and F19 nur in SI100..
 F18 and F19 only in SI100..
 F18 et F19 uniquement dans SI100..

* M11 ist optional
 M11 is optional
 M11 en option

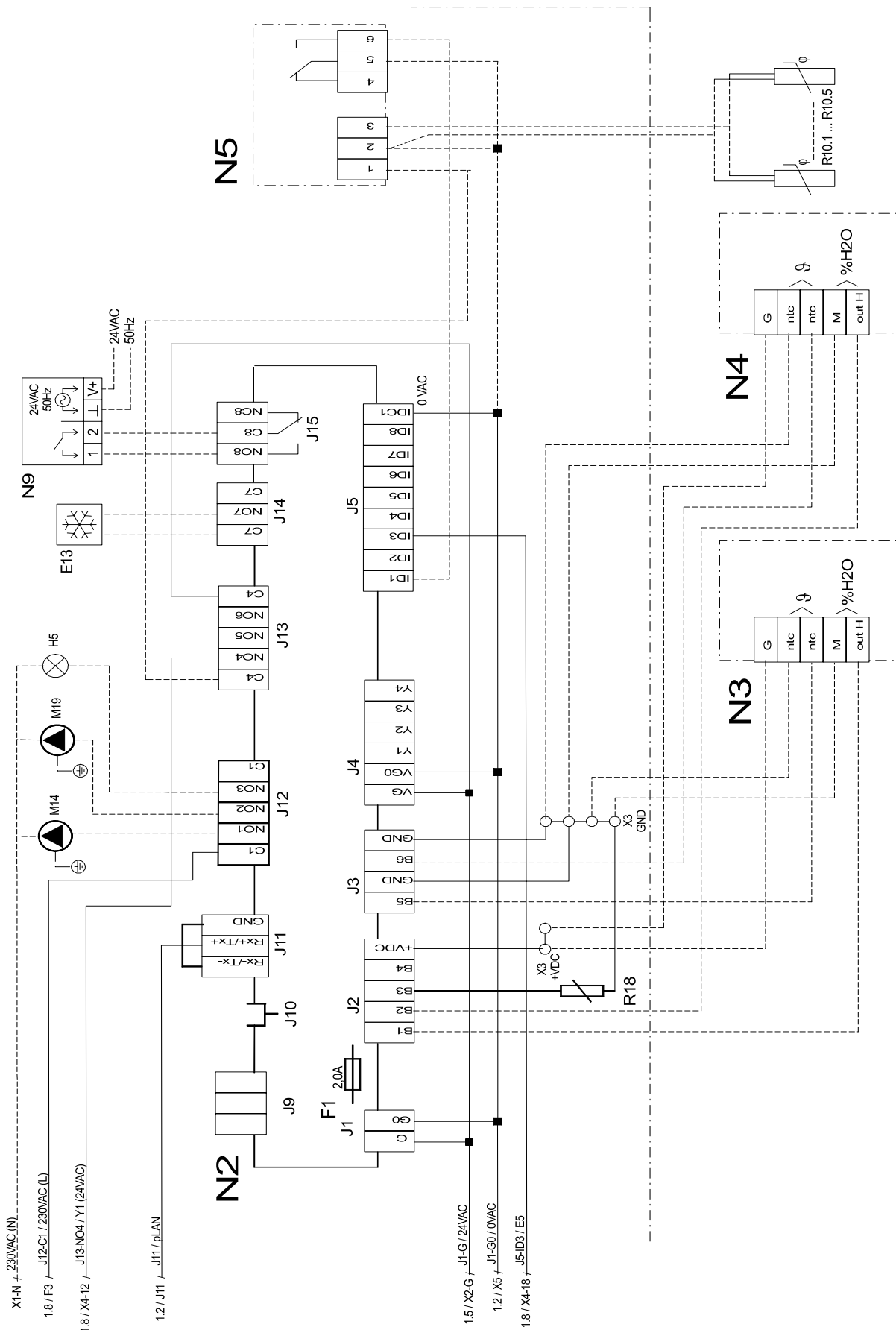
* Q1 in / en SI 50 : 1,4 - 2,0A
 SI 75 : 2,2 - 3,2A
 SI 100 : 2,8 - 4,0A

3.4 Anschlussplan Standardregler / Terminal diagram for standard controller / Schéma de branchement du régulateur standard



Anhang · Appendix · Annexes

3.5 Anschlussplan Kühlregler / Terminal diagram for cooling controller / Schéma de branchement du régulateur de refroidissement



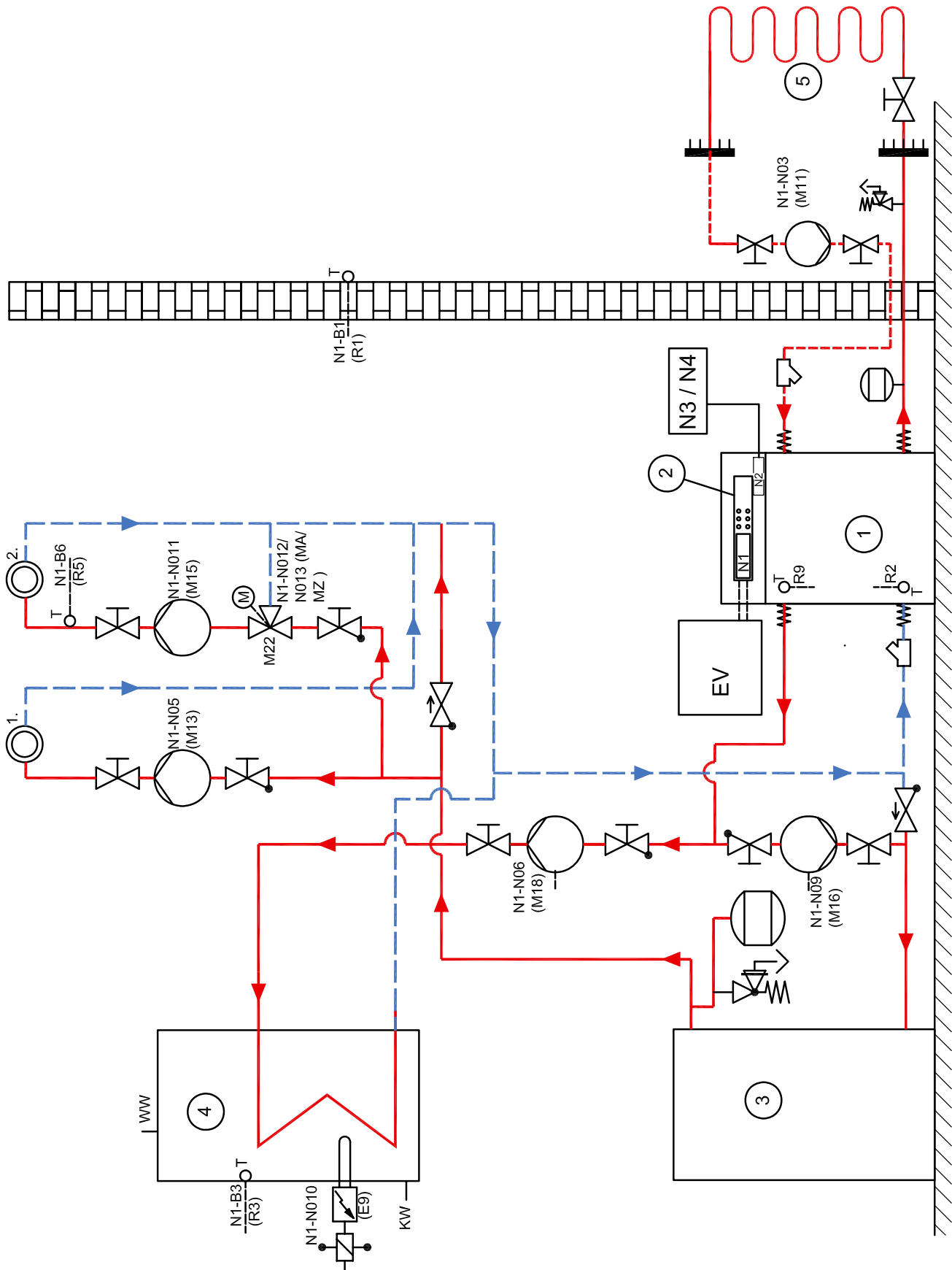
3.6 Legende / Legend / Légende

A1	Drahtbrücke, muss eingelegt werden, wenn kein Sperrschütz benötigt wird Kontakt offen = EVU-Sperre	Wire jumper, must be inserted if no blocking contactor is required Contact open - utility block (EVU)	Le cavalier à fil doit être inséré en absence de disjoncteur de blocage du fournisseur d'énergie Contact ouvert - blocage du fournisseur d'électricité EJP
A2	Drahtbrücke, muss bei Verwendung des 2ten Sperrringanges entfernt werden Kontakt offen = WP gesperrt	Wire jumper, must be removed if the 2nd disable contactor is used Contact open - heat pump blocked	Cavalier à fil à retirer si la 2e entrée de coupure est utilisée Contact ouvert - PAC bloquée
A4	Drahtbrücke in SI 50ZS / SI 75ZS, anstelle von F18/ F19	Wire jumper in SI 50ZS / SI 75ZS, in place of F18/ F19	Cavalier à fil en SI 50ZS / SI 75ZS au lieu de F18/ 19
B2*	Pressostat Niederdruck-Sole	Low-pressure brine controller	Pressostat eau glycolée basse pression
B3*	Thermostat Warmwasser (alternativ zu R3)	Hot water thermostat (as an alternative to R3)	Thermostat eau chaude (alternative à R3)
B4*	Thermostat Schwimmbadwasser	Swimming pool water thermostat	Thermostat eau de piscine
E1	Ölsumpfheizung - M1	Oil sump heater - M1	Chauffage à carter d'huile - M1
E2	Ölsumpfheizung - M3	Oil sump heater - M3	Chauffage à carter d'huile - M3
E9*	Elektr. Tauchheizkörper Warmwasser	Electric immersion heater hot water	Thermoplongeur élect. eau chaude
E10*	2. Wärmeerzeuger (Heizkessel oder elektr. Heizstab - Funktion über Regler wählbar)	Heat generator 2 (boiler or electric heating element) - selectable via controller	2e générateur de chaleur (chaudière ou cartouche chauffante électrique) - réglable par le régulateur
E13*	2. Kälteerzeuger	Chiller 2	2. générateur de froid
F2	Lastsicherung für N1-Relaisausgänge an J13 4,0 ATr	Load fuse for N1 relay outputs at J13 4.0 slow-acting	Coupe-circuit de la charge pour sorties de relais N1 sur J13 4,0 ATr
F3	Lastsicherung für Relaisausgänge an J15 bis J18 am N1 und J12 am N2 4,0 ATr	Load fuse relay outputs at J15 to J18 at N1 and J12 at N2 4.0 slow-acting	Coupe-circuit de charge pour sorties de relais en J15 jusqu'à J18 pour N1 et en J12 pour N2 4,0 ATr
F4	Pressostat Hochdruck	High-pressure controller	Pressostat haute pression
F5	Pressostat Niederdruck	Low-pressure controller	Pressostat basse pression
F10	Durchflussschalter (Kühlbetrieb)	Flow rate switch cooling operation	Commutateur de débit mode refroidissement
F18	Motorschutz M1 - nur in SI 100ZS	M1 motor protection - only in SI 100ZS	Protection moteur M1 - uniquement sur SI 100ZS
F19	Motorschutz M3 - nur in SI 100ZS	M3 motor protection - only in SI 100ZS	Protection moteur M3 - uniquement sur SI 100ZS
F21	Lastsicherung für Ölsumpfheizung/Sanftanlasser	Load fuse for oil sump heater/soft starter	Fusible pour chauffage à carter d'huile / démarreur progressif
H5*	Leuchte Störferrnanzeige	Remote fault indicator lamp	Témoin de télé-détection de pannes
J1...J18	Klemmensteckverbinder an N1 (Heizungsregler) - Achtung: an den Steckern J1-J12 liegen 24V an - keine Netzspannung anlegen!	Terminal connector at N1 (Heating controller) Caution: There are 24 V on the J1-J12 plugs - do not apply any system voltage!	Connecteur à bornes sur N1 (Régulateur de chauffage). Attention ! Ne pas brancher la tension secteur ! Les connecteurs J1-12 sont sous 24V !
J1...J15	Klemmensteckverbinder an N2 (Kühlregler) Achtung: an den Steckern J1-J12, 13 liegen 24V an - keine Netzspannung anlegen!	Terminal connector at N2 (cooling controller) Caution: There are 24 V on the J1-J12, 13 plugs - do not apply any system voltage!	Connecteur à bornes sur N2 (régulateur refroidissement). Attention ! Ne pas brancher la tension secteur! Les connecteurs J1-12, 13 sont sous 24V !
K1	Schütz M1	Contacteur M1	Contacteur M1
K3	Schütz M3	Contacteur M3	Contacteur M3
K5	Schütz M11	Contacteur M11	Contacteur M11
K20*	Schütz 2. Wärmeerzeuger	Contacteur for heat generator 2	Contacteur 2e générateur de chaleur
K21*	Schütz elektr. Tauchheizkörper Warmwasser	Contacteur for electric immersion heater hot water	Contacteur thermoplongeur élect. eau chaude
K22*	EVU Sperrschütz	Utility blocking contactor	Contacteur de coupure de la société d'électricité
K23*	SPR Hilfsrelais	SPR auxiliary relay	Relais auxiliaire « SPR »
K28*	externe Umschaltung Betriebsart Kühlen	External switching to "cooling" mode	Commutation externe mode opératoire rafraîchissement
M1	Verdichter 1	Compressor 1	Compresseur 1
M3	Verdichter 2	Compressor 2	Compresseur 2
M11*	Primärpumpe	Primary pump	Pompe primaire
M13*	Heizungsumwälzpumpe	Heat circulating pump	Circulateur de chauffage
M14*	Heizungsumwälzpumpe 1. Heizkreis	Heat circulating pump of heating circuit 1	Circulateur de chauffage 1er circuit de chauffage
M15*	Heizungsumwälzpumpe 2. Heizkreis	Heat circulating pump of heating circuit 2	Circulateur de chauffage 2e circuit de chauffage
M16*	Zusatzumwälzpumpe	Auxiliary circulating pump	Circulateur supplémentaire
M18*	Warmwasserumwälzpumpe	Hot water circulating pump	Circulateur d'eau chaude
M19*	Schwimmbadwasserumwälzpumpe	Swimming pool water circulating pump	Circulateur d'eau de piscine
M21*	Mischer Hauptkreis	Mixer for main circuit	Mélangeur circuit principal
M22*	Mischer 2. Heizkreis	Mixer for heating circuit 2	Mélangeur 2e circuit de chauffage
N1	Heizungsregler	Heating controller	Régulateur de chauffage
N2	Kühlregler (pCO1)	Cooling controller (pCO1)	Régulateur refroidissement (pCO1)
N3/N4*	Raumstationen für die Taupunktregelung*	Room stations for dew point regulation	Stations de pièce pour régulation du point de condensation
N5*	Taupunktwärter	Dew point monitor	Contrôleur du point de condensation
N7	Sanftanlaufsteuerung M1	Soft start control M1	Commande de démarrage progressif M1
N8	Sanftanlaufsteuerung M3	Soft start control M3	Commande de démarrage progressif M3
N9*	Raumthermostat	Room thermostat	Thermostat de pièce
N10*	Fernbedienstation	Remote control	Station de télécommande
Q1	Leistungsschutzschalter M11	Miniature circuit breaker M11	Disjoncteur M11
R1	Außenfühler	External sensor	Sonde extérieure
R2	Rücklauffühler	Return flow sensor	Sonde de retour
R3	Warmwasserfühler (alternativ zum Warmwasserthermostat)	Hot water sensor (as an alternative to the hot water thermostat)	Sonde d'eau chaude (alternative au thermostat eau chaude)
R5	Fühler für 2ten Heizkreis	Sensor for heating circuit 2	Sonde pour 2e circuit de chauffage
R6	Eingefrierschutzfühler (Sole)	Flow temperature limit sensor (brine)	Sonde antigel (eau glycolée)
R7	Kodierwiderstand	Coding resistor	Résistance de codage
R8	Frostschutzfühler Kühlen	Flow sensor, cooling	Sonde antigel refroidissement
R9	Frostschutzfühler Heizen	Flow sensor, heating	Sonde antigel chauffage
R10.1-5*	Feuchtesensoren von N5 (max. 5 Sensoren können angeschlossen werden)	N5 humidity sensors (maximum of 5 sensors can be connected!)	Capteurs d'humidité de N5 (raccordement de 5 capteurs au maximum !)
T1	Sicherheitstrenntransformator 230/24 VAC-28VA	Safety isolating transformer 230/24 V AC-28 VA	Transformateur sectionn. sécu. 230/24 VAC-28VA

X1	Klemmenleiste Netz-Steuerung L/N/PE-230VAC-50Hz/Sicherungen/N- und PE-Verteiler	Terminal strip for mains control L/N/PE-230 V AC - 50 Hz/fuses/N and PE terminal block	Bornier commande réseau L/N/PE-230VAC-50Hz/ fusibles/distributeur N et PE
X2	Klemmenleiste 24 VAC-Verteiler	Terminal strip for 24 V AC terminal block	Bornier distributeur pour 24 V AC
X3	Klemmenleiste GND / +VDC Verteiler für Sensoren	Terminal strip for GND / +VDC terminal block for sensors	Bornier distributeur GND / +VDC pour capteurs
X5	Klemmenleiste 0 VAC-Verteiler	Terminal strip for 0 V AC terminal block	Bornier distributeur pour 0 V AC
X6	Klemmenleiste Leistungseinspeisung 3L / PE-400VAC~50Hz	Terminal strip for power supply 3L / PE-400VAC~50Hz	Bornier alimentation puissance 3L / PE-400VAC~50Hz
X7	Verteilerdose Ölsumpfheizungen	Junction box for oil sump heaters	Boîte de distribution chauffages à carter d'huile
Y1	4-Wege-Umschaltventil	Four-way reversing valve	Soupape de commutation 4 voies
	Abkürzungen:	Abbreviations:	Abréviations :
EVS	EVU-Sperreingang	Utility disable contactor	Entrée de coupure fournisseur d'énergie
SPR	Zusätzlicher Sperreingang	Supplementary disable contactor	Entrée de « coupure courant » complémentaire
MA*	Mischer AUF	Mixer OPEN	Mélangeur OUVERT
MZ*	Mischer ZU	Mixer CLOSED	Mélangeur FERME
*	Bauteile sind bauseits beizustellen, bzw. als Zubehör erhältlich	Components to be supplied by the customer, available as accessories	Pièces fournies par le client (disponibles comme accessoires)
—	werkseitig 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

4 Hydraulisches Prinzipschema / Hydraulic block diagrams / Schéma hydraulique

4.1 Darstellung / Schematic view / Représentation schématique



4.2 Legende / Legend / Légende

	Rückschlagventil	Check valve	Clapet anti-retour
	Absperrventil	Shutoff valve	Robinet d'arrêt
	Dreiwegemischer	Three-way mixer	Mélangeur 3 voies
	Umwälzpumpe	Circulating pump	Circulateur
	Ausdehnungsgefäß	Expansion vessel	Vase d'expansion
	Absperrventil mit Rückschlagventil	Shutoff valve with check valve	Robinet d'arrêt avec clapet anti-retour
	Sicherheitsventilkombination	Safety valve combination	Groupe de valves de sécurité
	Wärmeverbraucher	Heat consumer	Consommateur de chaleur
	Temperaturfühler	Temperature sensor	Sonde de température
	Flexibler Anschlusschlauch	Flexible connection hose	Tuyau de raccord flexible
①	Sole/Wasser-Wärmepumpe	Brine-to-water heat pump	Pompe à chaleur eau glycolée/eau
②	Wärmepumpenmanager	Heat pump manager	Gestionnaire de pompe à chaleur
③	Pufferspeicher	Buffer tank	Réservoir tampon
④	Warmwasserspeicher	Hot water cylinder	Ballon d'eau chaude
⑤	Wärmequelle	Heat source	Source de chaleur
E9	Tauchheizkörper Warmwasser	Immersion heater hot water	électrique eau chaude
M11	Primärumschälzpumpe	Primary circulating pump	Circulateur primaire
M13	Heizungsumwälzpumpe	Heat circulating pump	Circulateur de chauffage
M15	Heizungsumwälzpumpe 2. Heizkreis	Heat circulating pump of heating circuit 2	Circulateur de chauffage 2e circuit de chauffage
M16	Zusatzumwälzpumpe	Auxiliary circulating pump	Circulateur supplémentaire
M18	Warmwasserumwälzpumpe	Hot water circulating pump	Circulateur d'eau chaude
M22	Mischer 2. Heizkreis	Mixer for heating circuit 2	Mélangeur 2e circuit de chauffage
N1	Regeleinheit	Control unit	Unité de régulation
N2	Kühlregler	Cooling controller	Régulateur de refroidissement
N3/N4	Raumklimastation	Room Climate Control Station	Station de climatisation de pièce
R1	Außenwandfühler	External wall sensor	Sonde de paroi extérieure
R2	Rücklauffühler	Return flow sensor	Sonde retour chauffage
R3	Warmwasserfühler	Hot water sensor	Sonde d'eau chaude
R5	Fühler 2. Heizkreis	Sensor for heating circuit 2	Sonde 2e circuit de chauffage
R9	Frostschutzfühler Heizwasser	Flow sensor, heating water	Sonde antigel eau de chauffage
EV	Elektroverteilung	Electrical distribution system	Distributeur courant électrique
KW	Kaltwasser	Cold water	Eau froide
WW	Warmwasser	Hot water	Eau chaude

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 be-
zeichnete(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 con-
struction 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

Sole/Wasser-Wärmepumpen
für Innenaufstellung mit R404A

Brine-to-water heat pumps
for indoor installation, containing R404A

Pompes à chaleur eau glycolée/eau
pour installation intérieure avec R404A

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):

Harmonisierte EN / Harmonized EB Standards / Normes EN harmonisées:

SI 75ZSR

EN 255:1997
EN 378:2000
DIN 8901

DIN EN 60335-1 (VDE 0700 T1):2005-07
DIN EN 60335-2-40 (VDE 0700 T40):2004-03
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 T2):2001-12
DIN EN 61000-3-3 (VDE 0838 T3):2002-05

EN 60335-1:2002+A11:2004+A1:2004
EN 60335-2-40:2003
EN 55014-1:2000+A1:2001+A2:2002
EN 55014-2:1997+A1:2001
EN 61000-3-2:2000
EN 61000-3-3:1995+Corr.:1997+A1:2001

Nationale Richtlinien / National Directives / Directives nationales

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Wolfgang Weinhold
Geschäftsführer / Managing Director


Andreas Tilch
Spartenleiter / Head of business unit

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

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