



User Guide

Reversible air/water "Split Inverter" heat pump

HPI S

MIT-S 4-8/E

MIT-S 11-16/E

MIT-S 22-27/E

MIT-S 4-8/H

MIT-S 11-16/H

MIT-S 22-27/H






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1 Safety instructions and recommendations


1.1 Safety

| | |
|--------------|---|
| Operation | <p> Danger This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.</p> |
| Electrical | <p> Important Before any work on the appliance, carefully read all documents that accompany the product. These documents are also available on our website. See the last page.</p> <p> Warning</p> <ul style="list-style-type: none"> • Install the appliance in accordance with national rules on electrical installation. • If a power supply cable comes with the appliance and it turns out to be damaged, it must be replaced by the manufacturer, its after-sales service or persons with similar qualifications in order to avoid danger. • If the appliance is not wired in the factory, carry out the wiring according to the wiring diagram described in the chapter Electrical Connections. See the Installation and Service Manual. • This appliance must be connected to the protective earthing. • Earthing must comply with the prevailing installation standards. • Earth the appliance before making any electrical connections. • Type and calibre of the protective equipment: refer to the "Recommended cable cross-sections" chapter. See the Installation and Service Manual. • To connect the appliance to the electricity mains, refer to the "Electrical Connections" chapter. See the Installation and Service Manual. <p>In order to avoid the danger of an unexpected thermal circuit breaker reset, this appliance must not be powered through an external switch, such as a timer, or be connected to a circuit which is regularly switched on and off by the electricity provider.</p> |
| Hydraulics | <p> Caution Respect the minimum and maximum water pressure and temperature to ensure the appliance operates correctly. See chapter on Technical Specifications.</p> |
| Installation | <p> Important Allow the space required to install the appliance correctly, referring to the "Installation" chapter. See the Installation and Service Manual.</p> |

1.2 General instructions

| | |
|---------------------|--|
| Installation | <ul style="list-style-type: none"> • The system must satisfy each point in the rules in force in the country that govern works and interventions in individual homes, blocks of flats or other buildings. • Only qualified professionals are authorised to work on the appliance and the heating installation. They must respect prevailing local and national regulations during fitting, installation and maintenance of the installation. • Commissioning must be performed by a qualified professional. |
|---------------------|--|

1.3 Electrical wiring

| | |
|-------------|---|
| General | <ul style="list-style-type: none"> • Only a qualified installer or qualified service person are allowed to carry out the electrical work of the indoor and outdoor units. Under no circumstances must this work be done by an unqualified individual since failure to carry out the work properly may result in electric shocks and/or electrical leaks. • The appliance must be installed in accordance with national wiring regulations. Capacity shortages in the power supply circuit or an incomplete installation may cause an electric shock or fire. |
| Precautions | <div style="background-color: #f0f0f0; padding: 5px; border: 1px solid #ccc;">  <p>Danger Before any wiring work on the electrical circuit, switch off the power supply, check that no voltage is present and secure the circuit breaker with a circuit breaker lock-out.</p> </div> <ul style="list-style-type: none"> • Use wiring that meets the specifications in the Installation Manual and the stipulations in the local regulations and laws. Use of wiring which does not meet the specifications may give rise to electric shocks, electrical leakage, smoking and/or a fire. • Always connect a protective earthing cable (grounding). Earthing must comply with the prevailing installation standards. Earth the appliance before making any electrical connections. Incomplete grounding can cause a malfunction or electric shock. • To avoid electric shock, make sure that the length of the conductors between the strain relief device and the terminal blocks is such that the active conductors are put under tension before the earth conductor. • Install a circuit breaker that meets the specifications in the installation manual and the stipulations in the local regulations and laws. • Install the circuit breaker where it can be easily accessed by the technician. • In order to avoid the danger of an unexpected thermal circuit breaker reset, this appliance must not be powered through an external switch, such as a timer, or be connected to a circuit which is regularly switched on and off by the electricity provider. • If a power supply cable comes with the appliance and it turns out to be damaged, it must be replaced by the manufacturer, its after-sales service or persons with similar qualifications in order to avoid danger. • When connecting the appliance to the electricity mains or carrying out any other wiring work, refer to the instructions given in the installation manual and the provided wiring diagrams. • Separate the very low voltage cables from the 230/400 V power supply cables. |

1.4 Refrigerant safety

| | |
|-------------|--|
| General | <ul style="list-style-type: none"> • France: Pursuant to Article L. 113-3 of the French Consumer Code, the equipment must be installed by a certified operator whenever the refrigerant load is in excess of 5 tonnes of CO₂ equivalent or when a refrigerant connection is necessary (the case with split systems, even when fitted with a quick coupling device). • All work on the refrigeration circuit must be done by a qualified professional, according to prevailing codes of practice and safety in the profession (recovery of the refrigerant, brazing under nitrogen). All brazing work must be done by qualified brazers. |
| Precautions | <ul style="list-style-type: none"> • Use only R410A refrigerant to fill the installation. • Use tools and pipe components especially designed for use with R410A refrigerant. • Use copper pipes deoxidised with phosphorus to carry the refrigerant. • Store the refrigerant connection pipes away from dust and humidity (risk of damage to the compressor). • Do not use a load cylinder. • Protect the heat pump components, including the insulation and structural elements. Do not overheat the pipes as brazed components may cause damage. • Contact between the refrigerant and a flame may result in emissions of toxic gases. • Do not touch the refrigeration connection pipes with your bare hands while the heat pump is running. Danger of burn or frost injury. • In the event of a refrigerant leakage: <ul style="list-style-type: none"> - Switch off the appliance. - Open the windows. - Do not use a naked flame, do not smoke, do not operate electrical contacts. - Avoid contact with the refrigerant. Danger of frost injuries. - Locate the probable leak and seal it immediately. Use only original parts to replace a defective refrigeration component. • Use only dehydrated nitrogen for detecting leaks or for pressurised tests. • Do not allow the refrigerant to escape into the atmosphere. |

1.5 Water connections

| | |
|--------------------|---|
| General | <ul style="list-style-type: none"> • To drain the domestic hot water circuit. See chapter Maintenance. • Limit temperature at the draw-off point: the maximum domestic hot water temperature at the draw-off point is subject to special regulations in the various countries in which the appliance is sold in order to protect the user. These special regulations be observed when installing the appliance. |
| Precautions | <ul style="list-style-type: none"> • Insulate the pipes to reduce heat losses to a minimum. • Fit drainage valves between the indoor unit and the heating circuit. • If radiators are connected directly to the heating circuit, make sure that there is enough volume of heating water available in the installation. For example, install a pressure actuated bypass valve and a buffer tank between the indoor unit and the heating circuit. • Respect the minimum and maximum water pressure and temperature (70°C) to ensure the appliance operates correctly. See chapter on Technical Specifications. • The hydraulic installation must be capable of handling a minimum flow rate at all times. • Heating water and domestic water must not come into contact with each other. Domestic water must not circulate through the exchanger. |

1.6 Recommendations

| | |
|------------------|--|
| Operation | <ul style="list-style-type: none"> • Keep the indoor unit and outdoor unit accessible at all times. • Regularly check the hydraulic pressure in the heating system. • Do not touch radiators for long periods. Depending on the heat pump settings, the temperature of the radiators may exceed 60 °C. • Do not power off the heat pump. The frost protection mode does not work if the heat pump is switched off. • If you do not need to heat your home for a long period, turn off the heating function or activate frost protection mode. See the chapter Selecting the operating mode. • Do not drain the installation, except in cases of absolute necessity, for example at disposal. See the chapter Decommissioning and disposal. • Give preference to the OFF or frost protection mode rather than switching off the system to leave the following functions running: <ul style="list-style-type: none"> - Anti blocking of pumps - Frost protection • Never remove or cover the labels and data plates affixed to appliances. Labels and data plates must be legible throughout the entire lifetime of the appliance. • Immediately replace damaged or illegible instructions and warning stickers. • If you need to switch off the heat pump in the event of a prolonged absence, drain the indoor unit and the heating system to prevent the system from freezing. • Do not make any modifications to the heat pump without the written consent of the manufacturer. • To benefit from warranty cover, no modifications should be made to the appliance. |
|------------------|--|

1.7 Specific instructions for service, maintenance and breakdowns

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|--------------------|---|
| Precautions | <ul style="list-style-type: none"> • Maintenance work must be carried out by a qualified professional. • Only a qualified professional is authorised to set, correct or replace the safety devices. • For heat pumps with a refrigerant load of more than 5 tonnes of CO₂ equivalent, the user must have an annual leak-tightness test performed on the refrigerant equipment. • Before any work, switch off the power supply to the heat pump, the indoor unit and the hydraulic/electrical backup. • Wait for approx. 20-30 seconds for the outdoor unit capacitors to be discharged, and check that the lights on the outdoor unit PCBs have gone out. • Before working on the refrigeration circuit, switch off the appliance and wait a few minutes. Certain items of equipment such as the compressor and the pipes can reach temperatures in excess of 100 °C and high pressures, which may cause serious injuries. • Use only original spare parts. • Locate and correct the cause of power cut before resetting the safety thermostat. • Removal and disposal of the heat pump must be carried out by a qualified professional in accordance with prevailing local and national regulations. • After maintenance or repair work, check the entire heating system to ensure that there are no leaks. • Remove the casing only to perform maintenance and repair work. Put the casing back in place after maintenance and repair work. |
|--------------------|---|

1.8 Liabilities

| | |
|--------------------------|--|
| Manufacturer's liability | <p>Our products are manufactured in compliance with the requirements of the various Directives applicable. They are therefore delivered with the CE marking and any documents necessary. In the interests of the quality of our products, we strive constantly to improve them. We therefore reserve the right to modify the specifications given in this document.</p> <p>Our liability as manufacturer may not be invoked in the following cases:</p> <ul style="list-style-type: none"> • Failure to abide by the instructions on installing the appliance. • Failure to abide by the instructions on using the appliance. • Faulty or insufficient maintenance of the appliance. |
| Installer's liability | <p>The installer is responsible for the installation and initial commissioning of the appliance. The installer must observe the following instructions:</p> <ul style="list-style-type: none"> • Read and follow the instructions given in the manuals provided with the appliance. • Install the appliance in compliance with prevailing legislation and standards. • Carry out initial commissioning and any checks necessary. • Explain the installation to the user. • If maintenance is necessary, warn the user of the obligation to check the appliance and keep it in good working order. • Give all the instruction manuals to the user. |
| User's liability | <p>To guarantee optimum operation of the system, the user must follow the instructions below:</p> <ul style="list-style-type: none"> • Read and follow the instructions given in the manuals provided with the appliance. • Call on a qualified professional to carry out installation and initial commissioning. • Get your installer to explain your installation to you. • Have the required inspections and maintenance carried out by a qualified installer. • Keep the instruction manuals in good condition close to the appliance. |

2 Symbols used in the manual

This manual uses various danger levels to draw attention to special instructions. We do this to improve user safety, to prevent problems and to guarantee correct operation of the appliance.



Danger

Risk of dangerous situations that may result in serious personal injury.



Danger of electric shock

Risk of electric shock.



Warning

Risk of dangerous situations that may result in minor personal injury.



Caution

Risk of material damage.



Important

Please note: important information.



See

Reference to other manuals or pages in this manual.

3 Technical specifications

3.1 Homologations

3.1.1 Directives

This product complies with the requirements of the following European Directives and Standards:

- Pressure Equipment Directive 2014/68/EU
- Low Voltage Directive 2014/35/EU
Generic standard: EN 60335-1
Relevant standards: EN 60335-2-40, EN 60335-2-21
- Electromagnetic Compatibility Directive 2014/30/EU
Generic standards: EN 61000-6-3, EN 61000-6-1
Relevant Standard: EN 55014

This product complies with the requirements of European Directive 2009/125/EC on the ecodesign of energy-related products.

In addition to the legal requirements and guidelines, the supplementary guidelines in this manual must also be followed.

Supplements or subsequent regulations and guidelines that are valid at the time of installation shall apply to all regulations and guidelines specified in this manual.

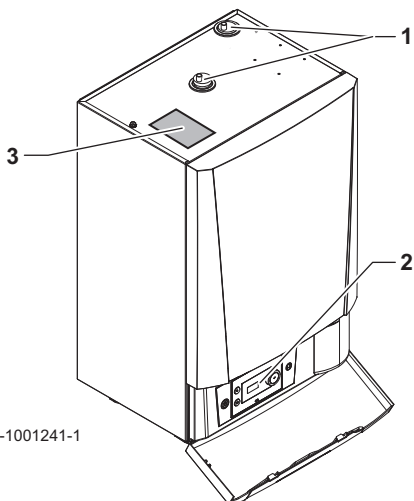
3.1.2 EC Declaration of Conformity

The unit complies with the standard type described in the EC declaration of conformity. It has been manufactured and put into circulation in accordance with the requirements of the European Directives.

The original declaration of conformity is available from the manufacturer.

3.2 Main components

Fig.1



- 1 Automatic air vent
- 2 Control panel
- 3 Location of the data plate

MW-1001241-1

3.3 Technical data

3.3.1 Heat pump

The specifications are valid for a new appliance with clean heat exchangers.

Maximum operating pressure: 0.3 MPa (3 bar)

Tab.1 Outdoor unit conditions of use

| Limit operating temperatures | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 | AWHP 11 MR-2 AWHP 11 TR-2 | AWHP 16 MR-2 AWHP 16 TR-2 | AWHP 22 TR-2 | AWHP 27 TR-2 |
|------------------------------|-----------------|-----------------|-----------------|------------------------------|------------------------------|-----------------|-----------------|
| Water in heating mode | +18 °C / +55 °C | +18 °C / +60 °C | +18 °C / +60 °C | +18 °C / +60 °C | +18 °C / +60 °C | +18 °C / +60 °C | +18 °C / +60 °C |
| Outdoor air in heating mode | -15 °C / +35 °C | -15 °C / +35 °C | -20 °C / +35 °C | -20 °C / +35 °C | -20 °C / +35 °C | -20 °C / +35 °C | -20 °C / +35 °C |
| Water in cooling mode | +7 °C / +25 °C | +7 °C / +25 °C | +7 °C / +25 °C | +7 °C / +25 °C | +7 °C / +25 °C | +7 °C / +25 °C | +7 °C / +25 °C |
| Outdoor air in cooling mode | +10 °C / +46 °C | +7 °C / +46 °C | +7 °C / +46 °C | +7 °C / +46 °C | +7 °C / +46 °C | +7 °C / +46 °C | +7 °C / +46 °C |

Tab.2 Heating mode: outside air temperature +7 °C, water temperature at the outlet +35 °C. Performances in accordance with EN 14511-2.

| Measurement type | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 | AWHP 11 MR-2 | AWHP 11 TR-2 | AWHP 16 MR-2 | AWHP 16 TR-2 | AWHP 22 TR-2 | AWHP 27 TR-2 |
|---|-------------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Heat output | kW | 4.60 | 5.87 | 8.26 | 10.56 | 10.56 | 14.19 | 14.19 | 21.70 | 24.40 |
| Coefficient of performance (COP) | - | 5.11 | 4.18 | 4.27 | 4.18 | 4.18 | 4.22 | 4.22 | 3.96 | 3.80 |
| Absorbed electrical power | kWe | 0.90 | 1.41 | 1.93 | 2.53 | 2.53 | 3.36 | 3.36 | 5.48 | 6.42 |
| Nominal water flow rate ($\Delta T = 5$ K) | m ³ /h | 0.80 | 1.04 | 1.47 | 1.88 | 1.88 | 2.67 | 2.67 | 3.80 | 4.20 |

Tab.3 Heating mode: outside air temperature +2 °C, water temperature at the outlet +35 °C. Performances in accordance with EN 14511-2.

| Measurement type | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 | AWHP 11 MR-2 | AWHP 11 TR-2 | AWHP 16 MR-2 | AWHP 16 TR-2 | AWHP 22 TR-2 | AWHP 27 TR-2 |
|----------------------------------|------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Heat output | kW | 3.47 | 3.74 | 5.93 | 10.19 | 10.19 | 11.38 | 11.38 | 16.11 | 14.70 |
| Coefficient of performance (COP) | - | 3.97 | 3.30 | 3.12 | 3.20 | 3.20 | 3.22 | 3.22 | 3.13 | 3.13 |
| Absorbed electrical power | kWe | 0.88 | 1.11 | 1.90 | 3.19 | 3.19 | 3.53 | 3.53 | 5.14 | 4.70 |

Tab.4 Cooling mode: outside air temperature +35 °C, water temperature at the outlet +7 °C. Performances in accordance with EN 14511-2.

| Measurement type | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 | AWHP 11 MR-2 | AWHP 11 TR-2 | AWHP 16 MR-2 | AWHP 16 TR-2 | AWHP 22 TR-2 | AWHP 27 TR-2 |
|-------------------------------|------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Cooling output | kW | 4.52 | 4.50 | 6.65 | 9.90 | 9.90 | 9.74 | 9.74 | 11.30 | 13.20 |
| Energy efficiency ratio (EER) | - | 2.77 | 2.71 | 3.00 | 2.77 | 2.77 | 2.89 | 2.89 | 2.80 | 2.82 |
| Absorbed electrical power | kWe | 1.63 | 1.66 | 2.22 | 3.57 | 3.57 | 3.37 | 3.37 | 4.07 | 4.69 |

Tab.5 Cooling mode: outdoor air temperature +35°C, water temperature at the outlet +18°C. Certified performances at full load in accordance with EN 14511-2.

| Measurement type | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 | AWHP 11 MR-2 | AWHP 11 TR-2 | AWHP 16 MR-2 | AWHP 16 TR-2 | AWHP 22 TR-2 | AWHP 27 TR-2 |
|-------------------------------|------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Cooling output | kW | 6.39 | 7.41 | 10.29 | 15.49 | 15.49 | 18.36 | 18.36 | 23.23 | 23.52 |
| Energy efficiency ratio (EER) | - | 2.98 | 2.90 | 3.15 | 3.48 | 3.48 | 2.81 | 2.81 | 2.88 | 2.85 |
| Absorbed electrical power | kWe | 2.14 | 2.56 | 3.27 | 4.45 | 4.45 | 6.53 | 6.53 | 8.07 | 8.25 |

Tab.6 Cooling mode: outdoor air temperature +35°C, water temperature at the outlet +18°C. Stated performances at nominal load in accordance with EN 14511-2.

| Measurement type | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 | AWHP 11 MR-2 | AWHP 11 TR-2 | AWHP 16 MR-2 | AWHP 16 TR-2 | AWHP 22 TR-2 | AWHP 27 TR-2 |
|-------------------------------|------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Cooling output | kW | 3.80 | 4.69 | 7.90 | 11.16 | 11.16 | 14.46 | 14.46 | 17.65 | 22.20 |
| Energy efficiency ratio (EER) | - | 4.28 | 4.09 | 3.99 | 4.68 | 4.68 | 4.43 | 4.43 | 3.80 | 3.80 |
| Absorbed electrical power | kWe | 0.89 | 1.15 | 2.00 | 2.35 | 2.35 | 3.65 | 3.65 | 4.65 | 5.84 |

Tab.7 Common specifications

| Measurement type | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 | AWHP 11 MR-2 | AWHP 11 TR-2 | AWHP 16 MR-2 | AWHP 16 TR-2 | AWHP 22 TR-2 | AWHP 27 TR-2 |
|--|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------------------------|-------------------------------------|
| Total dynamic head at nominal flow rate | kPa | 62 | 61.80 | 49.30 | 39.30 | 39.30 | 21.30 | 21.30 | - | - |
| Nominal air flow rate | m ³ /h | 2680 | 2700 | 3000 | 6000 | 6000 | 6000 | 6000 | 8400 | 8400 |
| Power voltage of the outdoor unit | V | 230 | 230 | 230 | 230 | 400 | 230 | 400 | 400 | 400 |
| Start-up amperage | A | 5 | 5 | 5 | 5 | 3 | 6 | 3 | - | - |
| Maximal amperage | A | 12 | 13 | 17 | 29.5 | 13 | 29.5 | 13 | 19 | 21 |
| Sound power - In-side ⁽¹⁾ | dB(A) | 43 | 43 | 51 | 51 | 51 | 51 | 51 | 43 | 43 |
| Acoustic power - Out-side ⁽²⁾ | dB(A) | 58 | 65 | 65 | 69 | 69 | 69 | 69 | 77 | 77 |
| R410A refrigerant | kg | 1.4 | 1.3 | 3.2 | 4.6 | 4.6 | 4.6 | 4.6 | 7.1 | 7.7 |
| R410A refrigerant ⁽³⁾ | tCO ₂ e | 2.923 (2.694) | 2.714 (2.501) | 6.682 (6.157) | 9.605 (8.850) | 9.605 (8.850) | 9.605 (8.850) | 9.605 (8.850) | 14.825 (13.660) | 16.078 (14.815) |
| Refrigerant connection (Liquid - Gas) | inch | 1/4 - 1/2 | 1/4 - 1/2 | 3/8 - 5/8 | 3/8 - 5/8 | 3/8 - 5/8 | 3/8 - 5/8 | 3/8 - 5/8 | 3/8 - 1 or 3/8 - 3/4 ⁽⁴⁾ | 1/2 - 1 or 1/2 - 3/4 ⁽⁴⁾ |
| Maximum precharged length | m | 7 | 10 | 10 | 10 | 10 | 10 | 10 | 30 | 30 |

(1) Noise radiated by the envelope - Test run in accordance with the NF EN 12102 standard, temperature conditions: air 7 °C, water 55 °C.

(2) Noise radiated by the envelope - Test run in accordance with the NF EN 12102 standard, temperature conditions: air 7 °C, water 45 °C for AWHP 4.5 MR only (inner and outer sides).

(3) The quantity of refrigerant in tonnes of CO₂ equivalent is calculated using the following formula: quantity (in kg) of refrigerant x GWP/ 1000. The Global Warming Potential (GWP) of the R410A is 2088 following the IPCC fourth assessment report (1924 following IPCC fifth assessment report).

(4) Warning: the refrigerant connection lengths are limited to 20 m with the 3/4" gas pipe.

3.3.2 Heat pump weight

Tab.8 Indoor unit

| Indoor unit | Unit | MIT-S 4-8/E | MIT-S 4-8/H | MIT-S 11-16/E | MIT-S 11-16/H | MIT-S 22-27/E | MIT-S 22-27/H |
|--------------|------|-------------|-------------|---------------|---------------|---------------|---------------|
| Net weight | kg | 59 | 53 | 66 | 60 | 66 | 60 |
| Gross weight | kg | 70 | 64 | 77 | 71 | 77 | 71 |

Tab.9 Outdoor unit

| Outdoor unit | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 | AWHP 11 MR-2 | AWHP 11 TR-2 | AWHP 16 MR-2 | AWHP 16 TR-2 | AWHP 22 TR-2 | AWHP 27 TR-2 |
|--------------|------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Weight | kg | 54 | 42 | 75 | 118 | 130 | 118 | 130 | 135 | 141 |

3.3.3 Combination heaters with medium-temperature heat pump

Tab.10 Technical parameters for heat pump combination heaters (parameters declared for medium-temperature application)

| Product name | Symbol | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 |
|---|------------------------|------|-------------|-------------|-------------|
| Air-to-water heat pump | | | Yes | Yes | Yes |
| Water-to-water heat pump | | | No | No | No |
| Brine-to-water heat pump | | | No | No | No |
| Low-temperature heat pump | | | No | No | No |
| Equipped with a supplementary heater | | | Yes | Yes | Yes |
| Heat pump combination heater | | | No | No | No |
| Rated heat output under average conditions⁽¹⁾ | <i>Prated</i> | kW | 3 | 4 | 6 |
| Rated heat output under colder conditions | <i>Prated</i> | kW | 5 | 4 | 6 |
| Rated heat output under warmer conditions | <i>Prated</i> | kW | 4 | 5 | 6 |
| Declared capacity for heating for part load at an indoor temperature of 20 °C and outdoor temperature T_j | | | | | |
| $T_j = -7$ °C | <i>Pdh</i> | kW | 3.8 | 3.4 | 5.6 |
| $T_j = +2$ °C | <i>Pdh</i> | kW | 4.3 | 2.2 | 2.9 |
| $T_j = +7$ °C | <i>Pdh</i> | kW | 4.5 | 2.1 | 6.4 |
| $T_j = +12$ °C | <i>Pdh</i> | kW | 5.5 | 2.6 | 4.3 |
| $T_j =$ bivalent temperature | <i>Pdh</i> | kW | 3.1 | 3.9 | 5.6 |
| $T_j =$ operation limit temperature | <i>Pdh</i> | kW | 3.1 | 3.9 | 5.6 |
| Bivalent temperature | T_{biv} | °C | -10 | -10 | -10 |
| Degradation coefficient ⁽²⁾ | <i>Cdh</i> | - | 1.0 | 1.0 | 1.0 |
| Seasonal space heating energy efficiency under average conditions | η_s | % | 134 | 125 | 129 |
| Seasonal space heating energy efficiency under colder conditions | η_s | % | 109 | 116 | 119 |
| Seasonal space heating energy efficiency under warmer conditions | η_s | % | 179 | 172 | 169 |
| Declared coefficient of performance or primary energy ratio for part load at an indoor temperature of 20 °C and outdoor temperature T_j | | | | | |
| $T_j = -7$ °C | <i>COPd</i> | - | 1.64 | 1.75 | 1.95 |
| $T_j = +2$ °C | <i>COPd</i> | - | 3.46 | 3.18 | 3.22 |
| $T_j = +7$ °C | <i>COPd</i> | - | 4.96 | 4.56 | 4.57 |
| $T_j = +12$ °C | <i>COPd</i> | - | 7.90 | 6.41 | 6.55 |
| $T_j =$ bivalent temperature | <i>COPd</i> | - | 1.20 | 1.56 | 1.70 |
| $T_j =$ operation limit temperature | <i>COPd</i> | - | 1.20 | 1.56 | 1.70 |
| Operation limit temperature for air-to-water heat pumps | <i>TOL</i> | °C | -10 | -10 | -10 |
| Heating water operating limit temperature | <i>WTOL</i> | °C | 55 | 60 | 60 |
| Electrical power consumption | | | | | |
| Off mode | <i>P_{OFF}</i> | kW | 0.009 | 0.009 | 0.009 |
| Thermostat-off mode | <i>P_{TO}</i> | kW | 0.049 | 0.049 | 0.049 |
| Stand-by | <i>P_{SB}</i> | kW | 0.012 | 0.016 | 0.018 |
| Crankcase heater mode | <i>P_{CK}</i> | kW | 0.000 | 0.055 | 0.055 |
| Supplementary heater | | | | | |
| Rated heat output | <i>P_{sup}</i> | kW | 0.0 | 0.0 | 0.0 |
| Type of energy input | | | Electricity | Electricity | Electricity |
| Other specifications | | | | | |
| Capacity control | | | Variable | Variable | Variable |
| Sound power level, indoors - outdoors | L_{WA} | dB | 43 - 58 | 43 - 65 | 51 - 65 |

| Product name | Symbol | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 |
|--|----------|-------------------|-------------|-------------|-------------|
| Annual energy consumption under average conditions | Q_{HE} | kWh | 2353 | 2124 | 3499 |
| Annual energy consumption under colder conditions | Q_{HE} | kWh | 4483 | 3721 | 4621 |
| Annual energy consumption under warmer conditions | Q_{HE} | kWh | 1249 | 1492 | 1904 |
| Rated air flow rate, outdoors for air-to-water heat pumps | - | m ³ /h | 2680 | 2700 | 3300 |
| <p>(1) The rated heat output P_{rated} is equal to the design load for heating $P_{designh}$, and the rated heat output of a supplementary heater P_{sup} is equal to the supplementary capacity for heating $sup(T_j)$.</p> <p>(2) If C_{dh} is not determined by measurement, the default degradation coefficient is $C_{dh} = 0.9$.</p> | | | | | |

Tab.11 Technical parameters for heat pump combination heaters (parameters declared for medium-temperature application)

| Product name | Symbol | Unit | AWHP 11 MR-2 AWHP 11 TR-2 | AWHP 16 MR-2 AWHP 16 TR-2 |
|---|-------------|------|------------------------------|------------------------------|
| Air-to-water heat pump | | | Yes | Yes |
| Water-to-water heat pump | | | No | No |
| Brine-to-water heat pump | | | No | No |
| Low-temperature heat pump | | | No | No |
| Equipped with a supplementary heater | | | Yes | Yes |
| Heat pump combination heater | | | No | No |
| Rated heat output under average conditions ⁽¹⁾ | P_{rated} | kW | 6 | 9 |
| Rated heat output under colder conditions | P_{rated} | kW | 4 | 7 |
| Rated heat output under warmer conditions | P_{rated} | kW | 8 | 13 |
| Declared capacity for heating for part load at an indoor temperature of 20 °C and outdoor temperature T_j | | | | |
| $T_j = -7$ °C | P_{dh} | kW | 6.8 | 8.6 |
| $T_j = +2$ °C | P_{dh} | kW | 5.3 | 6.5 |
| $T_j = +7$ °C | P_{dh} | kW | 9.0 | 12.9 |
| $T_j = +12$ °C | P_{dh} | kW | 7.7 | 9.9 |
| $T_j =$ bivalent temperature | P_{dh} | kW | 6.3 | 8.8 |
| $T_j =$ operation limit temperature | P_{dh} | kW | 6.3 | 8.8 |
| Bivalent temperature | T_{biv} | °C | -10 | -10 |
| Degradation coefficient ⁽²⁾ | C_{dh} | - | 1.0 | 1.0 |
| Seasonal space heating energy efficiency under average conditions | η_s | % | 125 | 121 |
| Seasonal space heating energy efficiency under colder conditions | η_s | % | 113 | 113 |
| Seasonal space heating energy efficiency under warmer conditions | η_s | % | 167 | 161 |
| Declared coefficient of performance or primary energy ratio for part load at an indoor temperature of 20 °C and outdoor temperature T_j | | | | |
| $T_j = -7$ °C | COP_d | - | 1.82 | 1.85 |
| $T_j = +2$ °C | COP_d | - | 3.17 | 3.02 |
| $T_j = +7$ °C | COP_d | - | 4.54 | 4.34 |
| $T_j = +12$ °C | COP_d | - | 6.19 | 5.75 |
| $T_j =$ bivalent temperature | COP_d | - | 1.20 | 1.35 |
| $T_j =$ operation limit temperature | COP_d | - | 1.20 | 1.35 |
| Operation limit temperature for air-to-water heat pumps | TOL | °C | -10 | -10 |
| Heating water operating limit temperature | $WTOL$ | °C | 60 | 60 |
| Electrical power consumption | | | | |
| Off mode | P_{OFF} | kW | 0.009 | 0.009 |
| Thermostat-off mode | P_{TO} | kW | 0.049 | 0.035 |
| Stand-by | P_{SB} | kW | 0.021 | 0.021 |
| Crankcase heater mode | P_{CK} | kW | 0.055 | 0.055 |
| Supplementary heater | | | | |
| Rated heat output | P_{sup} | kW | 0.0 | 0.0 |

| Product name | Symbol | Unit | AWHP 11 MR-2 AWHP 11 TR-2 | AWHP 16 MR-2 AWHP 16 TR-2 |
|---|----------|-------------------|------------------------------|------------------------------|
| Type of energy input | | | Electricity | Electricity |
| Other specifications | | | | |
| Capacity control | | | Variable | Variable |
| Sound power level, indoors - outdoors | L_{WA} | dB | 51 - 65 | 51 - 69 |
| Annual energy consumption under average conditions | Q_{HE} | kWh | 3999 | 5861 |
| Annual energy consumption under colder conditions | Q_{HE} | kWh | 3804 | 5684 |
| Annual energy consumption under warmer conditions | Q_{HE} | kWh | 2580 | 4120 |
| Rated air flow rate, outdoors for air-to-water heat pumps | - | m ³ /h | 6000 | 6000 |
| (1) The rated heat output P_{rated} is equal to the design load for heating $P_{designh}$, and the rated heat output of a supplementary heater P_{sup} is equal to the supplementary capacity for heating $sup(T_j)$. | | | | |
| (2) If Cdh is not determined by measurement, the default degradation coefficient is $Cdh = 0.9$. | | | | |

Tab.12 Technical parameters for heat pump combination heaters (parameters declared for medium-temperature application)

| Product name | Symbol | Unit | AWHP 22 TR-2 | AWHP 27 TR-2 |
|---|-------------|------|--------------|--------------|
| Air-to-water heat pump | | | Yes | Yes |
| Water-to-water heat pump | | | No | No |
| Brine-to-water heat pump | | | No | No |
| Low-temperature heat pump | | | No | No |
| Equipped with a supplementary heater | | | Yes | Yes |
| Heat pump combination heater | | | No | No |
| Rated heat output under average conditions⁽¹⁾ | P_{rated} | kW | 11 | 14 |
| Rated heat output under colder conditions | P_{rated} | kW | 12 | 14 |
| Rated heat output under warmer conditions | P_{rated} | kW | 18 | 20 |
| Declared capacity for heating for part load at an indoor temperature of 20 °C and outdoor temperature T_j | | | | |
| $T_j = -7$ °C | P_{dh} | kW | 10.3 | 12.4 |
| $T_j = +2$ °C | P_{dh} | kW | 10.0 | 8.9 |
| $T_j = +7$ °C | P_{dh} | kW | 5.8 | 11.8 |
| $T_j = +12$ °C | P_{dh} | kW | 6.9 | 18.1 |
| $T_j =$ bivalent temperature | P_{dh} | kW | 10.9 | 12.4 |
| $T_j =$ operation limit temperature | P_{dh} | kW | 10.9 | 14.1 |
| Bivalent temperature | T_{biv} | °C | -10 | -7 |
| Degradation coefficient ⁽²⁾ | Cdh | - | 1.0 | 1.0 |
| Seasonal space heating energy efficiency under average conditions | η_s | % | 114 | 112 |
| Seasonal space heating energy efficiency under colder conditions | η_s | % | 111 | 103 |
| Seasonal space heating energy efficiency under warmer conditions | η_s | % | 143 | 141 |
| Declared coefficient of performance or primary energy ratio for part load at an indoor temperature of 20 °C and outdoor temperature T_j | | | | |
| $T_j = -7$ °C | COP_d | - | 1.95 | 1.67 |
| $T_j = +2$ °C | COP_d | - | 2.80 | 2.86 |
| $T_j = +7$ °C | COP_d | - | 3.76 | 4.12 |
| $T_j = +12$ °C | COP_d | - | 4.85 | 5.06 |
| $T_j =$ bivalent temperature | COP_d | - | 1.64 | 1.67 |
| $T_j =$ operation limit temperature | COP_d | - | 2.80 | 2.86 |
| Operation limit temperature for air-to-water heat pumps | TOL | °C | -10 | -10 |
| Heating water operating limit temperature | $WTOL$ | °C | 60 | 60 |
| Electrical power consumption | | | | |
| Off mode | P_{OFF} | kW | 0.010 | 0.014 |
| Thermostat-off mode | P_{TO} | kW | 0.049 | 0.023 |

| Product name | Symbol | Unit | AWHP 22 TR-2 | AWHP 27 TR-2 |
|--|-----------|-------------------|--------------|--------------|
| Stand-by | P_{SB} | kW | 0.021 | 0.021 |
| Crankcase heater mode | P_{CK} | kW | 0.055 | 0.055 |
| Supplementary heater | | | | |
| Rated heat output | P_{sup} | kW | 0.0 | 0.0 |
| Type of energy input | | | Electricity | Electricity |
| Other specifications | | | | |
| Capacity control | | | Variable | Variable |
| Sound power level, indoors - outdoors | L_{WA} | dB | 43 - 70 | 43 - 77 |
| Annual energy consumption under average conditions | Q_{HE} | kWh | 7681 | 9993 |
| Annual energy consumption under colder conditions | Q_{HE} | kWh | 10578 | 13164 |
| Annual energy consumption under warmer conditions | Q_{HE} | kWh | 10025 | 11541 |
| Rated air flow rate, outdoors for air-to-water heat pumps | - | m ³ /h | 6000 | 6000 |
| (1) The rated heat output P_{rated} is equal to the design load for heating $P_{designh}$, and the rated heat output of a supplementary heater P_{sup} is equal to the supplementary capacity for heating $sup(T_j)$. (2) If C_{dh} is not determined by measurement, the default degradation coefficient is $C_{dh} = 0.9$. | | | | |



See
The back cover for contact details.

3.3.4 Circulating pump



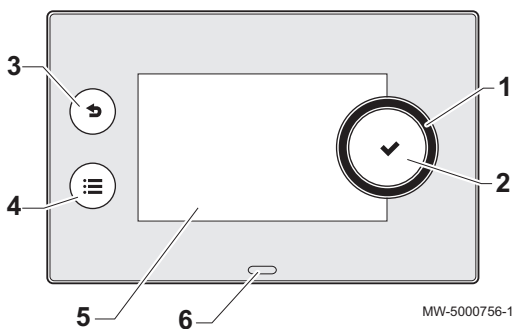
Important
The benchmark for the most efficient circulating pumps is $EEL \leq 0.20$.

4 Operation

4.1 Description of the user interface

4.1.1 Description of the user interface

Fig.2



- 1 Rotary knob to select a menu or setting
- 2 Validation button ✓
- 3 Back button ← to return to the previous level or menu
- 4 Main menu button ☰
- 5 Display screen
- 6 LED for status indication:
 - continuous green = normal operation
 - flashing green = warning
 - red fixed = blockage
 - flashing red = lockout

4.1.2 Description of the home screen

The home screen is displayed automatically after the appliance is started up.

The screen automatically goes into standby if no button is pressed for five minutes.

Press one of the buttons on the user interface to exit the standby screen and display the home screen.

Tab.13 Icons on the home screen and information

| Icon | Information | Description of the icon |
|------|----------------------|---|
| | Error status | Information on operation of the appliance |
| | Maintenance status | Maintenance message |
| | Installer access | Installer Level |
| | Holiday programme | Holiday mode in all circuits simultaneously |
| | Air source heat pump | Heat pump flow temperature display |
| | Water pressure | Current water pressure display |
| | CIRCA/CIRCB | Symbol representing the circuit used Circuit temperature display |
| | DHW tank | Temperature display for the domestic hot water |
| | Outdoor temperature | Outdoor temperature display |

4.2 Starting and stopping the heat pump

4.2.1 Starting the heat pump

1. Switch on the outdoor unit and the indoor unit.
⇒ The heat pump will begin an automatic vent cycle (which lasts approx. three minutes), run each time the power is switched on.
2. Check the hydraulic pressure in the installation indicated on the user interface.



Important

Recommended hydraulic pressure between 1.5 and 2.0 bar.

4.2.2 Shutting down the heat pump

The heat pump must be shut down in certain situations, for example during any intervention on the equipment. In other situations, such as an extended absence period, we recommend that the **Holiday** operating mode is used in order to benefit from the heat pump anti-blocking function and to protect the installation from frost.

To shut down the heat pump:

1. Switch off the power to the outdoor unit.
2. Switch off the power to the indoor unit.

4.3 Switching the central heating on/off

Your appliance will automatically deactivate the heating function and switch to cooling mode when the temperature exceeds 22 °C (factory setting). However, you can manually switch off the heating function for all circuits to save energy during the summer period, for example.

**Important**

If the heating function is shut off, then the cooling will also be shut off.



1. Select the **Air Src Heat pump** icon.
2. Select **CH function on**.
3. Select the desired value:
 - **Off** to stop the heating function.
 - **On** to switch the heating function on again.

4.4 Periods of absence or going on holiday

If you will be absent for several weeks, you can reduce the room temperature and domestic hot water temperature in order to save energy. To do this, activate the **Holiday** operating mode for all zones, including for domestic hot water.



1. Select the **Holiday Mode** icon.
2. Set the following parameters:

Tab.14

| Parameter | Description |
|---|--|
| Start date holiday | Set the date and time for the start of the absence period. |
| End date holiday | Set the date and time for the end of the absence period. |
| Wished room temperature during holiday | Set the desired room temperature for the absence period |
| Reset | Restart or cancel the holiday programme |

4.5 Regional and ergonomic parameters

You can personalise your appliance by modifying the parameters linked to your geographic location and the ergonomics of the user interface.



1. Press the  button.
2. Select **System Settings**.
3. Carry out one of the following operations:

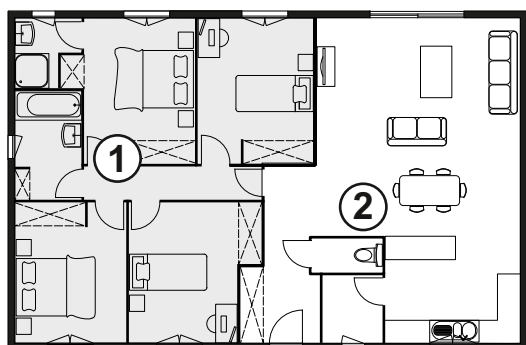
Tab.15

| Menu | Description |
|------------------------------------|---|
| Set Date and Time | Setting the date and time |
| Select Country and Language | Select the country and language |
| Daylight Saving Time | Setting the automatic change to daylight saving time. These changes will be carried out on the last Sunday in March and October |
| Installer Details | Display the installer details |
| Cost calculation | Enter the tariffs for the energy used |
| Set Heating Activity Names | Modify the name of activities used to program heating periods |
| Set Cooling Activity Names | Modify the name of activities used to program cooling periods |
| Set Screen Brightness | Setting the screen brightness |
| Set click sound | Switch the sound of the rotary knob on or off |
| Firmware Update | Function not available |
| License Information | Display the creation licenses for the internal software |

4.6 Personalising the zones

4.6.1 Definition of the term "zone"

Fig.3



MW-1001145-2


Zone: term given to the different hydraulic circuits (CIRCA, CIRCB). It indicates several rooms served by the same circuit.

Tab.16 Example:

| Key | Zone | Factory-set name |
|-----|--------|------------------|
| ① | Zone 1 | CIRCA |
| ② | Zone 2 | CIRCB |

4.6.2 Changing the name and symbol of a zone

The name and symbol for a zone are factory-set as shown in the appendix. If you desire, you can personalise the name and symbol of the zones in your installation.

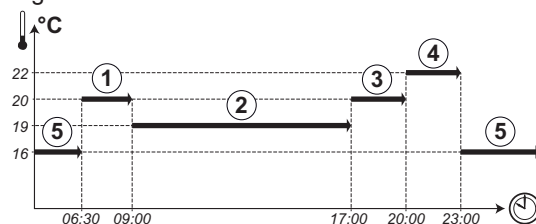
1. Select the icon of the zone to be modified, , for example.
2. Select **Zone configuration > Zone friendly Name**.
3. Change the name of the zone (20 characters maximum).
4. Select **Icon display zone**
5. Select the symbol to be associated with the zone.
6. Enter the chosen name and symbol in the table provided at the back of the manual.

4.7 Personalising the activities

4.7.1 Definition of the term "Activity"

Activity: this term is used when programming time ranges. It refers to the client's desired comfort level for different activities during the course of the day. One set point temperature is associated to each activity. The last activity of the day remains valid until the first activity of the following day.

Fig.4



MW-1001144-2

Tab.17 Example:

| Start of the activity | Activity | Set point temperature |
|-----------------------|-----------|-----------------------|
| 6:30 | Morning ① | 20 °C |
| 9:00 | Away ② | 19 °C |
| 17:00 | Home ③ | 20 °C |
| 20:00 | Evening ④ | 22 °C |
| 23:00 | Sleep ⑤ | 16 °C |

4.7.2 Changing the name of an activity


The name of the different activities is factory-set: Sleep, Home, Away, Morning, Evening and Custom. If you wish, you can personalise the name of the activities for all of the zones in your installation.

1. Press the  button.
2. Select **System Settings**.

3. Select **Set Heating Activity Names** or **Set Cooling Activity Names**.
4. Select the activity you want to change.
5. Change the name of the activity (10 characters max.).

4.7.3 Changing the temperature of an activity

The temperatures for the different activities are factory-set as shown in the appendix. If you desire, you can personalise the temperatures for these activities for all of the zones in your installation. These activities are used in the timer programmes.


1. Select the icon for the zone to be programmed, , for example.
2. Select **Set Heating Activity Temperatures**, either for heating or for cooling.
⇒ Information on the selected menu is given in the lower part of the screen.
3. Select the activity you want to change.
4. Modify the temperature for the activity.
5. Enter the chosen temperature in the table provided at the back of the manual.

4.8 Room temperature for a zone






4.8.1 Selecting the operating mode

To set the room temperature for the different living zones, you can choose between five operating modes. We recommend the **Scheduling** operating mode which enables the room temperature to be modulated according to your needs and to optimise your energy consumption.



1. Select the icon for the affected zone, , for example.
2. Select the desired operating mode:

Tab.18

| Mode | Description |
|---|--|
|  Scheduling | The room temperature is modulated according to the timer programme chosen. Recommended mode. |
|  Manual | The room temperature is constant. |
|  Short temperature change | The room temperature is forced for a defined period. |
|  Holiday | The room temperature is reduced during an absence period to save energy. |
|  Antifrost | The installation and equipment are protected against frost during the winter period. |

4.8.2 Activating and configuring a timer programme for heating

A timer programme can be used to vary the room temperature in a living zone depending on activities during the day. This can be programmed for each day of the week.




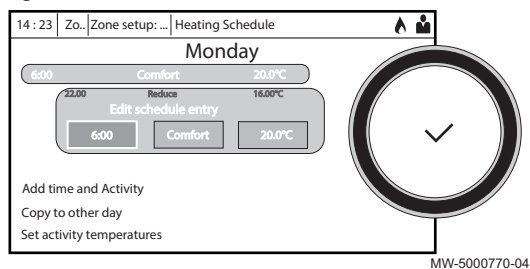
1. Select the icon for the zone to be programmed, , for example.
⇒ Information on the current operating mode is given in the upper part of the screen.
2. To activate the timer programming or to change the timer programme, select **Scheduling**.
3. Select the timer programme to be activated.
⇒ Information on the active timer programme is given in the upper part of the screen.

Fig.5



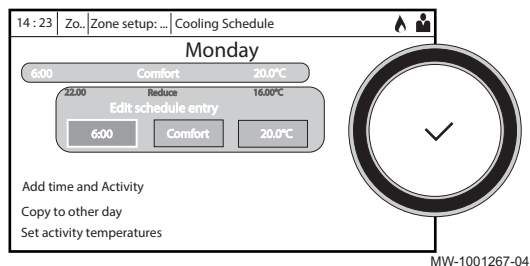
4. To modify the timer programme, select **Zone configuration > Heating Schedule**.
5. Select the programme to be modified.
 - ⇒ The programmed activities for Monday are displayed. The last activity of the day remains active until the first activity of the following day.
6. Select the day to be modified.
7. Carry out the following actions according to your needs:
 - **Modify** the timings for programmed activities.
 - **Add** a new time range.
 - **Delete** a programmed activity (choose the activity "Delete").
 - **Copy** programmed daily activities to other days.
 - **Modify temperatures** linked to an activity.


4.8.3 Activating and configuring a timer programme for cooling

You can modify the timer programme linked to the **Cooling** mode. In the **Scheduling** operating mode, the Cooling timer programme is activated automatically when the average outdoor temperature over a 24-hour period has been greater than 22 °C. If you would prefer that this mode is triggered at a different temperature, ask your installer to modify this parameter in your installation.



Fig.6




1. Select the icon for the zone to be programmed, , for example.
 - ⇒ Information on the current operating mode is given in the upper part of the screen.
2. To modify the timer programme for the **Cooling** mode, select **Zone configuration > Cooling Schedule**.
 - ⇒ The programmed activities for Monday are displayed. The last activity of the day remains active until the first activity of the following day.
3. Select the day to be modified.
4. Carry out the following actions according to your needs:
 - **Modify** the timings for programmed activities.
 - **Add** a new activity.
 - **Delete** a programmed activity (choose the activity "Delete").
 - **Copy** programmed daily activities to other days.
 - **Modify temperatures** linked to an activity.

4.8.4 Changing the room temperature temporarily

Regardless of the operating mode selected for a zone, it is possible to modify the room temperature for a defined period. Once this time has elapsed, the selected operating mode will restart.



1. Select the icon of the zone to be modified, , for example.
2. Select **Short temperature change**.
3. Define the duration in **Hour** and in **Minute**.
4. Set the temporary room temperature setpoint for the circuit selected.

4.9 Domestic hot water temperature

4.9.1 Selecting the operating mode






For the production of domestic hot water, you can choose between five operating modes. We recommend the **Scheduling** mode which enables domestic hot water production periods to be programmed according to your needs and to optimise your energy consumption.



1. Select the  **DHW tank** icon.

2. Select the desired operating mode:

Tab.19

| Mode | Description |
|--|--|
|  Scheduling | The domestic hot water is produced according to the timer programme chosen |
|  Manual | The domestic hot water temperature remains at the comfort temperature permanently |
|  Hot water boost | The production of domestic hot water is forced at the comfort temperature for a defined duration |
|  Holiday | The domestic hot water temperature is reduced during an absence period to save energy |
|  Antifrost | The equipment and the system are protected when the heat pump is in frost protection mode. |

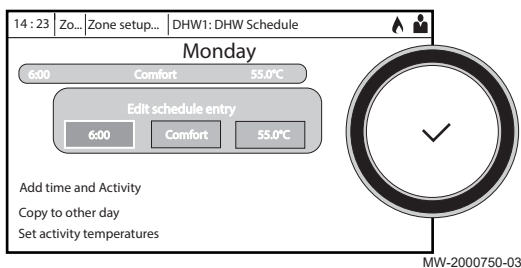
4.9.2 Activating and configuring a timer programme for domestic hot water

A timer programme can be used to vary the domestic hot water temperature depending on activities during the day. This can be programmed for each day of the week.



1. Select the **DHW tank icon**.
⇒ Information on the current operating mode is given in the upper part of the screen.
2. To activate the timer programming or to change the timer programme, select **Scheduling**.
3. Select the timer programme to be activated.
⇒ Information on the active timer programme is given in the upper part of the screen.
4. To modify the timer programme, select **Zone configuration > DHW Schedule**.
5. Select the programme to be modified.
⇒ The programmed activities for Monday are displayed.
The last activity of the day remains active until the first activity of the following day.
6. Select the day to be modified.
7. Carry out the following actions according to your needs:
 - **Modify** the timings for programmed activities.
 - **Add** a new activity.
 - **Delete** a programmed activity (choose the activity "Delete").
 - **Copy** programmed daily activities to other days.
 - **Modify temperatures** linked to an activity.

Fig.7



4.9.3 Forcing domestic hot water production (override)

Regardless of the selected operating mode, you can force domestic hot water production to the comfort temperature (**DHW comfort setpoint** parameter) for a defined duration.



1. Select the **DHW tank icon**.
2. Select **Hot water boost**.
3. Define the duration in **Hour** and in **Minute**.

4.9.4 Modifying the domestic hot water set point temperatures

The production of domestic hot water operates with two set point temperature parameters:

- **DHW comfort setpoint**: used in the Scheduling, Manual and Hot water boostmodes
- **DHW reduced setpoint**: used in the Scheduling, Holiday and Antifrostmodes

You can change these set point temperature settings to adapt them to your needs.



1. Select the **DHW tank** icon.
2. Select **Comfort DHW set point** to modify this set point.
3. Select **Zone configuration > Domestic Hot Water Setpoints > Reduced DHW set point** to modify this set point.

4.10 Monitoring the energy consumption

If your installation is equipped with an energy meter, you can monitor your energy consumption.



1. Select the **Air Src Heat pump** icon.
⇒ The energy consumed since the last energy consumption meter reset is displayed:

Tab.20

| Parameter | Description |
|----------------------|--|
| Cool Energy consumed | Energy consumed for cooling |
| DHW energy consumed | Energy consumed for domestic hot water |
| CH Energy Consumed | Energy consumed for central heating |

2. To reset the meters to zero, select **Reset counters for the energy consumption**.

5 Maintenance

5.1 General

An annual inspection with a leak-tightness check in accordance with prevailing standards is obligatory.

Maintenance operations are important for the following reasons:

- To guarantee optimum performance.
- To extend the life of the equipment.
- To provide an installation which offers the user optimum comfort over time.



Caution

Only qualified professionals are authorised to carry out maintenance work on the heat pump and the heating system.



Danger of electric shock

Before any work, switch off the power supply to the heat pump and the backup boiler or the electric heating element, if present.



Caution

Before working on the refrigeration circuit, switch off the appliance and wait a few minutes. Certain items of equipment such as the compressor and the pipes can reach temperatures in excess of 100°C and high pressures, which may cause serious injuries.



Caution

Do not drain the installation, except in cases of absolute necessity. E.g.: several months' absence with the risk of temperatures in the building falling below freezing.



Important

- Maintenance shall be performed only as recommended by the manufacturer.
- Replace any damaged component.
- When breaking into the refrigerant circuit to make repairs – or for any other purpose – remove the refrigerant. Recover the refrigerant into the correct recovery cylinders.

5.2 Standard inspection and maintenance operations

An annual inspection with tightness check is obligatory. These maintenance operations are necessary in order to guarantee the performance of the installation and to extend the life of the equipment.



Caution

Only qualified professionals are authorised to carry out maintenance work on the heat pump and the heating system.

Schedule a service by a qualified professional at a cold time of the year to check the following points:

1. Operation of the installation.
2. Thermal output, by measuring the difference in temperature between heating flow and return.
3. The setting for the safety thermostats.

5.3 Maintenance message

When a maintenance operation is required, your appliance will alert you in two ways:

- A maintenance message will appear on the screen.
- The **Maintenance Status** icon on the home screen flashes.

5.4 Displaying the maintenance information

Your appliance gives you information on necessary maintenance and servicing operations.



1. Select the **Maintenance Status** icon.
2. Consult the information linked to the maintenance and servicing of your appliance:

| Information | Description |
|----------------------|---|
| Maintenance required | Indicates the necessity of maintenance: yes/no |
| Current maintenance | Type of maintenance to come |
| Service run hours | Number of hours that the appliance has been producing energy since last service |
| Hours since service | Number of hours since the previous servicing of the appliance |
| Starts since service | Number of heat generator starts since the previous servicing. |

5.5 Check the hydraulic pressure

Regularly check the hydraulic pressure in the installation. It should be between 1.5 and 2 bar.



1. Select the **Water Pressure** icon.
2. Check the pressure that is displayed in the right section of the main screen.
3. If the pressure is less than 1.5 bar, contact the installer so that they check the condition of the expansion vessel, check hydraulic leak-tightness and top up the water.

5.6 Cleaning the casing

1. Clean the outside of the appliance using a damp cloth and a mild detergent.

6 Troubleshooting

6.1 Resolving operating errors

If your appliance malfunctions, the status LED flashes and/or changes colour and a message containing an error code is displayed on the user interface screen. This error code is important for the correct and rapid diagnosis of the type of malfunction and for any technical assistance that may be needed.

If an error occurs:

1. Make a note of the code displayed on the screen.
2. Remedy the problem described by the error code or contact the installer.
3. Switch the heat pump off and back on to check that the cause of the error has been removed.
4. If the code is displayed again, contact the installer.

6.1.1 Types of error code

The user interface can display three types of error code:

Tab.21

| Type of code | Code format | Colour of the status LED |
|--------------|-------------|--------------------------|
| Warning | Axx.xx | Green flashing |
| Blockage | Hxx.xx | Continuous red |
| Lockout | Exx.xx | Flashing red |

6.1.2 Blocking codes

A blocking code signals an anomaly affecting the heating system.

Several examples:

- The system automatically attempts to correct the error (for example in the event of a fault related to the flow rate).
- The error is still present and the system functions in defect mode (for example, in the event of a fault affecting the outdoor unit, the backup is started up).
- The system is shut down but automatically switches on again when the error disappears.

When one of the codes below is displayed, contact the professional responsible for maintenance of the heat pump.

Tab.22 List of blocking codes linked to the EHC-05 PCB

| Code | Message | Description |
|--------|-------------------|--|
| H00.17 | DHW sensor Closed | Domestic Hot Water tank temperature sensor is either shorted or measures a temperature above range |
| H00.32 | TOutside Open | Outside temperature sensor is either removed or measures a temperature below range |

| Code | Message | Description |
|--------|---------------------------------------|---|
| H00.33 | TOutside Closed | Outside temperature sensor is either shorted or measures a temperature above range |
| H00.34 | TOutside Missing | Outside temperature sensor was expected but not detected |
| H00.47 | HP flow sensor removed or below range | Heat pump flow temperature sensor is either removed or measures a temperature below range |
| H00.48 | THp Flow Closed | Heat pump flow temperature sensor is either shorted or measures a temperature above range |
| H00.49 | THp Flow Missing | Heat pump flow temperature sensor was expected but not detected |
| H00.51 | THp Return Open | Heat pump return temperature sensor is either removed or measures a temperature below range |
| H00.52 | THp Return Closed | Heat pump return temperature sensor is either shorted or measures a temperature above range |
| H00.57 | T DHW Top Open | Domestic Hot Water top temperature sensor is either removed or measures a temperature below range |
| H00.58 | T DHW Top Closed | Domestic Hot Water top temperature sensor is either shorted or measures a temperature above range |
| H02.02 | Wait Config Number | Waiting For Configuration Number |
| H02.03 | Conf Error | Configuration Error |
| H02.04 | Parameter Error | Parameter Error |
| H02.05 | CSU CU mismatch | CSU does not match CU type |
| H02.07 | Water Press Error | Water Pressure Error active <ul style="list-style-type: none"> • Check the hydraulic pressure in the heating circuit. |
| H02.09 | Partial block | Partial blocking of the device recognized BL input on the central unit PCB terminal block open |
| H02.10 | Full Block | Full blocking of the device recognized BL input on the central unit PCB terminal block open |
| H02.23 | System flow error | System water flow error active Flow problem Insufficient flow: open a radiator valve. The circuit is clogged: <ul style="list-style-type: none"> • Check that the filters are not obstructed and clean them if necessary. • Clean and flush the installation. No circulation: <ul style="list-style-type: none"> • Check that the valves and thermostatic valves are open, • Check that the circulating pump is working, • Check the wiring, • Check the pump supply: if the pump does not work, replace it. |
| H02.25 | ACI error | Titan Active System short-circuited or on an open circuit |
| H02.36 | Funct device lost | Functional device has been disconnected No communication between the central unit PCB and the additional circuit PCB |
| H02.37 | Uncritic device lost | Uncritical device has been disconnected No communication between the central unit PCB and the additional circuit PCB |
| H02.60 | Unsupported function | The zone doesn't support the selected function |
| H06.01 | HP Unit Failure | Heat Pump Unit Failure occurred Heat pump outdoor unit fault |

6.1.3 SCB-10 blocking codes

A blocking code signals an anomaly affecting the heating system.

Several examples:

- The system automatically attempts to correct the error (for example in the event of a fault related to the flow rate).
- The error is still present and the system functions in defect mode (for example, in the event of a fault affecting the outdoor unit, the backup is started up).
- The system is shut down but automatically switches on again when the error disappears.

When one of the codes below is displayed, contact the professional responsible for maintenance of the heat pump.

Tab.23 List of blocking codes linked to the SCB-10 PCB

| Code | Message | Description |
|--------|----------------------|--|
| H00.69 | TbufferTankOpen | Buffer Tank temperature sensor is either removed or measures a temperature below range |
| H00.70 | TbufferTankClosed | Buffer Tank temperature sensor is either shorted or measures a temperature above range |
| H00.71 | TbufferTankTopOpen | Buffer Tank top temperature sensor is either removed or measures a temperature below range |
| H00.72 | TbufferTankTopClosed | Buffer Tank top temperature sensor is either shorted or measures a temperature above range |
| H00.74 | TBufferTankMissing | Buffer Tank temperature sensor was expected but not detected |
| H00.75 | TBufferTankTop Miss | Buffer Tank Top temperature sensor was expected but not detected |
| H00.76 | TcascadeFlow Open | Cascade Flow temperature sensor is either removed or measures a temperature below range |
| H00.77 | TcascadeFlow Closed | Cascade Flow temperature sensor is either shorted or measures a temperature above range |
| H00.78 | TcascadeFlow missing | Cascade Flow temperature sensor was expected but not detected |
| H02.02 | Wait Config Number | Waiting For Configuration Number |
| H02.03 | Conf Error | Configuration Error |
| H02.04 | Parameter Error | Parameter Error |
| H02.05 | CSU CU mismatch | CSU does not match CU type |
| H02.16 | Int CSU Timeout | Internal CSU Timeout |
| H02.36 | Funct device lost | Functional device has been disconnected |
| H02.40 | Function unavailable | Function unavailable |
| H02.45 | Full Can Conn Matrix | Full Can Connection Matrix |
| H02.46 | Full Can Device Adm | Full Can Device Administration |
| H02.47 | Failed Conn Funct Gr | Failed Connecting Function Groups |
| H02.48 | Funct Gr Conf Fault | Function Group Configuration Fault |
| H02.49 | Failed Init Node | Failed Initialising Node |
| H02.55 | Inval or miss SerNR | Invalid or missing device serial number |
| H02.61 | Unsupported function | Zone A doesn't support the selected function |
| H02.62 | Unsupported function | Zone B doesn't support the selected function |
| H02.63 | Unsupported function | Zone C doesn't support the selected function |
| H02.64 | Unsupported function | Zone D doesn't support the selected function |
| H02.65 | Unsupported function | Zone E doesn't support the selected function |
| H02.66 | TAS not connected | The anti corrosion protection (TAS) of the Domestic Hot Water tank is not connected |
| H02.67 | TAS short-circuit | The anti corrosion protection (TAS) of the Domestic Hot Water tank is shortend |
| H10.00 | T Flow Zone A Open | Flow temperature sensor Zone A Open |
| H10.01 | T Flow Zone A Closed | Flow temperature sensor Zone A Closed |
| H10.02 | T DhW Zone A Open | Domestic Hot Water temperature sensor Zone A Open |
| H10.03 | T DhW Zone A Closed | Domestic Hot Water temperature sensor Zone A Closed |
| H10.04 | TSwimmPoolZoneA Open | Swimming Pool Temperature Sensor Zone A Open |
| H10.05 | TSwimmPoolZoneAClose | Swimming Pool Temperature Sensor Zone A Closed |
| H10.09 | T Flow Zone B Open | Flow temperature sensor Zone B Open |
| H10.10 | T Flow Zone B Closed | Flow temperature sensor Zone B Closed |
| H10.11 | T DhW Zone B Open | Domestic Hot Water Temperature Sensor Zone B Open |
| H10.12 | T DhW Zone B Closed | Domestic Hot Water temperature sensor Zone B Closed |
| H10.13 | TSwimmPoolZoneB Open | Swimming Pool Temperature Sensor Zone B Open |

| Code | Message | Description |
|--------|----------------------|---|
| H10.14 | TSwimmPoolZoneBClose | Swimming Pool Temperature Sensor Zone B Closed |
| H10.18 | T Flow Zone C Open | Flow temperature sensor Zone C Open |
| H10.19 | T Flow Zone C Closed | Flow temperature sensor Zone C Closed |
| H10.20 | T Dhw Zone C Open | Domestic Hot Water Temperature Sensor Zone C Open |
| H10.21 | T Dhw Zone C Closed | Domestic Hot Water temperature sensor Zone C Closed |
| H10.22 | TSwimmPoolZoneC Open | Swimming Pool Temperature Sensor Zone C Open |
| H10.23 | TSwimmPoolZoneCClose | Swimming Pool Temperature Sensor Zone C Closed |
| H10.27 | T Flow Zone DHW open | Flow temperature sensor Zone DHW open |
| H10.28 | Sens. ZoneDHW closed | Flow temperature sensor Zone DHW closed |
| H10.29 | Sensor Zone DHW open | Temperature sensor Zone DHW open |
| H10.30 | T Zone DHW closed | Domestic Hot Water temperature sensor Zone DHW closed |
| H10.36 | Sensor Zone AUX open | Flow temperature sensor Zone AUX open |
| H10.37 | Sens. ZoneAUX closed | Flow temperature sensor ZoneAUX closed |
| H10.38 | T Dhw Zone AUX open | Domestic Hot Water temperature sensor Zone AUX open |
| H10.39 | Sens. ZoneAUX Closed | Domestic Hot Water temperature sensor Zone AUX closed |

6.1.4 Lockout codes

A lockout code signals a major anomaly affecting the heating system: the heating system is shut down as the safety conditions are not fulfilled.

When one of the codes below is displayed, contact the professional responsible for maintenance of the heat pump.

Tab.24 List of lockout codes

| Code | Message | Description |
|--------|---------------------|--|
| E00.00 | TFlow Open | Flow temperature sensor is either removed or measures a temperature below range |
| E00.01 | TFlow Closed | Flow temperature sensor is either shorted or measures a temperature above range |
| E02.13 | Blocking Input | Blocking Input of the Control Unit from device external environment Input BL open. |
| E02.24 | System flow locking | System water flow locking active Insufficient flow: open a radiator valve The circuit is clogged: <ul style="list-style-type: none"> • Check that the filters are not obstructed and clean them if necessary. • Clean and flush the installation. No circulation: <ul style="list-style-type: none"> • Check that the valves and thermostatic valves are open. • Check that the filters are not obstructed. • Check that the circulating pump is working. • Check the wiring. • Check the pump supply: if the pump does not work, replace it. |

6.1.5 Warning codes

A warning code signals that the optimal operating conditions are not fulfilled. The system continues to operate safely, but there is a risk of shutdown if the situation continues to deteriorate.

If the situation improves, the warning code may disappear spontaneously.

When one of the codes below is displayed continuously, contact the professional responsible for maintenance of the heat pump.

Tab.25 List of warning codes linked to the EHC-05 PCB

| Code | Message | Description |
|--------|---------------------|-------------------------------|
| A02.06 | Water Press Warning | Water Pressure Warning active |
| A02.18 | OBD Error | Object Dictionary Error |

| Code | Message | Description |
|--------|----------------------|---|
| A02.22 | System flow warning | System water flow warning active |
| A02.55 | Inval or miss SerNR | Invalid or missing device serial number |
| A02.80 | Missing Cascade Ctrl | Missing Cascade controller |

6.1.6 SCB-10 warning codes

A warning code signals that the optimal operating conditions are not fulfilled. The system continues to operate safely, but there is a risk of shutdown if the situation continues to deteriorate.

If the situation improves, the warning code may disappear spontaneously.

When one of the codes below is displayed continuously, contact the professional responsible for maintenance of the heat pump.

Tab.26 List of warning codes linked to the SCB-10 PCB

| Code | Message | Description |
|--------|----------------------|--|
| A00.32 | TOutside Open | Outside temperature sensor is either removed or measures a temperature below range |
| A00.33 | TOutside Closed | Outside temperature sensor is either shorted or measures a temperature above range |
| A00.34 | TOutside Missing | Outside temperature sensor was expected but not detected |
| A02.18 | OBD Error | Object Dictionary Error: |
| A02.37 | Uncritic device lost | Uncritical device has been disconnected: |
| A10.45 | RoomTempZoneA miss | Measure of Room Temperature Zone A is missing |
| A10.46 | RoomTempZoneB miss | Measure of Room Temperature Zone B is missing |
| A10.47 | RoomTempZoneC miss | Measure of Room Temperature Zone C is missing |
| A10.50 | T_DHW top D miss | Domestic Hot Water temperature sensor top zone DHW is missing |
| A10.54 | Temp. Zone DHW miss. | Temperature sensor Zone DHW is missing |
| A10.56 | T_DHW Zone AUX miss | Domestic Hot Water temperature sensor Zone AUX is missing |

6.2 Fault finding

Tab.27

| Problems | Probable causes | Corrections |
|-------------------------|--|--|
| The radiators are cold. | The heating setpoint temperature is too low. | Increase the value of the room temperature setpoint or, if a room unit is connected, increase the temperature on it. |
| | The heating mode is deactivated. | Activate the heating mode. |
| | The radiator valves are closed. | Open the valves on all radiators connected to the heating system. |
| | The heat pump is not operating. | <ul style="list-style-type: none"> • Check that the heat pump is switched on. • Check the fuses and switches on the electrical installation. |
| | The water pressure is too low (< 1 bar). | Top up the system with water. |

| Problems | Probable causes | Corrections |
|--|---|--|
| There is no domestic hot water. | The domestic hot water setpoint temperature is too low. | Increase the domestic hot water setpoint temperature. |
| | The domestic hot water mode is deactivated. | Activate the domestic hot water mode. |
| | The appliance is in reduced domestic hot water mode | <ul style="list-style-type: none"> • Check and modify the comfort and reduced time ranges for the domestic hot water. • Adapt the domestic hot water setpoint temperature. |
| | The shower head is restricting the water flow. | Clean the shower head; replace it if necessary. |
| | The heat pump is not operating. | <ul style="list-style-type: none"> • Check that the heat pump is switched on. • Check the fuses and switches on the electrical installation. |
| | The water pressure is too low (< 1 bar). | Top up the installation with water. |
| Significant variations in domestic hot water temperature | Insufficient water supply | <ul style="list-style-type: none"> • Check the water pressure in the installation. • Open the valve. |
| | The domestic hot water hysteresis is too high | Contact the professional responsible for maintenance of the heat pump. |
| The heat pump does not work. | The heating setpoint temperature is too low. | Increase the value of the room temperature setpoint or, if a room unit is connected, increase the temperature on it. |
| | The heat pump is not operating. | <ul style="list-style-type: none"> • Check that the heat pump is switched on. • Check the fuses and switches on the electrical installation. |
| | The water pressure is too low (< 1 bar). | Top up the system with water. |
| | An error code appears on the display. | Correct the error if possible. |
| The heat pump runs short-cycling in domestic hot water mode | The temperature setpoint is too low | Increase the setpoint |
| The water pressure is too low (< 1 bar). | Not enough water in the installation. | Top up the system with water. |
| | Water leak. | Contact the professional responsible for maintenance of the heat pump. |
| Clicking in the central heating pipes | The central heating pipe clamps are too tight. | Slightly loosen the clamps. |
| | There is air in the heating pipes. | Vent any air in the domestic hot water tank, the pipes and the taps to prevent the annoying noises likely to be produced during heating or when drawing off water. |
| | The water is circulating too quickly in the central heating system. | Contact the professional responsible for maintenance of the heat pump. |
| Significant water leak underneath or in the vicinity of the heat pump. | The pipes on the heat pump or the central heating are damaged. | Contact the professional responsible for maintenance of the heat pump. |

7 Decommissioning and disposal

7.1 Decommissioning procedure

To decommission the heat pump temporarily or permanently:

1. Contact the installer.

7.2 Disposal and recycling

Fig.8



Warning

Removal and disposal of the heat pump must be carried out by a qualified professional in accordance with prevailing local and national regulations.

8 Energy savings

Energy-saving advice:

- Do not block ventilation outlets.
- Do not cover the radiators. Do not fit curtains in front of the radiators.
- Install reflective panels behind the radiators to prevent heat losses.
- Insulate the pipes in rooms that are not heated (cellars and lofts).
- Close the radiators in rooms not in use.
- Do not run hot (or cold) water pointlessly.
- Install an energy-saving shower head, which can save up to 40 % energy.
- Take showers rather than baths. A bath consumes twice as much water and energy.

9 Product fiche and package fiche

9.1 Compatible heating devices

Tab.28

| Outdoor unit | Associated/compatible indoor units |
|--------------|------------------------------------|
| AWHP 4.5 MR | MIT-S 4-8/E MIT-S 4-8/H |
| AWHP 6 MR-3 | MIT-S 4-8/E MIT-S 4-8/H |
| AWHP 8 MR-2 | MIT-S 4-8/E MIT-S 4-8/H |
| AWHP 11 MR-2 | MIT-S 11-16/E MIT-S 11-16/H |
| AWHP 11 TR-2 | MIT-S 11-16/E MIT-S 11-16/H |
| AWHP 16 MR-2 | MIT-S 11-16/E MIT-S 11-16/H |
| AWHP 16 TR-2 | MIT-S 11-16/E MIT-S 11-16/H |
| AWHP 22 TR-2 | MIT-S 22-27/E MIT-S 22-27/H |
| AWHP 27 TR-2 | MIT-S 22-27/E MIT-S 22-27/H |

9.2 Product fiche

Tab.29 Product fiche for heat pump space heaters

| | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 |
|--|------|-----------------|-----------------|-----------------|
| Space heating energy efficiency class under average climate conditions | | A ⁺⁺ | A ⁺⁺ | A ⁺⁺ |
| Rated heat output under average climate conditions (<i>Prated or Psup</i>) | kW | 3 | 4 | 6 |

| | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 |
|---|--------|-------------|-------------|-------------|
| Seasonal space heating energy efficiency under average climate conditions | % | 134 | 125 | 129 |
| Annual energy consumption under average climate conditions | kWh | 2353 | 2124 | 3499 |
| Sound power level L_{WA} indoors ⁽¹⁾ | dB (A) | 43 | 43 | 51 |
| Rated heat output, under colder - warmer climate conditions | kW | 5 - 4 | 4 - 5 | 6 - 6 |
| Seasonal space heating energy efficiency, under colder - warmer climate conditions | % | 109 - 179 | 116 - 172 | 119 - 169 |
| Annual energy consumption, under colder - warmer climate conditions | kWh | 4483 - 1249 | 3721 - 1492 | 4621 - 1904 |
| Sound power level L_{WA} outdoors | dB (A) | 58 | 65 | 65 |
| (1) If applicable | | | | |

Tab.30 Product fiche for heat pump space heaters

| | Unit | AWHP 11 MR-2 | AWHP 11 TR-2 | AWHP 16 MR-2 | AWHP 16 TR-2 |
|---|--------|-----------------------|-----------------------|----------------------|----------------------|
| Space heating energy efficiency class under average climate conditions | | A⁺⁺ | A⁺⁺ | A⁺ | A⁺ |
| Rated heat output under average climate conditions (<i>Prated or Psup</i>) | kW | 6 | 6 | 9 | 9 |
| Seasonal space heating energy efficiency under average climate conditions | % | 125 | 125 | 121 | 121 |
| Annual energy consumption under average climate conditions | kWh | 3999 | 3999 | 5861 | 5861 |
| Sound power level L_{WA} indoors ⁽¹⁾ | dB (A) | 51 | 51 | 51 | 51 |
| Rated heat output, under colder - warmer climate conditions | kW | 4 - 8 | 4 - 8 | 7 - 13 | 7 - 13 |
| Seasonal space heating energy efficiency, under colder - warmer climate conditions | % | 113 - 167 | 113 - 167 | 113 - 161 | 113 - 161 |
| Annual energy consumption, under colder - warmer climate conditions | kWh | 3804 - 2580 | 3804 - 2580 | 5684 - 4120 | 5684 - 4120 |
| Sound power level L_{WA} outdoors | dB (A) | 65 | 65 | 69 | 69 |
| (1) If applicable. | | | | | |

Tab.31 Product fiche for heat pump space heaters

| | Unit | AWHP 22 TR-2 | AWHP 27 TR-2 |
|---|--------|----------------------|----------------------|
| Space heating energy efficiency class under average climate conditions | | A⁺ | A⁺ |
| Rated heat output under average climate conditions (<i>Prated or Psup</i>) | kW | 11 | 14 |
| Seasonal space heating energy efficiency under average climate conditions | % | 114 | 112 |
| Annual energy consumption under average climate conditions | kWh | 7681 | 9993 |
| Sound power level L_{WA} indoors ⁽¹⁾ | dB (A) | 43 | 43 |
| Rated heat output, under colder - warmer climate conditions | kW | 12 - 18 | 14 - 20 |
| Seasonal space heating energy efficiency, under colder - warmer climate conditions | % | 111 - 143 | 103 - 141 |
| Annual energy consumption, under colder - warmer climate conditions | kWh | 10578 - 10025 | 13164 - 11541 |
| Sound power level L_{WA} outdoors | dB (A) | 70 | 77 |
| (1) If applicable. | | | |

**See**

For specific precautions about assembling, installing and maintaining: See Safety

9.3 Product fiche – Temperature controller

Tab.32 Product fiche for the temperature controller

| | Unit | DIEMATIC Evolution |
|---|------|--------------------|
| Class | | II |
| Contribution to space heating energy efficiency | % | 2 |

9.4 Package fiche - Medium-temperature heat pumps



Important

'Medium-temperature application' means an application where the heat pump space heater or heat pump combination heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 55 °C.

Fig.9 Package fiche for medium-temperature heat pumps indicating the space heating energy efficiency of the package

Seasonal space heating energy efficiency of heat pump ①
‘I’ %

Temperature control
 from fiche of temperature control

Class I = 1%, Class II = 2%, Class III = 1.5%,
 Class IV = 2%, Class V = 3%, Class VI = 4%,
 Class VII = 3.5%, Class VIII = 5%

②
 + %

Supplementary boiler
 from fiche of boiler

Seasonal space heating energy efficiency (in %)

③
 (- ‘I’) x ‘II’ = ± %

Solar contribution
 from fiche of solar device

Collector size (in m²)

Tank volume (in m³)

Collector efficiency (in %)

Tank rating ⁽¹⁾
 A* = 0.95, A = 0.91,
 B = 0.86, C = 0.83,
 D - G = 0.81

④
 (‘III’ x + ‘IV’ x) x 0.45 x (/100) x = + %

(1) If tank rating is above A, use 0.95

Seasonal space heating energy efficiency of package under average climate ⑤
 %

Seasonal space heating energy efficiency class of package under average climate

| | | | | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| G | F | E | D | C | B | A | A* | A** | A*** |
| <30% | ≥30% | ≥34% | ≥36% | ≥75% | ≥82% | ≥90% | ≥98% | ≥125% | ≥150% |

Seasonal space heating energy efficiency under colder and warmer climate conditions

⑤
Colder: - ‘V’ = % **Warmer:** + ‘VI’ = %

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as this efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

AD-3000745-01

- I The value of the seasonal space heating energy efficiency of the preferential space heater, expressed in %.
- II The factor for weighting the heat output of preferential and supplementary heaters of a package as set out in the following table.
- III The value of the mathematical expression: 294/(11 · Prated), whereby "Prated" is related to the preferential space heater.
- IV The value of the mathematical expression 115/(11 · Prated), whereby "Prated" is related to the preferential space heater.
- V The value of the difference between the seasonal space heating energy efficiencies under average and colder climate conditions, expressed in %.
- VI The value of the difference between the seasonal space heating energy efficiencies under warmer and average climate conditions, expressed in %.

Tab.33 Weighting of medium temperature heat pumps

| Prated / (Prated + Psup) ⁽¹⁾⁽²⁾ | II, package without hot water storage tank | II, package with hot water storage tank |
|--|--|---|
| 0 | 1.00 | 1.00 |
| 0.1 | 0.70 | 0.63 |
| 0.2 | 0.45 | 0.30 |
| 0.3 | 0.25 | 0.15 |
| 0.4 | 0.15 | 0.06 |
| 0.5 | 0.05 | 0.02 |
| 0.6 | 0.02 | 0 |
| ≥ 0.7 | 0 | 0 |

(1) The intermediate values are calculated by linear interpolation between the two adjacent values.
(2) Prated is related to the preferential space heater or combination heater.

Tab.34 Package efficiency

| | Unit | AWHP 4.5 MR | AWHP 6 MR-3 | AWHP 8 MR-2 |
|---|------|-------------|-------------|-------------|
| Seasonal space heating energy efficiency of package | % | 136 | 127 | 131 |




Tab.35 Package efficiency

| | Unit | AWHP 11 MR-2 | AWHP 11 TR-2 | AWHP 16 MR-2 | AWHP 16 TR-2 | AWHP 22 TR-2 | AWHP 27 TR-2 |
|---|------|--------------|--------------|--------------|--------------|--------------|--------------|
| Seasonal space heating energy efficiency of package | % | 127 | 127 | 123 | 123 | 116 | 114 |

10 Appendix

10.1 Name and symbol of the zones

Tab.36

| Factory-set name | Factory-set symbol | Name and symbol defined by the customer |
|------------------|---|---|
| CIRCA0 |  | |
| CIRCA1 |  | |
| CIRCB1 |  | |
| CIRCC1 | | |
| CIRCAUX1 | | |

10.2 Name and temperature of the activities

Tab.37 Name and temperature of the activities for heating

| Activities | Factory-set name | Factory-set temperature | Name and temperature defined by the customer |
|------------|------------------|-------------------------|--|
| Activity 1 | Sleep | 16 °C | |
| Activity 2 | Home | 20 °C | |
| Activity 3 | Away | 6 °C | |
| Activity 4 | Morning | 21 °C | |
| Activity 5 | Evening | 22 °C | |
| Activity 6 | Custom | 20 °C | |

Tab.38 Name and temperature of the activities for cooling

| Activities | Factory-set name | Factory-set temperature | Name and temperature defined by the customer | |
|-------------------|-------------------------|--------------------------------|---|--|
| Activity 1 | Sleep | 30 °C | | |
| Activity 2 | Home | 25 °C | | |
| Activity 3 | Away | 25 °C | | |
| Activity 4 | Morning | 25 °C | | |
| Activity 5 | Evening | 25 °C | | |
| Activity 6 | Custom | 25 °C | | |

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