

KALI KO

Thermodynamic water heater

TWH 200E

TWH 300E

TWH 300EH



C003182-B



User Guide

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1 Safety instructions and recommendations


1.1 Safety instructions




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.

1.1.1. Installation




- ▶ Allow the space necessary for the correct installation of the appliance:
 - ▶  See chapter Positioning of the appliance (Installation and Service Manual).

1.1.2. Hydraulic connections

- ▶ The appliance is intended to be connected permanently to the mains water supply.
- ▶ Maximum / minimum water pressure at the inlet:
 - ▶  See chapter Technical specifications.
- ▶ The pressure limiter device must be started up regularly in order to remove any limescale deposits and check that it is not blocked.
- ▶ Draining: Turn off the domestic cold water inlet. Open a hot water tap in the system and then open the safety unit valve. When the water stops flowing, the appliance has been drained.

- ▶ A pressure reducer (not provided) is necessary when the mains pressure exceeds 80% of the calibration of the safety valve or unit. It will be installed upstream of the appliance.
- ▶ As water may run out of the discharge pipe on the pressure limiter device, the discharge pipe must be kept open to the open air.
- ▶ Connect the pressure limiter device to a drainage pipe, kept in the open air, in a frost-free environment, on a continuous downward slope.

1.1.3. Electrical connections

- ▶ Allowance must be made for a means of disconnection in the fixed pipes in accordance with the regulations on installations.
- ▶ If the mains power lead is damaged it must be replaced by the original manufacturer, the manufacturer's dealer or another competent person to prevent hazardous situations.
- ▶ This appliance must not be powered via an external switch such as a timer or be connected to a circuit that is regularly switched on and off by the electricity supplier.
- ▶ Install the appliance according to national regulations on electrical installation.
- ▶ Wiring diagram:  See chapter Electrical principle diagram (Installation and Service Manual).
- ▶ Connecting the appliance to the mains electricity:  See chapter Electrical connections (Installation and Service Manual).
- ▶ Fuse type and calibre:  See chapter Electrical connections (Installation and Service Manual).

1.1.4. Internet Site



The user guide and the installation manual can also be found on our internet site.

1.1.5. Miscellaneous



DANGER

If smoke is released or in case of refrigerant leak:

1. Do not use a naked flame, do not smoke, do not operate electrical contacts or switches (doorbell, light, motor, lift, etc..).
2. Open the windows.
3. Switch the appliance off.
4. Avoid contact with the refrigerant. Danger of frost injuries.
5. Contact the professional responsible for maintenance of the boiler.



WARNING

Depending on the settings of the appliance:

- ▶ Do not touch the refrigeration connection pipes with your bare hands while the appliance is running. Risk of being burnt.



CAUTION

- ▶ Do not neglect to service the appliance. Contact a qualified professional or take out a maintenance contract for the annual servicing of the appliance.
- ▶ In order to limit the risk of being scalded, the installation of a thermostatic mixing valve on the domestic hot water flow piping is compulsory.

1.2 Recommendations



WARNING

Only certified professionals having received adequate training are permitted to work on the appliance and the installation.



WARNING

Before any work, switch off the mains supply to the appliance.

1.3 Liabilities

1.3.1. Manufacturer's liability

Our products are manufactured in compliance with the requirements of the various applicable European Directives. They are therefore delivered with **CE** marking and all relevant documentation.

In the interest of customers, we are continuously endeavouring to make improvements in product quality. All the specifications stated in this document are therefore subject to change without notice.

Our liability as the manufacturer may not be invoked in the following cases:

- ▶ Failure to abide by the instructions on using the appliance.
- ▶ Faulty or insufficient maintenance of the appliance.
- ▶ Failure to abide by the instructions on installing the appliance.

1.3.2. Installer's liability

The installer is responsible for the installation and commissioning of the appliance. The installer must respect the following instructions:

- ▶ Read and follow the instructions given in the manuals provided with the appliance.
- ▶ Carry out installation in compliance with the prevailing legislation and standards.
- ▶ Perform the initial start up and carry out any checks necessary.
- ▶ Explain the installation to the user.
- ▶ If a maintenance is necessary, warn the user of the obligation to check the appliance and maintain it in good working order.
- ▶ Give all the instruction manuals to the user.

1.3.3. User's liability

To guarantee optimum operation of the appliance, the user must respect the following instructions:

- ▶ Read and follow the instructions given in the manuals provided with the appliance.
- ▶ Call on qualified professionals to carry out installation and initial start up.
- ▶ Get your installer to explain your installation to you.
- ▶ Ensure the Appliance is serviced in accordance with the manufacturer's instructions by a suitable qualified person.
- ▶ Keep the instruction manuals in good condition close to the appliance.

1.4 Safety data sheet: R-134a refrigerant

1.4.1. Product identification

- ▶ Refrigerant name: R-134a

1.4.2. Hazard identification

- ▶ Effects harmful to health:
 - The vapours are heavier than air and may lead to asphyxia owing to reduced oxygen levels.
 - Liquefied gas: Contact with the liquid may cause serious frost and eye injuries.
- ▶ Product classification: This product is not classified as a "hazardous preparation" according to European Union regulations.



CAUTION

If refrigerant is mixed with air, it may lead to pressure surges in the refrigeration pipes and cause an explosion and other hazards.

1.4.3. Composition / Information on the ingredients

- ▶ Chemical nature: 1,1,1,2-Tetrafluoroethane R-134a.

- ▶ Ingredients that may lead to hazardous situations:

Substance name	Concentration	CAS number	CE number	Classification	GWP
1,1,1,2-Tetrafluoroethane R-134a	100 %	811-97-2	212-377-0		1300

1.4.4. First aid

- ▶ **If inhaled:** Evacuate the subject from the contaminated area and take him into the open air.
If feeling unwell: Call a doctor.
- ▶ **In the event of contact with the skin:** Treat frost injuries as burns. Rinse in abundant water, do not remove clothing (risk of adhesion to the skin).
If skin burns appear, call a doctor immediately.
- ▶ **In the event of contact with the eyes:** Rinse immediately in water, holding the eyelids well apart (at least 15 minutes).
Consult an ophthalmologist immediately.

1.4.5. Fire prevention measures

- ▶ Appropriate extinguishing agents: All extinguishing agents can be used.
- ▶ Inappropriate extinguishing agents: None to our knowledge. In the event of fire nearby, use the appropriate extinguishing agents.
- ▶ Specific hazards:
 - Rise in pressure.
In the presence of air, an inflammable mixture may form under certain temperature and pressure conditions
 - Toxic and corrosive vapours may be released by the effect of the heat.
- ▶ Special intervention methods: Cool the volumes exposed to heat with water spray.
- ▶ Protection of the firemen:
 - Full facepiece self-contained breathing apparatus
 - Complete body protection.

1.4.6. In the event of accidental spillage

- ▶ Individual precautions:
 - Avoid contact with the skin and eyes

- Do not intervene without appropriate protective equipment
 - Do not inhale the vapours
 - Evacuate the hazardous area
 - Stop the leakage
 - Eradicate all sources of ignition
 - Ventilate the spillage area mechanically (Risk of asphyxia).
- ▶ Cleaning / Decontamination: Allow residual product to evaporate.

1.4.7. Handling

- ▶ Technical measures: Ventilation.
- ▶ Precautions to be taken:
 - No smoking
 - Prevent the accumulation of electrostatic charges
 - Work in a well ventilated place.

1.4.8. Personal protection

- ▶ Respiratory protection:
 - If insufficient ventilation: AX type cartridge mask
 - In confined spaces: Full facepiece self-contained breathing apparatus.
- ▶ Hand protection: Protective gloves in leather or nitrile rubber.
- ▶ Eye protection: Safety glasses with side protection.
- ▶ Skin protection: Clothing made mostly of cotton.
- ▶ Industrial hygiene: Do not drink, eat or smoke at the place of work.

1.4.9. Considerations on disposal

- ▶ Product waste: Consult the manufacturer or the supplier for information on recovery or recycling.
- ▶ Soiled packaging: Reuse or recycle after decontamination. Destroy in authorised installations.



WARNING

Disposal must be done in compliance with prevailing local and national regulations.

1.4.10. Regulations

- ▶ EC Regulation 842/2006: Fluorinated greenhouse gases under the Kyoto Protocol.

2 About this manual

2.1 Symbols used

In these instructions, various danger levels are employed to draw the user's attention to particular information. In so doing, we wish to safeguard the user's safety, highlight hazards and guarantee correct operation of the appliance.



DANGER

Risk of a dangerous situation causing serious physical injury.



WARNING

Risk of a dangerous situation causing slight physical injury.



CAUTION

Risk of material damage.



Signals important information.



Signals a referral to other instructions or other pages in the instructions.



Before installing and commissioning the device, read carefully the instruction manuals provided.

2.2 Abbreviations

- ▶ **HP:** Heat pump
- ▶ **DHW:** Domestic hot water
- ▶ **LP:** Low pressure
- ▶ **HP:** High pressure
- ▶ **CFC:** Chlorofluorocarbon
- ▶ **Qpr:** Static losses (Thermal losses from the DHW tank when it is off for 24 hours)
- ▶ **COP:** Performance coefficient
- ▶ **HP/HC:** Peak hours / Off-peak hours

3 Technical specifications

3.1 Certifications

3.1.1. Electrical compliance / Marking CE

This product complies to the requirements to the european directives and following standards:

- ▶ 2006/95/EC Low Voltage Directive
Reference Standard: EN 60.335.1.
- ▶ 2004/108/EC Electromagnetic Compatibility Directive
Reference Standard: EN 50.081.1 / EN 50.082.1 / EN 55.014.

3.2 Technical specifications

3.2.1. Characteristics of the appliance

Model		TWH 300 E	TWH 300 EH	TWH 200 E
Capacity	litres	270	260	215
Output (HP) -Air temperature = 15°C	W	1700	1700	1700
Absorbed electrical power (HP)	W	500	500	500
COP ⁽¹⁾		2.94	2.75	2.90
Nominal air flow rate ($\Delta P = 25 \text{ Pa}$) ⁽¹⁾	m ³ /h	320	320	320
Electrical resistor output	W	2400	2400	2400
Operating pressure	bar (MPa)	10 (1,0)	10 (1,0)	10 (1,0)
Power supply voltage	V	230	230	230
Circuit breaker	A	16	16	16
Exchanger surface	m ²	-	1.00	-
Continuous output $\Delta T = 35 \text{ K}$ ⁽²⁾ ⁽³⁾	litres per hour	-	955.6	-
Flow rate over 10 minutes with $\Delta T = 30 \text{ K}$ ⁽²⁾	l/10 mm	-	420	-
Vmax ⁽¹⁾	litres	388	383	281.9
Pes ⁽¹⁾	W	34	36	30
Maximum length of the air connection Diameter 160 mm ⁽⁴⁾	m	26	26	26
R134a refrigerant	kg	1.45	1.45	1.45
Weight (empty)	kg	105	123	92

(1) Value obtained with an air temperature of 7 and a water inlet at 10 °C, as per EN16147 based on Specification LCIE N°103-15/B:2011
(2) Domestic cold water input at 10°C - Primary inlet temperature at 80°C
(3) Output: 34.1 kW
(4) The installation of suction and backflow conduits on the heat pump lessens its performance

4 Technical description

4.1 Operating principle

The thermodynamic DHW tank uses unheated ambient air or outside air to prepare DHW.

The refrigerant circuit is a closed circuit in which the R-134a refrigerant plays the role of an energy carrier.

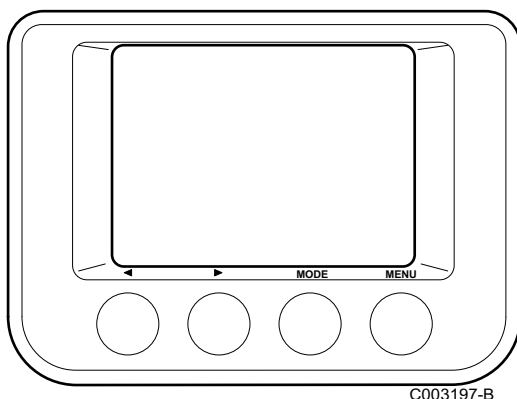
The heat from the intake air is transferred to the refrigerant in the finned heat exchanger at a low evaporation temperature.

The refrigerant is sucked in by a compressor in vapour form, which raises it to a higher pressure and temperature and sends it to the condenser. In the condenser, the heat extracted in the evaporator and some of the energy absorbed by the compressor are released into the water.

The refrigerant is depressurised in the thermostatic expansion valve and is cooled. The refrigerant can again extract the heat contained in the inlet air into the evaporator.

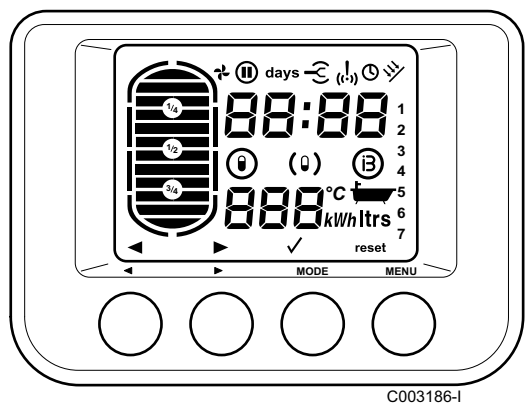
4.2 Control panel

4.2.1. Description of the keys



- ◀ - ▶ Browse keys
- MODE** Operating mode selection key
- MENU** Key to access the various menus





4.2.2. Description of the display



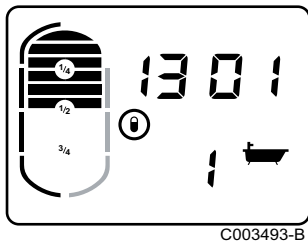
- Quantity of domestic hot water available (depending on the set point input)
- Parameter settings
- Alarm
- Comfort period active or Clock programming
- Display of the date (day:month) or the time (hour:minutes) depending on the selected menu
- Display of the day of the week (1=Monday, 2=Tuesday, etc.)
- Digital display
- Number of baths available (40 °C)
- ltrs** Quantity of water (litres)
- Reduces set values
- Increases set values
- Confirm key
- reset** Reset the control system after a breakdown
- Automatic mode or Comfort mode
- Eco mode
- Boost mode
- days** Holiday mode
- Boost function active via the HP/HC inlet
- Boost function active via the HP/HC inlet
- Boost function active via the HP/HC inlet +

■ DHW production mode indicator

The main display indicates the domestic hot water production mode.

Display	Domestic hot water production	Description
	Heat pump	The 2 segments of the tank flash simultaneously when domestic hot water production is handled by the heat pump
	Electrical back-up	The right-hand segment of the tank flashes when domestic hot water production is handled by electrical back-up
	Hydraulic additional heating	The left-hand segment of the tank flashes when domestic hot water production is handled by hydraulic back-up (Version EH)
	Heat pump + Electrical back-up + Hydraulic additional heating	The 2 segments of the tank flash alternately when domestic hot water production is handled by the heat pump, by electrical back-up and by hydraulic backup (EH version)

■ Indicator of the water volume available

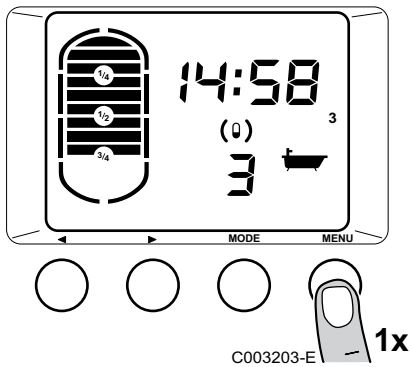


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When producing domestic hot water, the display indicates the number of baths available and the level to which the tank is filled (quantity of hot water available).

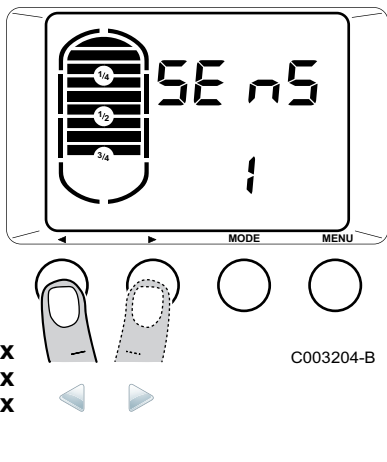
- ▶ The number of baths is calculated based on a domestic hot water temperature of 40°C.
- ▶ The level to which the tank is filled is calculated according to the set point temperature.

4.2.3. Browsing in the menus



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1x



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1x
2x
3x
⋮

1. Press the **MENU** key. The **SE nS 1** menu is displayed (Temperature measurement).

2. Use the ◀ and ▶ keys to scroll through the menus (See table below).
3. To access the selected menu, press the **MODE** key (✓).
4. To go back to the previous display, press the key **MENU**.
5. To go back to the main display, press once key **MENU**.

Accessing the menu	Menu	Description	See chapter
1x MENU	SE nS 1	Measurements menu	☞ "Reading out measured values", page 17
1x ▶	CL OC 2	Setting the time and the date	☞ "Setting the time and date", page 21
2x ▶	Pr oG 3	Modify an hourly programme	☞ "Modify an hourly programme", page 22
3x ▶	Co un 4	Meters	☞ "Counters", page 18
4x ▶	PA rA 5	Setting parameters	☞ "Reading out measured values", page 17
5x ▶	Er bL 6	Failure history	☞ "Message and error history", page 29
6x ▶	Co dE 7	Installer parameters	☞ Refer to the installation and service manual

5 Operating the appliance

5.1 Putting the appliance into operation

5.1.1. Commissioning


**CAUTION**

Initial commissioning must be done by a qualified professional.

**CAUTION**

After positioning the appliance, wait **one hour** before starting it up.

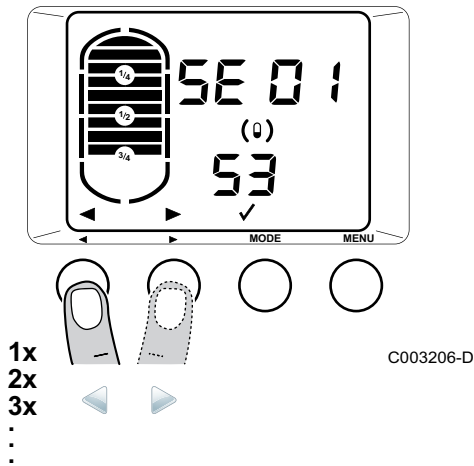
Carry out the commissioning operations in the following order:

1. Connect to the mains.
2. Check that no error codes or messages are shown on the display. The domestic hot water set point temperature is set to 55°C in comfort mode.
3. Select the **Boost** operating mode.
 See chapter: "Choosing the operating mode", page 19
4. The compressor starts up after 120 seconds if DHW production is required.

5.2 Reading out measured values

5.2.1. Measurements menu

1. Press once the **MENU** key. The **SE nS 1** menu is displayed.
2. Press the **MODE✓** key to go to the Measurements menu. The **SE 01** menu is displayed.



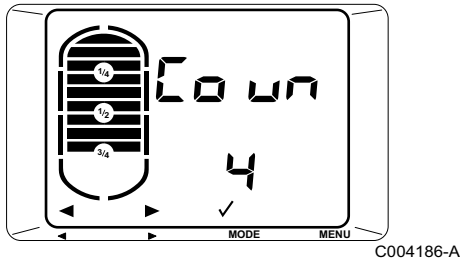
- Use the ◀ and ▶ keys to switch from one measurement to another.

Parameters	Description	Unit
SE 01	Top DHW temperature sensor	°C
SE 02	Middle DHW temperature sensor	°C
SE 03	Bottom DHW temperature sensor	°C
SE 04	Room sensor	°C
SE 05	Evaporator temperature sensor	°C
SE 06	Electricity tariff: <ul style="list-style-type: none"> ▶ HP1: Peak hours ▶ HC0: Off-peak hours 	
SE SW	Operating status / sub-status of the control system sequence	
SP 1	Back-up setpoint	°C
SP 2	Compressor setpoint	°C

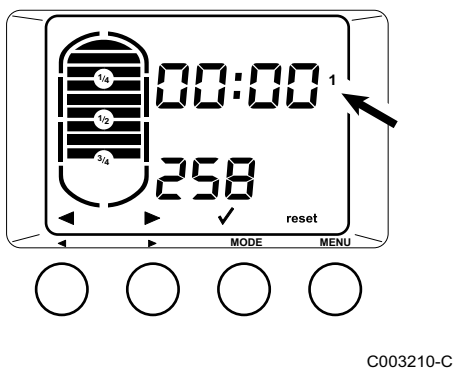
5.2.2. Counters

■ Displaying the counters

- Press once the **MENU** key. The **SE nS 1** menu is displayed.
- Press the ▶ key 3 times. The **Co un 4** menu is displayed.
- Press the **MODE** ✓ key to go to the Counters menu. The number of the counter is shown to the right of the display.



- Use the ◀ and ▶ keys to switch from one counter to another (See table below).
- To exit this menu, press the **MODE** ✓ key.
- To go back to the main display, press the **MENU** button.

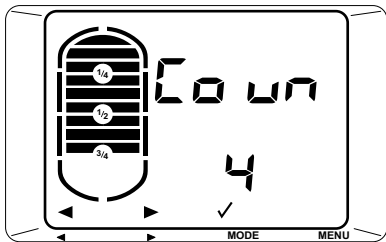


Meter	Description	Unit
1	Total electric energy input for DHW production	kWh
2	Electric energy input by the compressor in the last 24 hours The counter is reset at 00:00 hours every day	Wh
3	Electric energy input by the electrical back-up in the last 24 hours The counter is reset at 00:00 hours every day	Wh

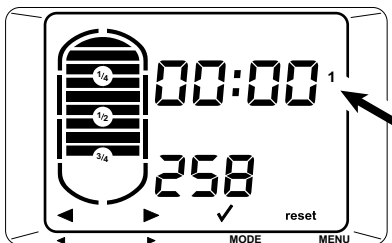
Meter	Description	Unit
4	Number of hours operation of the hydraulic backup	h
5	Number of hours powered up	h
6	Instantaneous output	W

■ Resetting the counters

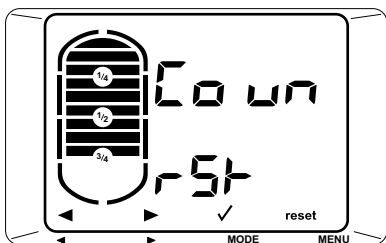
1. Press once the **MENU** key. The **SE nS 1** menu is displayed.
2. Press the **▶** key 3 times. The **Co un 4** menu is displayed.
3. Press the **MODE ✓** key to go to the Counters menu. The number of the counter is shown to the right of the display.



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4. Use the **◀** and **▶** keys to switch from one counter to another.
5. Press the **reset** key to reset the meter displayed to zero.

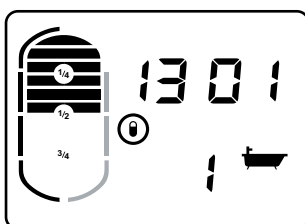
6. Confirm using key **MODE ✓**.
7. To exit this menu, press the **MODE ✓** key.
8. To go back to the main display, press the **MENU** button.

5.3 Changing the settings

5.3.1. Choosing the operating mode

The operating mode is shown on the main display.

1. To change the operating mode, press the **MODE** key several times until the symbol corresponding to the desired operating mode appears on the display.

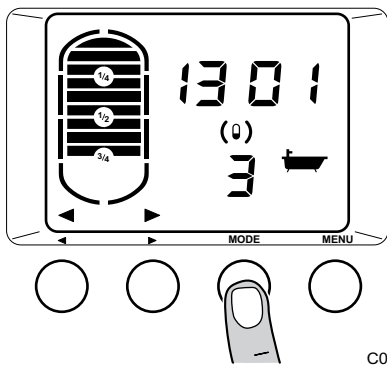


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Display	Operating mode	Description
Ⓢ	Automatic or Comfort	Comfort programme activated Domestic hot water production is handled by the heat pump and by electrical back-up if necessary (+ Hydraulic back-up for EH version). If domestic hot water production is not satisfied by the compressor after a modifiable time delay (factory setting: 5 hours - Parameter P23), the back-ups start up.
Ⓢ	Eco	Reduced programme activated. Domestic hot water production is handled by the heat pump alone. After the compressor stops, the displayed quantity of domestic hot water available may not be complete (Ⓢ).
Ⓢ	Boost	Forced operating activated Domestic hot water production is handled simultaneously by the heat pump and the electrical back-up for a modifiable period (factory setting: 6 hours).
Ⓢ days	Vacation	Holiday period Shutting down domestic hot water production. The domestic hot water temperature is kept at 10°C.

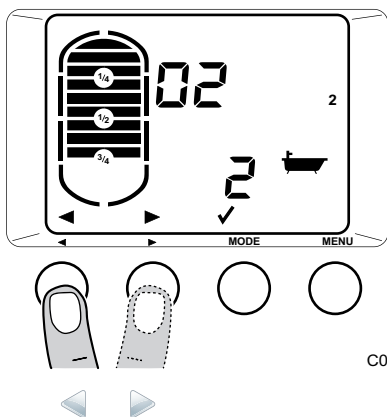
5.3.2. Programming an extended absence (Vacation)

1. Press the **MODE** key 4 times. The symbol Ⓢ days appears.



2. Programme the number of days' holiday using the ◀ and ▶ keys. DHW production is shut down during this period. The domestic hot water temperature is kept at 10°C.
3. Confirm using key **MODE** ✓.

i The number of days' holiday is decremented by one day at midnight every night.

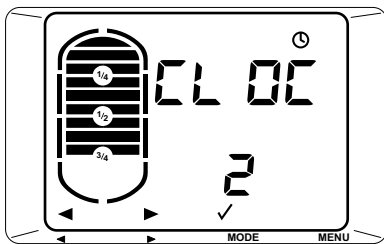


5.3.3. Setting the time and date

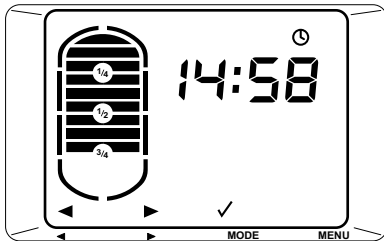
■ Setting the time and the date

To set the time and date, proceed as follows:

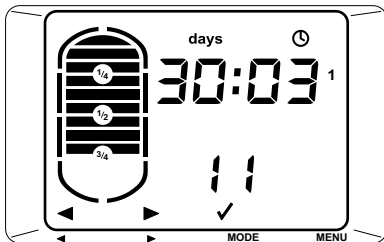
1. Press once the **MENU** key. The **SE nS 1** menu is displayed.
2. Press once the **▶** key. The **CL OC 2** menu is displayed.
3. Press the **MODE ✓** key to go to the Hours menu. The hours flash.



C004183-A



C004184-A




C003207-C

4. Set the hour with the **◀** and **▶** keys.
5. Confirm using key **MODE ✓**. The minutes flash.
6. Set the minutes with the **◀** and **▶** keys.
7. Confirm using key **MODE ✓**.
8. Proceed in the same way to set the day, the month and the year.
9. Confirm using key **MODE ✓**.
10. To exit this menu, press the **MODE ✓** key.
11. To go back to the main display, press the **MENU** button.

■ Automatic switching to summer time

The control unit is programmed to switch automatically to summer time on the last Sunday in March and back to winter time on the last Sunday in October.

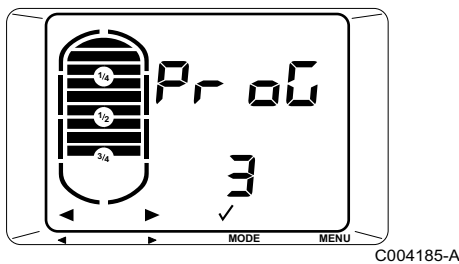
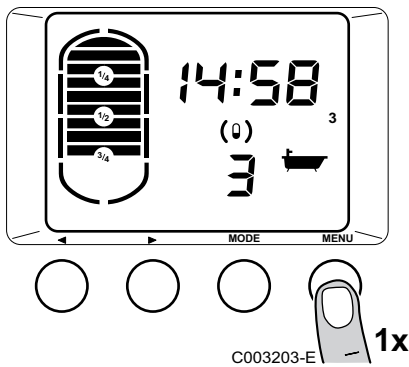
To modify this parameter, refer to chapter  "Modifying the domestic hot water production parameters", page 23.

5.3.4. Modify an hourly programme

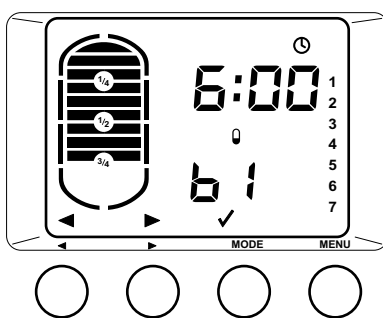


- ▶ The hourly programme can be the same for each day of the week or different, depending on the day of the week.
- ▶ It is possible to programme up to 3 comfort periods for each day of the week, each period being defined by a start time **[b].[X]** and a stop time **[E].[X]**.
- ▶ The hours are divided into half-hour sections.
- ▶ For enhanced comfort, the duration of the period must be more than 6 hours.
- ▶ Factory setting: 23:00 - 7:00 hours - Every day of the week.

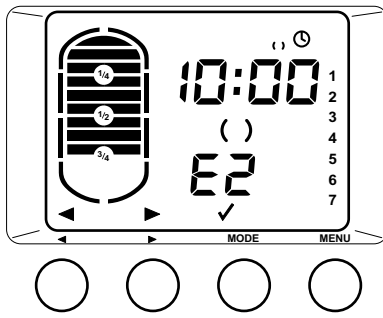
1. Press once the **MENU** key. The **SE nS 1** menu is displayed.
2. Press the **▶** key 2 times. The **Pr oG 3** menu is displayed.



3. Press the **MODE ✓** key to go to this menu. All the numbers for the day of the week flash (1 =Monday, ..., 7 = Sunday).
4. - To have an identical hourly programme for every day of the week, press the **MODE ✓** key.
 - To have a different hourly programme depending on the day of the week, press the **◀** and **▶** keys to select the day on which the programme is to be modified. Confirm using key **MODE ✓**. The start time for the first period (**[b].[i]**) is displayed.



5. Press the **MODE ✓** key. The hour **[b].[i]** flashes.
6. Enter the new start time using the **◀** and **▶** keys.
7. Confirm using key **MODE ✓**. The stop time for the first period (**[E].[2]**) is displayed.



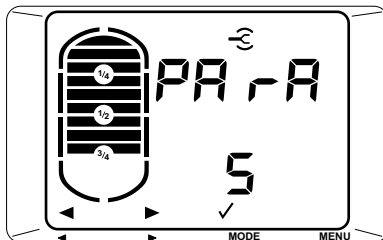
C003209-B

8. Enter the new stop time using the ◀ and ▶ keys.
9. Confirm using key **MODE** ✓. The start time for the second period (b.3) is displayed.
10. Programme the start and stop times for the second and third periods by repeating steps 5 to 9.

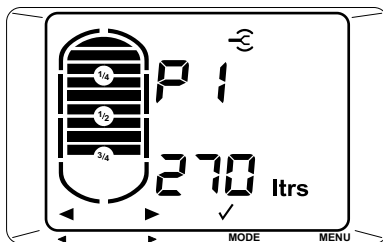
b.1	Start time - period 1
E.2	Stop time - period 1
b.3	Start time - period 2
E.4	Stop time - period 2
b.5	Start time - period 3
E.6	Stop time - period 3

11. In order not to use a comfort period, press the **MODE** ✓ key when the start time for the period is displayed.
The display for the time switches to a.F.F.
When the start time for the period is set to a.F.F., the stop time also switches automatically to a.F.F.
12. To exit this menu, press the **MENU** key.

5.3.5. Modifying the domestic hot water production parameters



C004188-A

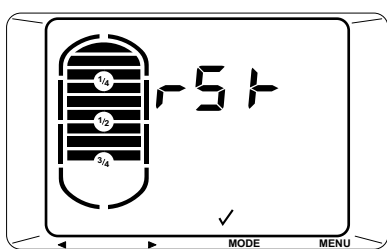
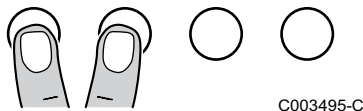
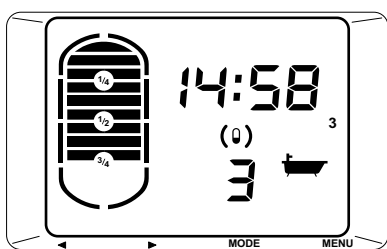


C003307-A

1. Press once the **MENU** key. The **SE nS 1** menu is displayed.
2. Press the ▶ key 4 times. The **PA rA 5** menu is displayed.
3. Press the **MODE** ✓ key to go to this menu. The parameter P displays. i displays.
4. Use the ◀ and ▶ keys to switch from one parameter to another.
5. To modify a parameter, press the **MODE** ✓ key.
6. Set the desired value using the ◀ or ▶ key.
7. Confirm using key **MODE** ✓.

Parameters	Description	Adjustment range	Factory setting
P 01	DHW setpoint in Auto mode	40 to 70 °C	55 °C
P 02	DHW set point in Eco mode	40 to 65 °C	55 °C
P 04	Choice of mode for the DHW Comfort period: <ul style="list-style-type: none"> ▶ 0 = Use the time programs. ▶ 1 = Use the electricity tariff information input. Tells you whether or not domestic hot water production is permitted (HP1 = not permitted => Contact closed, HC0 = permitted => Contact open). ▶ 2 = Use the electricity tariff information input. Tells you whether or not domestic hot water production is permitted (HP1 = not permitted => Contact open, HC0 = permitted => Contact closed). ▶ 3 = Use the time programs. The status of the electricity tariff information input is used to activate the Boost function with compressor only (HP1 = Boost deactivated => Contact closed, HC0 = Boost activated => Contact open). ▶ 4 = The status of the electricity tariff information input is used to activate the Boost function with compressor only (HP1 = Boost activated => Contact open, HC0 = Boost deactivated => Contact closed). ▶ 5 = The status of the electricity tariff information input is used to activate the Boost function with compressor and back-up (HP1 = Boost deactivated => Contact closed, HC0 = Boost activated => Contact open). ▶ 6 = The status of the electricity tariff information input is used to activate the Boost function with compressor and back-up (HP1 = Boost activated => Contact open, HC0 = Boost deactivated => Contact closed). 	0 - 6	0
P 06	Automatic switch to summer time (last Sunday in March) and winter time (last Sunday in October): <ul style="list-style-type: none"> ▶ 0 = Function not active (for countries where the time change is done on other dates or is not in use) ▶ 1 = Function activated 	0 - 1	1
P 07	DHW setpoint in Boost mode	40 to 70 °C	62 °C

5.3.6. Return to the factory settings



C004193-A

1. Press the ◀ and ▶ keys **simultaneously** for 5 seconds. The **rSt** menu is displayed.

2. Press the **MODE** ✓ key to carry out a TOTAL RESET of all parameters.

5.4 Installation shutdown




CAUTION

Try to avoid switching off the appliance in order to maintain protection against corrosion. The appliance's frost protection continues to be activated.

5.5 Antifreeze protection

In the event of extended absence (holiday), programme the corresponding number of days. The temperature of the water in the tank is maintained at 10°C.

 See chapter "Programming an extended absence (Vacation)", page 20

6 Checking and maintenance

6.1 General instructions



CAUTION

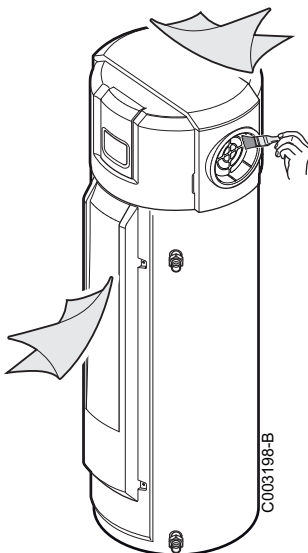
Installation and maintenance of the appliance must be done by a qualified professional in accordance with prevailing statutory texts and codes of practice.

Maintenance operations are important for the following reasons:

- ▶ To guarantee optimum performance
- ▶ To extend the life of the equipment
- ▶ To provide an installation that guarantees the best comfort over time.

6.2 Maintenance operations to be performed

6.2.1. Cleaning the casing material



- ▶ Clean the outside of the appliance with a damp cloth and soapy water.
- ▶ Clean the ventilation grid with a long-haired brush.


7 Troubleshooting

7.1 Messages (Code type bxx or Exx)

7.1.1. Messages (type code **b.X.X**)

In the case of failure, the control panel displays a message and a corresponding code.

1. Make a note of the code displayed.
The code is important for the correct and rapid diagnosis of the type of failure and for any technical assistance that may be needed.
2. Disconnect and reconnect the mains cable.
The appliance will restart only when the malfunction has been corrected.
3. If the code is displayed again, correct the problem by following the instructions in the table below:

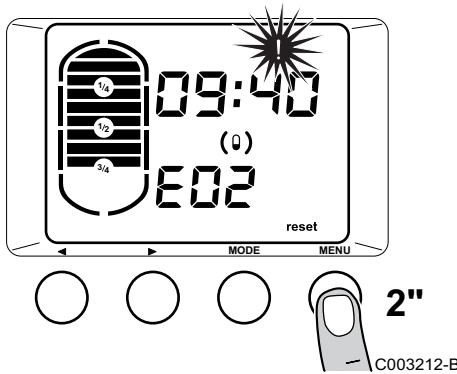
Code no.	Description	Checking / solution
b00	Parameter error on the PCU PCB	Reset the parameters.  See chapter: "Return to the factory settings", page 24.
b01	Pressure switch alarm Note: DHW production is handled by back-up if back-up enabled	▶ Contact the professional who takes care of maintenance of the appliance.
b02	Maximum DHW temperature exceeded Note: DHW production is not covered (by the compressor or the back-up)	▶ Contact the professional who takes care of maintenance of the appliance.
b03	The room temperature is higher than 35°C. The compressor is outside its operating range. Note: DHW production is handled by back-up if back-up enabled.	▶ Modify the parameters according to the instructions in the manual. ▶ The compressor will handle DHW production once the room temperature is less than 35°C.
b04	The room temperature is less than -5°C. Note: DHW production is handled by back-up if back-up enabled.	▶ Modify the parameters according to the instructions in the manual. ▶ The compressor will handle DHW production once the room temperature is higher than -5°C.
b25	The bottom DHW temperature sensor is short circuited	▶ Contact the professional who takes care of maintenance of the appliance.
b26	The bottom DHW temperature sensor is open	▶ Contact the professional who takes care of maintenance of the appliance.
b27	The top DHW temperature sensor is short circuited	▶ Contact the professional who takes care of maintenance of the appliance.
b28	The top DHW temperature sensor is open	▶ Contact the professional who takes care of maintenance of the appliance.
b32	The impressed current anode is in open circuit.	▶ Contact the professional who takes care of maintenance of the appliance.
b33	The impressed current anode is short-circuited.	▶ Contact the professional who takes care of maintenance of the appliance.

Code no.	Description	Checking / solution
E00	Measurement error on the domestic hot water temperature sensors. Remarks: <ul style="list-style-type: none"> This message is only displayed on initial commissioning. This message disappears after 10 minutes or when you press the ✓ key. 	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E05	No communication between the control panel and the PCU board.	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E12	No communication between the control panel and the PCU board.	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.

If the causes of the problem are still present after several attempts at automatic start-up, the appliance goes into lockdown mode (also called failure).

☞ see chapter: "Messages (type code **E.X.X**)", page 28

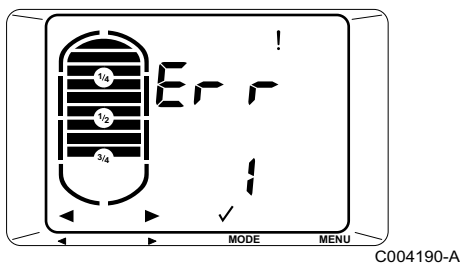
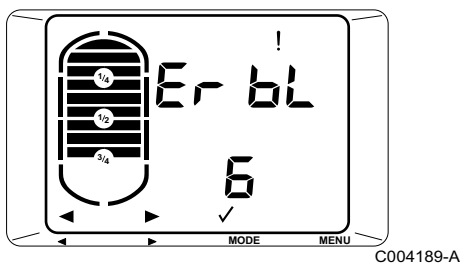
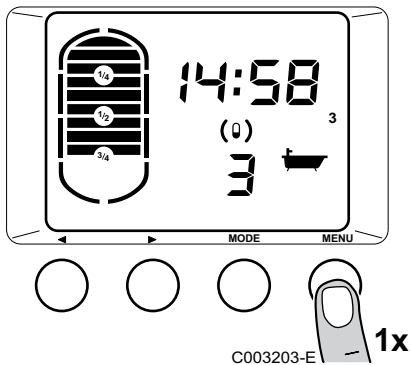
7.1.2. Messages (type code **E.X.X**)



- The display shows :
 - The symbol (!)
 - The symbol **reset**
 - The fault code (for example **E02**).
- After correcting the failure, press the **reset** key for 2 seconds. If the error code continues to display, search for the cause in the error table and apply the solution.

Code no.	Description	Checking / solution
E00	The parameter storage unit on the PCU electronic board is defective	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E01	The middle DHW temperature sensor is short circuited Note: DHW production is not covered	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E02	The middle DHW temperature sensor is open Note: DHW production is not covered	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E04	The room temperature sensor is short circuited Note: DHW production is handled by back-up if back-up enabled	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E05	The room temperature sensor is open Note: DHW production is handled by back-up if back-up enabled	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E06	The evaporator temperature sensor is short circuited Note: DHW production is handled by back-up if back-up enabled	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E07	The evaporator temperature sensor is open Note: DHW production is handled by back-up if back-up enabled	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E08	Malfunction on the defrosting function Note: DHW production is handled by back-up if back-up enabled	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E09	The low pressure pressure switch alarm sounds for more than 120 seconds Note: DHW production is handled by back-up if back-up enabled	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.
E10	The low pressure pressure switch alarm has been tripped more than 3 times during the last 24 hours Note: DHW production is handled by back-up if back-up enabled	<ul style="list-style-type: none"> Contact the professional who takes care of maintenance of the appliance.

7.2 Message and error history



The **Er bL 6** menu is used to consult the last 16 messages and the last 16 errors displayed by the control panel.

1. Press once the **MENU** key. The **SE nS 1** menu is displayed.
2. Press the **▶** key 5 times. The **Er bL 6** menu is displayed.

3. Press the **MODE ✓** key to go to this menu.

Accessing the menu	Menu	Description
1x ▶	Err	Error history
2x ▶	bL	Blockage history
3x ▶	CLr	Reset error and blockage history

4. The **Er r** menu is displayed with the number of errors that have occurred.
5. To go back to the previous display, press the key **MENU**.

7.2.1. Err error display

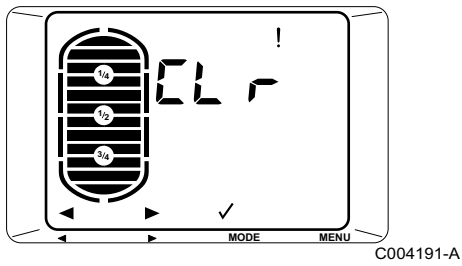
1. When the **Err** menu is displayed, press the **MODE ✓** key.
2. The code **E.X.X** for the last error that occurred is displayed as are its time and date alternately.
3. - Press the **MODE (✓)** key to access details of the error.
 - Use the **◀** and **▶** keys to browse the error list.
 - Use the **MENU** key to go back to the error list.

7.2.2. bL blockage display

1. When the **bL** menu is displayed, press the **MODE ✓** key.
2. The code **b.X.X** for the last blockage that occurred is displayed as are its time and date alternately.
3. - Press the **MODE (✓)** key to display the details of the error.
 - Use the **◀** and **▶** keys to scroll through the blockage list.
 - Use the **MENU** key to go back to the blockage list.

7.2.3. Reset error and blockage history

1. When the **Er bL** menu is displayed, press the **MODE** ✓ key.
2. The error and blockage history are reset.



8 Warranty

8.1 General

You have just purchased one of our appliances and we thank you for the trust you have placed in our products.

Please note that your appliance will provide good service for a longer period of time if it is regularly checked and maintained.

Your installer and our customer support network are at your disposal at all times.

8.2 Warranty terms

The following provisions are not exclusive of the buyer being able benefit from the legal provisions applicable regarding hidden defects in the buyer's country.

Starting from the purchase date shown on the original installer's invoice, your appliance has a contractual guarantee against any manufacturing defect.

The length of the guarantee is mentioned in the price catalogue. The manufacturer is not liable for any improper use of the appliance or failure to maintain or install the unit correctly (the user shall take care to ensure that the system is installed by a qualified engineer).

In particular, the manufacturer shall not be held responsible for any damage, loss or injury caused by installations which do not comply with the following:

- ▶ applicable local laws and regulations,
- ▶ specific requirements relating to the installation, such as national and/or local regulations,
- ▶ the manufacturer's instructions, in particular those relating to the regular maintenance of the unit,
- ▶ the rules of the profession.

The warranty is limited to the exchange or repair of such parts as have been recognised to be faulty by our technical department and does not cover labour, travel and carriage costs.

The warranty shall not apply to the replacement or repair of parts damaged by normal wear and tear, negligence, repairs by unqualified parties, faulty or insufficient monitoring and maintenance, faulty power supply or the use of unsuitable fuel.

Sub-assemblies such as motors, pumps, electric valves etc. are guaranteed only if they have never been dismantled.

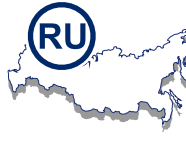
The legislation laid down by european directive 99/44/EEC, transposed by legislative decree No. 24 of 2 February 2002 published in O.J. No. 57 of 8 March 2002, continues to apply.

DE DIETRICH THERMIQUE S.A.S

www.dedietrich-thermique.fr
 Direction des Ventes France
 57, rue de la Gare
 F- 67580 MERTZWILLER
 ☎ +33 (0)3 88 80 27 00
 📠 +33 (0)3 88 80 27 99

REMEHA GmbH

www.remeha.de
 Rheiner Strasse 151
 D- 48282 EMSDETTEN
 ☎ +49 (0)25 72 / 9161-0
 📠 +49 (0)25 72 / 9161-102
 info@remeha.de

DE DIETRICH

www.dedietrich-otoplenie.ru
 129164, Россия, г. Москва
 Зубарев переулок, д. 15/1
 Бизнес-центр «Чайка Плаза»,
 офис 309
 ☎ +7 (495) 221-31-51
 info@dedietrich.ru

VAN MARCKE

www.vanmarcke.be
 Weggevoerdenlaan 5
 B- 8500 KORTRIJK
 ☎ +32 (0)56/23 75 11

NEUBERG S.A.

www.dedietrich-heating.com
 39 rue Jacques Stas
 L- 2010 LUXEMBOURG
 ☎ +352 (0)2 401 401

DE DIETRICH THERMIQUE Iberia S.L.U.

www.dedietrich-calefaccion.es
 C/Salvador Espriu, 11
 08908 L'HOSPITALET de LLOBREGAT
 ☎ +34 935 475 850
 info@dedietrich-calefaccion.es

DE DIETRICH SERVICE

www.dedietrich-heiztechnik.com
 ☎ Freecall 0800 / 201608

WALTER MEIER (Klima Schweiz) AG

www.waltermeier.com
 Bahnstrasse 24
 CH-8603 SCHWERZENBACH
 +41 (0) 44 806 44 24
 Serviceline +41 (0)8 00 846 846
 ☎ +41 (0) 44 806 44 25
 ch.klima@waltermeier.com

WALTER MEIER (Climat Suisse) SA

www.waltermeier.com
 Z.I. de la Veyre B, St-Légier
 CH-1800 VEVEY 1
 ☎ +41 (0) 21 943 02 22
 Serviceline +41 (0)8 00 846 846
 ☎ +41 (0) 21 943 02 33
 ch.climat@waltermeier.com

DUEDI S.r.l.

www.duediclima.it
 Distributore Ufficiale Esclusivo
 De Dietrich-Thermique Italia
 Via Passatore, 12 - 12010
 San Defendente di Cervasca
 CUNEO
 ☎ +39 0171 857170
 📠 +39 0171 687875
 info@duediclima.it

DE DIETRICH

www.dedietrich-heating.com
 Room 512, Tower A, Kelun Building
 12A Guanghua Rd, Chaoyang District
 C-100020 BEIJING
 ☎ +86 (0)106.581.4017
 +86 (0)106.581.4018
 +86 (0)106.581.7056
 ☎ +86 (0)106.581.4019
 contactBJ@dedietrich.com.cn

BDR Thermea (Czech republic) s.r.o

www.dedietrich.cz
 Jeseniova 2770/56
 130 00 Praha 3
 ☎ +420 271 001 627
 info@dedietrich.cz

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16/01/2015



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DE DIETRICH THERMIQUE

57, rue de la Gare F- 67580 MERTZWILLER - BP 30