en

EASYLIFE

ALEZIO S



User Guide

Reversible air/water "Split Inverter" heat pump

ALEZIO S

MIV-S 4-8/EM-MIV-S 4-8/EMI
MIV-S 4-8/H-MIV-S 4-8/HI
MIV-S 11-16/H-MIV-S 11-16/HI
MIV-S 11-16/EM-MIV-S 11-16/EMI
MIV-S 11-16/ET-MIV-S 11-16/ETI

De Dietrich
SUSTAINABLE COMFORT®

Dear Customer,

Thank you very much for buying this appliance.

Please read through the manual carefully before using the product, and keep it in a safe place for later reference. In order to ensure continued safe and efficient operation we recommend that the product is serviced regularly. Our service and customer service organisation can assist with this.

We hope you enjoy years of problem-free operation with the product.

Contents

1 Safety instructions and recommendations . . . 5
1.1 Safety . . . 5
1.2 General instructions . . . 5
1.3 Electrical safety . . . 5
1.4 Refrigerant safety . . . 6
1.5 Domestic water safety . . . 6
1.6 Hydraulic safety . . . 7
1.7 Recommendations for operation . . . 7
1.8 Specific instructions for service, maintenance and breakdowns . . . 7
1.9 Specific safety instructions . . . 8
1.10 Liabilities . . . 8

2 Symbols used . . . 9
2.1 Symbols used in the manual . . . 9
2.2 Symbols used on the appliance . . . 9
2.3 Symbols used on the data plate . . . 9

3 Technical specifications . . . 10
3.1 Directives . . . 10
3.2 Technical data . . . 10
3.2.1 Compatible heating devices . . . 10
3.2.2 Heat pump . . . 11
3.2.3 Heat pump weight . . . 13
3.2.4 Combination heaters with medium-temperature heat pump . . . 14
3.2.5 Circulating pump . . . 16

4 Description of the product . . . 16
4.1 Operating principle . . . 16
4.2 Main components . . . 17
4.3 Control panel description . . . 17
4.3.1 Description of the user interface . . . 17
4.3.2 Description of the home screen . . . 17

5 Operation . . . 18
5.1 Starting and stopping the heat pump . . . 18
5.1.1 Starting the heat pump . . . 18
5.1.2 Shutting down the heat pump . . . 18
5.2 Switching the central heating on/off . . . 19
5.3 Periods of absence or going on holiday . . . 19
5.4 Regional and ergonomic parameters . . . 19
5.5 Personalising the zones . . . 20
5.5.1 Definition of the term "zone" . . . 20
5.5.2 Changing the name and symbol of a zone . . . 20
5.6 Personalising the activities . . . 20
5.6.1 Definition of the term "Activity" . . . 20
5.6.2 Changing the name of an activity . . . 20
5.6.3 Changing the temperature of an activity . . . 21
5.7 Room temperature for a zone . . . 21
5.7.1 Selecting the operating mode . . . 21
5.7.2 Activating and configuring a timer programme for heating . . . 21
5.7.3 Activating and configuring a timer programme for cooling . . . 22
5.7.4 Changing the room temperature temporarily . . . 22
5.8 Domestic hot water temperature . . . 22
5.8.1 Selecting the operating mode . . . 22
5.8.2 Activating and configuring a timer programme for domestic hot water . . . 23
5.8.3 Forcing domestic hot water production (override) . . . 23
5.8.4 Modifying the domestic hot water set point temperatures . . . 23
5.9 Monitoring the energy consumption . . . 24

6 Maintenance . . . 24
6.1 General . . . 24
6.2 Standard inspection and maintenance operations . . . 24
6.3 Maintenance message . . . 25
6.4 Displaying the maintenance information . . . 25

6.5 Check the hydraulic pressure . . . 25
6.6 Cleaning the casing . . . 25

7 Troubleshooting . . . 26
7.1 Resetting the safety thermostat . . . 26
7.2 Resolving operating errors . . . 26
7.2.1 Types of error code . . . 26
7.2.2 Warning codes . . . 26
7.2.3 Blocking codes . . . 27
7.2.4 Lockout codes . . . 29
7.3 Fault finding . . . 29
7.4 Displaying and clearing the error memory . . . 30

8 Decommissioning and disposal . . . 31
8.1 Decommissioning procedure . . . 31
8.2 Disposal and recycling . . . 31

9 Energy savings . . . 31

10 Product fiche and package fiche . . . 31
10.1 Product fiche . . . 31
10.2 Product fiche – Temperature controller . . . 32
10.3 Package fiche . . . 32
10.4 Package fiche - Combination heaters (boilers or heat pumps) . . . 35

11 Appendix . . . 36
11.1 Name and symbol of the zones . . . 36
11.2 Name and temperature of the activities . . . 36

1 Safety instructions and recommendations

1.1 Safety

Operation	**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.
Electrical	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. Install the appliance in accordance with national rules on electrical installation. A disconnection device must be fitted to the fixed wiring in accordance with installation rules. 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 obviate any 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. In order to prevent any danger owing to the unexpected reset of the thermal circuit breaker, 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.
Hydraulics	**Caution** Respect the minimum and maximum water pressure and temperature to ensure the appliance operates correctly. See chapter on Technical Specifications.
Installation	**Important** Allow the space required to install the appliance correctly, referring to the chapter Dimensions of the Appliance. See the Installation and Service Manual.

1.2 General instructions

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 safety

Before making any electrical connections, earth the appliance in accordance with prevailing standards.

Danger
Danger of electric shock: the length of the conductors between the traction arrester device and the terminal blocks must be such that the active conductors are put under tension before the earth conductor.

Only qualified professionals may carry out electrical connections, always with the power off.

Separate the very low voltage cables from the 230/400 V power supply cables.

1.4 Refrigerant safety

Warning
Refrigerant fluid and pipes:

- Use only **R410A** refrigerant fluid to fill the installation.
- Use tools and pipe components especially designed for use with **R410A** refrigerant fluid.
- Use copper pipes deoxidised with phosphorus to carry the refrigerant fluid.
- 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 fluid and a flame may result in emissions of toxic gases.

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.

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:

1. Switch off the appliance.
2. Open the windows.
3. Do not use a naked flame, do not smoke, do not operate electrical contacts.
4. 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 fluid to escape into the atmosphere.

1.5 Domestic water safety

In accordance with safety rules, a safety valve calibrated to 0.7 MPa (7 bar) must be mounted on the tank's domestic cold water inlet.

A pressure reducer (not supplied) is necessary if the supply pressure exceeds 80% of the safety valve or safety unit calibration. This component must be located upstream of the appliance.

There must be no cut-off devices between the safety valve or safety unit and the domestic hot water tank.

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.

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.

Take precautions with the domestic hot water. Depending on the heat pump settings, the domestic hot water temperature may exceed 65°C.

In order to limit the risk of being scalded, a thermostatic mixing valve must be installed on the domestic hot water flow pipes.

1.6 Hydraulic safety

When making the hydraulic connection, it is imperative that the standards and corresponding local directives be respected.

If radiators are connected directly to the heating circuit: install a differential valve between the indoor unit and the heating circuit.

Fit drainage valves between the indoor unit and the heating circuit.

Do not add any chemical products to the heating water without first consulting a water treatment specialist. For example: antifreeze, water softeners, products to increase or reduce the pH value, chemical additives and/or inhibitors. These may cause faults in the heat pump and damage the heat exchanger.

1.7 Recommendations for operation

Keep the heat pump accessible at all times.

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.

Give preference to the OFF or frost protection mode rather than switching off the system to leave the following functions running:

- Anti blocking of pumps
- Frost protection

The frost protection function does not work if the heat pump is switched off.

Regularly check the presence of water and 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 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.

If the home is unoccupied for a long period and there is a risk of frost, drain the indoor unit and the heating system.

1.8 Specific instructions for service, maintenance and breakdowns

Maintenance work must be carried out by a qualified professional.

Only a qualified professional is authorised to set, correct or replace the safety devices.

Before any work, switch off the power supply to the heat pump, the indoor unit and the hydraulic/electrical back-up.

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.

Locate and correct the cause of power cut before resetting the safety thermostat.

Only genuine spare parts may be used.

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.

For heat pumps with a refrigerant fluid load of more than 5 tonnes of CO_2 equivalent, the user must have an annual leak-tightness test performed on the refrigerant equipment.

1.9 Specific safety instructions

Warning
Refrigerant fluid and pipes:

- Use only **R410A** refrigerant fluid to fill the installation.
- Use tools and pipe components especially designed for use with **R410A** refrigerant fluid.
- Use copper pipes deoxidised with phosphorus to carry the refrigerant fluid.
- 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 fluid and a flame may result in emissions of toxic gases.

1.10 Liabilities

Tab.1

Manufacturer's liability	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. Our liability as manufacturer may not be invoked in the following cases: • 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	The installer is responsible for the installation and initial commissioning of the appliance. The installer must observe the following instructions: • 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	To guarantee optimum operation of the system, the user must abide by the following instructions: • 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. • Ask 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

2.1 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.

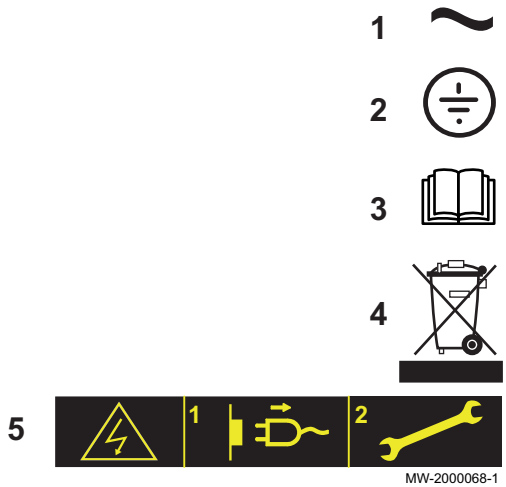
Caution
Risk of material damage.

Important
Please note: important information.

See
Reference to other manuals or pages in this manual.

2.2 Symbols used on the appliance

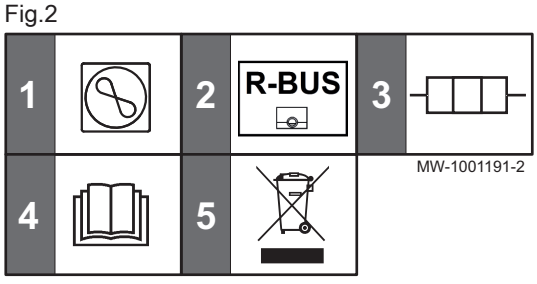
Fig.1



1 Alternating current
2 Protective earthing
3 Before installing and commissioning the appliance, carefully read the instruction manuals provided.
4 Dispose of used products through an appropriate recovery and recycling structure.
5 Caution: danger of electric shock, live parts. Disconnect the mains power prior to carrying out any work.

2.3 Symbols used on the data plate

Fig.2



1 Refrigerant type, maximum operating pressure.
2 Compatibility with the Smart TC° connected thermostat.
3 Maximum output and power supply (only for versions with electrical backup).
4 Before installing and commissioning the appliance, carefully read the instruction manuals provided.
5 Dispose of used products through an appropriate recovery and recycling structure.

3 Technical specifications

3.1 Directives

De Dietrich hereby declares that the radio equipment type ALEZIO S is in compliance with the directives and standards below. It has been manufactured and put into circulation in accordance with the requirements of the European Directives.

The full text of the EU declaration of conformity is available from the manufacturer.

- Low Voltage Directive 2014/35/EU
  Generic standard: EN 60335-1
  Relevant standards: EN 60335-2-21, EN 60335-2-40
- Electromagnetic Compatibility Directive 2014/30/EU
  Generic standards: EN 61000-6-3, EN 61000-6-1
  Relevant Standard: EN 55014
- Pressure Equipment Directive 2014/68/EU
- RoHS Directive 2017/2012/EU
- Energy labelling directive
  2017/1369/EU, No. 811/2013, No. 812/2013
  2009/125/EC, No. 813/2013, No. 814/2013

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.

3.2 Technical data

3.2.1 Compatible heating devices

Tab.2

Outdoor unit	Associated/compatible indoor units
AWHP 4.5 MR	MIV-S 4-8/EM MIV-S 4-8/EMI MIV-S 4-8/H MIV-S 4-8/HI
AWHP 6 MR-3	MIV-S 4-8/EM MIV-S 4-8/EMI MIV-S 4-8/H MIV-S 4-8/HI
AWHP 8 MR-2	MIV-S 4-8/EM MIV-S 4-8/EMI MIV-S 4-8/H MIV-S 4-8/HI
AWHP 11 MR-2	MIV-S 11-16/EM MIV-S 11-16/EMI MIV-S 11-16/ET MIV-S 11-16/ETI MIV-S 11-16/H MIV-S 11-16/HI
AWHP 11 TR-2	MIV-S 11-16/EM MIV-S 11-16/EMI MIV-S 11-16/ET MIV-S 11-16/ETI MIV-S 11-16/H MIV-S 11-16/HI

Outdoor unit	Associated/compatible indoor units
AWHP 16 MR-2	MIV-S 11-16/EM MIV-S 11-16/EMI MIV-S 11-16/ET MIV-S 11-16/ETI MIV-S 11-16/H MIV-S 11-16/HI
AWHP 16 TR-2	MIV-S 11-16/EM MIV-S 11-16/EMI MIV-S 11-16/ET MIV-S 11-16/ETI MIV-S 11-16/H MIV-S 11-16/HI

3.2.2 Heat pump

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

Maximum operating pressure: 0.3 MPa (3 bar)

Tab.3 Outdoor unit conditions of use

Limit operating temperatures	AWHP 4.5 MR	AWHP 6 MR-3	AWHP 8 MR-2
Water in heating mode	+18 °C / +55 °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
Water in cooling mode for the non-insulated models Water in cooling mode	+18 °C/+25 °C	+18 °C/+25 °C	+18 °C/+25 °C
Water in cooling mode for the insulated models Water in cooling mode	+7 °C / +25 °C	+7 °C / +25 °C	+7 °C / +25 °C
Outdoor air in cooling mode	+7 °C/+46 °C	+7 °C/+46 °C	+7 °C/+46 °C

Tab.4 Outdoor unit conditions of use

Limit operating temperatures	AWHP 11 MR-2 AWHP 11 TR-2	AWHP 16 MR-2 AWHP 16 TR-2
Water in heating mode	+18 °C/+60 °C	+18 °C/+60 °C
Outdoor air in heating mode	-20 °C/+35 °C	-20 °C/+35 °C
Water in cooling mode for the non-insulated models Water in cooling mode	+18 °C/+25 °C	+18 °C/+25 °C
Water in cooling mode for the insulated models Water in cooling mode	+7 °C / +25 °C	+7 °C / +25 °C
Outdoor air in cooling mode	+7 °C/+46 °C	+7 °C/+46 °C

Tab.5 Heating mode: outdoor 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
Heat output	kW	4.60	5.82	7.9
Coefficient of performance (COP)	-	5.11	4.22	4.34
Absorbed electrical power	kWe	0.90	1.38	1.82
Nominal water flow rate (ΔT = 5 K)	m^3/hour	0.88	1.00	1.53

Tab.6 Heating mode: outdoor air temperature +7 °C, water temperature at the outlet +35 °C. Performances in accordance with EN 14511-2.

Measurement type	Unit	AWHP 11 MR-2	AWHP 11 TR-2	AWHP 16 MR-2	AWHP 16 TR-2
Heat output	kW	11.39	11.39	14.65	14.65
Coefficient of performance (COP)	-	4.65	4.65	4.22	4.22

Measurement type	Unit	AWHP 11 MR-2	AWHP 11 TR-2	AWHP 16 MR-2	AWHP 16 TR-2
Absorbed electrical power	kWe	2.45	2.45	3.47	3.47
Nominal water flow rate (ΔT = 5 K)	m^3/hour	1.96	1.96	2.53	2.53

Tab.7 Heating mode: outdoor 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
Heat output	kW	3.47	3.74	6.8
Coefficient of performance (COP)	-	3.97	3.37	3.3
Absorbed electrical power	kWe	0.88	1.11	2.06

Tab.8 Heating mode: outdoor air temperature +2°C, water temperature at the outlet +35°C. Performances in accordance with EN 14511-2.

Measurement type	Unit	AWHP 11 MR-2	AWHP 11 TR-2	AWHP 16 MR-2	AWHP 16 TR-2
Heat output	kW	10.19	10.19	12.90	12.90
Coefficient of performance (COP)	-	3.20	3.20	3.27	3.27
Absorbed electrical power	kWe	3.19	3.19	3.94	3.94

Tab.9 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
Cooling output	kW	6.39	7.41	10.29
Energy efficiency ratio (EER)	-	2.98	2.90	3.15
Absorbed electrical power	kWe	2.14	2.56	3.27

Tab.10 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
Cooling output	kW	3.80	4.69	7.90
Energy efficiency ratio (EER)	-	4.28	4.09	3.99
Absorbed electrical power	kWe	0.89	1.15	2.00

Tab.11 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 11 MR-2	AWHP 11 TR-2	AWHP 16 MR-2	AWHP 16 TR-2
Cooling output	kW	15.49	15.49	18.36	18.36
Energy efficiency ratio (EER)	-	3.48	3.48	2.81	2.81
Absorbed electrical power	kWe	4.45	4.45	6.53	6.53

Tab.12 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 11 MR-2	AWHP 11 TR-2	AWHP 16 MR-2	AWHP 16 TR-2
Cooling output	kW	11.16	11.16	14.46	14.46
Energy efficiency ratio (EER)	-	4.75	4.75	3.96	3.96
Absorbed electrical power	kWe	2.35	2.35	3.65	3.65

Tab.13 Common specifications

Measurement type	Unit	AWHP 4.5 MR	AWHP 6 MR-3	AWHP 8 MR-2
Power voltage of the outdoor unit	V	230	230	230
Start-up amperage	A	5	5	5
Maximal amperage	A	12	13	17
Refrigerant R410A	kg	1.3	1.4	3.2
R410A refrigerant(1)	tCO_2e	2.714 (2.501)	2.923 (2.694)	6.682 (6.157)
Refrigerant connection (Liquid - Gas)	inch	1/4 - 1/2	1/4 - 1/2	3/8 - 5/8
Maximum precharged length	m	7	10	10

(1) The quantity of refrigerant in CO_2 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).

Tab.14 Common specifications

Measurement type	Unit	AWHP 11 MR-2	AWHP 11 TR-2	AWHP 16 MR-2	AWHP 16 TR-2
Power voltage of the outdoor unit	V	230	400	230	400
Start-up amperage	A	5	3	6	3
Maximal amperage	A	29.5	13	29.5	13
Refrigerant R410A	kg	4.6	4.6	4.6	4.6
R410A refrigerant(1)	tCO_2e	9.605 (8.850)	9.605 (8.850)	9.605 (8.850)	9.605 (8.850)
Refrigerant connection (Liquid - Gas)	inch	3/8 - 5/8	3/8 - 5/8	3/8 - 5/8	3/8 - 5/8
Maximum precharged length	m	10	10	10	10

(1) The quantity of refrigerant in CO_2 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).

3.2.3 Heat pump weight

Tab.15 Indoor unit

Indoor unit	Unit	MIV-S 4-8/EM	MIV-S 4-8/EMI	MIV-S 4-8/H	MIV-S 4-8/HI
Weight (empty)	kg	35.5	36.7	36.1	38.2

Tab.16 Indoor unit

Indoor unit	Unit	MIV-S 11-16/EM	MIV-S 11-16/EMI	MIV-S 11-16/ET	MIV-S 11-16/ETI	MIV-S 11-16/H	MIV-S 11-16/HI
Weight (empty)	kg	35.5	36.7	35.5	36.7	36.1	38.2

Tab.17 Outdoor unit

Outdoor unit	Unit	AWHP 4.5 MR	AWHP 6 MR-3	AWHP 8 MR-2
Weight (empty)	kg	54	42	75

Tab.18 Outdoor unit

Outdoor unit	Unit	AWHP 11 MR-2	AWHP 11 TR-2	AWHP 16 MR-2	AWHP 16 TR-2
Weight (empty)	kg	118	130	118	130

3.2.4 Combination heaters with medium-temperature heat pump

Tab.19 Technical parameters for heat pump combination heaters (parameters declared for medium-temperature application)

Product name			AWHP 4.5 MR	AWHP 6 MR-3
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)	*Prated*	kW	4	4
Rated heat output under colder conditions	*Prated*	kW	5	4
Rated heat output under warmer conditions	*Prated*	kW	4	5
Declared capacity for heating for part load at an indoor temperature of 20 °C and outdoor temperature T_j				
T_j = -7 °C	*Pdh*	kW	3.8	3.5
T_j = +2°C	*Pdh*	kW	4.3	4.5
T_j = +7 °C	*Pdh*	kW	4.5	4.8
T_j = +12 °C	*Pdh*	kW	5.5	5.2
T_j = bivalent temperature	*Pdh*	kW	3.9	3.6
T_j = operation limit temperature	*Pdh*	kW	3.9	3.6
Bivalent temperature	T_{biv}	°C	-10	-10
Degradation coefficient(2)	*Cdh*	—	1.0	1.0
Seasonal space heating energy efficiency under average conditions	η_s	%	134	138
Seasonal space heating energy efficiency under colder conditions	η_s	%	109	116
Seasonal space heating energy efficiency under warmer conditions	η_s	%	179	172
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	*COPd*	-	1.64	1.89
T_j = +2 °C	*COPd*	-	3.46	3.53
T_j = +7 °C	*COPd*	-	4.96	4.74
T_j = +12 °C	*COPd*	-	7.90	7.08
T_j = bivalent temperature	*COPd*	-	1.20	1.52
T_j = operation limit temperature	*COPd*	-	1.20	1.52
Operation limit temperature for air-to-water heat pumps	*TOL*	°C	-10	-10
Heating water operating limit temperature	*WTOL*	°C	55	60
Electrical power consumption				
Off mode	P_{OFF}	kW	0.009	0.009
Thermostat-off mode	P_{TO}	kW	0.049	0.049
Stand-by	P_{SB}	kW	0.009	0.015
Crankcase heater mode	P_{CK}	kW	0.000	0.055
Supplementary heater				
Rated heat output	*Psup*	kW	0.0	0.0
Type of energy input			Electricity	Electricity
Other specifications				
Capacity control			Variable	Variable

Product name			AWHP 4.5 MR	AWHP 6 MR-3
Sound power level, indoors - outdoors	L_{WA}	dB	53 - 61	48 - 65
Annual energy consumption under average conditions	Q_{HE}	kWh	2353	2124
Annual energy consumption under colder conditions	Q_{HE}	kWh	4483	3721
Annual energy consumption under warmer conditions	Q_{HE}	kWh	1249	1492
Rated air flow rate, outdoors for air-to-water heat pumps	—	m^3/h	2680	2700

(1) The rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating *sup(Tj)*.
(2) If *Cdh* is not determined by measurement, the default degradation coefficient is *Cdh* = 0.9.

Tab.20 Technical parameters for heat pump combination heaters (parameters declared for medium-temperature application)

Product name			AWHP 8 MR-2	AWHP 11 MR-2 AWHP 11 TR-2	AWHP 16 MR-2 AWHP 16 TR-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)	*Prated*	kW	6	6	9
Rated heat output under colder conditions	*Prated*	kW	6	4	7
Rated heat output under warmer conditions	*Prated*	kW	6	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	*Pdh*	kW	5.6	5.9	9.0
T_j = +2 °C	*Pdh*	kW	2.9	5.3	6.5
T_j = +7 °C	*Pdh*	kW	6.4	9.0	12.9
T_j = +12 °C	*Pdh*	kW	4.3	7.7	10.0
T_j = bivalent temperature	*Pdh*	kW	5.6	6.3	8.8
T_j = operation limit temperature	*Pdh*	kW	5.6	6.3	8.8
Bivalent temperature	T_{biv}	°C	-10	-10	-10
Degradation coefficient(2)	*Cdh*	—	1.0	1.0	1.0
Seasonal space heating energy efficiency under average conditions	η_s	%	129	125	121
Seasonal space heating energy efficiency under colder conditions	η_s	%	119	113	113
Seasonal space heating energy efficiency under warmer conditions	η_s	%	169	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	*COPd*	-	1.95	1.87	1.85
T_j = +2 °C	*COPd*	-	3.22	3.17	3.02
T_j = +7 °C	*COPd*	-	4.57	4.54	4.34
T_j = +12 °C	*COPd*	-	6.55	6.19	5.75
T_j = bivalent temperature	*COPd*	-	1.70	1.20	1.35
T_j = operation limit temperature	*COPd*	-	1.70	1.20	1.35

Product name			AWHP 8 MR-2	AWHP 11 MR-2 AWHP 11 TR-2	AWHP 16 MR-2 AWHP 16 TR-2
Operation limit temperature for air-to-water heat pumps	*TOL*	°C	-10	-10	-10
Heating water operating limit temperature	*WTOL*	°C	60	60	60
Electrical power consumption					
Off mode	P_{OFF}	kW	0.009	0.009	0.009
Thermostat-off mode	P_{TO}	kW	0.049	0.023	0.035
Stand-by	P_{SB}	kW	0.015	0.021	0.021
Crankcase heater mode	P_{CK}	kW	0.055	0.055	0.055
Supplementary heater					
Rated heat output	*Psup*	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	53 - 67	53 - 69	53 - 69
Annual energy consumption under average conditions	Q_{HE}	kWh	3499	3999	5861
Annual energy consumption under colder conditions	Q_{HE}	kWh	4621	3804	5684
Annual energy consumption under warmer conditions	Q_{HE}	kWh	1904	2580	4120
Rated air flow rate, outdoors for air-to-water heat pumps	—	m^3/h	3300	6000	6000

(1) The rated heat output *Prated* is equal to the design load for heating *Pdesignh*, and the rated heat output of a supplementary heater *Psup* is equal to the supplementary capacity for heating *sup(Tj)*.
(2) If *Cdh* is not determined by measurement, the default degradation coefficient is *Cdh* = 0.9.

See
The back cover for contact details.

3.2.5 Circulating pump

Important
The benchmark for the most efficient circulating pumps is EEI ≤ 0.20.

4 Description of the product

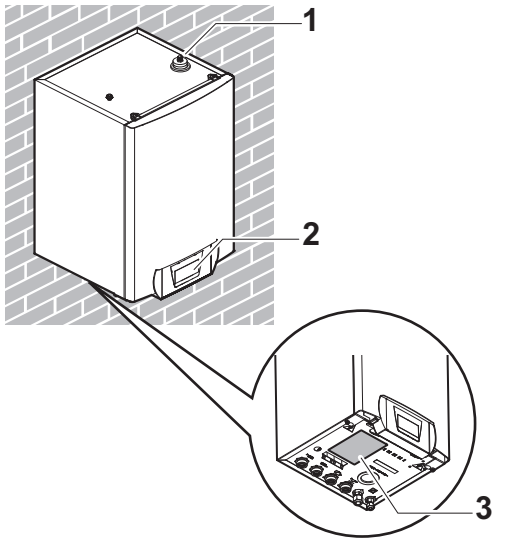
4.1 Operating principle

The outdoor unit produces heat or cold and transfers it to the indoor module via the refrigerant in the plate exchanger.

The indoor module is equipped with a specific control system which is used to adjust the temperature of the heating water to the needs of the home.

4.2 Main components

Fig.3

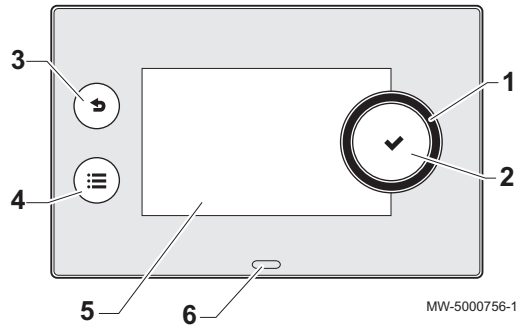


1 Automatic air vent
2 (HMI) user interface
3 Location of the data plate

4.3 Control panel description

4.3.1 Description of the user interface

Fig.4



1 Rotary knob to select a menu or setting
2 Validation button ✔
3 Back key ⮌ to return to the previous level or previous menu
4 Main menu key ☰
5 Display screen
6 LED for status indication:

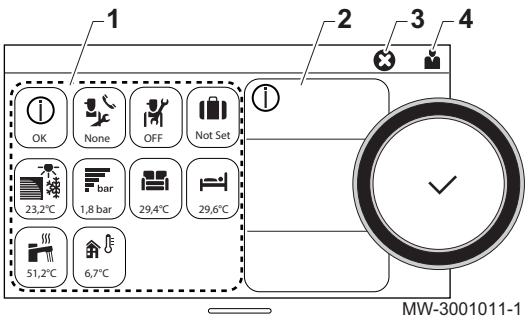
- continuous green = normal operation
- flashing green = warning
- red fixed = blockage
- flashing red = lockout

4.3.2 Description of the home screen

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

The screen goes into standby if no key is pressed for five minutes. Press one of the buttons on the user interface to exit the standby screen and display the home screen.

Fig.5

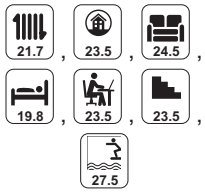


1 Access icons for menus and parameters

The selected icon is highlighted.
2 Information on the selected icon
3 ⊗ error notification: only visible if an error occurs
4 Navigation level:

- 👤 : User level
- 🔧 : Installer level.
  This level is reserved for installers and is protected by an access code. When this level is active, the Off icon becomes On.

Tab.21 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

5 Operation

5.1 Starting and stopping the heat pump

5.1.1 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.

5.1.2 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.

5.2 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.

5.3 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.22

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

5.4 Regional and ergonomic parameters

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

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

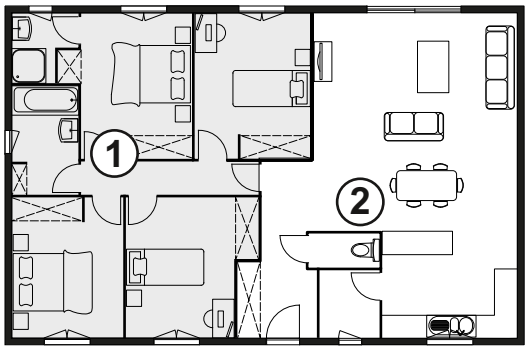
Tab.23

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

5.5 Personalising the zones

5.5.1 Definition of the term "zone"

Fig.6



MW-1001145-2

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

Tab.24 Example:

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

5.5.2 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 for the zone to be modified, 

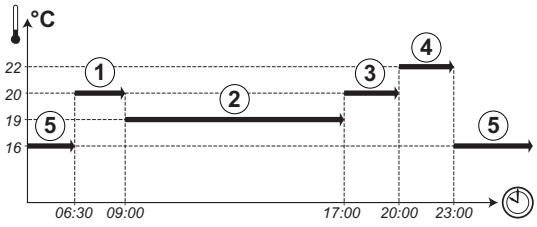
, for example.
2. Select **Zone configuration > Zone friendly Name**.
3. Modify the name of the zone (20 characters max.).
4. Select **Icon display zone**
5. Select the symbol to be associated with the zone.
6. Enter the chosen name and symbol in the table provided at the back of the manual.

5.6 Personalising the activities

5.6.1 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.7



MW-1001144-2

Tab.25 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

5.6.2 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 ☰ key.
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.).

5.6.3 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.

5.7 Room temperature for a zone

5.7.1 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.26

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.

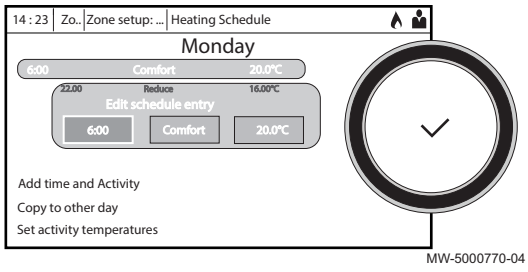
5.7.2 Activating and configuring a timer programme for heating

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.8



MW-5000770-04

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.

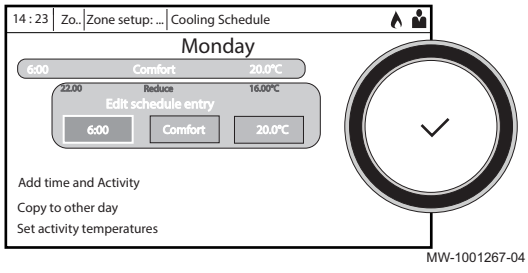
5.7.3 Activating and configuring a timer programme for cooling

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.

Off

1. Select the icon for the zone to be programmed, 29,4°C, for example.
   ⇨ Information on the current operating mode is given in the upper part of the screen.

Fig.9



MW-1001267-04

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.

5.7.4 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.

Off

1. Select the icon of the zone to be modified, 29,4°C, 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.

5.8 Domestic hot water temperature

5.8.1 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.

Off

1. Select the 51,2°C **DHW tank** icon.

2. Select the desired operating mode:

Tab.27

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.

5.8.2 Activating and configuring a timer programme for domestic hot water

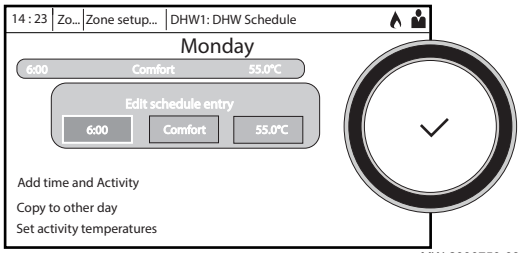
A timer programme can be used to vary the domestic hot water temperature depending on activities during the day. This can be programmed for each day of the week.



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.10



MW-2000750-03

5.8.3 Forcing domestic hot water production (override)

Regardless of the selected operating mode, you can force domestic hot water protection 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**.

5.8.4 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 **DHW comfort setpoint** to modify this set point.
3. Select **Zone configuration > Domestic Hot Water Setpoints > DHW reduced setpoint** to modify this set point.

5.9 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.28

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**.

6 Maintenance

6.1 General

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 mains electricity to the heat pump and the hydraulic or electrical back-up 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.

6.2 Standard inspection and maintenance operations

An annual inspection with tightness check is obligatory. 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.

6.3 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.

6.4 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.

6.5 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.

6.6 Cleaning the casing

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

7 Troubleshooting

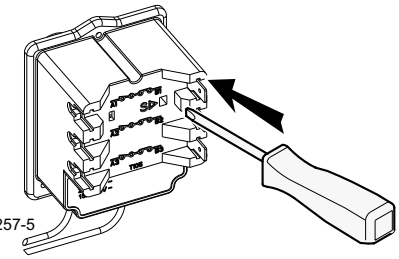
7.1 Resetting the safety thermostat

Danger
Before carrying out any work on the indoor unit, cut off its power supply and the electrical back-up immersion heater.

If you suspect that the safety thermostat was triggered:

1. Cut off the power supply to the indoor unit and the electrical back-up immersion heaters by lowering the circuit breakers on the electric panel.
2. Locate and correct the cause of power cut before resetting the safety thermostat.
3. Remove the front panel of the indoor unit and the protective cap.
4. If the safety thermostat has been triggered, use a flat-headed screwdriver to press the reset button on the thermostat. If not, look for an alternative cause for the power to the immersion heater having been cut.
5. Refit the front panel on the indoor unit and the protective cover.
6. Switch the mains supply to the indoor unit and the electrical back-up immersion heater back on.

Fig.11



MW-2000257-5

7.2 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 main screen of the control panel. 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.

7.2.1 Types of error code

The control panel can display three types of error codes:

Tab.29

Type of code	Code format	Colour of the status LED
Warning	Axx.xx	Green flashing
Blockage	Hxx.xx	Continuous red
Lock out	Exx.xx	Red flashing

7.2.2 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.30 List of warning codes

Code	Message	Description
A02.06	Water Press Warning	Water Pressure Warning active
A02.22	System flow warning	System water flow warning active
A02.55	Inval or miss SerNR	Invalid or missing device serial number

7.2.3 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.31 List of blocking codes

Code	Message	Description
H00.16	DHW sensor Open	Domestic Hot Water tank temperature sensor is either removed or measures a temperature below range • Check the wiring between the PCB and the sensor. • Check that the sensor has been fitted properly. • Check the Ohmic value of the sensor. • Replace the sensor if necessary.
H00.17	DHW sensor Closed	Domestic Hot Water tank temperature sensor is either shorted or measures a temperature above range • Check the wiring between the PCB and the sensor. • Check that the sensor has been fitted properly. • Check the Ohmic value of the sensor. • Replace the sensor if necessary.
H00.32	TOutside Open	Outside temperature sensor is either removed or measures a temperature below range • Check the wiring between the PCB and the sensor. • Check that the sensor has been fitted properly. • Check the Ohmic value of the sensor. • Replace the sensor if necessary.
H00.33	TOutside Closed	Outside temperature sensor is either shorted or measures a temperature above range • Check the wiring between the PCB and the sensor. • Check that the sensor has been fitted properly. • Check the Ohmic value of the sensor. • Replace the sensor if necessary.
H00.34	TOutside Missing	Outside temperature sensor was expected but not detected • Check the wiring between the PCB and the sensor. • Check that the outdoor temperature sensor is connected to the EHC–04 PCB. • Check that the sensor has been fitted properly. • Check the Ohmic value of the sensor. • Reset the factory settings for the CN1 and CN2 parameters. • Replace the sensor if necessary. • Activate automatic detection of all the options and accessories.
H00.40	WaterPressureOpen	Water pressure sensor is either removed or measures a temperature below range

Code	Message	Description
H00.41	WaterPressureClosed	Water pressure sensor is either shorted or measures a temperature above range
H00.47	THp Flow Open	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
H00.51	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 • Configure the CN1 and CN2 parameters according to the values specified on the data plate. Replacement of the PCB: appliance not configured.
H02.03	Conf Error	Configuration Error The configuration parameters entered are incorrect: • Configure the CN1 and CN2 parameters according to the data plate on the heat pump If the PCB is replaced, the appliance is not configured. • Run the automatic detection function
H02.04	Parameter Error	Parameter Error: Incorrect configuration of the PCB parameters: • Restore the factory settings. • If the error is still present: change the PCB.
H02.05	CSU CU mismatch	CSU does not match CU type Memory error: • Software change (software number or version parameter inconsistent with the memory)
H02.07	Water Press Error	Water Pressure Error active
H02.09	Partial block	Partial blocking of the device recognized **BL** input on the PCB terminal block open: • Check the contact on the **BL** input. • Check the wiring • Check the **AP001** parameter.
H02.10	Full Block	Full blocking of the device recognized **BL** input on the PCB terminal block open: • Check the contact on the **BL** input. • Check the wiring. • Check the **AP001** parameter.
H02.23	System flow error	System water flow error active
H02.36	Funct device lost	Functional device has been disconnected No communication between the PCB and the optional PCB • Check the connection of the supply cable between the PCBs • Check the connection of the **BUS** cable between the PCBs • Run automatic detection
H02.37	Uncritic device lost	Uncritical device has been disconnected No communication between the main PCB and the optional PCB • Check the connection of the supply cable between the PCBs • Check the connection of the **BUS** cable and the PCBs • Run automatic detection
H06.01	HP Unit Failure	Heat Pump Unit Failure occured

Code	Message	Description
H06.02	BL Hydraulic Backup	Hydraulic Backup are blocking
H06.04	Loss Com PCU	Loss of the communication with the Primary Control Unit

7.2.4 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.

Two operations are necessary for the system to resume normal operation:

1. Remove the causes of the anomaly.
2. Acknowledge the error message manually on the control panel.

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

Tab.32 List of lockout codes

Code	Message	Description
E00.00	TFlow Open	Flow temperature sensor is either removed or measures a temperature below range • Poor sensor connection: - Check the wiring between the PCB and the sensor - Check that the sensor has been correctly fitted • Sensor failure: - Check the Ohmic value of the sensor - Replace the sensor if necessary
E00.01	TFlow Closed	Flow temperature sensor is either shorted or measures a temperature above range • Poor sensor connection: - Check the wiring between the PCB and the sensor - Check that the sensor has been correctly fitted • Sensor failure: - Check the Ohmic value of the sensor - Replace the sensor if necessary
E02.13	Blocking Input	Blocking Input of the Control Unit from device external environment • Check the wiring • Check the component connected to the **BL.** contact
E02.24	System flow locking	System water flow locking active
E02.24	System flow locking	System water flow locking active
E06.03	Locking HydrauBackup	Locking Hydraulic Backup

7.3 Fault finding

Tab.33

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.	• 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	• 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.	• 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	• 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.	• 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.

7.4 Displaying and clearing the error memory

The error memory stores the 32 most recent errors. You can check the details of each error and then clear it from the error memory.

To display and clear the error memory:



1. Press the ☰ key.
2. Select **Error History**.
   ⇨ The list of the 32 most recent errors is displayed with the error code, a short description and the date.
3. Carry out the following actions according to your needs:
   • Show the details of an error: select the desired error.
   • To clear the error memory, press and hold the ✔ rotary knob.

8 Decommissioning and disposal

8.1 Decommissioning procedure

To decommission the heat pump temporarily or permanently:

1. Contact the installer.

8.2 Disposal and recycling

Fig.12



MW-3000179-03

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

9 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.

10 Product fiche and package fiche

10.1 Product fiche

Tab.34 Product fiche for heat pump space heaters

		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 *(Prated or Psup)*	kW	4	4	6
Seasonal space heating energy efficiency under average climate conditions	%	134	138	129
Annual energy consumption	kWh	2353	2124	3499
Sound power level L_{WA} indoors(1)	dB (A)	53	48	53
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 **colder - warmer**	kWh	4483 – 1249	3721 - 1492	4621 - 1904
Sound power level L_{WA} outdoors	dB (A)	61	65	67
(1) If applicable				

Tab.35 Product fiche for heat pump space heaters

		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+
Rated heat output under average climate conditions *(Prated or Psup)*	kW	6	9
Seasonal space heating energy efficiency under average climate conditions	%	125	121
Annual energy consumption	kWh	3999	5861
Sound power level L_{WA} indoors (1)	dB (A)	53	53
Rated heat output, under **colder - warmer** climate conditions	kW	4 - 8	7 - 13
Seasonal space heating energy efficiency, under **colder - warmer** climate conditions	%	113 - 167	113 - 161
Annual energy consumption **colder - warmer**	kWh	3804 - 2580	5684 - 4120
Sound power level L_{WA} outdoors	dB (A)	69	69
(1) If applicable.			

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

For more information, see
Compatible heating devices, page 10

10.2 Product fiche – Temperature controller

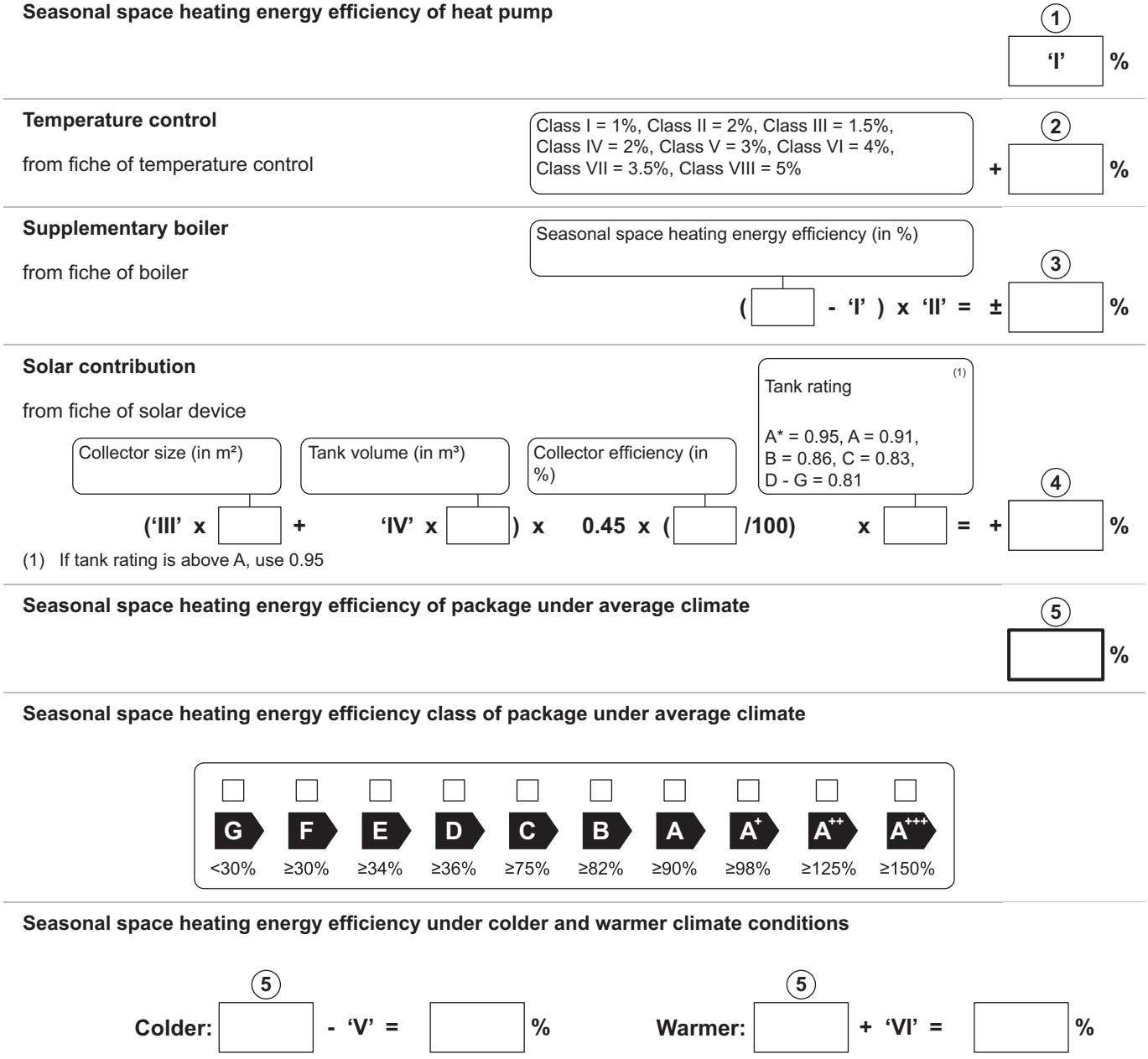
Tab.36 Product fiche for the temperature controller

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

10.3 Package fiche

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



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.37 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.38 Package efficiency (temperature regulator + heat pump)

		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
DIEMATIC Evolution	%	136	140	131	127	123

For more information, see
Compatible heating devices, page 10

10.4 Package fiche - Combination heaters (boilers or heat pumps)

Fig.14 Package fiche for combination heaters (boilers or heat pumps) indicating the water heating energy efficiency of the package

Water heating energy efficiency of combination heater

(1) ‘I’ %

Declared load profile: ☐

Solar contribution

from fiche of solar device

Auxiliary electricity

(2) **(1.1 x ‘I’ - 10%) x ‘II’ - ‘III’ - ‘I’ = +** ☐ %

Water heating energy efficiency of package under average climate

(3) ☐ %

Water heating energy efficiency class of package under average climate

	G	F	E	D	C	B	A	A+	A++	A+++
☐ M	<27%	≥27%	≥30%	≥33%	≥36%	≥39%	≥65%	≥100%	≥130%	≥163%
☐ L	<27%	≥27%	≥30%	≥34%	≥37%	≥50%	≥75%	≥115%	≥150%	≥188%
☐ XL	<27%	≥27%	≥30%	≥35%	≥38%	≥55%	≥80%	≥123%	≥160%	≥200%
☐ XXL	<28%	≥28%	≥32%	≥36%	≥40%	≥60%	≥85%	≥131%	≥170%	≥213%

Water heating energy efficiency under colder and warmer climate conditions

Colder: (3) ☐ **- 0.2 x** (2) ☐ **=** ☐ **%**

Warmer: (3) ☐ **+ 0.4 x** (2) ☐ **=** ☐ **%**

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-3000747-01

I The value of the water heating energy efficiency of the combination heater, expressed in %.

II The value of the mathematical expression $(220 \cdot Q_{ref})/Q_{nonsol}$, where Q_{ref} is taken from Regulation EU 811/2013, Annex VII Table 15 and Q_{nonsol} from the product fiche of the solar device for the declared load profile M, L, XL or XXL of the combination heater.

III The value of the mathematical expression $(Q_{aux} \cdot 2{,}5)/(220 \cdot Q_{ref})$, expressed in %, where Q_{aux} is taken from the product fiche of the solar device and Q_{ref} from Regulation EU 811/2013, Annex VII Table 15 for the declared load profile M, L, XL or XXL.

11 Appendix

11.1 Name and symbol of the zones

Tab.39 Name and symbol of the zones

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

11.2 Name and temperature of the activities

Tab.40 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.41 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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