

User Guide

# Mega



The English language is used for the original instructions.  
Other languages are a translation of the original instructions.  
(Directive 2006/42/EC)

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## 1 Foreword

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### **Buying a heat pump from Thermia is an investment in a better future.**

A Thermia heat pump is classed as a renewable energy source, which means that it is considerate of our environment. It is a safe and convenient solution that provides heating, hot water and, in certain cases, cooling for your home at a low cost.

We thank you for the confidence that you have shown in us by buying a heat pump from Thermia . We hope that you will benefit from it for many, many years to come.

### **With best wishes**

### **Thermia heat pumps**

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## 2 Safety precautions

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### 2.1 Symbols in documents

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The instructions contain different warning symbols, which, together with text, indicate to the user that there are risks involved with actions to be taken.

The symbols are displayed to the left of the text and three different symbols are used to indicate the degree of danger:

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#### **Danger**



Indicates an immediate danger that leads to fatal or serious injury if necessary measures are not taken.

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#### **Warning**



Risk of personal injury!  
Indicates a possible danger that can lead to fatal or serious injury if necessary measures are not taken.

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#### **Caution**



Risk of installation damage.  
Indicates a possible hazard that can lead to item damage if necessary measures are not taken.

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A fourth symbol is used to give practical information or tips on how to perform a procedure.



Information regarding making the handling of the installation easier or a possible operational technical disadvantage.

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### 2.2 Important information

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#### **Warning**



The front of the heat pump must only be opened by qualified installers.

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**Warning**

This appliance can be used by children aged 8 years and above, and by persons with reduced physical, sensory or mental capabilities or lack of experience or knowledge, provided that they are supervised or have been instructed in the safe use of the appliance and understand the hazards involved.  
Cleaning and user maintenance must not be carried out by children, except under adult supervision.

**Warning**

Children are not permitted to play with the product.

The system can be considered maintenance-free but certain checks are necessary.  
Contact your installer for any service work.

**2.3 Installation and maintenance****Warning**

Only qualified installers may install, operate and carry out maintenance and repair work on the heat pump

**Warning**

Only qualified electricians may modify the electrical installation.

**Warning**

Only qualified refrigeration technicians may work on the refrigerant circuit

## 2.4 System modifications

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Only qualified installers may carry out modifications on the following components:

- The heat pump unit
- The pipes for the refrigerant, brine and water
- The power supply
- The safety valves

It is not permitted to carry out construction installations that may affect the operational safety of the heat pump.

## 2.5 Safety valves

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### Warning



Never block the connection to the safety valves' overflow pipes.

The following safety precautions apply to the hot water circuit's safety valve with corresponding overflow pipe:

- Water expands when it is heated, which means that a small amount of water is released from the system via the overflow pipe.
- The water that exits the overflow pipe can be hot!  
Therefore, allow it to flow to a floor drain to prevent any risk of burning yourself.

## 3 About your heat pump

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### 3.1 Product description

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The Mega heat pump is a heating system for heating and, if an external water heater is installed (accessory), for hot water production. It has a compressor which is customised for heat pumps.

The Mega heat pump is equipped with control equipment which is presented in a graphic display. The control equipment is also prepared for monitoring via the internet.

Heating is provided to the building via a water-borne heating system. The heat pump supplies as much of the heat demand as possible before auxiliary heating is engaged to assist.

The Mega heating unit consists of two basic components:

#### **Heat pump unit**

The heat pump consists of:

- Scroll compressor
- Stainless steel heat exchanger
- Circulation pumps for collector system and heating system

#### **Control equipment**

The control equipment controls the incoming components of the heating appliance (compressor, circulation pumps, auxiliary heating and exchange valve) and keeps track of when the pump should start and stop, as well as whether it should produce heating for the building or hot water.

The control equipment consists of:

- Colour touch screen and relay module
- Temperature sensors (outdoor, supply line, return line, brine and hot water)

### 3.2 Water heater

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The Mega heat pump can also produce hot water for an external water heater. The temperature of the water supplied to the water heater is controlled by the start and stop temperature.



## 4 Control system

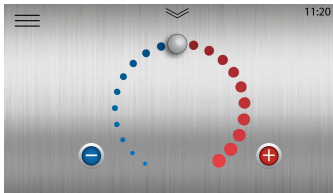
The heat pump has an integrated control system which automatically calculates the heat demand in the building to ensure that the correct amount of heat is produced and emitted when necessary. A touch screen is connected to the control system.

The display is used for:

- making settings such as:
  - setting heating
  - adjusting the heat curve
- displaying operating data such as:
  - temperatures
  - operating time
  - version information



### 4.1 Display description

#### Start screen




The screen which appears when the system is up and running.

Here you can also carry out comfort adjustment:

1. Drag clockwise or anticlockwise to raise or lower the offset. Each point represents an increase/decrease of 1°C.
2. Alternatively, press  or 

#### Menu screen

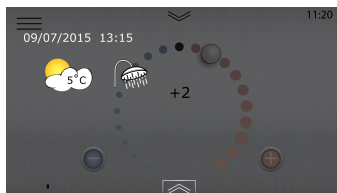



This screen appears when you have pressed  on the start screen.

## Drop down view

There is a quick link to system information. Press  at the top of any screen .

This screen appears where system information is presented.



Press  at the bottom of the drop down view to hide the screen.

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## 5 Settings and adjustments

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A qualified installer sets the heat pump's basic settings upon installation. The adjustments that may be made by the installer/user are described below.



Never change control unit settings unless you are aware of what effects the changes may have.  
Make a note of the default setting.

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### 5.1 Adjusting the indoor temperature

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The heat curve is a graph that compares the outdoor temperature with the supply temperature. The colder the outdoor temperature is, the more heat is supplied to the heating system. The heat curve is adjusted during installation. It must however be re-adjusted later to obtain a pleasant indoor temperature in all weather conditions.

**For an explanation of the factory pre-set heat curve, see *Adjusting the Heat Curve*.**

At an outdoor temperature of 0°C the supply temperature should be 40°C. Note that this is only a benchmark. There are radiator systems, floor heating systems and other types of heating system which require either lower or higher temperatures.

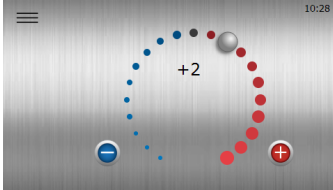
At outdoor temperatures below 0°C, supply line water hotter than 40°C is supplied to the radiators. Supply line water colder than 40°C is supplied if the outdoor temperature is above 0°C.

A correctly set heat curve reduces the need for maintenance, as well as making operation more energy-efficient.



The indoor temperature is adjusted by changing the heat curve of the heat pump. This curve is the control system's tool for calculating the correct supply temperature of water for the heating system.

## Comfort adjustment, to change temperature

Comfort adjustment means moving the whole curve upwards or downwards.





Drag clockwise or anticlockwise to raise or lower the offset. Each point represents an increase/decrease of approximately 1°C on the supply line temperature.

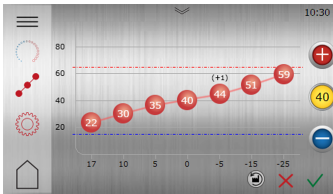
Alternatively, press  or .











**NOTE:** This option should be primarily used for temporary temperature adjustments. When permanently changing the indoor temperature for a more precise indoor climate, change the heat curve settings.

## 5.2 Adjusting the Heat Curve

The Curve indicator has two modes that can be toggled by pressing the Curve indicator symbol.

-  When lit, the curve is adjusted as one unit.
-  When not lit, individual curve points can be moved separately.







1. Press  on the Start screen to open the Menu screen.
2. Press .
3. Press  if the Heat curve is not shown.
4. There are two ways of adjusting the heat curve:
  - If the Curve indicator  is lit, press  or  to adjust the entire curve.
  - Or:**
  - If the Curve indicator  is not lit individual points can be moved separately by pressing  and  to the desired temperature.
5. Confirm the new selection by pressing .

## 5.3 Heating Settings

In Heating settings, you can set seasonal stop and min/max supply line temperature.

Default value is 1x.









1. Press  on the Start screen to open the Menu screen.
2. Press .
3. Press  if the Heat settings window is not shown.
4. Make the desired changes.
5. Confirm settings by pressing .

## 5.4 Activate / deactivate functions



Functions not activated/enabled from factory must be enabled and activated in the control system before they can be used.

Below is an example where the Distribution Circuit function is deactivated. Other functions are activated in a similar way.



1. Press  in the upper left corner of the Start screen.
2. Press .
3. Continue with  to the menu page to activate/deactivate Distribution Circuit 1.
4. Press  to activate Distribution Circuit 1 or press  to deactivate Distribution Circuit 1.
5. Press  to return to the Menu screen.

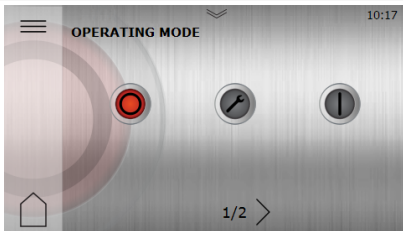
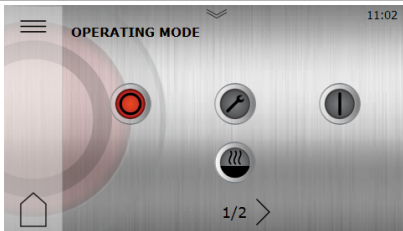


## 5.5 Selecting operating mode






The heat pump has a starting time of about 5 - 10 minutes.  
The delay does not apply to the auxiliary operating mode.

Set the heat pump to the desired operating mode in the menu:



1. Press  on the Start screen to open the Menu screen.
2. Press . A new window opens.
3. Press the appropriate symbol for the desired operating mode.

Symbol	Description
	<p>Operating mode <b>Off</b>. All functions off. Components inside are still current carrying.</p>
	<p>Operating mode <b>Off</b>. All functions off. Auxiliary heater enabled but not activated. Components inside are still current carrying.</p>
	<p>Operating mode <b>Service</b>. All internal functions off. Components inside are still current carrying. External functions are on. In this operating mode the heat pump is deactivated and will not produce hot water or heating.</p>
	<p>Operating mode <b>Auxiliary heater + service</b>. External functions are on. Auxiliary heater enabled but not activated. In this mode the heat pump (compressor) is disabled, but the unit can produce heating and hot water with the internal immersion heater (and/or external auxiliary heater if activated). This operating mode must be used if heating and/or hot water is needed, but the compressor must be disabled e.g. when the brine circuit is not available or installed.</p>

Symbol	Description
	<p>Operating mode <b>Auxiliary heater + service</b>.</p> <p>External functions are on.</p> <p>Auxiliary heater enabled and activated.</p> <p>In this mode the heat pump (compressor) is disabled, but the unit can produce heating and hot water with the internal immersion heater (and/or external auxiliary heater if activated).</p> <p>This operating mode must be used if heating and/or hot water is needed, but the compressor must be disabled e.g. when the brine circuit is not available or installed.</p>
	<p>Operating mode <b>On</b>. All activated functions are on.</p> <p>In this operating mode, functions enabled in Settings can be switched activated or deactivated.</p> <p>Press &gt; to go to page 2 where functions can be activated/deactivated.</p> <p>See the example in the table below.</p>
	<p>Operating mode <b>On</b>. All activated functions are on.</p> <p>In this operating mode, functions enabled in Settings can be switched activated or deactivated.</p> <p>Auxiliary heater enabled but not activated.</p> <p>Press &gt; to go to page 2 where functions can be activated/deactivated.</p> <p>See the example in the table below.</p>



The list below shows examples of selected functions on page 2 in Operating mode. Functions not activated from factory must be enabled in Settings before they can be activated and used.

Symbol	Description
 A simple line drawing of a house with three wavy lines inside, representing heat or space heating.	Operating mode <b>Heat production</b> . Space heating is permitted.
 A line drawing of a showerhead with water droplets falling from it, representing hot tap water.	Operating mode <b>Hot tap water</b> . Hot tap water production is permitted.



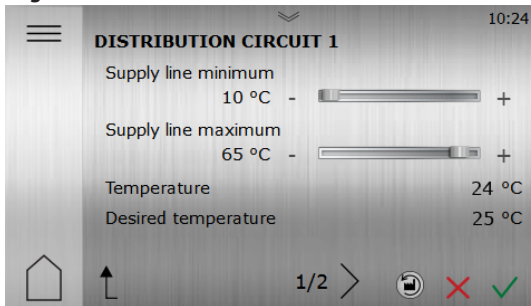
## 5.6 Distribution circuits

Distribution circuit 1 is available from factory. Distribution circuits 2-5 require an expansion module, separately sold as accessory.

Up to 5 distribution circuits can be active simultaneously.

Example of settings for distribution circuit 1:

1. Press in the upper left corner of the Start screen
2. Press
3. Press text for desired distribution circuit.
4. **Page 1:**

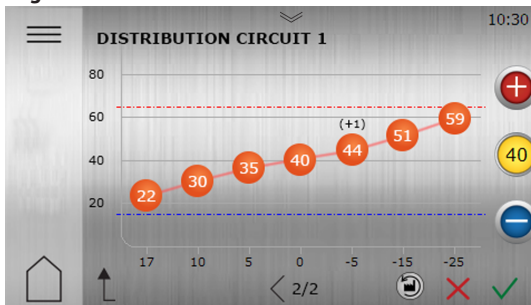


Settings for max/min supply temperature.

NOTE! The distribution circuit settings can not exceed the values set in the main heat curve.

Confirm the settings with







5. **Page 2:**



Settings for supply temperature at different outdoor temperatures.



NOTE! The distribution circuit settings can not exceed the values set in the main heat curve.

The temperature can be adjusted in two ways:


- If the Curve indicator  is lit, press  or  to adjust the entire curve.
- Press and drag individual curve points:
  - If the Curve indicator  is not lit individual points can be moved separately by pressing  and  to the desired temperature.

Confirm the settings with 



The Curve indicator has two modes that can be toggled by pressing the Curve indicator symbol.

-  When lit, the curve is adjusted as one unit.
-  When not lit, individual curve points can be moved separately.

## 5.7 System information

Check applicable operating data described in the tables below. The information can be found in the sub-menu System information 

Select System information on the Menu screen:

1. Press  on the Start screen to open the Menu screen.
2. Press System information 

### Operating data

Sensor	Explanation
<b>Outdoor</b>	Shows the temperature on the outdoor sensor.
<b>System supply line</b>	Shows the temperature on the system supply line.
<b>Desired system supply line</b>	Shows the current system requirement value.
<b>Hot water</b>	Shows the temperature of the hot water sensor, if hot water production is permitted.
<b>Supply line (HP)</b>	Shows temperature of outgoing radiator temperature from heat pump.
<b>Return line (HP)</b>	Shows temperature of incoming radiator temperature to heat pump.
<b>Brine in</b>	Shows the current temperature of brine in to the heat pump.
<b>Brine out</b>	Shows the current temperature of brine out from the heat pump.

### Operating time

	Explanation
<b>Compressor run time</b>	Shows the number of hours that the compressor has been in operation.
<b>Tap water run time</b>	Shows the number of hours that has been used for hot water production.
<b>External heater run time</b>	Shows the number of hours that the external heater has been activated.

### Version information

In the menu Operating data, version information about the control system software is shown.



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This information is useful when contacting support.

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**6 Default settings in the control unit**

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The left column in the table below shows the parameters that can be adjusted by the user.

The middle column shows the factory settings.

The right column shows the settings made by the installer when the heat pump was installed

Parameter	Factory setting	Any customer-specific settings
<b>Heat curve</b>	40°C	
<b>Operating mode</b>	Off	
<b>Min desired system supply temp.</b>	10°C	
<b>Max desired system supply temp.</b>	55°C	
<b>Seasonal stop</b>	17°C	

## 7 Regular checks

### 7.1 Alarms

If the display shows a green screen saver, the system is OK and no actions are required.

There are three types of alarms:

- **Class A:** Stops the heat pump. The alarm must be acknowledged. The display shows a red screen saver.
- **Class B:** Does **not** stop the heat pump. The alarm must be acknowledged. The display shows a yellow screen saver.
- **Class C:** Temporary functional deviation, no action required. Does **not** stop the heat pump. The alarm is self-acknowledging. The display shows a yellow screen saver during the functional deviation.

If an A-alarm is active, the heat pump compressor is disabled, and the hot water production will stop to provide a notification.

If the alarm can not be acknowledged, and hot water production is needed, it is normally possible to change the operating mode to Auxilliary heater + service, see section about "operating mode".

Press the screen, and the following window will appear:

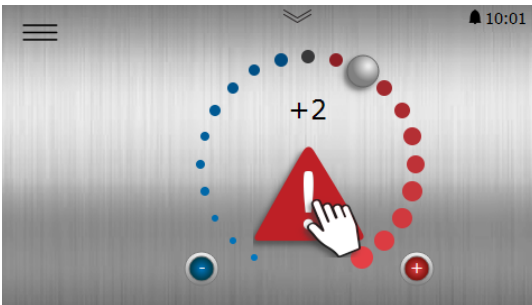


Fig. 1: Start screen with a class A alarm

Press  A new window opens, showing the alarm which has been triggered.




Fig. 2: Alarm example

Example of alarm messages:

Message	Meaning / Class	Corrective action
<b>High pressure</b>	The heating circuit is the heat pump's high pressure circuit. Class A	Check and, if necessary, rectify the level of the circuit. Acknowledge the alarm as described below.
<b>Low pressure</b>	The coolant circuit is the heat pump's low pressure circuit. Class A	Check the circuit's level. Acknowledge the alarm as described below. Contact a service technician if the alarm reoccurs.
<b>All other messages</b>	Acknowledge the alarm as described below. If the alarm remains or reoccurs, contact a service technician.	

### Acknowledging alarms

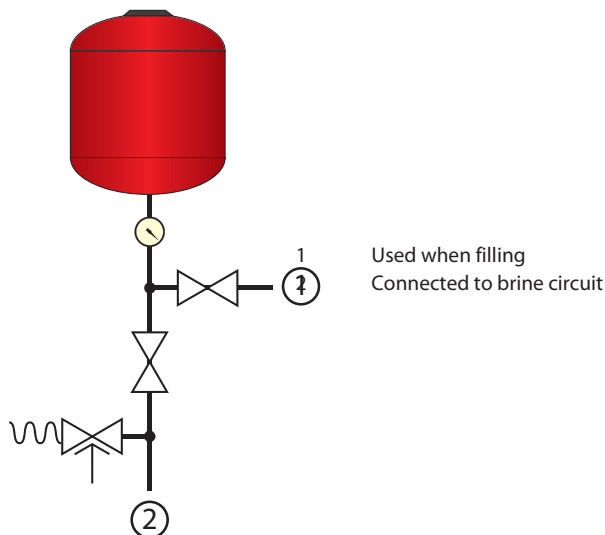
Press  to reset all alarms.

Contact the installer if alarms are persisting and/or reoccurring.

## 7.2 Checking the brine circuit pressure

The brine circuit must be filled with the correct amount of fluid; otherwise the installation may become damaged. Ensure that the system has the necessary pressure, but not above the maximum pressure of 6 bar.

For filling brine, see the commissioning guide.



### 7.3 Check the water level in the heating circuit

The system pressure of the installation must be checked at least twice per year. Ensure that the heating system has the necessary pressure, but max 6 bar.

You can use normal tap water when topping up the heating system. In certain exceptional cases the water quality may be unsuitable for filling the heating system (corrosive or calciferous water). In case of doubt, contact your installer.

**NOTE:** Do not use any additives for treatment of the water in the heating system, unless you have a written consent from Thermia!

### 7.4 Checking safety valves

The safety valves for the installation must be checked at least four times a year to prevent lime deposits clogging the mechanism.

The safety valve of the water tank protects the enclosed heater against over pressure. It is mounted on the cold water inlet line. If the safety valve is not checked regularly, there is a risk that the water tank may sustain damage. It is quite normal for the safety valve to let out small amounts of water when the water tank is being charged, especially if a lot of hot water was used previously.

The safety valves can be checked by turning the cap a quarter of a turn clockwise until water comes out of the overflow pipe. If a safety valve does not work properly, it must be replaced. Contact your installer.

The opening pressure of the safety valves is not adjustable.

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**7.5 In the event of leakage**

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In the event of leakage in the hot water pipes between the heat pump and water taps, close the shut-off valve on the cold water inlet immediately. Then contact your installer.

In the event of leakage in the brine circuit, turn off the heat pump and call your installer immediately.

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**7.6 Cleaning the filters for the heating and brine circuits**

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Contact your installer if you are not sure how to perform the filter cleaning.



The heat pump must be switched off at the main switch before cleaning can be started.



The cleaning of filters may cause air ingress to the brine or heating system that may cause operational disturbances.



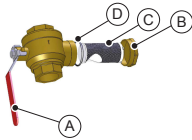
Check and clean the filters at least twice the first year after installation. The interval can be extended if there is evidence that cleaning twice a year is not necessary.



Have a cloth at hand when opening the filter cover as a small amount of water usually escapes.

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- |   |              |
|---|--------------|
| A | Shut-off tap |
| B | Cover        |
| C | Filter       |
| D | O-ring       |

Clean the filter as follows:

1. Switch off the heat pump.
2. For the brine circuit filter - remove the insulation around the filler cock.
3. Turn the shut-off tap (A) to the closed position.
4. Unscrew the cover (B) and remove it.
5. Remove the filter.
6. Rinse the filter (C).
7. Reinstall the filter.
8. Check that the O-ring (D) on the cover is not damaged.
9. Screw the cover back into place.
10. Turn the shut-off tap to the open position.
11. For the brine circuit filter - reinstall the insulation around the filler cock.
12. Start the heat pump.

## 7.7 CO<sub>2</sub> equivalent

















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The refrigerant circuit is hermetically sealed and is subject to the F-gas directive.

According to EC regulation 517/2014, for heat pumps containing 10 tonnes of CO<sub>2</sub> equivalent or more, with hermetically sealed fluorinated greenhouse gases, an annual inspection of leakage must be carried out by qualified personnel. This will affect both Mega XL and Mega L heat pumps.

## 8 Appendix

### 8.1 Display symbol description

Symbol	Description
	Opens the menu screen from the start screen. Return to the menu screen from any sub-menu.
	Confirm setting. A change which has been made is confirmed and becomes the new setting.
	Ignore change. Changes which are not confirmed with  are reset to the previous value.
	To browse backwards through pages and sub-menus.  means that you are on page 2 of 3.
	To browse forwards between pages and sub-menus.  means that you are on page 2 of 3.
	Home. Back to start screen.
	Alarm. Press on the symbol to go to the alarm window. The window displays the alarm history.
	Alarm. Indicates that there are active class A or class B alarms. Press on the symbol to go to the alarm window.
	Select operating mode. Press on the symbol to select operating mode. A new window opens for selection of operating mode.
	Operating data. Opens a number of sub-menus which show current operating data such as: <ul style="list-style-type: none"> <li>▪ Outdoor temperature</li> <li>▪ etc.</li> </ul>
	Factory reset. Resets values on the current menu page to factory values.
	Settings. Opens a number of sub-menus such as: <ul style="list-style-type: none"> <li>▪ Language</li> <li>▪ System settings</li> </ul>
	Back. Back in the menu tree

Symbol	Description
	<p>Push-pull control. Used for raising or lowering values. Press on the "handle" and push it to the sides.</p> <p>Alternatively, press  or </p>
	<p>Activation/deactivation of push-pull control or switch functions/equipment on/off. Press on the symbol to change mode. The symbol  indicates activated function/equipment switched on.</p>
	<p>Activation/deactivation of push-pull control or switch functions/equipment on/off. Press on the symbol to change mode. The symbol  indicates deactivated function/equipment switched off.</p>
	<p>Certain menu selections are locked to prevent unauthorised use. An authorisation code is required.</p>

## 8.2 Calculating heat production

The heat curve settings are adjusted by the installer during installation/commissioning, but fine tuning to the specific house conditions and individual preferences may be required after some time to obtain a pleasant indoor climate in all weather conditions. A correctly set heat curve reduces maintenance and saves energy. The indoor temperature is adjusted by changing the heat pump's heat curve, which is the control system's tool for calculating what the supply temperature should be for water that is sent out in the heating system.

The heat curve calculates the supply temperature depending on the outdoor temperature. The lower the outdoor temperature, the higher the supply temperature. In other words, the supply temperature of the water fed to the heating system will increase linearly as the outdoor air temperature falls.

## 8.3 Heat curve

### The set value 40 for heat curve

The heat curve number is indicating the temperature of the water supplied to the heating system ("supply line temperature") at an outdoor temperature of 0 °C.

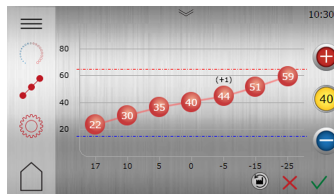


Fig. 3: Heat curve 40

The factory settings for the heat curve before adjustment is "40". This setting is suitable for many heating systems with radiators, but generally unsuitable for systems with floor heating. For systems with underfloor heating a standard heat curve setting is "30".

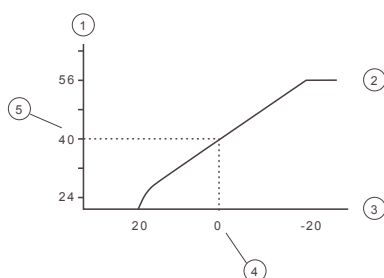
Combination systems with both underfloor heating and radiators may need different heat curves. This can be obtained with, for example, an additional distribution circuit if that has been prepared by the installer. See the Distribution Circuit chapter.

The heat curve provides very good adjustment possibilities and may also be further customized to individual needs at seven different outdoor temperatures.

If a room sensor is installed (accessory), this will enhance the control of how warm the water supplied to the heating system should be based on the measured indoor temperature.

To ensure that the supply line temperature is not too warm (or cold) for the heating system, max and min supply line temperature boundaries should be set. See chapter Heating Settings (Supply line min and max) in this appendix.


The simplified working principle for the heat curve is as follows:



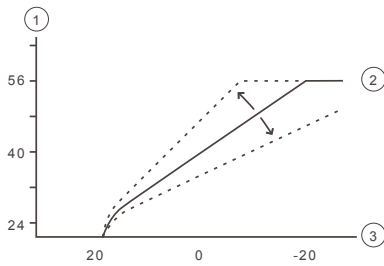
- 1 Temperature (°C)
- 2 Maximum setpoint value
- 3 Outdoor temperature (°C)
- 4 0°C
- 5 Set value (standard 40°C).

In the event of outdoor temperatures below 0°C, a higher setpoint value is calculated and in the event of outdoor temperatures greater than 0°C, a lower setpoint value is calculated.

## Moving the heat curve as one unit

When the curve indicator  is lit, the curve is moved as one unit and the slope of the curve is adjusted.

The simplified working principle for this is as follows:



- 1 Temperature (°C)
- 2 Maximum setpoint value
- 3 Outdoor temperature (°C)

If the curve is moved upwards, the heat curve will become steeper and if the curve is moved downwards, it will become flatter.

The most energy efficient and cost effective setting is achieved by changing the curve settings which leads to fewer starts and longer operating times.

## Symbol description

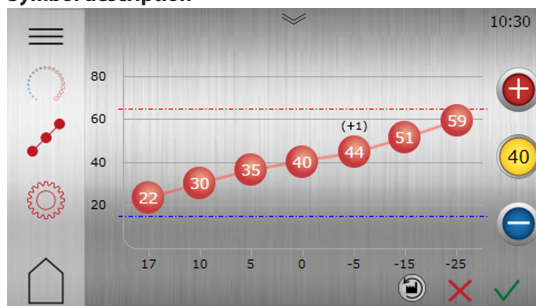

















Fig. 1: The figure shows the standard curve 40

Symbol	description
(+2) 	Shows when the curve is comfort-adjusted. The digit shows how much.
	Shows that the <b>comfort adjustment</b> window is inactive. Press on the symbol to open comfort adjustment.
	Shows that the <b>comfort adjustment</b> window is active.
	Shows that the <b>heat curve</b> window is inactive. Press on the symbol to open heat curve settings.
	Shows that the <b>heat curve</b> window is active. This window is the default window.
	Shows that the <b>heating settings</b> window is inactive. Press on the symbol to open heating settings.
	Shows that the <b>heating settings</b> window is active.
	Press  to reset to factory settings.
	When the curve indicator is lit, press  or  to move whole curve upwards or downwards.
	When the curve indicator is not lit, press  or  to move individual curve points upwards or downwards.

## 8.4 Heating Settings

For a temporary increase or reduction, adjust the Comfort setting instead. See Comfort settings in this appendix.

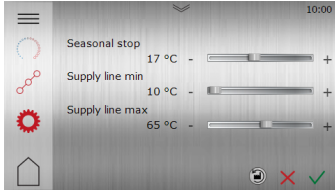


Fig. 5: Heating Settings

### Seasonal stop

*Seasonal stop* is at which outdoor temperature the heat pump will be blocked, or allowed, to produce heat.

The time it takes for the heat pump to switch from, or to, the heat season mode when it reaches the seasonal stop value is determined by a calculation in the heat pump control system. E.g. the bigger heat increase of the outdoor temperature over time, the faster the heat pump will decide to stop producing heat on the supply line.

The seasonal stop is set to 17 °C by default.

### Supply line min and max

The MIN and MAX values are the lowest, respectively highest set point values that are allowed for the supply temperature.

*Supply line min* is the minimum permitted supply temperature, if the temperature for seasonal stop has been reached and the heat pump has stopped.

Adjusting the minimum and maximum supply temperatures is particularly important if your home has under-floor heating.

If your house has underfloor heating and parquet floors, the supply line temperature must not exceed 45°C. Otherwise the floor might get damaged. If you have under floor heating and stone tiles, the MIN value should be 22-25°C, even in summer when no heating is required. This is to achieve a comfortable floor temperature.

If your house has a basement, the MIN value should be adjusted to a suitable temperature for the basement in summer. A condition for maintaining the heat in the basement in the summer is that all radiators have thermostat valves that switch off the heat in the rest of the house. It is extremely important that the heating system and the radiator valves are tuned correctly. Also remember that the value for seasonal stop needs adjusting upwards for summer heating.

## 8.5 Comfort settings

If you temporarily wish to increase or reduce the indoor temperature.

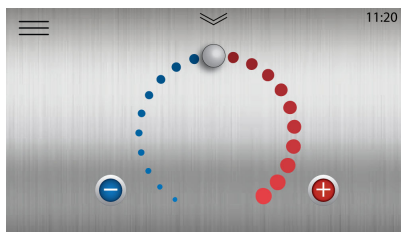
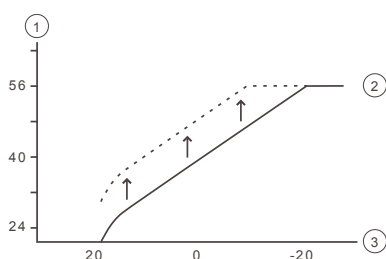


Fig. 6: Comfort Settings

When changing the comfort setting, the angle of the curve on the system's heat curve does not change, instead the entire heat curve is moved by 3°C for every degree change of the comfort setting. The reason that the curve is adjusted 3°C is that an approximate 3°C increase in supply temperature is usually needed to increase the indoor temperature 1°C.

The simplified working principle for Comfort Settings is as follows:



- 1 Supply temperature (°C)
- 2 Maximum supply temperature
- 3 Outdoor temperature (°C)

If a larger change than +/- 3 steps on the comfort wheel is required to obtain the desired indoor temperature, or corrective adjustments are needed at different outdoor temperatures, the more advanced heating settings may need adjustments. See the Heating Settings chapter in this Appendix for details.

Please note that lowering the comfort adjustments too low may cause very low indoor temperatures. Also be aware that it may take up to one day before the result of the changes you make have full impact, due to the space heating system inertia.

Contact your installer if you are uncertain about how to adjust the heat pump settings.



## 9 Checklist

### Location

- Surface adjustment
- Drainage

### Pipe installation, hot and cold side

- Pipe connections in accordance with the diagram
- Flexible hoses
- Expansion and bleed vessel
- Filter, hot and cold side
- Pipe insulation
- Open radiator valves
- Leak test, hot and cold side

### Electrical Installation

- Circuit breaker
- Fuse
- Positioning of the outdoor sensor

### Commissioning

- Bleeding, hot and cold side
- Settings control system
- Manual test components
- Manual test different operating conditions
- Noise check
- Function test safety valves
- Function test mixer valve
- Trimming the heating system

### Customer information

- Contents of this manual
- Safety precautions
- Controller, function
- Settings and adjustments
- Regular checks
- Reference to service requirement
- Warranties and insurances

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## 10 Installation carried out by:

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### Piping installation

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▪ Date:

▪ Company:

▪ Name:

▪ Tel. No:

### Electrical Installation

---

▪ Date:

▪ Company:

▪ Name:

▪ Tel. No:

### System adjustment

---

▪ Date:

▪ Company:

▪ Name:

▪ Tel. No:





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