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1 Please Read Immediately

1.1 Important Information

⚠️ ATTENTION!
The heat pump is not secured to the wooden pallet.

⚠️ ATTENTION!
The heat pump must not be tilted more than 45° (in any direction).

⚠️ ATTENTION!
Do not use the holes in the panel assemblies for lifting the device!

⚠️ ATTENTION!
In the case of large-volume heating circuits, an additional expansion vessel must be used to supplement the installed expansion vessel (24 litres, 1.0 bar admission pressure).

⚠️ ATTENTION!
The brine solution must contain at least a 25 % concentration of a monoethylene glycol or propylene glycol-based antifreeze, which must be mixed before filling.

⚠️ ATTENTION!
The heat pump must be started up in accordance with the installation and operating instructions of the heat pump controller.

⚠️ ATTENTION!
The supplied dirt trap must be inserted in the heat source inlet of the heat pump to protect the evaporator against the ingress of impurities.

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

⚠️ ATTENTION!
Disconnect all electrical circuits from the power source prior to opening the device.

1.2 Legal Regulations and Directives

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

The heat pump must be connected to the power supply in compliance with all relevant VDE, EN and IEC standards. Any further connection requirements stipulated by local utility companies must also be observed.

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

Persons, especially children, who are not capable of operating the device safely due to their physical, sensory or mental abilities or 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.

1.3 Energy-Efficient Use of the Heat Pump

By operating this heat pump you are helping to protect our environment. Both the heating system and the heat source must be properly designed and dimensioned to ensure efficient operation. It is particularly important to keep water flow temperatures as low as possible. All connected energy consumers should therefore be suitable for low flow temperatures. Raising the heating water temperature by 1 K corresponds to an increase in energy consumption of approx. 2.5 %. Low-temperature heating systems with flow temperatures between 30 °C and 50 °C are particularly well-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 transfer medium in the heat source system. Borehole heat exchangers, ground heat collectors or similar systems can be used as the heat source.

2.2 Operating Principle
The heat generated by the sun, wind and rain is stored in the ground. This heat stored in the ground is collected at a low temperature by the brine circulating in the ground heat collector, the borehole heat exchanger or a similar system. A circulating pump then conveys the “heated” brine to the evaporator of the heat pump. There the heat is given off to the refrigerant in the refrigerating cycle. This cools the brine so that it can once again absorb thermal energy in the brine circuit.

The refrigerant is drawn in by the electrically driven compressor, compressed and “pumped” to a higher temperature level. The electrical power needed to run the compressor is not lost in this process. Most of it is absorbed by the refrigerant.

The refrigerant subsequently passes through the liquifier where it transfers its thermal energy to the heating water. Depending on the set operating point (thermostat setting), the heating water is thus heated up to a max. of 60 °C.

3 Basic Device
The basic device consists of a ready-to-use heat pump for indoor installation in a compact design. In addition to the control panel with integral controller, the device is already equipped with all of the most important components of the heating circuit and the brine circuit:

- Expansion vessel
- Circulating pumps
- Pressure relief valves
- Pressure gauge
- Overflow valve (heating circuit)

The refrigerating cycle contains the refrigerant R407C. R407C refrigerant is CFC-free, non-ozone depleting and non-combustible.

All components required for the operation of the heat pump are located on the control panel. The power feed for the load current and the control current must be installed by the customer.

The customer must provide both the collector and the brine circuit manifold.

1) Control panel
2) Circulating pumps
3) Liquifier
4) Compressor
5) Evaporator
6) Expansion vessel
4 Accessories

4.1 Brine Circuit Manifold
The brine circuit manifold merges the individual collector loops of the heat source system into a single main pipe which is connected to the heat pump. Integrated ball valves allow the individual brine circuits to be shut off for de-aeration purposes.

4.2 Brine Controller
If required by the authorities, a low-pressure brine controller can be installed in the device. In this case, the connection located upstream from the brine expansion vessel provided for this purpose is to be used.

5 Transport
A lift truck is suited for transporting the unit on a level surface. Carrying straps may be used if the heat pump needs to be transported on an uneven surface or carried up or down stairs. These straps can be passed directly underneath the wooden pallet.

⚠️ ATTENTION!
The heat pump must not be tilted more than 45° (in any direction).

Use the holes provided in the sides of the frame to lift the unit without the pallet. The side panel assemblies must be removed for this purpose. Any commercially available length of pipe can be used as a carrying aid.

6 Set-up

6.1 General Information
The unit must be installed indoors on a level, smooth and horizontal surface. The entire base of the frame should lie directly on the floor to ensure a good soundproof seal. If this is not the case, additional sound insulation measures may be necessary. The heat pump must be installed so that maintenance work can be carried out without hindrance. This can be ensured by maintaining a clearance of approx. 1 m in front of and on each side of the heat pump.

6.2 Acoustic Emissions
The heat pump operates silently due to efficient sound insulation. Internal insulation measures should be carried out to prevent vibrations from being transmitted to the foundation or to the heating system.
7 Installation

7.1 General Information

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

- Flow and return flow of the brine system
- Flow for heating and domestic hot water preparation
- Joint return flow for the heating and domestic hot water preparation
- Return flow of the overflow valve
- Connection for an additional expansion vessel (according to need)
- Outflows for the pressure relief valves
- Condensate outflow
- Power supply

7.2 Heating System Connection

The heat pump is equipped with separate outputs for the heating circuit and the hot water circuit.

If the heat pump is not intended to be used to heat up the hot water, the hot water output must be permanently sealed.

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 liquifier could cause the heat pump to completely break down.

An overflow valve is installed in the device for systems in which the heating water flow can be shut off via the radiator or thermostat valves. This ensures a minimum heating water flow rate through the heat pump and helps to avoid faults.

Once the heating system has been installed, it must be filled, de-aerated and pressure-tested.

Antifreeze protection for installation locations prone to frost

The antifreeze function of the heat pump controller is active whenever the controller and the heat circulating pumps 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 can not be detected (holiday home).

The integrated expansion vessel has a volume of 24 litres. This volume is suitable for buildings with a living space area to be heated of maximum 200 m².

The volume should be checked by the heating system technician. If necessary, an additional expansion vessel must be installed (according to DIN 4751, Part 1). The tables listed in the manufacturers’ catalogues simplify dimensioning the system on the basis of the water content.

ATTENTION!
In the case of large-volume heating circuits, an additional expansion vessel must be used to supplement the installed expansion vessel (24 litres, 1.0 bar admission pressure).

7.3 Heat Source Connection

The following procedure must be observed when connecting the heat source:

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

The hydraulic plumbing diagram must be adhered to.

The dirt traps and micro bubble air separator included in the scope of supply must be inserted in the brine inlet of the heat pump by the customer.

The brine liquid must be produced prior to charging the system. The liquid must have an antifreeze concentration of at least 25 % to ensure frost protection down to -14 °C.

Only monoethylene glycol or propylene glycol-based antifreeze may be used.

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

ATTENTION!
The brine solution must contain at least a 25 % concentration of a monoethylene glycol or propylene glycol-based antifreeze, which must be mixed before filling.

7.4 Electrical Connection

The following electrical connections need to be established on the heat pump.

- The mains cable must be connected to the control panel of the heat pump.
- The control voltage cable must be connected to the control panel of the heat pump.

All electrical components required for the operation of the heat pump are located on the control panel.

For detailed instructions on how to connect the external components and how the heat pump controller functions, please refer to the device connection diagram and the operating manual supplied with the controller.

The mains cable is connected via the terminals X5: L/N/PE on the control panel.

A disconnecting device with a contact gap of at least 3 mm (e.g. utility blocking contactor or power contactor) as well as a 1-pole circuit breaker have to be provided by the customer. The required conductor cross section is to be selected according to the power consumption of the heat pump, the technical connection requirements of the relevant electrical utility company as well as all applicable regulations. Details on the power consumption of the heat pump are listed on both the product information sheet and the type plate. The connection terminals are designed for a max. conductor cross section of 10 mm².

Connection of the control voltage via terminals X1:L/N/PE.

If a brine pump is required which is more powerful than the integral brine pump, a motor contactor and a corresponding motor circuit breaker must be installed. In such cases, the contactor is to be connected to the terminals for the internal brine pump (controller terminals J12/N03 and X1-N). The larger pump must then be supplied by the supply network.
8 Start-up

8.1 General Information

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).

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.
- The heat source system and the heating circuit must have been filled and checked.
- Dirt traps and breathers must be inserted in the brine inlet of the heat pump.
- All valves that could impair proper flow in the brine and heating circuits must be open.
- The heat pump controller must be adapted to the heating system in accordance with the controller’s operating instructions.
- Ensure the condensate outflow functions.
- The outflows of the brine and heating water pressure relief valves must not be impaired.

8.3 Start-up Procedure

The heat pump is started up via the heat pump controller.

⚠️ ATTENTION!

The heat pump must be started up in accordance with the installation and operating instructions of the heat pump controller.

The performance level of the circulating pump must be adapted to the respective heating system.

The overflow valve must be adjusted to the requirements of the respective heating system. Incorrect adjustment can lead to faulty operation and increased energy consumption. We recommend carrying out the following procedure to correctly adjust the overflow valve:

Close all of the heating circuits that may also be closed during operation so that the most unfavourable operating state - with respect to the water flow rate - is achieved. This normally means the heating circuits of the rooms on the south and west sides of the building. At least one heating circuit must remain open (e.g. bathroom).

The overflow valve should be opened far enough to produce the maximum temperature spread between the heating flow and return flow listed in the table below for the current heat source temperature. The temperature spread should be measured as close as possible to the heat pump. The heating element of mono energy systems should be disconnected.

<table>
<thead>
<tr>
<th>Heat source temperature From</th>
<th>Max. temperature spread</th>
<th>Heat source temperature To</th>
</tr>
</thead>
<tbody>
<tr>
<td>-5°C</td>
<td>0°C</td>
<td>10 K</td>
</tr>
<tr>
<td>1°C</td>
<td>5°C</td>
<td>11 K</td>
</tr>
<tr>
<td>6°C</td>
<td>9°C</td>
<td>12 K</td>
</tr>
<tr>
<td>10°C</td>
<td>14°C</td>
<td>13 K</td>
</tr>
<tr>
<td>15°C</td>
<td>20°C</td>
<td>14 K</td>
</tr>
<tr>
<td>21°C</td>
<td>25°C</td>
<td>15 K</td>
</tr>
</tbody>
</table>

Any faults 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 Maintenance and Cleaning

9.1 Maintenance
The heat pump is maintenance-free. To prevent faults due to sediment in the heat exchangers, care must be taken to ensure that no impurities can enter either the heat source system or the heating system. In the event that operating malfunctions due to contamination occur nevertheless, 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 liquifier in the heat pump, the system must be cleaned by a heating technician.

According to today’s state of knowledge, 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 liquifier. It is important that the system be thoroughly flushed using appropriate neutralising agents to prevent any damage from being 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 Heat Source System

⚠️ ATTENTION!
The supplied dirt trap must be inserted in the heat source inlet of the heat pump to protect the evaporator against the ingress of impurities.

Clean the dirt trap’s filter screen one day after start-up and subsequently in weekly intervals. If no more signs of contamination are evident, the filter can be removed to reduce pressure drops.

10 Faults / Trouble-Shooting
This heat pump is a quality product and is designed for trouble-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.

⚠️ ATTENTION!
Disconnect all electrical circuits from the power source prior to opening the device.

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
   SIK 11ME    SIK 16ME

2 Design
   2.1 Model  Compact  Compact
   2.2 Degree of protection according to EN 60 529  IP 20  IP 20
   2.3 Installation Location  Indoors  Indoors

3 Performance data
   3.1 Operating temperature limits:
      | Heating water flow °C | Up to 55         | Up to 55         |
      | Brine (heat source) °C | -5 to +25        | -5 to +25        |
      | Antifreeze             | Monoethylene glycol | Monoethylene glycol |
      | Minimum brine concentration (-13 °C freezing temperature) | 25% | 25% |
   3.2 Temperature spread of heating water (flow/return flow) at B0 / W35 K
      | 9.9 | 10 |
   3.3 Heat output / COP at B-5 / W55 kW / ---
      | 9.4 / 2.4 | 13.3 / 2.2 |
   3.4 Sound power level dB(A)  51  51
   3.5 Heating water flow with an internal pressure differential of m³/h / Pa
      | 1.0 / 3500 | 1.3 / 3500 |
   3.6 Free compression of heat circulating pump (max. level) Pa
      | 65500 | 43500 |
   3.7 Brine throughput with an internal pressure differential (heat source) of m³/h / Pa
      | 3.0 / 13000 | 3.5 / 13000 |
   3.8 Free compression of brine circulating pump (max. level) Pa
      | 40000 | 34000 |
   3.9 Refrigerant; total filling weight type / kg
      | R407C / 2.0 | R407C / 2.3 |

4 Dimensions, connections and weight
   4.1 Device dimensions without connections ²
      | 1115 x 652 x 688 mm |
   4.2 Device connections to heating system Inch
      | R 1¼" external |
   4.3 Device connections to heat source Inch
      | R 1¼" external |
   4.4 Weight of the transportable unit(s) incl. packing kg
      | 191 | 203 |

5 Electrical connection
   5.1 Nominal voltage; fuse protection V / A
      | 230 / 25 | 230 / 32 |
   5.2 Nominal power consumption ¹ B0 W35 kW
      | 2.66 | 3.77 |
   5.3 Starting current with soft starter A
      | 38 | 50 |
   5.4 Nominal current B0 W35 / cos ϕ A / ---
      | 14.46 / 0.8 | 20.5 / 0.8 |

6 Complies with the European safety regulations
   3

7 Additional model features
   7.1 Water in device protected against freezing ⁴
      | Yes | Yes |
   7.2 Performance levels
      | 1 | 1 |
   7.3 Controller internal/external
      | Internal | 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. Note that additional space is required for pipe connections, operation and maintenance.

3. See CE declaration of conformity

4. The heat circulating pump and the heat pump controller must always be ready for operation.
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1 Maßbild / Dimension Drawing / Schéma côté

Manometer Heizkreis  Heating circuit pressure gauge  Manomètre circuit de chauffage
Manometer Solekreis  Brine circuit pressure gauge  Manomètre circuit eau glycolée

1. Wärmequelle  Heat source  Source de chaleur
Eingang in WP  Heat pump inlet  Entrée dans la PAC
1 1/4" Außengewinde  1 1/4" external thread  Filetage extérieur 1 1/4"

2. Wärmequelle  Heat source  Source de chaleur
Ausgang aus WP  Heat pump outlet  Sortie de la PAC
1 1/4" Außengewinde  1 1/4" external thread  Filetage extérieur 1 1/4"

3. Heizungsventil  Overflow valve  Soupape de trop-plein
1 1/4" Außengewinde  1 1/4" external thread  Filetage extérieur 1 1/4"

4. gemeinsamer Rücklauf  Common return flow  Retour commun
Eingang in WP  Heat pump inlet  Entrée dans la PAC
1 1/4" Außengewinde  1 1/4" external thread  Filetage extérieur 1 1/4"

5. Anschluss zusätzliches  Connection of an additional  Record pour vase
Auszweigungsteil  expansion vessel  d’expansion supplémentaire
3 1/4" Außengewinde  3/4" external thread  Filetage extérieur 3/4"

6. Kondensatablauf  Condensate outflow  Ecoulement du condensat
Außendurchmesser 12mm  12mm outer diameter  Diamètre extérieur 12mm

7. Warmwasserzulauf  Hot water flow  Alte eau chaude
Auszug aus WP  Heat pump outlet  Sortie de la PAC
1 1/4" Außengewinde  1 1/4" external thread  Filetage extérieur 1 1/4"

8. Ablauf Überdruck  Overflow outlet  Décharge surpression
Side- und Heizkreis  Brine and heating circuits  Circuits eau glycolée
3 1/4" Schlauch  et chauffage  Tuyau flexible 3/4"
2 Diagramme / Diagrams / Diagrames

2.1 Kennlinien / Characteristic Curves / Courbes caractéristiques

SIK 11ME

Heizleistung in [kW]  Wasseraustrittstemperatur in [°C]
Heating capacity in [kW]  Water outlet temperature in [°C]
Puisance de chauffage en [kW]  Température de sortie de l'eau en [°C]

Bedingungen · Conditions · Conditions:
Heizwasserdurchsatz  Heating water flow rate
Débit d'eau de chauffage  1.0 m³/h
Soledruckzusatz  Brine flow rate
Débit d'eau glycolée  3.0 m³/h

Leistungsaufnahme (incl. Pumpenleistungsanteil)  
Power consumption (incl. power input to pump)
Consumption de puissance (y compris part de consommation de la pompe)

Druckverlust in [Pa]  
Pressure loss in [Pa]
Perle de pression en [Pa]

Leistungszahl (incl. Pumpenleistungsanteil)  
Coefficient of performance (incl. power input to pump)
Coefficient de performance (y compris part de consommation de la pompe)
2.2 Kennlinien / Characteristic Curves / Courbes caractéristiques

SIK 16ME

Leistungsaufnahme (incl. Pumpenleistungsanteil)
Power consumption (incl. power input to pump)
Consommation de puissance (y compris part de consommation de la pompe)

Druckverlust in [Pa]
Pressure loss in [Pa]
Perte de pression en [Pa]

Verdampfer
Evaporator
Evaporateur

Verflüssiger
Condenser
Condenseur

Bedingungen · Conditions · Conditions:
Heizwasserdurchsatz
Heating water flow rate
Débit d'eau de chauffage
1,3 m³/h
Soledurchsatz
Brine flow rate
Débit d'eau glycolée
3,5 m³/h

Heizleistung in [kW]
Heating capacity in [kW]
Puissance de chauffage en [kW]

Wasseraustrittstemperatur in [°C]
Water outlet temperature in [°C]
Température de sortie de l'eau en [°C]

Soleintrittstemperatur in [°C] · Brine inlet temperature in [°C] · Température d'entrée d'eau glycolée en [°C]

Leistungszahl (incl. Pumpenleistungsanteil)
Coefficient of performance (incl. power input to pump)
Coefficient de performance (y compris part de consommation de la pompe)

Druckverlust in [Pa]
Pressure loss in [Pa]
Perte de pression en [Pa]

Verdampfer
Evaporator
Evaporateur

Verflüssiger
Condenser
Condenseur

Heizwasserdurchfluss in [m³/h]
Heating water flow rate in [m³/h]
Débit d'eau de chauffage en [m³/h]
3 Stromlaufpläne / Circuit Diagrams / Schémas électriques

3.1 Steuerung / Control / Commande

![Circuit Diagram]
3.2 Last / Load / Charge
3.3 Anschlussplan / Circuit Diagram / Schéma électrique
### 3.4 Legende / Legend / Légende

<table>
<thead>
<tr>
<th>Code</th>
<th>Beschreibung</th>
<th>Abkürzungen:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Drahtbrücke, muss eingelegt werden, wenn kein EVU-Sperreingang benutzt wird</td>
<td>Cavalier à fil à monter si aucun contacteur de coupure du fournisseur d'énergie n'est requis</td>
</tr>
<tr>
<td>A2</td>
<td>Drahtbrücke, muss bei Verwendung des 2ten Sperreinganges entfernt werden</td>
<td>Cavalier à fil à retirer si la 2e entrée de coupure est utilisée</td>
</tr>
<tr>
<td>B3</td>
<td>Thermostat Schwimmbadwasser</td>
<td>Thermostat eau de piscine</td>
</tr>
<tr>
<td>B4</td>
<td>Thermostat Schwimmbadwasser</td>
<td>Thermostat eau de piscine</td>
</tr>
<tr>
<td>C1</td>
<td>Betriebskondensator Verdichter</td>
<td>Condensateur de service - compresseur</td>
</tr>
<tr>
<td>E9</td>
<td>Elekt. Tauchheizkörper Warmwasser</td>
<td>Thermoplongeur élect. eau chaude</td>
</tr>
<tr>
<td>E10</td>
<td>2. Wärmezeuger (Heizkessel oder elek.: Heizstab)</td>
<td>2e générateur de chaleur (chaudière ou carouche chauffante élect.)</td>
</tr>
<tr>
<td>F2</td>
<td>Lastsicherung für N1-Relaisausgänge an J12 und J13 4,0 A Tr</td>
<td>Coupe-circuit de charge pour sorties de relais en J12 et J13 4,0 A Tr</td>
</tr>
<tr>
<td>F3</td>
<td>Lastsicherung für N1-Relaisausgänge an J15 bis J18 4,0 A Tr</td>
<td>Coupe-circuit de charge pour sorties de relais en J15 jusqu'à J18 4,0 A Tr</td>
</tr>
<tr>
<td>F4</td>
<td>Pressostat Hochdruck</td>
<td>Pressostat haute pression</td>
</tr>
<tr>
<td>F5</td>
<td>Pressostat Niederdruck</td>
<td>Pressostat basse pression</td>
</tr>
<tr>
<td>H5*</td>
<td>Leuchte Störfernanzeige</td>
<td>Témoin de télédétection de pannes</td>
</tr>
<tr>
<td>J1</td>
<td>Klemmensteckverbinder an N1</td>
<td>Connecteur à bornes sur N1</td>
</tr>
<tr>
<td>K1</td>
<td>Schütz Verdichter</td>
<td>Contacteur compresseur</td>
</tr>
<tr>
<td>K11*</td>
<td>Elektron. Relais für Störfernanzeige (auf Relaisbaugruppe)</td>
<td>Relais électronique pour télédétection de pannes (sur module relais)</td>
</tr>
<tr>
<td>K12*</td>
<td>Elektron. Relais für Schwimmbadwasserumwälzpumpe (auf Relaisbaugruppe)</td>
<td>Relais électronique pour circulateur eau de piscine (sur module relais)</td>
</tr>
<tr>
<td>K20*</td>
<td>Schütz 2. Wärmezeuger</td>
<td>Contacteur 2e générateur de chaleur</td>
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<tr>
<td>K21*</td>
<td>Schütz elek. Tauchheizkörper Warmwasser</td>
<td>Contacteur thermoplongeur élect. eau chaude</td>
</tr>
<tr>
<td>K22*</td>
<td>EVU-Sperreingang</td>
<td>Contacteur de coupure du fournisseur d'énergie</td>
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<tr>
<td>K23*</td>
<td>SPR Hilfsrelais</td>
<td>Relais auxiliaire « SPR »</td>
</tr>
<tr>
<td>K25</td>
<td>Startrelais Sanflanlasser</td>
<td>Démarreur progressif du relais départ</td>
</tr>
<tr>
<td>M1</td>
<td>Verdichter</td>
<td>Compresseur</td>
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<tr>
<td>M11</td>
<td>Primärumwälzpumpe (Sole)</td>
<td>Circulateur primaire (eau glycolée)</td>
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<tr>
<td>M13</td>
<td>Heizungsumwälzpumpe</td>
<td>Circulateur de chauffage</td>
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<tr>
<td>M15</td>
<td>Heizungsumwälzpumpe 2. Heizkreis</td>
<td>Circulateur de chauffage 2e circuit de chauffage</td>
</tr>
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<td>M16</td>
<td>Zusatzumwälzpumpe</td>
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<td>M18</td>
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<td>M19</td>
<td>Schwimmbadwasserumwälzpumpe</td>
<td>Circulateur d’eau de piscine</td>
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<tr>
<td>M21*</td>
<td>Mischer Hauptkreis</td>
<td>Mélangeur circuit principal</td>
</tr>
<tr>
<td>M22*</td>
<td>Mischer 2. Heizkreis</td>
<td>Mélangeur 2e circuit de chauffage</td>
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<tr>
<td>N1</td>
<td>Wärmepumpenregler</td>
<td>Régulateur de pompe à eau chaude</td>
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<td>N7</td>
<td>Sanflanlasser</td>
<td>Démarrage progressif</td>
</tr>
<tr>
<td>N11*</td>
<td>Relaisbaugruppe</td>
<td>Module de relais</td>
</tr>
<tr>
<td>N16</td>
<td>Bedienteil</td>
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</tr>
<tr>
<td>R1</td>
<td>Außenfühler</td>
<td>Sonde extérieure</td>
</tr>
<tr>
<td>R2</td>
<td>Rücklaufühler</td>
<td>Sonde de retour</td>
</tr>
<tr>
<td>R3</td>
<td>Warmwasserfühler (alternativ zum Warmwasser-thermostat)</td>
<td>Sonde d’eau chaude (alternative au thermostat eau chaude)</td>
</tr>
<tr>
<td>R5</td>
<td>Fühler für 2ten Heizkreis</td>
<td>Sonde pour 2e circuit de chauffage</td>
</tr>
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<td>R6</td>
<td>Eingefrierschutzfühler</td>
<td>Sonde antigel</td>
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<td>R7</td>
<td>Widerstand 40,2 kOhm</td>
<td>Résistance de codage 40,2 kohm</td>
</tr>
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<td>R9</td>
<td>Vorlaufühler</td>
<td>Sonde aller</td>
</tr>
<tr>
<td>T1</td>
<td>Sicherheitstretertransformator 230/24V AC-28VA</td>
<td>Transformateur sectionneur de sécurité 230/24 V AC-28 VA</td>
</tr>
<tr>
<td>X1</td>
<td>Netz-Steuerung L/NPE-230V AC-50 Hz / Sicherungen-N- und PE-Verteiler</td>
<td>Commande-réseau L/NPE-230V AC-50 Hz / fusibles/N et PE terminal blocks</td>
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<td>X2</td>
<td>Klemmleiste 24V AC-Verteiler</td>
<td>Borneur distributeur pour 24 V AC</td>
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<td>X3</td>
<td>Klemmleiste GND-Verteiler für analoge Eingänge an J2 und J6</td>
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<td>X4</td>
<td>Klemmleiste N/S-Verteiler</td>
<td>Borneur du distributeur N/S</td>
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<td>X5</td>
<td>Klemmleiste Netz-Last L/NPE-230VAC - 50Hz</td>
<td>Borneur charge-réseau L/NPE-230VAC - 50Hz</td>
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</tbody>
</table>

**Abkürzungen:**
- EVS: EVU-Sperreingang
- SPR: zusätzlicher Sperreingang, konfigurierbar
- MA*: Mischer AUF
- MZ*: Mischer ZU
- *: Bauteile sind extern beizustellen

**Abbréviations:**
- EVS: EVU-Sperreingang
- SPR: supplémentaire Sperreingang, configurable
- MA*: Mischer OUVERT
- MZ*: Mischer FERMÉ
- *: Pièces à fournir par le client

**Abbreviations:**
- EVS: EVU-Sperreingang
- SPR: supplementary Sperreingang, configurable
- MA*: Mixer OPEN
- MZ*: Mixer CLOSED
- *: Components to be supplied from external sources
4 Hydraulisches Prinzipschema / Hydraulic Plumbing Diagram / Schéma hydraulique

4.1 Darstellung / Schematic View / Représentation
### 4.2 Legende / Legend / Légende

<table>
<thead>
<tr>
<th>German</th>
<th>English</th>
<th>French</th>
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<tr>
<td>Rückschlagventil</td>
<td>Check valve</td>
<td>Clapet anti-retour</td>
</tr>
<tr>
<td>Absperrventil</td>
<td>Shutoff valve</td>
<td>Robinet d’arrêt</td>
</tr>
<tr>
<td>Überstromventil</td>
<td>Overflow valve</td>
<td>Vanne de trop-plein</td>
</tr>
<tr>
<td>Sicherheitsventilkombination</td>
<td>Safety valve combination</td>
<td>Groupe de valves de sécurité</td>
</tr>
<tr>
<td>Umwälzpumpe</td>
<td>Circulating pump</td>
<td>Circulateur</td>
</tr>
<tr>
<td>Ausdehnungsgefäß</td>
<td>Expansion vessel</td>
<td>Vase d’expansion</td>
</tr>
<tr>
<td>Raumtemperaturgesteuertes Ventil</td>
<td>Room temperature-controlled valve</td>
<td>Vanne commandée par température</td>
</tr>
<tr>
<td>Absperrventil mit Rückschlagventil</td>
<td>Shutoff valve with check valve</td>
<td>Robinet d’arrêt avec clapet anti-retour</td>
</tr>
<tr>
<td>Wärmeverbraucher</td>
<td>Heat consumer</td>
<td>Consommateur de chaleur</td>
</tr>
<tr>
<td>Temperaturfühler</td>
<td>Temperature sensor</td>
<td>Sonde de température</td>
</tr>
<tr>
<td>Flexible Anschlussschlauch</td>
<td>Flexible connection hose</td>
<td>Tuyau de raccord flexible</td>
</tr>
<tr>
<td>Wärmepumpe mit integ. Wärmepumpenregler</td>
<td>Heat pump with integrated heat pump controller</td>
<td>Pompe à chaleur intégrant régulateur PAC</td>
</tr>
<tr>
<td>Unterstellpufferspeicher</td>
<td>Built-under buffer tank</td>
<td>Réservoir tampon sous-jacent</td>
</tr>
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<td>Warmwasserspeicher</td>
<td>Hot water cylinder</td>
<td>Ballon d’eau chaude</td>
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<tr>
<td>Kondensatablauf</td>
<td>Condensate outflow</td>
<td>Ecoulement des condensats</td>
</tr>
<tr>
<td>Überdruck Heizung/Sole</td>
<td>Overpressure of the heating system/brine</td>
<td>Surpression chauffage/eau glycolée</td>
</tr>
<tr>
<td>Soleverteiler</td>
<td>Brine circuit manifold</td>
<td>Distributeur d’eau glycolée</td>
</tr>
<tr>
<td>Solesammler</td>
<td>Brine collector</td>
<td>Absorbeur à circulation d’eau glycolée</td>
</tr>
<tr>
<td>Erdreichkollektoren oder Erdwärmesonden</td>
<td>Ground heat collectors or borehole heat exchangers</td>
<td>Collecteurs enterrés ou sondes géothermiques</td>
</tr>
<tr>
<td>E10 2ter Wärmeerzeuger</td>
<td>2nd heat generator</td>
<td>2e générateur de chaleur</td>
</tr>
<tr>
<td>M11 Primärumwälzpumpe</td>
<td>Primary circulating pump</td>
<td>Circulateur primaire</td>
</tr>
<tr>
<td>M13 Heizungsumwälzpumpe</td>
<td>Heat circulating pump</td>
<td>Circulateur de chauffage</td>
</tr>
<tr>
<td>M18 Warmwasserumwälzpumpe</td>
<td>Hot water circulating pump</td>
<td>Circulateur d’eau chaude</td>
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<tr>
<td>R1 Außenwandfühler</td>
<td>External wall sensor</td>
<td>Sonde de paroi extérieure</td>
</tr>
<tr>
<td>R2 Rücklauffühler</td>
<td>Return flow sensor</td>
<td>Sonde de retour</td>
</tr>
<tr>
<td>R3 Warmwasserfühler</td>
<td>Hot water sensor</td>
<td>Sonde d’eau chaude</td>
</tr>
<tr>
<td>EV Elektroverteilung</td>
<td>Electrical distribution system</td>
<td>Distributeur courant électrique</td>
</tr>
<tr>
<td>KW Kaltwasser</td>
<td>Cold water</td>
<td>Eau froide</td>
</tr>
<tr>
<td>WW Warmwasser</td>
<td>Domestic hot water</td>
<td>Eau chaude</td>
</tr>
</tbody>
</table>
5 Konformitätserklärung / Declaration of Conformity / Déclaration de conformité

EG - Konformitätserklärung
EC Declaration of Conformity
Déclaration de conformité CE

Der Unterschreiber
The undersigned
La société soinsignée,

bestätigt, dass das (die) nachfolgend bezeichnete(n) Gerät(e) in Verkehr gebrachte(n) nach den von uns in Verkehr gebrachten Produkten entsprechen.
bei einer nicht mit uns abgestimmten Änderung des (der) Gerätes verliehen diese Erklärung ihre Gültigkeit.

Gien Dimplex Deutschland GmbH
Geschäftbereich Dimplex
Am Goldenen Feld 18
D - 95326 Kulmbach

hierby 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 authorization.

certifie que l'appareil / les appareils ci-après, par leur conception et leur mode de construction ainsi que par la définition technique avec laquelle ils sont mis en circulation par notre société, est / sont conforme(s) aux directives fondamentales CEE afférentes.
Ce certificat perd sa validité pour les appareils modifiés sans notre consentement.

Bezeichnung / Designation / Désignation

Sole/Wasser-Wärmepumpen
für Innenanstellung mit R407C

Brine-to-water heat pumps
for indoor installation, containing R407C

Pompes à chaleur eau glycolé/eau
pour installation intérieure avec R407C

EG - Richtlinien / EC Directives / Directives CEE

EG-EMV-Richtlinie / EC EMC Directive / Directive CEE relative à la compatibilité électromagnétique (89/336/EWG)
Druckgerätherichtlinie / Pressure Equipment Directive / Directive CEE relative aux appareils sous pression (97/23/EG)

Type(s):

SIK 11ME
SIK 16ME

EN 255:1997
EN 378:2000
DIN 8961
DIN EN 60335-1 (VDE 0700 T1):2006
DIN EN 60335-2-40 (VDE 0700 T40):2006-11
DIN EN 55014-1 (VDE 0875 T1+1):2003-09
DIN EN 55014-2 (VDE 0875 T1+2):2002-08
DIN EN 61060-3-2 (VDE 0838 T2):2005-09
DIN EN 61060-3-3 (VDE 0838 T3):2002-05

Harmonisierte EN / Harmonised EB Standards / Normes EN harmonisées:

EN 60335-1:2003+A11+A12+
Corr.:A2:2006
EN 61060-3-2:2000+A2:2005

Nationale Richtlinien / National Directives / Directives nationales

D A CH

BGR 500 SVTI

Kulmbach, 09.02.2007

Wolfgang Weinhold
Geschäftsführer / Managing Director

Andreas Thiel
Spartenleiter / Head of Business unit

CE02W01K.doc