User handbook

Standard display

METROAIR Aqua 202

METROAIR Aqua 302



EXPERTS IN HEATING AND HOT WATER

METRO THERM

QUICK GUIDE

1. **INSTALL THE APP** (LS CONFIG)

App store

Google Play

2. **TURN ON BLUETOOTH**

3. **OPEN THE APP**

4. **SCAN THE QR CODE ON THE PRODUCT WITH THE APP**



You are now connected to the product

We reserve the right to correct printing errors.

TABLE OF CONTENTS (EN)

1 Important information 4
Installation data 4
Symbols 5
Serial number 5
Bluetooth 5
2 Heat pump function 6
3 Control - Introduction 8
Display unit 8
Button / actions 9
Additional heat / Immersion heater 11
Error indications 12
4 Connect to the app 14
Install LS config on your phone. . . . 14
Connect to the heat pump 14
5 App control - Introduction 15
Navigation. 15
Menu types 17
6 Maintenance of the product. 20
Regular checks. 20
Saving tips. 21
7 Disturbances in comfort 22
Info menu 22
Manage alarm 22
Troubleshooting. 23
Safety breaker. 25
8 Item register 26

1 IMPORTANT INFORMATION

Installation data

Product	*METROAIR Aqua*
Serial number	
Installation date	
Installer	

No.	Name	Factory setting	Set
5.4.1.1	Min. fan speed	30 %	
5.4.1.2	Medium fan speed	50 %	
5.4.1.3	Max. fan speed	60 %	
5.4.1.4	Normal speed	50 %	
5.1.2	Fan setting	Off	
5.4.2.1	Min. air temperature	-10 °C	
5.4.2.3	Max. hot water temp.	65 °C	

Recommended normal fan speed: 57% for indoor air and 48% for outdoor air.

✓	*Accessories*
	Ventilation filter
	Smart display
	Condensation adaptor

Date _____ Signed _____

Symbols

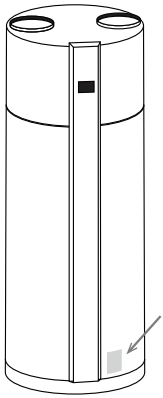
CAUTION
This symbol indicates a risk of injury to people or damage to the product.

NOTE
This symbol highlights important information that you should consider.

TIP
This symbol provides tips that make the product easier to use.

Serial number

The serial number can be found at the bottom right, shown on the type label.



NOTE
You need the product's 19-digit serial number for service and support. The serial number is shown on the type plate.

Bluetooth

The water heater features Bluetooth connectivity for convenient access to setpoints. All settings are accessible via an encrypted app, and only one person can access the unit information at a time.

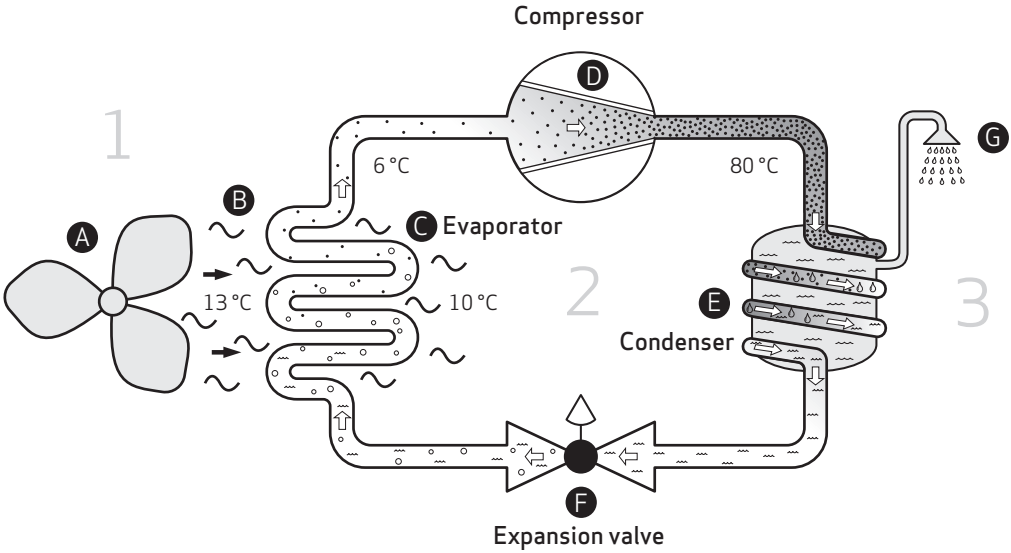
TIP
The Bluetooth range is approximately 5 metres.

The phone requires an internet connection to access the cloud and unit data. The water heater's software can be updated via the app.

2 HEAT PUMP FUNCTION

METROAIR Aqua uses extract air, outdoor air or ambient air to heat domestic hot water. The energy is transferred in three stages.

Heat energy is recovered from the air (1) and transferred to the heat pump. In the refrigerant circuit (2), the heat pump raises the recovered energy to a higher temperature. The heat is transferred to the water in the hot water tank (3).



The temperatures are only examples and can vary depending on the installation.

VENTILATION AIR

A Warm extract air is drawn from the rooms to the heat pump through the home's ventilation system.

B The fan then routes the air to the heat pump's evaporator. Here the air releases the thermal energy and the air's temperature can drop significantly. The cooled exhaust air is then discharged outside.

REFRIGERANT CIRCUIT

C A liquid, a refrigerant circulates in a closed circuit in the heat pump and passes through the evaporator. The refrigerant has a very low boiling point. IIn the evaporator, the refrigerant absorbs heat from the ventilation air and begins to boil.

D The gas produced during boiling is routed to an electrically powered compressor. When the gas is compressed, its pressure and temperature increase significantly, from approximately -5 °C to approximately 95 °C.

E The compressor sends the gas through the condenser around the hot water tank. The gas transfers heat to the water, cools and condenses back into a liquid.

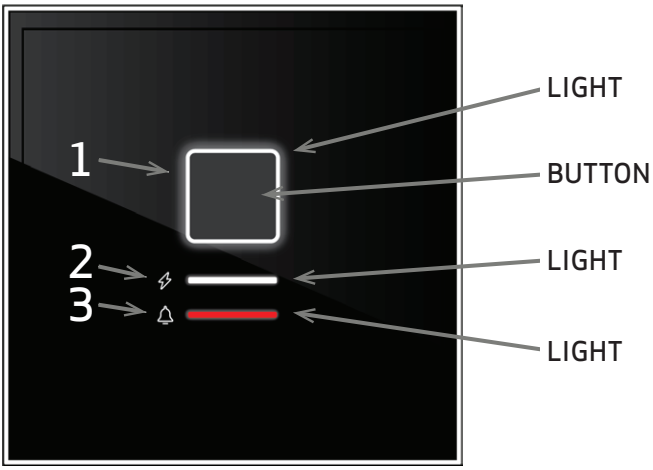
F Because the pressure is still high, the refrigerant passes through an expansion valve, which reduces the pressure and temperature. The refrigerant has now completed a full cycle. It returns to the evaporator, and the process is repeated.

WATER HEATER

G The water in the hot water tank absorbs heat from the refrigerant in the condenser and can be heated to 65 °C.

3 CONTROL - INTRODUCTION

Display unit



LIGHTS

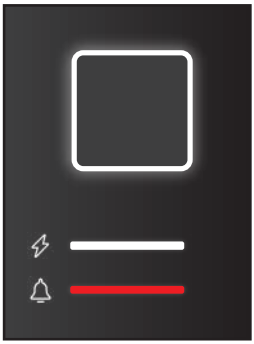
1. Lights up to indicate which operating mode the product is currently running in.
2. Lights up when the additional heater is on.
3. Lights up when an alarm is active.

BUTTON

Press once to change the operating mode.

To switch the product on or off, press and hold the button for 3 seconds. When light (1) stays on, press the button again to confirm.

Button / actions



OPERATING MODE

Press the button once to change between the following operating modes.

1. Auto
2. Eco
3. Boost
4. Silent

To activate Holiday mode, press and hold the button for 3 seconds, then press it again to confirm.

AUTO

A slowly pulsing light around the button indicates that the product is operating in Auto mode.



ECO

In Eco mode, the slowly pulsing light around the button switches off once during each cycle.



BOOST

In Boost mode, the light around the button switches off twice during each cycle.



SILENT

In Silent mode, the light around the button switches off three times during each cycle.



INACTIVE

When there is no demand for hot water, the heat pump stops operating.



HOLIDAY

Press and hold the button for 3 seconds. When the light stops pulsing or flashing and stays on, Holiday mode is ready to be activated. Press the button again to activate Holiday mode. The light will switch off.



To turn the product ON, hold the button in for 3 sec.

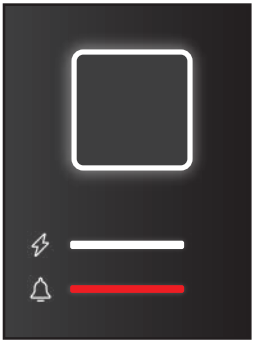
RESTART

Press and hold the button for 7 seconds. When the light starts flashing, press the button again to confirm.



NOTE
If you do not confirm within 30 seconds, the product continues to operate as before.

Additional heat / Immersion heater



When the additional heater is operating, the light remains on continuously in every operating mode.

The additional heater is on in Boost and Backup modes.

BACKUP MODE

Is there no hot water, and is the additional-heater light flashing continuously? A fault has occurred and must be corrected by an installer.



The heat pump will not produce any hot water until the installer has corrected the issue.

When the light starts flashing, activate Backup mode by pressing and holding the button for 3 seconds, then release it. You do not need to press the button again to confirm.

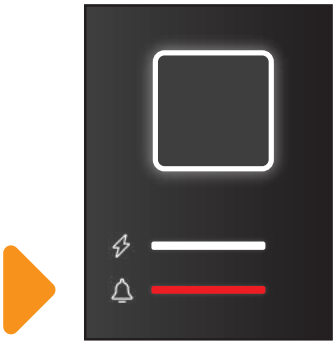
The light will stop blinking when the mode is activated.

Backup mode remains active for one week. It then stops, and the light starts flashing again.

TIP
When Backup mode is active, the additional heater produces the hot water. This increases electricity consumption and running costs.

Error indications

If an error occurs, complete the basic checks described on page 23 before contacting an installer.



SENSOR FAULT

If a sensor is disconnected or damaged, the red light switches off three times during each pulse cycle.



ALARM 164

If the pressure in the refrigerant circuit is too high, the red light switches off once during each pulse cycle.



ALARM 631

If the temperature in the evaporator is too high, the red light remains continuously on.



ALARM 359

If the evaporator temperature exceeds the maximum limit, the red light starts pulsing slowly and continuously.



ALARM 240

If the evaporator temperature becomes too low, the red light switches off twice during each pulse cycle.



ALARM 222 (FILTER CHANGE)

When the filter needs to be changed, the red light flashes dimly.



ALARM 217 (ANODE FAULT)

If the anode needs to be changed or there is a connectivity issue, the red light flashes rapidly at 0.5-second intervals.



Contact your installer immediately!

4 CONNECT TO THE APP

Install LS config on your phone

Available in App store or Google Play.

App store

Google Play

The app is user-friendly, and the installer menus are locked to prevent unintended advanced adjustments.

Connect to the heat pump

1. Make sure Bluetooth is switched on on your phone.
2. Ensure that your phone is connected to the internet
3. Open the app
4. Scan the QR code located on the product



You are now connected to the product

NOTE
All changes made in the app have an immediate effect on the operation of the heat pump.

5 APP CONTROL - INTRODUCTION

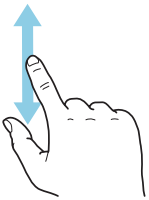
Navigation

Select



Tap the screen to select most options and functions.

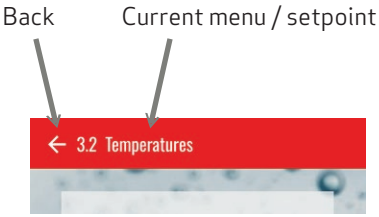
Scroll



If the menu contains several submenus, swipe up or down to view more information.

MENU NAVIGATION

Tap the arrow in the top-left corner to return to the previous page.

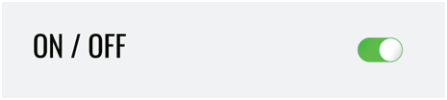


The text in the top banner shows the current menu and set point.

CHANGE A SETTING

Press the setting you want to change.

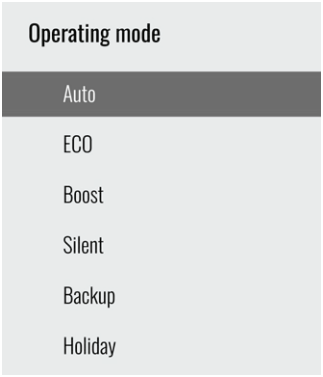
If it is an on/off setting, it changes as soon as you press it.



If several values are available, use the phone's keyboard to enter the required value.



If a list of options is displayed, the setting changes as soon as you select an option.



FACTORY SETTINGS

For the factory settings, see the installer handbook or page 4 of this manual.

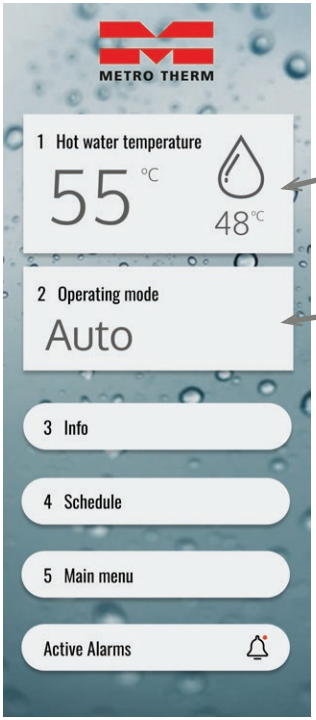
Your installer may have chosen other values that suit your system better.

Menu types

HOME SCREEN

The home screen gives you easy access to the product settings.

You can change the operating mode or hot water temperature manually.



Press to change the hot water temperature. (menu 1)

Press to change the operating mode. (menu 2)

Accessible menus from the home screen

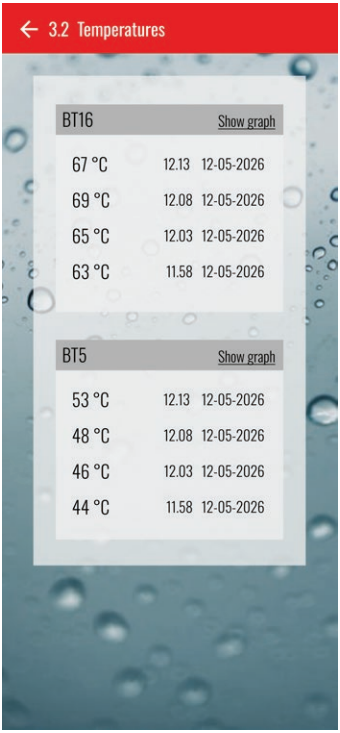
1. Hot water temperature
2. Operating mode
3. Information
4. Schedule
5. Main menu

MENU 3 INFO

The Information menu contains current and logged product data.

TIP
IIf a temperature reading shows -30 °C, it means that the sensor is not connected.
BT5 and BT50/53 are additional sensors used for the coil version.

NOTE
If a problem occurs or the product requires service, the installer may ask for the information shown in the Info menu.



MENU 4 SCHEDULE

If you will be away, set your return time. The water heater switches off while you are away and prepares a full tank of hot water for your return.

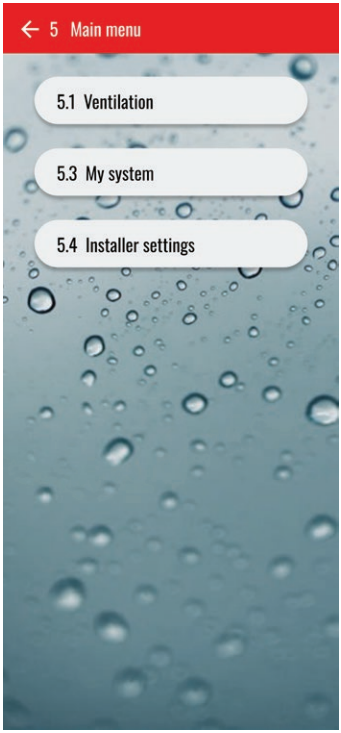
If Legionella mode is switched on, it continues to operate normally during Holiday mode.

In this menu, you can also select the day on which Legionella mode runs.

MENU 5 MAIN MENU

Under the main menu you will find the settings for the fan and general information on the product.

For example, you can adjust the time and date or reset the user settings in menu 5.3, My system.



NOTE
If a problem occurs or the product requires service, provide the installer with the information shown in menu 5.3.2, Software info.

CAUTION
Installer settings [5.4] are locked to prevent unintended changes. Settings in menu 5.4, Installer settings, may only be changed by authorized installers who understand how the heat pump operates.

6 MAINTENANCE OF THE PRODUCT

Regular checks

Your heat pump requires minimal maintenance after commissioning. It is recommended checking the installation regularly.

If a fault occurs, the red light on the display comes on and an error message appears in the app. See 'Manage alarm' on page 22.

CLEANING THE FLOOR DRAIN

Condensation forms when the heat pump is working. The condensate is routed from the top tray of the product to a floor drain.

The condensate may contain dust and other particles.

Check regularly that the floor drain is not blocked; water must be able to run through freely. Clean the floor drain if necessary.

> **CAUTION**
> If the floor drain is blocked, water can spill over onto the floor of the installation area. To prevent damage to the building, a waterproof floor, or a floor membrane is recommended.

CLEANING THE PRODUCT

Do not use chemical cleaning agents on the product. Clean the cabinet and EPS with a well-wrung, damp cloth.

ACTIVATE THE SAFETY VALVES

On the connection to the water heater, a safety valve may be installed if required by local or national regulations. This is to ensure that if the pressure in the water pipes becomes too high, the pressure will be released and not damage components in the system.

Check the safety valve regularly to prevent it from sticking.

Follow the instructions by the manufacturer of the safety valve.

REPLACING/CLEANING EXHAUST AIR FILTER

If the water heater is connected to air ducts, the ventilation system has one or more filters in the ducts. Either replace or clean the filters according to the manufactur's instructions.

> **NOTE**
> The efficiency of the installation can be impaired by a dirty air filter.

Saving tips

Your heat pump installation produces hot water. Hot-water production is controlled by your selected settings.

Energy consumption is affected by the hot-water schedule, operating mode and the amount of hot water used. For example, using the additional heater significantly increases energy consumption.

The house ventilation can also affect the energy consumption.

It is therefore important to perform a ventilation adjustment shortly after installing the heat pump. This should be done by a ventilation technician according to the design values for the building.

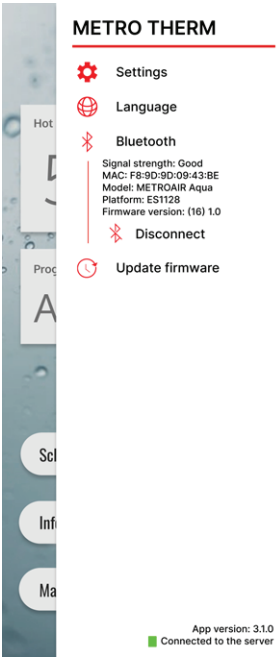
Also remember:

- Select Eco in menu 2, Operating mode, to reduce energy consumption.

Updating the software

Updating the software is done through the app.

1. Make sure you are connected to the app
2. Go to the home screen and press the icon in the top right corner.
   You now have access to the settings for the app.
3. Tap Update firmware to check whether an update is available.



NOTE
The update takes approximately 30 to 40 minutes.

CAUTION
Leave the app open and near the product while updating the product.
Removing the phone from the product or shifting the app to the background while an active update is underway will result in a disconnected update.

7 DISTURBANCES IN COMFORT

IIn most cases, the heat pump detects a fault (a malfunction can lead to disruption in comfort) and indicates this with a red light on the display and an error message in the app.

Info menu

The heat pump's measured values are shown in menu 3, Info, in the app. Checking the values in this menu can help identify the cause of the problem.

Manage alarm

In the event of an alarm, a fault has occured and the red light on the display will start to light up in sequence. You can receive information about the alarm in the app on your phone.



ALARM

Reset the alarm by restarting the water heater. Hold the button on the display down for 7 sec. and then press again to confirm your choice. The alarm has now been reset. The error has been logged in menu 3.6 for review by the installer.

> ⚠ CAUTION
> Investigate the alarm before resetting or restarting the water heater.
> Repeatedly restarting or resetting the water heater may cause a malfunction. Contact the installer if in doubt.

If a fault stops the heat pump, you will be asked to activate the backup mode for temporary use until an installer can fix the problem. This will turn on the additional heater and provide you with hot water. Expect a significant increase in energy consumption.

Troubleshooting

BASIC ACTIONS

- Is the cold water supply open?
- Have the evaporator, condensate drain and fan been cleaned as described in the maintenance section?
- Has any of the safety features disengaged the heat pump/electrical immersion heater?
- Has external short-circuiting of terminals disengaged the heat pump?
- Has factory resetting been tested?

If you need help, please contact:

- In the warranty period (0-2 years): The installer, from which the unit was purchased.
- After the warranty period (> 2 years): The installer from which the unit was purchased or partners of the manufacturer.



TIP
When contacting the installer be ready with the information on the type plate.

DOES NOT START

= Thermal fuse turns on/off (clicking sound)

= Incorrect power supply or fuse rating: 10/13 A, 230 V

= No sound emission from the compressor, no heating of hot water and no pressure difference when the heat pump is on means the compressor is blocked.

= The compressor makes a humming sound.

→ The capacitor is faulty or the wiring is disconnected.

If any of the above applies, do the following:

1. Disconnect the product from any power supply.
2. Reconnect the product to the prower supply.
3. If the product still does not work, contact a technician.

NOT COMMUNICATING

= Does the display not work?

→ Use the app to control the unit

→ If necessary, have the display replaced by an installer.

LOW HOT WATER TEMPERATURE OR LACK OF HOT WATER

- The unit is not connected to the power supply
  → Make sure the display lights up.
- An alarm from the controller stops the heat pump
  → Turn backup mode on. (will only be activated for 1 week)
  → Check the alarms in the Info menu (3.6)
  → Contact a technician for assistance.
- Low hot-water temperature set points
  → Increase all temperature set points in menu 1 Temperatures
- Low airflow in evaporator
  → Have the evaporator and air ducts checked and cleaned as described in "6 Maintenance of the product"
- Fan does not work
  → Contact an technician.
- SG Ready function is active
  → Switch OFF the SG Ready function

LARGE AMOUNT OF WATER BELOW UNIT

- The condensation pipe is not connected or connected incorrectly
  → Connect the condensate pipe to a hose that leads to a drain. Condensate is produced during normal operation.
- The anode or immersion heater is not properly tightened.
  → Contact an technician for help.

HIGH SOUND EMISSIONS

- Obstruction of the air ducts.
  → Remove the obstruction
- Dirt on fan or evaporator.
  → Follow the instructions in "6 Maintenance of the product"for cleaning the evaporator and fan. Do not use cleaning sprays that could damage the EPP housing.
- Too high maximum fan speed
  → Contact an installer to check the ventilation settings.
  → Activate the Silent mode (2)
- Component vibration
  → Contact an technician for help.

DEFROST ALARM

Occur frequently with alarm 240 (cold evaporator).

- = Airflow is much lower than during normal operation, could be caused by a high pressure drop in the air duct or low ventilation velocity.
  → Raise the airflow
- = The ambient temperature in the installation area is too low (below 5 °C).
  → Raise the ambient temperature to over 5 °C
- = The condensate drain is disconnected or blocked.
  → Ensure the condensation drain is correctly installed
  → Flush the drain to remove any blockage.

When the problem has been resolved, reset the alarm in menu 3.6.3.

Safety breaker

If the immersion heater fails, the safety cut-out switches off the immersion heater. If the set value (90 °C +/- 10 °C) is exceeded, the immersion heater will disconnect. The immersion heater can be reset when the temperature is below 90 °C.

To do this, the power to the unit must be switched off, and the front panel carefully removed. An authorized technician can then press the reset button in the centre of the safety cut-out.

8 ITEM REGISTER

A

Alarm 22

Reset 22

App 14

App store 14

Google play 14

App control - Introduction 15, 17, 18

3 Info 18

4 Schedule 18

5 Main menu 19

Change a setting 15

Change the hot water temperature 17

Change the operating mode 17

Menu navigation 15

C

Control - Introduction 8

Additional heater 11

Display 8

Error light 12

Lights 8

Operating mode 9

Restart 10

H

Heat pump function 6

I

Important information 4

Installation data 4

Serial number 5

M

Maintenance 20

Regular checks 20

Cleaning the floor drain 20

Cleaning the product 20

Saving tips 21

T

Troubleshooting 23

Help 23

No hot water 24

Safety breaker 25

METRO THERM A/S
RUNDINSVEJ 55
DK3200 HELSINGE
SOS@METROTHERM.DK
WWW.METROTHERM.DK

08:980-2609