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EASYLIFE

ALEZIO S V200



User Guide

Reversible air/water "Split Inverter" heat pump

ALEZIO S V200

MIV-4S/E 4-8 V200
MIV-4S/E 11-16 V200
MIV-4S/H 4-8 V200
MIV-4S/H 11-16 V200

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 . . . 6
1.3 Electrical safety . . . 6
1.4 Refrigerant safety . . . 7
1.5 Domestic water safety . . . 7
1.6 Hydraulic safety . . . 8
1.7 Recommendations for operation . . . 8
1.8 Specific instructions for service, maintenance and breakdowns . . . 8
1.9 Liabilities . . . 9

2 Symbols used . . . 10
2.1 Symbols used in the manual . . . 10
2.2 Symbols used on the appliance . . . 10

3 Technical specifications . . . 12
3.1 Homologations . . . 12
3.1.1 Directives . . . 12
3.2 Technical data . . . 12
3.2.1 Heat pump . . . 12
3.2.2 Domestic hot water tank . . . 14
3.2.3 Heat pump weight . . . 14
3.2.4 Combination heaters with medium-temperature heat pump . . . 15
3.2.5 Circulating pump . . . 17

4 Description of the product . . . 18
4.1 Main components . . . 18
4.2 Operating principle . . . 18
4.3 Control panel description . . . 18
4.3.1 Description of the keys . . . 18
4.3.2 Description of the display . . . 19

5 Operation . . . 22
5.1 Use of the control panel . . . 22
5.1.1 Browsing in the menus . . . 22
5.2 Start-up . . . 22
5.3 Shutdown . . . 23
5.3.1 Switching off the heating . . . 23
5.3.2 Stopping domestic hot water production . . . 24
5.3.3 Shutting down the cooling function . . . 24
5.4 Frost Protection . . . 25

6 Settings . . . 26
6.1 Modifying the User parameters . . . 26
6.2 User menu . . . 26
6.2.1 User \CIRCA and CIRCB menu . . . 26
6.2.2 User \DHW menu . . . 28
6.2.3 User \EHC–04 menu . . . 28
6.2.4 User \HMI menu . . . 29
6.2.5 HP parameters in the User menu . . . 29
6.3 COUNTERS /TIME PROG / CLOCK menus . . . 30
6.3.1 COUNTERS, TIME PROG, CLOCK \CNT menus . . . 30
6.3.2 COUNTERS, TIME PROG, CLOCK \CIRCA, CIRCB and DHW menus . . . 31
6.3.3 COUNTERS, TIME PROG, CLOCK \CLK menus . . . 31
6.4 Setting the parameters . . . 32
6.4.1 Setting the room temperature set point in comfort mode . . . 32
6.4.2 Setting the domestic hot water temperature . . . 32
6.4.3 Activating Forcing of the cooling function . . . 32
6.4.4 Activating Manual Forcing for heating . . . 33
6.4.5 Setting the timer programming . . . 34

7 Reading out measured values ⓘ 36
7.1 Control system sequence 37

8 Maintenance 43
8.1 General 43
8.2 Check the hydraulic pressure 43
8.3 Cleaning the casing 43
8.4 Standard inspection and maintenance operations 43

9 Troubleshooting 44
9.1 Error messages 44
9.1.1 Error codes 44
9.1.2 Fault codes 45
9.1.3 Alarm codes 45
9.2 Accessing the error memory ⚠ 46
9.3 Fault finding 47

10 Decommissioning and disposal 48
10.1 Decommissioning procedure 48
10.2 Disposal and recycling 48

11 Environmental 49
11.1 Energy savings 49

12 Warranty 50
12.1 General 50
12.2 Terms of warranty 50

13 Appendix 51
13.1 Product fiche 51
13.2 Product fiche - Temperature Controls 52
13.3 Package fiche 52
13.4 Package fiche - Combination heaters (boilers or heat pumps) 55

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	The appliance is intended to be permanently connected to the domestic water mains network. 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 permanent pipes 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 chapter Recommended cable cross-sections. See the Installation and Service Manual. To connect the appliance to the electricity mains, refer to the chapter Electrical Connections. 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.

Domestic water	Draining the appliance: 1. Shut off the domestic cold water inlet. 2. Open a hot water tap in the installation. 3. Open a valve on the safety unit. 4. To drain, open the tap at the base of the tank. The pressure limiter device (safety valve or safety unit) must be regularly operated in order to remove limescale deposits and ensure that it is not blocked. A pressure limiter device must be fitted to a discharge pipe. As water may flow out of the discharge pipe, the pipe must be kept open to the open air, in a frost-free environment, and at a continuous downward gradient. To ascertain the type or specifications of the pressure limiter and to find out how to connect it, refer to the chapter Connecting the domestic hot water tank to the drinking water mains. See the Installation and Service Manual.
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 circuit 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.

France: Pursuant to Article L. 113-3 of the French Consumer Code, the installation of equipment must be done by a certified operator whenever the refrigerant load is in excess of two kilograms 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 welders.

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) is mounted on the tank's domestic cold water inlet.

A pressure reducer (not provided) is required when the supply pressure exceeds 80% of the safety valve or safety unit calibration and must be located upstream of the appliance.

There must be no cut-off devices between the safety valve or 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 module and the heating circuit.

Fit drainage valves between the indoor module 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

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

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

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

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.

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 mains electricity to the heat pump, the indoor unit and the hydraulic or electrical back-up if present.

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.

The user must make sure the refrigerant pipes are checked annually for leaks for any heat pump with a charge greater than 5 tonnes of CO_2 equivalent.

1.9 Liabilities

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, you 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. • 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

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

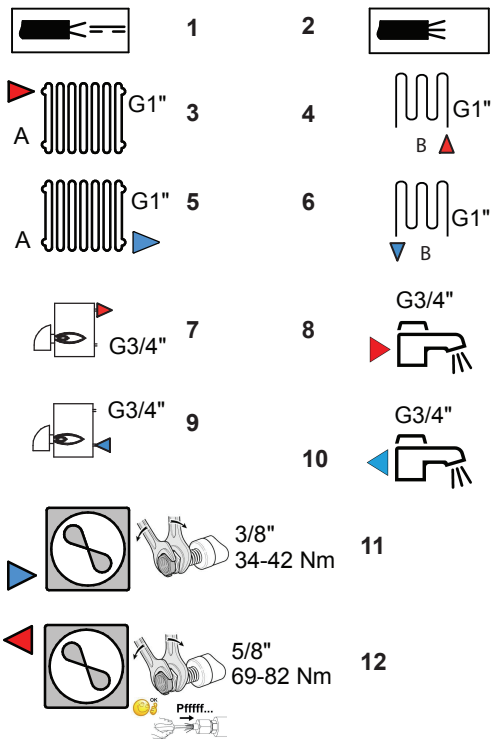
Fig.1 Symbols used on the appliance



MW-6000066-3

1 Alternating current
2 Protective earthing

Fig.2 Symbols used on the connection label



MW-3000554-02

1 Sensor cable - low voltage
2 Power supply cable 230 V / 400 V
3 Heating circuit flow
4 Circuit B flow
5 Heating circuit return
6 Circuit B return (optional)
7 Return from boiler back-up
8 Domestic hot water outlet
9 Flow to boiler back-up
10 Domestic cold water inlet
11 3/8" refrigerant fluid connection – liquid line
12 5/8" refrigerant fluid connection – gas line

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 60335-2-21, EN 60335-2-40
- Electromagnetic Compatibility Directive 2014/30/EU
  Generic standards: EN 61000-6-3, EN 61000-6-1
  Relevant Standard: EN 55014

This product conforms to 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.

3.2 Technical data

3.2.1 Heat pump

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

Maximum operating pressure: 0.3 MPa (3 bar)

Tab.1 Conditions of use

	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
Limit water operating temperatures 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 operating temperature limits 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 operating temperature limits 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 operating temperature limits in cooling mode	+7 °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
Heat output	kW	4.60	5.82	7.9	11.39	11.39	14.65	14.65
Coefficient of Performance (COP)		5.11	4.22	4.34	4.65	4.65	4.22	4.22

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
Absorbed electrical power	kWe	0.90	1.38	1.82	2.45	2.45	3.47	3.47
Nominal water flow rate (ΔT = 5K)	m^3/h	0.80	1.00	1.36	1.96	1.96	2.53	2.53

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
Heat output	kW	3.47	3.74	6.80	10.19	10.19	12.90	12.90
Coefficient of Performance **(COP)**		3.97	3.37	3.30	3.20	3.20	3.27	3.27
Absorbed electrical power	kWe	0.88	1.11	2.06	3.19	3.19	3.94	3.94

Tab.4 Cooling mode: outside air temperature +35 °C, water temperature at the outlet +18 °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
Cooling output	kW	3.80	4.69	7.90	11.16	11.16	14.46	14.46
Energy efficiency ratio (EER)		4.28	4.09	3.99	4.75	4.75	3.96	3.96
Absorbed electrical power	kWe	0.89	1.15	2.00	2.35	2.35	3.65	3.65

Tab.5 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
Total dynamic head at nominal flow rate	kPa	65	63	44	25	25	—	—
Nominal air flow rate	m^3/h	2680	2700	3300	6000	6000	6000	6000
Power voltage of the outdoor unit	V	230	230	230	230	400	230	400
Start-up amperage	A	5	5	5	5	3	6	3
Maximal amperage	A	12	13	17	29.5	13	29.5	13
Acoustic power - Inner side(1)	dB(A)	49	49	49	48	48	48	48
Acoustic power - Outside	dB(A)	61	65	67	69	69	70	70
Refrigerant fluid R410A	kg	1.3	1.4	3.2	4.6	4.6	4.6	4.6
R410A refrigerant(2)	tCO_2e	2.714	2.923	6.680	9.603	9.603	9.603	9.603
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
Max. pre-charged length	m	7	10	10	10	10	10	10

(1) Noise radiated by the enclosure - Test run in accordance with the NF EN 12102 standard, temperature conditions: air 7 °C, water 55 °C (except for AWHP 4.5 MR: air 7 °C, water 45 °C inner and outer sides)

(2) The quantity of refrigerant in tonnes of CO_2 equivalent is calculated using the following formula: quantity (in kg) of refrigerant x GWP/1000. The Global-Warming Potential (GWP) of R410A gas is 2088.

3.2.2 Domestic hot water tank

Tab.6 Technical specifications primary circuit (heating water)

Specification	Unit	Value
Maximum operating temperature Version with hydraulic back-up	°C	90
Maximum operating temperature Version with electrical back-up	°C	75
Minimum operating temperature	°C	7
Maximum operating pressure	MPa (bar)	0.3 (3.0)
Domestic hot water tank exchanger capacity	Litres	11.3
Exchange surface	m²	1.7

Tab.7 Technical specifications secondary circuit (domestic water)

Specification	Unit	Value
Maximum operating temperature	°C	80
Minimum operating temperature	°C	10
Maximum operating pressure	MPa (bar)	1.0 (10.0)
Water capacity	Litres	177

Tab.8 Common specifications (in accordance with the EN 16147 standard). Water set point temperature: 53 °C (except for AWHP 4.5 MR: 54 °C) – Outdoor temperature: 7°C – Inside air temperature: 20°C

	AWHP 4.5 MR (cycle M)	AWHP 6 MR-3 (cycle L)	AWHP 8 MR-2 (cycle L)	AWHP 11 MR-2 AWHP 11 TR-2 (cycle L)	AWHP 16 MR-2 AWHP 16 TR-2 (cycle L)
Charging time	1 hour 40 minutes	2 hours	1 hour 58 minutes	1 hour 33 minutes	1 hour 11 minutes
Coefficient of performance domestic hot water (COP_{DHW})	2.50	2.72	2.72	2.72	2.72

3.2.3 Heat pump weight

Tab.9 Indoor module

Indoor module	Unit	MIV-4S/E 4-8 V200	MIV-4S/H 4-8 V200	MIV-4S/E 11-16 V200	MIV-4S/H 11-16 V200
Weight (empty)	kg	138	137	140	139
Total weight with water	kg	333	332	335	334

Tab.10 Outdoor unit

Outdoor unit	Unit	AWHP 4.5 MR	AWHP 6 MR-3	AWHP 8 MR-2	AWHP 11 MR-2 AWHP 16 MR-2	AWHP 11 TR-2 AWHP 16 TR-2
Weight (empty)	kg	54	42	75	118	130

3.2.4 Combination heaters with medium-temperature heat pump

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

Product name			**MIV-4S V200 AWHP 4.5 MR**	**MIV-4S V200 AWHP 6 MR-3**	**MIV-4S V200 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			Yes	Yes	Yes
Rated heat output under average conditions(1)	*Prated*	kW	4	4	6
Rated heat output under colder conditions	*Prated*	kW	5	4	6
Rated heat output under warmer conditions	*Prated*	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	*Pdh*	kW	3.8	3.5	5.6
T_j = +2 °C	*Pdh*	kW	4.3	4.5	2.9
T_j = +7 °C	*Pdh*	kW	4.5	4.8	6.4
T_j = +12 °C	*Pdh*	kW	5.5	5.2	4.3
T_j = bivalent temperature	*Pdh*	kW	3.9	3.6	5.2
T_j = operation limit temperature	*Pdh*	kW	3.9	3.6	5.2
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	%	134	137	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	*COPd*	-	1.64	1.89	1.95
T_j = +2 °C	*COPd*	-	3.46	3.53	3.22
T_j = +7 °C	*COPd*	-	4.96	4.74	4.57
T_j = +12 °C	*COPd*	-	7.90	7.08	6.55
T_j = bivalent temperature	*COPd*	-	1.20	1.52	1.70
T_j = operation limit temperature	*COPd*	-	1.20	1.52	1.70
Operation limit temperature for air-to-water heat pumps	*TOL*	°C	-10	-10	-10
Heating water operating limit temperature	*WTOL*	°C	55	60	60
Electrical power consumption					
Off mode	P_{OFF}	kW	0.009	0.009	0.009
Thermostat-off mode	P_{TO}	kW	0.049	0.049	0.049
Stand-by	P_{SB}	kW	0.009	0.015	0.014
Crankcase heater mode	P_{CK}	kW	0.000	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					

Product name			MIV-4S V200 AWHP 4.5 MR	MIV-4S V200 AWHP 6 MR-3	MIV-4S V200 AWHP 8 MR-2
Capacity control			Variable	Variable	Variable
Sound power level, indoors - outdoors	L_{WA}	dB	49 – 61	49–65	49 – 67
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
Declared load profile			L	L	L
Daily electricity consumption	Q_{elec}	kWh	4.020	4.285	4.285
Annual electricity consumption	*AEC*	kWh	845	899	899
Water heating energy efficiency	η_{wh}	%	121.00	114.00	114.00
Daily fuel consumption	Q_{fuel}	kWh	0.000	0.000	0.000
Annual fuel consumption	*AFC*	GJ	0	0	0

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

Product name			MIV-4S V200 AWHP 11 MR-2 AWHP 11 TR-2	MIV-4S V200 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			Yes	Yes
Rated heat output under average conditions(1)	*Prated*	kW	6	9
Rated heat output under colder conditions	*Prated*	kW	4	7
Rated heat output under warmer conditions	*Prated*	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	*Pdh*	kW	5.9	9.0
T_j = +2°C	*Pdh*	kW	5.3	6.5
T_j = +7 °C	*Pdh*	kW	9.0	12.9
T_j = +12 °C	*Pdh*	kW	7.7	10.0
T_j = bivalent temperature	*Pdh*	kW	6.3	8.8
T_j = operation limit temperature	*Pdh*	kW	6.3	8.8
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	%	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				

Product name			MIV-4S V200 AWHP 11 MR-2 AWHP 11 TR-2	MIV-4S V200 AWHP 16 MR-2 AWHP 16 TR-2
T_j = -7 °C	*COPd*	-	1.87	1.85
T_j = +2 °C	*COPd*	-	3.17	3.02
T_j = +7 °C	*COPd*	-	4.54	4.34
T_j = +12 °C	*COPd*	-	6.19	5.75
T_j = bivalent temperature	*COPd*	-	1.20	1.35
T_j = operation limit temperature	*COPd*	-	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	0.023	0.035
Stand-by	P_{SB}	kW	0.023	0.023
Crankcase heater mode	P_{CK}	kW	0.055	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
Sound power level, indoors - outdoors	L_{WA}	dB	48–69	48 – 70
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
Declared load profile			L	L
Daily electricity consumption	Q_{elec}	kWh	4.285	4.285
Annual electricity consumption	*AEC*	kWh	899	899
Water heating energy efficiency	η_{wh}	%	114.00	114.00
Daily fuel consumption	Q_{fuel}	kWh	0.000	0.000
Annual fuel consumption	*AFC*	GJ	0	0

(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.

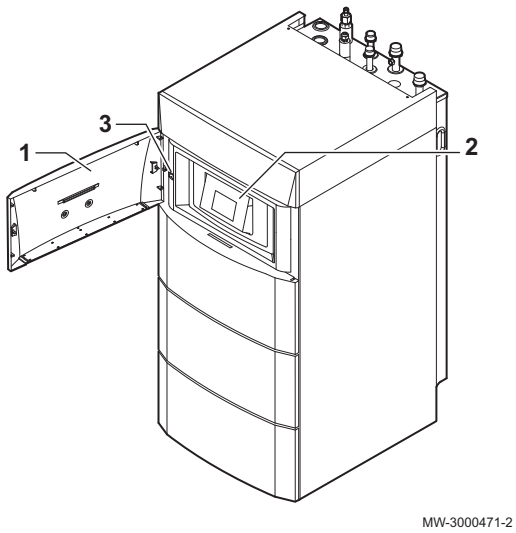
3.2.5 Circulating pump

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

4 Description of the product

4.1 Main components

Fig.3 Main components



1 Control panel access flap
2 User interface
3 ON/OFF button

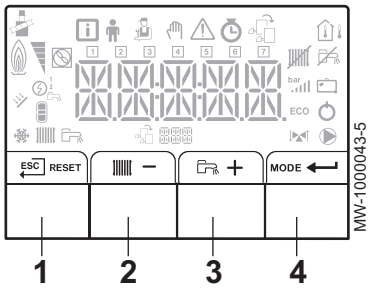
4.2 Operating principle

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.

4.3 Control panel description

Fig.4



4.3.1 Description of the keys

1 ESC: back to the previous level without saving the modifications made

RESET: manual reset

2 : accessing the heating parameters

— : lowering the value

3 : accessing the domestic hot water parameters

+ : raising the value

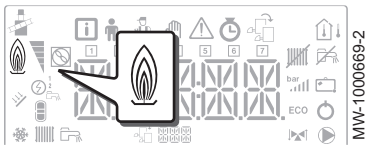
4 **MODE**: MODE display

: accessing the menu selected or confirming the value modification

4.3.2 Description of the display

■ **Hydraulic back-up**

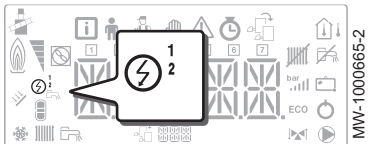
Fig.5



Hydraulic back-up in demand

■ **Electrical back-up**

Fig.6



Stage 1 of the electrical back-up
Stage 2 of the electrical back-up

■ **Status of the Compressor**

Fig.7



Steady symbol: compressing running

■ **Operating modes**

Fig.8

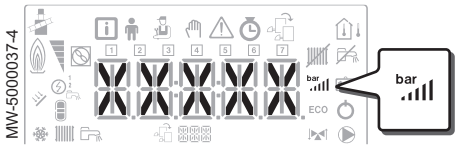


Steady symbol: heating function enabled
Flashing symbol: heating production running
Steady symbol: domestic hot water function enabled
Flashing symbol: domestic hot water production running
Heating or cooling function disabled
Domestic hot water function disabled

■ **Hydraulic pressure in the system**

The display alternates between the hydraulic pressure for the system and the measured flow temperature.

Fig.9



bar Steady symbol: displayed when indicating the system's hydraulic pressure value
bar Flashing symbol: pressure in the system too low
XXX Pressure value in the system (in bar) or flow temperature (in °C)

■ **Cooling mode**

Fig.10



Steady symbol: cooling mode on
Flashing symbol: cooling request pending

Menu display

Fig.11



Information menu: displays the measured values and the statuses of the appliance

User menu: provides access to the User level setting parameters

Installer menu: provides access to the Installer level setting parameters

Manual Forcing menu: the appliance runs at the set point displayed, the pumps operate and the three-way valves are not controlled.

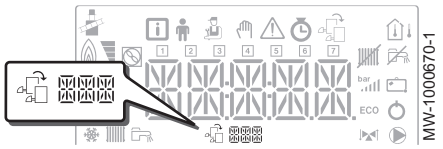
Malfunction menu: the appliance has malfunctioned. This information is signalled by an error code and a flashing display.

- Sub-Menu **COUNTERS**
- **TIME PROG** sub-menu: Timer programming dedicated to heating and domestic hot water production
- Sub-Menu **CLOCK**

PCB selection menu: access to information on the additional PCBs connected

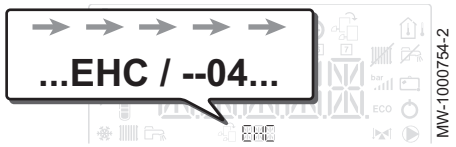
Display of PCB names

Fig.12



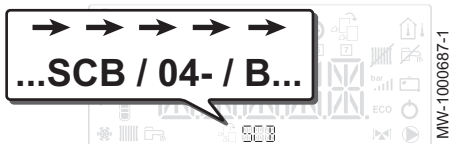
The name of the PCB for which the parameters are displayed is scrolling across the screen on 3 characters.

Fig.13



Central unit PCB **EHC-04**: direct circuit and domestic hot water

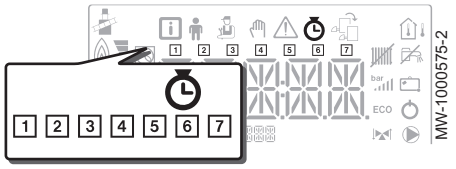
Fig.14



Additional PCB **SCB-04** : 2nd circuit

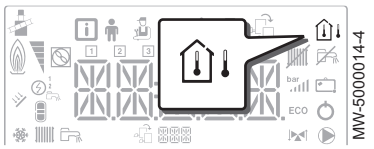
COUNTERS / TIME PROG / Sub-Menus CLOCK

Fig.15



- **COUNTERS** sub-menu **(CNT)**
- **TIME PROG** sub-menu: Timer programming dedicated to heating and domestic hot water production **(CIRC A, CIRC B, ECS)**
  - 1 **Timer program for Monday**
  - 2 **Timer program for Tuesday**
  - 3 **Timer program for Wednesday**
  - 4 **Timer program for Thursday**
  - 5 **Timer program for Friday**
  - 6 **Timer program for Saturday**
  - 7 **Timer program for Sunday**
- **CLOCK** sub-menu **(CLK)**

Fig.16



Temperature sensors

Room temperature sensor connected:

- fixed symbol for WINTER mode,
- flashing symbol for SUMMER mode.

Outside temperature sensor connected:

- fixed symbol for WINTER mode,
- flashing symbol for SUMMER mode.

Other Information

Fig.17



Test Menu: forced operation in heating and cooling mode
Three-way valve connected
Three-way valve closed
Three-way valve open
Pump running

5 Operation

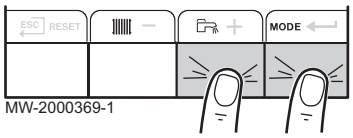
5.1 Use of the control panel

5.1.1 Browsing in the menus

Press any key to turn on the backlight for the control panel screen.

If no key is pressed within 3 minutes, the control panel backlight will go out.

Fig.18



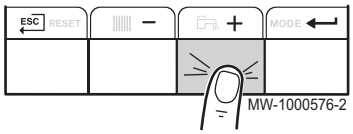
Press the 2 right-hand keys together to access the different menus:

Tab.13 Menus available

	Information menu
	User menu
	Installer menu
	Manual Forcing menu
	Malfunction menu
	COUNTERS sub-menu **TIME PROG** sub-menu **CLOCK** sub-menu
	PCB selection menu **Important** The icon is displayed only if an optional PCB has been installed.

Important
The different menus are only accessible when the icons flash.

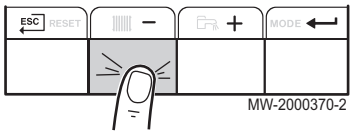
Fig.19



Press the + key to:

- access the next menu,
- access the next sub-menu,
- access the next parameter,
- increase the value.

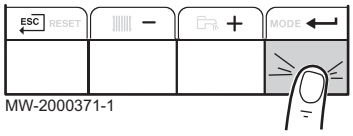
Fig.20



Press the − key to:

- access the previous menu,
- access the previous sub-menu,
- access the previous parameter
- decrease the value.

Fig.21



Press the confirmation key ⟵ to confirm:

- a menu,
- a sub-menu,
- a parameter,
- a value.

When the temperature is displayed, briefly pressing the back key ESC will return to the time display.

5.2 Start-up

1. Switch on the outdoor unit and the indoor module.
2. The heat pump begins its start-up cycle.
   ⇨ If the start-up cycle runs normally, an automatic venting cycle is initiated. Otherwise, an error message is displayed.

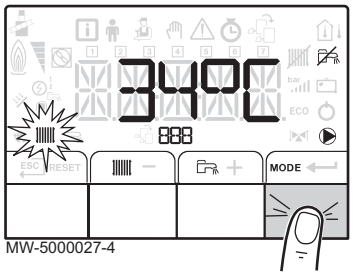
5.3 Shutdown

5.3.1 Switching off the heating

Important
Heating mode can be managed via the **TIME PROG** sub-menu dedicated to timer programming.

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

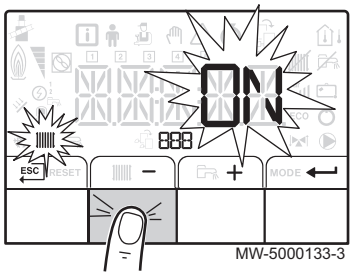
Fig.22



MW-5000027-4

1. Go to stop mode by pressing the **MODE** key.

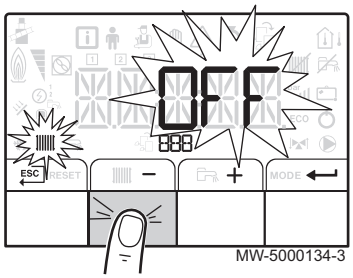
Fig.23



MW-5000133-3

2. Select the heating mode by pressing the − key.
3. Confirm by pressing the ↵ key.

Fig.24



MW-5000134-3

4. Select the heating shut-down pressing the − key.
   ⇨ The screen displays: OFF.
   - The frost protection function continues to run.
   - The heating and cooling have been shut down.

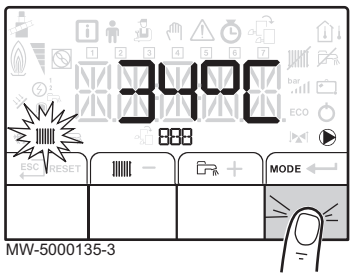
   Important
   Press the + key to restart the appliance: the screen will display ON.
5. Confirm by pressing the ↵ key.
6. Go back to the main display by pressing the ESC key.

Important
The display disappears after a few seconds of inactivity.

5.3.2 Stopping domestic hot water production

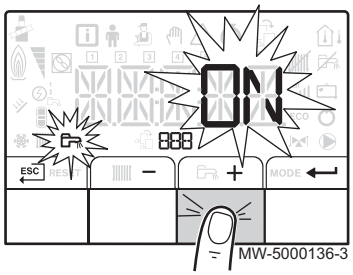
Important
Domestic hot water production can be managed via the TIME PROG sub-menu dedicated to timer programming.

Fig.25



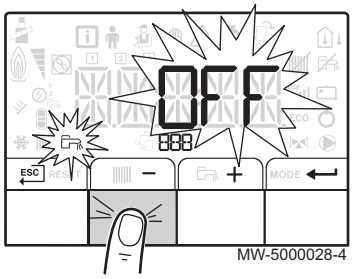
1. Go to stop mode by pressing the **MODE** key.

Fig.26



2. Select domestic hot water production mode pressing the + key.
3. Confirm by pressing the ↵ key.

Fig.27



4. Select domestic hot water production shut-down by pressing the − key.
   ⇨ The screen displays: OFF.
   - The frost protection function continues to run.
   - Production of domestic hot water has been shut down.

   Important
   Press the + key to restart the appliance: the screen will display ON.
5. Confirm by pressing the ↵ key.
6. Go back to the main display by pressing the ESC key.

Important
The display disappears after a few seconds of inactivity.

5.3.3 Shutting down the cooling function

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

1. Access the ⏱ menu.
2. Confirm access by pressing the ↵ key.
3. Select **CIRCA** or **CIRCB** by pressing the + or − key.
4. Confirm the selection by pressing the ↵ key.
5. Select **TP.C** by pressing the + or − keys.
6. Confirm the selection by pressing the ↵ key.
7. Modify the timer program to stop cooling.

For more information, see
Switching off the heating, page 23

5.4 Frost Protection

If the temperature of the heating water in the heat pump falls too much, the integrated protection device switches itself on. This device functions as follows:

- If the water temperature is lower than 5°C, the circulating pump starts up.
- If the water temperature is lower than 3°C, the back-up starts up.
- If the water temperature is higher than 10°C, the back-up shuts down and the circulating pump continues to run for a short time.

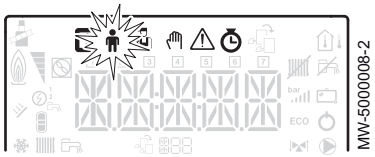
The radiator valves in rooms where there is a risk of frost must be fully open.

6 Settings

6.1 Modifying the User parameters

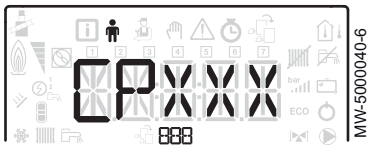
Caution
Altering the factory settings may impair operation of the appliance.

Fig.28



1. Go to the **User** menu.
2. Select the desired sub-menu by pressing the + or − key.
3. Confirm the selection by pressing the ⟵ key.

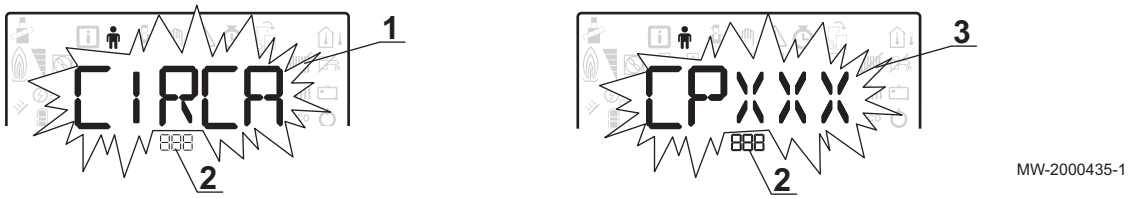
Fig.29



4. Select the required parameter by pressing the + or − keys to scroll through the list of adjustable parameters.
5. Confirm the selection by pressing the ⟵ key.
6. Modify the value of the parameter using the + or − keys.
7. Confirm the new value of the parameter by pressing the ⟵ key.
8. Go back to the main display by pressing the ESC key.

6.2 User menu

Fig.30



1 Sub-menu available
2 Name of the PCB or circuit
3 Setting parameters

Tab.14 List of User sub-menus

Sub-menu	Description	Name of the PCB or circuit
CIRCA	Main heating circuit	EHC--04
CIRCB	Additional heating circuit B	SCB04-B
ECS	Domestic hot water circuit	EHC--04
EHC-04	Central unit PCB **EHC-04**	EHC--04
SCB-04	Additional PCB for circuit B	SCB04-B
HMI	**HMI** control panel	HMI

6.2.1 User\CIRCA and CIRCB menu

CP : Circuits Parameters = Heating circuit parameters

Tab.15

Parameter	Description	Factory setting CIRCA	Factory setting CIRCB
CP010	Zone flow temperature setpoint, used when the zone is set to a fixed flow setpoint.	not available	50
CP080	Room setpoint temperature of the user zone activity Can be set from 5 °C to 30 °C	16	16

Parameter	Description	Factory setting CIRCA	Factory setting CIRCB
CP081	Room setpoint temperature of the user zone activity in activity zone 2 Can be set from 5 °C to 30 °C	20	20
CP082	Room setpoint temperature of the user zone activity in activity zone 3 Can be set from 5 °C to 30 °C	6	6
CP083	Room setpoint temperature of the user zone activity in activity zone 4 Can be set from 5 °C to 30 °C	21	21
CP084	Room setpoint temperature of the user zone activity in activity zone 5 Can be set from 5 °C to 30 °C	22	22
CP085	Room setpoint temperature of the user zone activity in activity zone 6 Can be set from 5 °C to 30 °C	23	20
CP140	Setpoint of the room cooling temperature of the zone: cooling activity zone 1 Can be set from 20 °C to 30 °C	30	30
CP141	Setpoint of the room cooling temperature of the zone: cooling activity zone 2 Can be set from 20 °C to 30 °C	25	25
CP142	Setpoint of the room cooling temperature of the zone: cooling activity zone 3 Can be set from 20 °C to 30 °C	25	25
CP143	Setpoint of the room cooling temperature of the zone: cooling activity zone 4 Can be set from 20 °C to 30 °C	25	25
CP144	Setpoint of the room cooling temperature of the zone: cooling activity zone 5 Can be set from 20 °C to 30 °C	25	25
CP145	Setpoint of the room cooling temperature of the zone: cooling activity zone 6 Can be set from 20 °C to 30 °C	25	25
CP200	Manually setting the room temperature setpoint of the zone Can be set from 5 °C to 30 °C	20	20
CP320	Operating mode of the zone • **0** = timer programming • **1** = manual mode • **2** = frost protection mode	0	0
CP350	Comfort Domestic Hot Water Temperature Setpoint of zone Can be set from 40 °C to 80 °C	not available	55
CP360	Reduced Domestic Hot Water Temperature Setpoint of zone Can be set from 10 °C to 60 °C	not available	10
CP510	Temporary room setpoint per zone Can be set from 5 °C to 30 °C	20	20
CP540	Setpoint of swimming pool when Zone is configured on Swimming Pool Can be set from 0 °C to 39 °C	not available	20
CP550	Fire Place mode is active • **0** = off • **1** = on	0	0

Parameter	Description	Factory setting CIRCA	Factory setting CIRCB
CP570	Time Program of the zone selected by the user • **0** = programme 1 • **1** = programme 2 • **2** = programme 3	0	0
CP660	Choice icon to display this zone • **0** =None • **1** =All • **2** =Bedroom • **3** =Livingroom • **4** =Study • **5** =Outdoor • **6** =Kitchen • **7** =Basement • **8** =Swimming Pool	0	3

6.2.2 User \DHW menu

DP : Direct Hot Water Parameters = Domestic hot water tank parameters

Tab.16

Parameter	Description	Factory setting
DP060	Time program selected for DHW. • **0** =Schedule 1 • **1** =Schedule 2 • **2** =Schedule 3 • **3** =Cooling	0
DP070	Comfort temperature setpoint from the Domestic Hot Water tank Can be set from 40 °C to 65 °C	54
DP080	Reduced temperature setpoint from the Domestic Hot Water tank Can be set from 10 °C to 60 °C	10
DP200	DHW primary mode current working setting • **0** =Scheduling • **1** =Manual • **2** =Antifrost • **3** =Temporary	1
DP337	Holiday temperature setpoint from the Domestic Hot Water tank Can be set from 10 °C to 60 °C	10 °C

6.2.3 User \EHC–04 menu

AP : Appliance Parameters = Appliance parameters

Tab.17

Parameter	Description	Factory setting
AP015	Force manually the heat pump in cooling mode • **0** =No • **1** =Yes	0
AP016	Enable central heating heat demand processing • **0**= off (no heating or cooling) • **1** = on	1
AP017	Enable domestic hot water heat demand processing • **0** = off • **1** = on	1

Parameter	Description	Factory setting
AP073	Outdoor temperature: upper limit for heating SUMMER / WINTER set point switch: • Can be set from 15 °C to 30.5 °C	22
AP074	The heating is stopped. Hot water is maintained. Force Summer Mode SUMMER override: • **0** = off • **1** = on	0
AP082	Automatic change between summer and winter time • **0** = Off • **1** = On	0

HP : Heat-pump Parameters = Heat pump parameters

Tab.18

Parameter	Description	Factory setting
HP062	Energy cost in Hybrid electricity cost in high tarif Can be set from 0.01 to 2.50 €/kWh	0.13 €/kWh
HP063	Energy cost in Hybrid electricity cost in low tarif Can be set from 0.01 to 2.50 €/kWh	0.09 €/kWh
HP064	Cost of fossil energy (oil or gas) - price per litre or per m3 Cost of fossil energy (oil or gas) - price per litre or per m^3 Can be set from 0.01 to 2.50 €/kWh	0.90 €/kWh

6.2.4 User \HMI menu

Tab.19 AP : Appliance Parameters = Appliance parameters

Parameter	Description	Factory setting
AP067	**BKL** backlighting • **0** = off after 3 minutes of inactivity on the control panel • **1** = on	0
AP103	Setting the **LANGUAGE**: • **0** = no language • **FR** = French • **NL** = Dutch • **EN** = English • **DE** = German • **ES** = Spanish • **IT** = Italian • **PL** = Polish • **PT** = Portuguese	FR
AP104	Setting the **CONTRAST**: Can be set from 0 to 3	3
AP105	Selecting the **UNIT**: • **0** = °C • **1** = °F	0
AP082	Changing the **DLS** summer/winter timer: • **0** = off • **1** = on	0

6.2.5 HP parameters in the User menu

HP : Heat-pump Parameters = Heat pump parameters

Tab.20

Parameter	Description	Factory setting EHC--04
HP062	Hybrid electricity cost in high tarif Can be set from 0.01 to 2.50 €/kWh	0.13 €/kWh
HP063	Hybrid electricity cost in low tarif Can be set from 0.01 to 2.50 €/kWh	0.09 €/kWh
HP064	Cost of fossil energy (oil or gas) - price per litre or per m3 Cost of fossil energy (oil or gas) - price per litre or per m^3 Can be set from 0.01 to 2.50 €/kWh	0.90 €/kWh

6.3 COUNTERS /TIME PROG / CLOCK menus

Tab.21 List of sub-menus

Sub-menu	Description
CNT	**COUNTERS**
CIRCA	Timer programming for the main heating circuit
CIRCB	Timer programming for the additional heating circuit B
DHW	Timer programming for the domestic hot water circuit
CLK	Setting the clock and the date

6.3.1 COUNTERS, TIME PROG, CLOCK \CNT menus

Tab.22 Choosing the menu

Counters	Selection
Circuit A counters	Choose the **EHC-04** menu
Circuit B counters	Choose the **SCB04-B** menu
Counters connected to the operation of the heat pump	Choose the **EHC-04** menu

Tab.23 Available counters

Parameter	Description	Unit	EHC-04	SCB04-B
AC001	Number of hours that the appliance has been on mains power	hours	X	X
AC005	Energy consumed for central heating	kWh	X	
AC006	Enegy consumed for domestic hot water	Wh	X	
AC007	Energy consumed for cooling	Wh	X	
AC008	Energy delivered for central heating	kWh	X	
AC009	Energy delivered for domestic hot water	kWh	X	
AC010	Energy delivered for cooling	kWh	X	
AC013	Seasonal COP		X	
AC026	Counter that shows the number of pump running hours	hours	X	
AC027	Counter that shows the number of pump starts	-	X	
AC028	Total working time of the first stage of backup	hours	X	
AC029	Total working time of the second stage of backup	hours	X	
AC030	Total startings of the first stage of backup	-	X	
AC031	Total startings of the second stage of backup	-	X	
DC002	Numbers of Domestic Hot Water diverting valve cycles	-	X	

Parameter	Description	Unit	EHC-04	SCB04-B
DC003	Number of hours during which the diverting valve is in DHW position	hours	X	
DC004	Number of compressor start-ups during domestic hot water production		X	
DC005	Number of compressor start-ups		X	
PC003	Number of compressor operating hours	hours	X	
CODE	Enter the installer code to access the following parameters.		X	
AC002	Number of hours that the appliance has been producing energy since last service	hours	X	
AC003	Number of hours since the previous servicing of the appliance	hours	X	
AC004	Number of generator startings since the previous servicing.		X	
AC013	Seasonal coefficient of performance		X	
SERVICE	Resetting the maintenance service CLR: the **AC002**, **AC003**, and **AC004** counters are reset to zero.		X	

6.3.2 COUNTERS, TIME PROG, CLOCK ⏲\CIRCA, CIRCB and DHW menus

Tab.24

Menu	Description
CIRCA	• **TP.H**: Timer programming for heating 06:00 - 23:00 ON 23:00 - 06:00 OFF • **TP.C**: Timer programming for cooling 14:00 - 23:00 ON 23:00 - 14:00 OFF
CIRCB	Timer programming for heating 06:00 - 23:00 ON 23:00 - 06:00 OFF
DHW	Timer programming for domestic hot water 06:00 - 23:00 ON 23:00 - 06:00 OFF

6.3.3 COUNTERS, TIME PROG, CLOCK ⏲\CLK menus

Tab.25

CLK parameter	Unit	HMI
HOURS	Can be set from 0 to 23	available
MINUTE	Can be set from 0 to 59	available
DATE	Can be set from 1 to 31	available
MONTH	Can be set from 1 to 12	available
YEAR	Can be set from 2000 to 2100	available

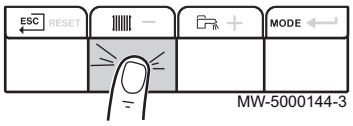
6.4 Setting the parameters

6.4.1 Setting the room temperature set point in comfort mode

Important
The room temperature set point can be managed via the TIME PROG sub-menu dedicated to timer programming.

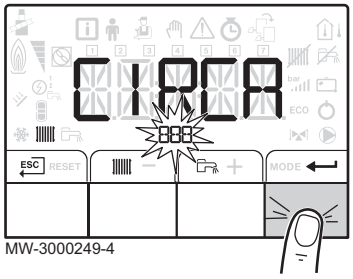
Important
- To set the room set point temperature in reduced mode, it is necessary to set the **CP080** parameter available in the **User** menu.
- When the setting is made in a reduced mode range, this setting shortcut is used only to set the set point temperature in comfort mode corresponding to the **CP081**.

Fig.31



1. Access the heating parameters by pressing the ||||| key twice.
2. Display the parameters for the required circuit by pressing the + or − key.

Fig.32



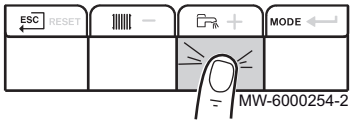
3. Confirm by pressing the ⟵ key.
   ⇨ The name of the circuit and the heating water temperature set point are displayed alternately.
4. Access setting of the heating water temperature set point by pressing the ⟵ key.
5. Set the heating water temperature set point by pressing the + or − key.
6. Confirm the new temperature set point by pressing the ⟵ key.

Important
Press the ESC key to cancel all inputs.

6.4.2 Setting the domestic hot water temperature

Important
Domestic hot water production can be managed via the **TIME PROG** sub-menu dedicated to timer programming.

Fig.33



1. Access the domestic hot water production parameters by pressing the key.
2. Modify the domestic hot water temperature set point by pressing the + or − key.

Important
Press the ESC key to cancel all input.

3. Confirm the new temperature set point by pressing the ⟵ key.
   ⇨ Go back to the main display by pressing the ESC key.

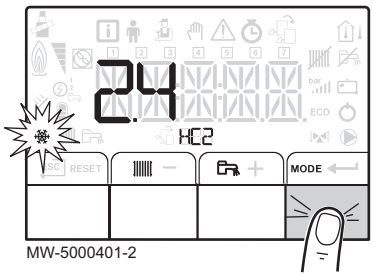
6.4.3 Activating Forcing of the cooling function

The cooling function can be managed via the **PROG COOL** sub-menu dedicated to timer programming.

The set point flow temperature for cooling mode corresponds to the **CP270** parameter for underfloor heating and **CP280** for a convection fan. The **CP270** and **CP280** parameters can be accessed by the **Installer**.

Important
The heat pump switches to cooling automatically when the outdoor temperature is +2 °C greater than the summer/winter switching set point temperature (22 °C). The forced cooling function is used to have cooling regardless of the outdoor temperature.

Fig.34

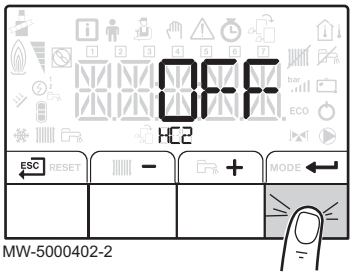


MW-5000401-2

1. Access Forcing of the cooling function by pressing the **MODE** key.

Important
Forcing of the cooling function is possible only if the Installer enabled the cooling function during Installation.

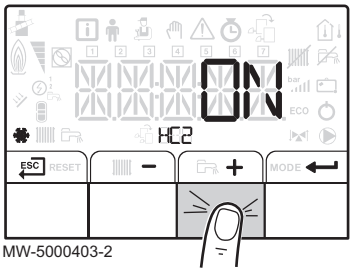
Fig.35



MW-5000402-2

2. Access Forcing of the cooling function by pressing the ↵ key.

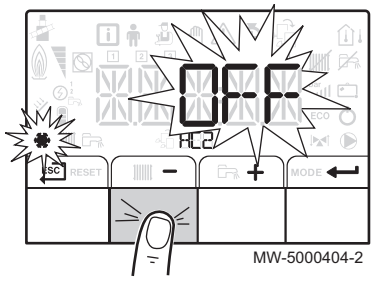
Fig.36



MW-5000403-2

3. Activate Forcing of the cooling function by pressing the + key.

Fig.37



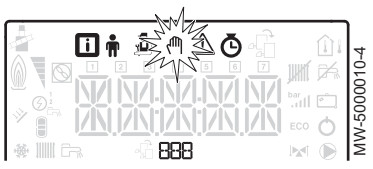
MW-5000404-2

4. Confirm Forcing of the cooling function by pressing the − key.
5. Go back to the main display by pressing the ESC key.

6.4.4 Activating Manual Forcing for heating

The **Manual Forcing** menu is only used with the heating mode.

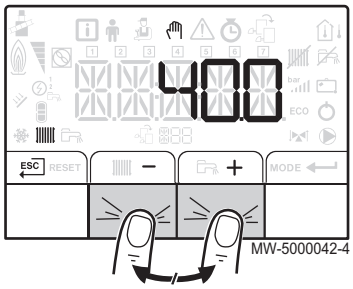
Fig.38



MW-5000010-4

1. Access the **Manual Forcing** menu.

Fig.39

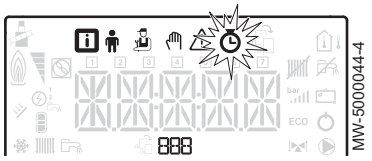


2. Set the value of the heating water temperature set point by pressing the + or − key.
3. Confirm the new value of the heating water temperature set point by pressing the ↵ key.
4. Go back to the main display by pressing the ESC key.

Important
To force domestic hot water production, select the **DP200** parameter available in the **User** menu.

6.4.5 Setting the timer programming

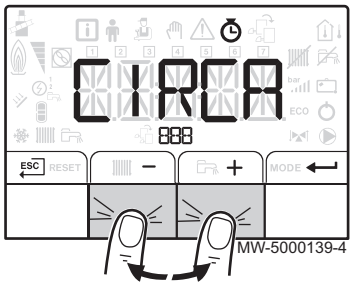
Fig.40



1. Access the **COUNTERS**/ **TIME PROG** / **CLOCK** menus.

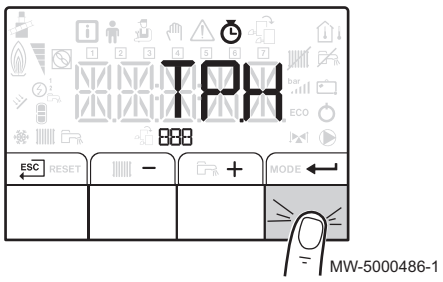
Important
When using a programmable room thermostat, this menu is not displayed.

Fig.41



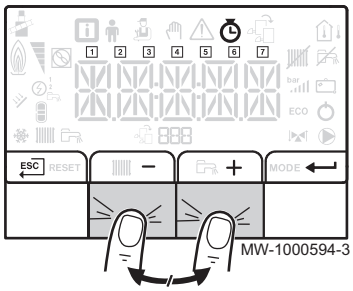
2. Select the desired circuit by pressing the + or − key.

Fig.42



3. Confirm the selection by pressing the ↵ key. Select the timer programming for the heating TP.H or the timer programming for the cooling TP.C by pressing the + or − key.
4. Confirm the selection by pressing the ↵ key.
   ⇨ The icons dedicated to the days of the week all flash at the same time: 1 2 3 4 5 6 7.

Fig.43



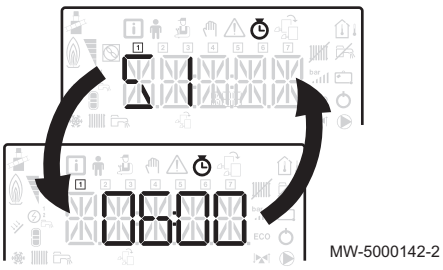
5. Select the desired day number by pressing the + or − key until the icon dedicated to the desired day flashes.

Day selected	Description
1, 2, 3, 4, 5, 6, 7	every day of the week
1	Monday
2	Tuesday
3	Wednesday
4	Thursday
5	Friday
6	Saturday
7	Sunday

Important
The + key is used to move to the right.
The − key is used to move to the left.

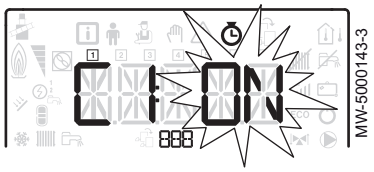
6. Confirm the selection by pressing the ↵ key.

Fig.44



7. Set the start time for the period S 1 by pressing the + or − key.
8. Confirm the selection by pressing the ⟵ key.

Fig.45



9. Select the status C 1 that corresponds to the period S 1 by pressing the + or − key.

Status C 1 to C6 for periods S 1 to S6	Description
ON	comfort mode
ECO	reduced mode

10. Confirm the selection by pressing the ⟵ key.
11. Repeat steps 8 to 11 to define the comfort periods S 1 to S 6 and the associated status C 1 to C 6.

Important
No setting: 10 minutes
The setting END determines the end.

12. Go back to the main display by pressing the ESC key.

Example:

Times	S 1	C 1	S2	C2	S3	C3	S4	C4	S5	C5	S6	C6
06:00-22:00	06:00	ON	22:00	ECO	END							
06:00-08:00 11:30-13:30	06:00	ON	08:00	ECO	11:30	ON	13:30	ECO	END			
06:00-08:00 11:30-14:00 17:30-22:00	06:00	ON	08:00	ECO	11:30	ON	14:00	ECO	17:30	ON	22:00	ECO

7 Reading out measured values

The measured values are available in the **Information** menu of the different PCBs.

Certain parameters are displayed:

- according to certain system configurations,
- according to the options, circuits or sensors actually connected.

Tab.26 Choosing the menu

Counters	Selection
Measured values on circuit A	Choose menu **EHC-04**
Measured values on circuit B	Choose menu **SCB04-B**
Measured values connected to the operation of the heat pump	Choose menu **EHC-04**

Tab.27 Values available (X) in the sub-menus **EHC-04**, **SCB04-B**

Parameter	Description	Unit	EHC-04	SCB04-B
AM002	"Silent mode" status		X	
AM010	The current pump speed	%	X	
AM012	Current main status of the appliance. **See** Control system sequence chapter		X	X
AM014	Current sub status of the appliance. **See** Control system sequence chapter		X	X
AM015	Is the pump running?		X	
AM016	Flow temperature of appliance.	°C	X	
AM019	Water pressure of the primary circuit.	bar	X	
AM027	Instantaneous outside temperature	°C	X	X
AM040	Temperature used for hot water control algorithms.	°C	X	
AM056	Wate flow rate in the system	l/min	X	
AM091	Seasonal mode active (summer / winter) • 0: Winter • 1: Frost protection • 2: Summer neutral band • 3: Summer		X	X
AM101	Internal system flow temperature setpoint		X	
CM030	Measure of the room temperature of the zone	°C	X	X
CM040	Measure Zone Flow Temperature or DHW temperature	°C		X
CM060	Current Pump speed of zone	%		X
CM120	Zone Current Mode: • 0 = Scheduling • 1 = Manual • 2 =Antifrost • 3 =Temporary		X	X
CM130	Current activity of the zone: • 0 = Anti frost • 1 =Reduced • 2 =Comfort • 3 =Anti legionella		X	X
CM190	Wished room temperature setpoint of the zone	°C	X	X
CM210	Current outdoor temperature of the zone	°C	X	X

Parameter	Description	Unit	EHC-04	SCB04-B
DM001	Domestic Hot Water tank temperature (bottom sensor)	°C	X	
DM006	Domestic Hot Water tank temperature (top sensor)		X	
DM009	Automatic/derogation status of Domestic Hot Water mode: • 0 =Scheduling • 1 = Manual • 2 =Antifrost • 3 =Temporary	°C	X	
DM029	Domestic Hot Water temperature setpoint	°C	X	
HM001	Heat pump flow temperature after condenser	°C	X	
HM002	Heat pump return temperature after condenser.	°C	X	
HM033	Flow temperature setpoint in cooling mode	°C	X	
HM046	Heat pump 5V signal output setpoint	V	X	
PM002	External winning Central Heating setpoint	°C	X	
Fxx.xx	Software version for the selected PCB		X	X
Pxx.xx	Parameter version for the selected PCB		X	X

Tab.28 Values available (X) in the HMI sub-menu

Parameter	Description	EHC--04	SCB04-B
Fxx.xx	**HMI** software version	X	X
Pxx.xx	**HMI** parameter version	X	X

7.1 Control system sequence

Tab.29 List of statuses and sub-statuses

Status Appliance: AM012 parameter	Appliance sub status: AM014 parameter
0	• **00**= total system shut-down
1= heating / cooling / domestic hot water demand	Heat Demand • **00** = off The set point is reached. The compressor can start up whenever necessary. • **01**= anti-short cycle The heating set point has been reached. The compressor is not authorised to restart. • **02**= reversal valve switch to heating position • **03**= power supply to the hybrid pump • **04**= pending start-up conditions on the heat pump and the back-ups • **62**= three-way valve switch to domestic hot water position

Status Appliance: AM012 parameter	Appliance sub status: AM014 parameter
3= operating in heating mode	• **30**= normal operation The compressor or the back-ups are running. • **31**= internal set point limited If the heating set point on the heat pump differs from the system set point. • **60**= pump post-operation Heat pump and back-up shut-down, system pump operation. • **65**= compressor bypass The back-ups are operating. • **66**= the temperature exceeds the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **67**= the outside temperature is lower than the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **68**= the hybrid function requests compressor shut-down The compressor has stopped. The back-ups are operating. • **69**= defrosting running The compressor is running. • **70**= defrosting conditions not met The compressor has stopped. The back-ups are operating. • **71**= defrosting running The compressor and the back-ups are running. • **88** = BL-Back-up limited Back-ups shed • **89** = BL-Heat pump limited Compressor shed • **90** = BL-Heat pump & back-up limited Compressor and back-ups shed • **91** = BL-Off-peak rate Off-peak cost • **92** = PV-with Heat pump Photovoltaic powered by compressor only • **93** = PV-with Heat pump & back-up Photovoltaic powered by compressor and back-ups • **94** = BL-Smart Grid Smart Grid Ready function

Status Appliance: AM012 parameter	Appliance sub status: AM014 parameter
4= operating in domestic hot water mode	• **30**= normal operation The compressor or the back-ups are running. • **31**= internal set point limited If the heating set point on the heat pump differs from the system set point. • **60**= pump post-operation Heat pump and back-up shut-down, system pump operation. • **65**= compressor bypass The back-ups are operating. • **66**= the temperature exceeds the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **67**= the outside temperature is lower than the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **68**= the hybrid function requests compressor shut-down The compressor has stopped. The back-ups are operating. • **69**= defrosting running The compressor is running. • **70**= defrosting conditions not met The compressor has stopped. The back-ups are operating. • **71**= defrosting running The compressor and the back-ups are running. • **88** = BL-Back-up limited Back-ups shed • **89** = BL-Heat pump limited Compressor shed • **90** = BL-Heat pump & back-up limited Compressor and back-ups shed • **91** = BL-Off-peak rate Off-peak cost • **92** = PV-with Heat pump Photovoltaic powered by compressor only • **93** = PV-with Heat pump & back-up Photovoltaic powered by compressor and back-ups • **94** = BL-Smart Grid Smart Grid Ready function
6	Pump Post Run • **60**= pump post-operation Heat pump and back-up shut-down, system pump post-operation.
7	Cooling Active • **30**= normal operation Cooling is active. • **75**= compressor shut-down owing to the condensation detector • **78**= correction of the temperature set point Increase in the cooling set point owing to the condensation detector. • **82**= temperature lower than the minimum cooling temperature Compressor shut-down.

Status Appliance: AM012 parameter	Appliance sub status: AM014 parameter
8= controlled compressor shut-down	Controlled Stop • 00= off: the heating or cooling set point has been reached • 01= anti-short cycle The heating set point has been reached. The compressor is not authorised to restart. • 60= pump post-operation Heat pump and back-up shut-down, system pump post-operation. • 67= the outside temperature is lower than the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • 68= the hybrid function requests compressor shut-down The compressor has stopped. The back-ups are operating. • 75= compressor shut-down owing to the condensation detector • 76= compressor shut-down owing to the flow rate • 79= compressor and back-up bypass in heating / domestic hot water mode • 80= compressor and back-up bypass in cooling mode • 82= temperature lower than the minimum cooling temperature Compressor shut-down.
9	Blocking Mode • 30= normal operation. The compressor or the back-ups are running. • 31= internal set point limited If the heating set point on the heat pump differs from the system set point. • 60= pump post-operation Heat pump and back-up shut-down, system pump running. • 65= compressor bypass The back-ups are operating. • 66= the temperature exceeds the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • 67= the outside temperature is lower than the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • 68= the hybrid function requests compressor shut-down The compressor has stopped. The back-ups are operating. • 69= defrosting running The compressor is running. • 70= defrosting conditions not met The compressor has stopped. The back-ups are operating. • 71= defrosting running. The compressor and the back-ups are running. • 88 = BL-Back-up limited Back-ups shed • 89 = BL-Heat pump limited Compressor shed • 90 = BL-Heat pump & back-up limited Compressor and back-ups shed • 91 = BL-Off-peak rate Off-peak cost • 92 = PV-with Heat pump Photovoltaic powered by compressor only • 93 = PV-with Heat pump & back-up Photovoltaic powered by compressor and back-ups • 94 = BL-Smart Grid Smart Grid Ready function
10	Locking Mode
11	Load test min

Status Appliance: AM012 parameter	Appliance sub status: AM014 parameter
12	Load test CH max • **30**= normal operation. The compressor or the back-ups are running. • **31**= internal set point limited If the heating set point on the heat pump differs from the system set point. • **60**= pump post-operation Heat pump and back-up shut-down, system pump post-operation. • **65**= compressor bypass and back-ups running • **66**= the temperature exceeds the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **67**= the outside temperature is lower than the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **68**= the hybrid function requests compressor shut-down The compressor has stopped. The back-ups are operating. • **69**= defrosting running The compressor is running. • **70**= defrosting conditions not provided The compressor has stopped. The back-ups are operating. • **71**= defrosting running. The compressor and the back-ups are running.

Status Appliance: AM012 parameter	Appliance sub status: AM014 parameter
16	Frost protection • **30**= normal operation The compressor or the back-ups are running. • **31**= internal set point limited If the heating set point on the heat pump differs from the system set point. • **60**= pump post-operation Heat pump and back-up shut-down, system pump post-operation. • **65**= compressor bypass and back-ups running • **66**= the temperature exceeds the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **67**= the outside temperature is lower than the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **68**= the hybrid function requests compressor shut-down The compressor has stopped. The back-ups are operating. • **69**= defrosting running The compressor is running. • **70**= defrosting conditions not met The compressor has stopped. The back-ups are operating. • **71**= defrosting running. The compressor and the back-ups are running.
17	DeAiration • **30**= normal operation The compressor or the back-ups are running. • **31**= internal set point limited If the heating set point on the heat pump differs from the system set point. • **60**= pump post-operation Heat pump and back-up shut-down. • **65**= compressor bypass and back-ups running • **66**= the temperature exceeds the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **67**= the outside temperature is lower than the compressor's maximum operating temperature The compressor has stopped. The back-ups are operating. • **68**= the hybrid function requests compressor shut-down The compressor has stopped. The back-ups are operating. • **69**= defrosting running The compressor is running. • **70**= defrosting conditions not met The compressor has stopped. The back-ups are operating. • **71**= defrosting running. The compressor and the back-ups are running.

8 Maintenance

8.1 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.

8.2 Check the hydraulic pressure

1. Checking the hydraulic pressure in the installation.
2. If the hydraulic pressure is less than 0.08 MPa (0.8 bar), top up the level of water in the heating installation so that the hydraulic pressure is between 0.15 and 0.2 MPa (1.5 and 2.0 bar).
3. Carry out a visual check for any water leaks.

8.3 Cleaning the casing

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

8.4 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.

9 Troubleshooting

9.1 Error messages

Fig.46

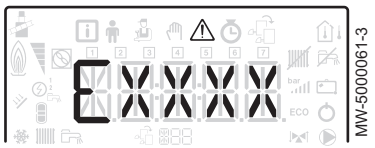
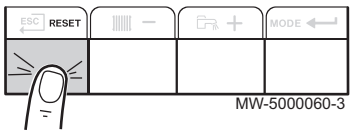


Fig.47



Resetting the control panel allows the appliance to be restarted.

The message **RESET** appears when a fault code is detected. After resolving the problem, pressing the **RESET** key resets the appliance's functions and thus eradicates the fault.

If several faults occur, they are displayed one after the other.

1. Reset the control panel by pressing the **RESET** key for 3 seconds, when an error message is displayed.
   ⇨ In economy mode, the appliance will not run a domestic hot water heating cycle after a central heating cycle.
2. Display the current operating status by briefly pressing the ↵ key.

9.1.1 Error codes

An error code is a temporary status, resulting from the detection of a heat pump anomaly. The control panel attempts automatic restart of the heat pump until it switches on.

When one of the following codes is displayed and the heat pump cannot restart automatically, contact a maintenance technician.

Tab.30 List of temporary error codes

Error 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
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
H00.51	**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
H02.00	**Reset In Progress**	Reset In Progress
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 • 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

Error code	Message	Description
H02.23	**System flow error**	System water flow error active Flow problem Insufficient flow: open a radiator valve. The circuit is clogged: • Check that the filters are not obstructed and clean them if necessary. • Clean and flush the installation, No circulation: • 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 occured Heat pump outdoor unit fault

9.1.2 Fault codes

If a fault code is still present after several automatic start-up attempts, the heat pump switches to error mode.

The heat pump will only resume normal operation once the causes of the fault have been eliminated by the installer.

When one of the following codes is displayed and the heat pump cannot restart automatically, contact a maintenance technician.

Tab.31 List of fault codes

Error code	Message	Description
E00.00	TFlow Open	Flow temperature sensor is either removed or measures a temperature below range
E00.01	Flow temp sensor shorted or above range	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 active	System water flow locking active Insufficient flow: open a radiator valve The circuit is clogged: • Check that the filters are not obstructed and clean them if necessary. • Clean and flush the installation. No circulation: • 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.

9.1.3 Alarm codes

An alarm code is a temporary heat pump status, resulting from the detection of an anomaly. If an alarm code still remains after several automatic start-up attempts, the system goes into fault mode.

When one of the following codes is displayed and the hybrid system cannot restart automatically, contact a maintenance technician.

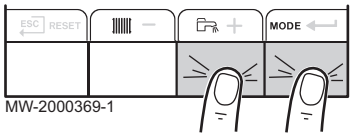
Tab.32 List of alarm codes

Error code	Message	Description
A02.06	Water Press Warning	Water Pressure Warning active
A02.18	OBD Error	Object Dictionary Error
A02.22	System flow warning	System water flow warning active
A02.55	Inval or miss SerNR	Invalid or missing device serial number

9.2 Accessing the error memory ⚠

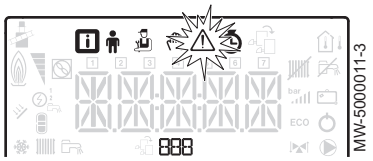
The error and fault codes are listed together in the memory.

Fig.48



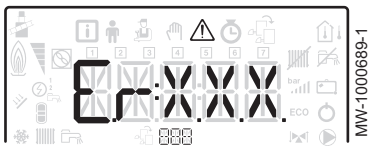
1. Access the menus by pressing the two keys on the right simultaneously.

Fig.49



2. Select the Malfunction menu ⚠ by pressing the ⟵ key.

Fig.50



3. Select the PCB by pressing the + or − key. The icon appears. Confirm the PCB selection by pressing the ⟵ key: the PCB name appears.

Important
The **Er:xxx** parameter flashes. **000** corresponds to the number of stored errors.

4. Go to the error details by pressing the ⟵ key.
5. Scroll through the errors by pressing the + or − key. When this menu opens, the row of the error in the memory appears briefly. The PCB name appears. Go back to the error list by pressing the ESC key.

Important
The errors are stored from the most recent to the oldest.

Fig.51



6. Go back to the **Er:xxx** display by pressing the ESC key. Press the + key: the **CLR** parameter flashes after the errors. **000** corresponds to the PCB selected.
   ⇨ Clear the error memory by pressing the ⟵ key.
7. Exit the Malfunctions menu by pressing the ESC key.

9.3 Fault finding

Problems	Probable causes	Corrections
The radiators are cold.	The heating set point temperature is too low.	Increase the value of the room temperature set point or, if a room thermostat 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.
There is no domestic hot water.	The domestic hot water set point temperature is too low.	Increase the domestic hot water set point 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 set point 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 set point temperature is too low.	Increase the value of the room temperature set point or, if a room thermostat 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 set point is too low	Increase the set point
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.

10 Decommissioning and disposal

10.1 Decommissioning procedure

To decommission the heat pump temporarily or permanently:

1. Contact the installer.

10.2 Disposal and recycling

Fig.52



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.

11 Environmental

11.1 Energy savings

Energy-saving advice:

- Do not block ventilation outlets.
- Do not cover the radiators. Do not hang 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.

12 Warranty

12.1 General

We would like to thank you for buying one of our appliances and for your trust in our product.

In order to ensure continued safe and efficient operation, we recommend that the product is regularly inspected and maintained.

Your installer and our service department can assist with this.

12.2 Terms of warranty

The following provisions do not affect the application, in favour of the buyer, of the legal provisions with regard to hidden defects that are applicable in the buyer's country.

The following provisions do not affect the application, in favour of the buyer, of the legal warranty in accordance with articles 1641 to 1648 of the civil code.

This appliance comes with a warranty that covers all manufacturing faults; the warranty period will commence on the date of purchase stated on the installer's invoice.

The duration of our warranty is shown on the certificate delivered with the appliance.

The warranty period is stated in our price list.

As a manufacturer, we can by no means be held liable if the appliance is used incorrectly, is poorly maintained or not maintained at all, or is not installed correctly (it is your responsibility to ensure that installation is carried out by a qualified installer).

In particular, we cannot be held liable for material damage, intangible losses or physical injury resulting from an installation that does not comply with:

- Legal or regulatory requirements or provisions laid down by the local authorities.
- National or local regulations and special provisions relating to the installation.
- Our manuals and installation instructions, in particular in terms of regular maintenance of the appliances.
- The rules of good workmanship.

Our warranty is limited to the replacement or repair of the parts found to be defective by our technical services team, excluding labour, transfer and transport costs.

Our warranty does not cover replacement or repair costs for parts that may become defective due to normal wear, incorrect usage, the intervention of unqualified third parties, inadequate or insufficient supervision or maintenance, a mains supply that is not appropriate or the use of unsuitable or poor quality fuel.

Smaller parts, such as motors, pumps, electrical valves etc., are guaranteed only if these parts have never been dismantled.

The rights established in European Directive 99/44/EEC, implemented by legal decree No. 24 of 2 February 2002 and published in Official Journal No. 57 of 8 March 2002, remain in force.

The foregoing provisions in no way affect the rights of the consumer, which are guaranteed by the legislation of the Russian Federation as regards hidden defects.

The terms and conditions of warranty and the terms and conditions of application of the warranty are indicated on the warranty form.

The warranty shall not apply as regards the replacement or repair of wearing parts under normal use. Such parts include thermocouples, injection nozzles, flame control and ignition systems, fuses and gaskets.

13 Appendix

13.1 Product fiche

Tab.33 Product data sheet for heat pump combination heaters

		MIV-4S V200 AWHP 4.5 MR	MIV-4S V200 AWHP 6 MR-3	MIV-4S V200 AWHP 8 MR-2
Space heating - Temperature application		Medium	Medium	Medium
Water heating - Declared load profile		L	L	L
Seasonal space heating energy efficiency class under average climate conditions		A++	A++	A++
Water 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
Space heating - Annual energy consumption under average climate conditions	kWh GJ(1)	2353	2124	3499
Water heating - Annual energy consumption under average climate conditions	kWh GJ(1)	845	899	899
Seasonal space heating energy efficiency under average climate conditions	%	134	137	129
Water heating energy efficiency under average climate conditions	%	121.00	114.00	114.00
Sound power level L_{WA} indoors(2)	dB	49	49	49
Ability to off-peak hours functioning(2)		No	No	No
Rated heat output, under **colder - warmer** climate conditions	kW	5 – 4	4 – 5	6 – 6
Space heating - Annual energy consumption, under **colder - warmer** climate conditions	kWh GJ(1)	4483 – 1249	3721 – 1492	4621 – 1904
Water heating - Annual energy consumption, under **colder - warmer** climate conditions	kWh(3) GJ(4)	1432 – 664	1432 – 664	1432 – 664
Seasonal space heating energy efficiency, under **colder - warmer** climate conditions	%	109 – 179	116 – 172	119 – 169
Water heating energy efficiency, under **colder - warmer** climate conditions	%	72.00 – 154.00	72.00 – 154.00	72.00 – 154.00
Sound power level L_{WA} outdoors	dB	61	65	67

(1) For gas heat pumps only
(2) If applicable.
(3) Electricity
(4) Fuel

Tab.34 Product fiche for heat pump combination heaters

		MIV-4S V200 AWHP 11 MR-2 AWHP 11 TR-2	MIV-4S V200 AWHP 16 MR-2 AWHP 16 TR-2
Space heating - Temperature application		Medium	Medium
Water heating - Declared load profile		L	L
Seasonal space heating energy efficiency class under average climate conditions		A++	A+
Water heating energy efficiency class under average climate conditions		A	A
Rated heat output under average climate conditions *(Prated or Psup)*	kW	6	9
Space heating - Annual energy consumption under average climate conditions	kWh GJ(1)	3999	5861
Water heating - Annual energy consumption under average climate conditions	kWh GJ(1)	899	899

		MIV-4S V200 AWHP 11 MR-2 AWHP 11 TR-2	MIV-4S V200 AWHP 16 MR-2 AWHP 16 TR-2
Seasonal space heating energy efficiency under average climate conditions	%	125	121
Water heating energy efficiency under average climate conditions	%	114.00	114.00
Sound power level L_{WA} indoors(2)	dB	48	48
Ability to function during off-peak hours (2)		No	No
Rated heat output, under **colder - warmer** climate conditions	kW	4 – 8	7 – 13
Space heating - Annual energy consumption, under **colder - warmer** climate conditions	kWh GJ(1)	3804 – 2580	5684 – 4120
Water heating - Annual energy consumption, under **colder - warmer** climate conditions	kWh(3) GJ(4)	1432 – 664	1432 – 664
Seasonal space heating energy efficiency, under **colder - warmer** climate conditions	%	113 – 167	113 – 161
Water heating energy efficiency, under **colder - warmer** climate conditions	%	72.00 – 154.00	72.00 – 154.00
Sound power level L_{WA} outdoors	dB	69	70

(1) For gas heat pumps only
(2) If applicable.
(3) Electricity
(4) Fuel

See
For specific precautions on assembly, installation and maintenance: see the chapter on Safety Instructions.

13.2 Product fiche - Temperature Controls

Tab.35 Product fiche for the Temperature controls

		IniControl 2
Class		II
Contribution to space heating energy efficiency	%	2

13.3 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.53 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 %)

( ) - ‘I’) x ‘II’ = ± (3) %

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

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

(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

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

Colder: (5) - ‘V’ = %

Warmer: (5) + ‘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.36 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.37 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
IniControl 2	%	136	139	131	127	123

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

Fig.54 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

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

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.

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