

User Guide

Mega 2020



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

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 sustainable heating, hot water and, in certain cases, cooling for your home at a low energy consumption.

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

2 Safety precautions

2.1 Symbols in documents

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:

Danger



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

Warning



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

Caution



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

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.

2.2 Important information

Warning



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

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

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

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

3.1 Product description

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

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

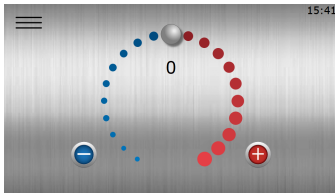
The heat pump has an integrated control system which automatically calculates the heat demand in the building to ensure that the correct amount of heat is produced and emitted when necessary. A touch screen is connected to the control system.

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

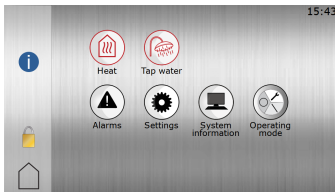
Start screen




From here you can carry out an indoor 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

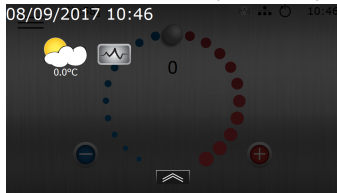



Depending on what functions are installed and enabled in the system, different icons will appear in the start menu, in which settings can be accessed by pressing the desired icon. The picture above is only an example.

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

Drop down view

There is a quick link, easy accessible, to view useful information about the heat pumps current status etc. Swipe downwards from the top of the display, in any view, to access. The following screen appears:



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

5 Settings and adjustments

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.

5.1 Adjusting the indoor temperature

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*.

The following examples are based on a heat curve set to 40:

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.

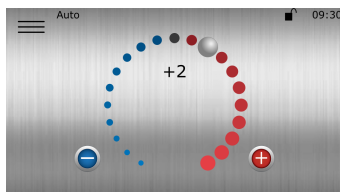
At outdoor temperatures below 0°C, supply line water hotter than 40°C is supplied to the radiators. Supply line water colder than 40°C is supplied if the outdoor temperature is above 0°C.

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.



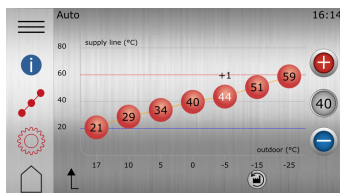
Drag clockwise or anticlockwise to raise or lower the offset. Each point represents an increase/decrease of approximately 1°C on the supply line temperature.











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

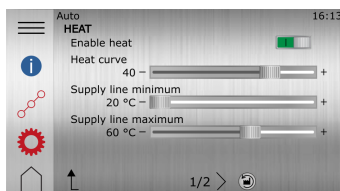
The Curve indicator has two modes that can be toggled by pressing the Curve indicator symbol.







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 the desired individual point and pressing  and  to the desired temperature.
5. Confirm the new selection by pressing .

5.3 Heating Settings






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



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 Deactivate functions

Below is an **example** where the **Heat** function is deactivated.
Other functions are deactivated in a similar way.



1. Press  in the upper left corner of the Start screen.
2. Press the icon for **Heat**  to enter the settings menu for **Heat**.
3. Press  to deactivate **Heat** function.
4. Press  to return to the Menu screen.
5. The following icon in the menu will indicate that the function is turned off: 

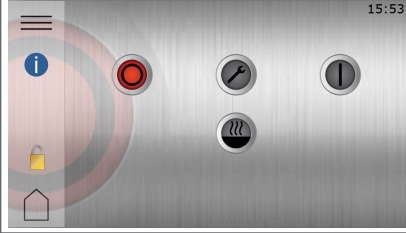
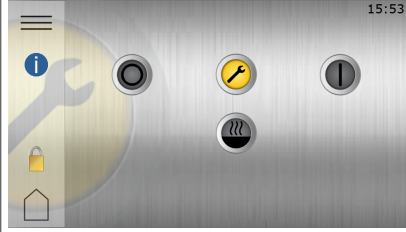
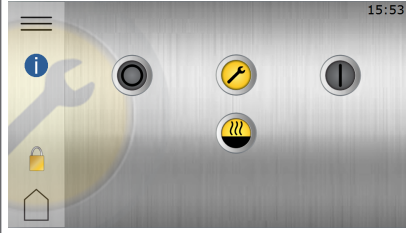


5.5 Selecting operating mode




In order for space heating to be allowed to start, the start limit for "Seasonal integral" needs to be fulfilled.
See the table for "Operating data" for values and ranges.

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 Off.</p> <p>All functions are off. Components inside the heat pump are still current carrying.</p>
	<p>Operating mode Service.</p> <p>In this operating mode the heat pump is deactivated and will not produce hot water or heating. All internal functions off. Components inside are still current carrying. External functions and secondary units (if connected) are on.</p>
	<p>Operating mode Auxiliary heater only. </p> <p>External functions are on. Compressor is off, thus unable to produce any heating or tap water. This button is only visible if auxiliary/immersion heater(s) are installed in the system. External auxiliary heater(s) can NOT produce hot tap water.</p> <p>Any secondaries connected will be restricted to produce heating and hot water.</p>
	<p>Operating mode On.</p> <p>All activated functions are on.</p>

5.6 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

What is shown in this view is dependent on what is connected to the respective heat pump.

Displayed text	Explanation
Outdoor	Shows the temperature on the outdoor sensor.
System supply line	Shows the temperature on the system supply line.
Desired system supply line	Shows the current system requirement value.
Hot water	Shows the temperature of the hot water sensor, if hot water production is permitted.
Supply line (HP)	Shows temperature of outgoing radiator temperature from heat pump.
Return line (HP)	Shows temperature of incoming radiator temperature to heat pump.
Brine in	Shows the current temperature of brine in to the heat pump.
Brine out	Shows the current temperature of brine out from the heat pump.
Seasonal integral	Shows the accumulated difference between the outdoor temperature and the set "seasonal stop" value. Heating season: start -100, stop +100 Cooling season: start +100, stop -100

Operating time

	Explanation
Compressor run time	Shows the number of hours that the compressor has been in operation.
Tap water run time	Shows the number of hours that has been used for hot water production.
External heater run time	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. This information is useful when contacting support.

6 Default settings in the control unit

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
Heat curve	40°C	
Operating mode	Off	
Min desired system supply temp.	10°C	
Max desired system supply temp.	55°C	
Seasonal stop	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 different 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 green screen saver during the functional deviation.
- **Class D:** Alarm visible only in Genesis primary/secondary systems. Information from Genesis secondary heat pump(s) to primary heat pump. The display shows a yellow screen saver. Must be acknowledged.
- **Class E:** Alarm visible only in legacy primary/secondary systems. Information from legacy secondary heat pump(s) to primary heat pump. The display shows a yellow screen saver. Must be acknowledged.

If an A-alarm is active, the heat pump compressor is disabled, and the hot water production will stop. This is to draw attention to the fact that there is an alarm that must be resolved before the heat pump can regain normal functionality.

If the alarm can not be acknowledged, and auxiliary heater is installed and activated, it will automatically provide space heating if allowed.

Press the screen, and the following window will appear:

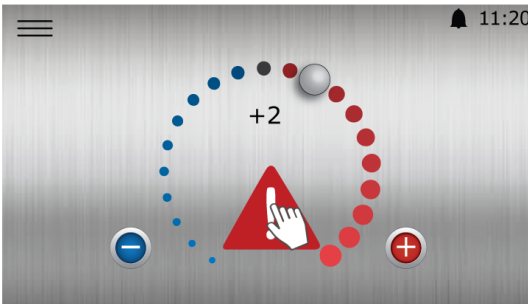



Fig. 1: Start screen with a class A alarm

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

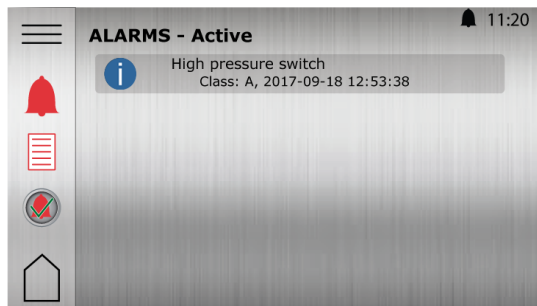



Fig. 2: Alarm example

Example of alarm messages:

Message	Meaning / Class	Corrective action
High pressure	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.
Low pressure	The brine 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.
All other messages	Acknowledge the alarm as described below. If the alarm remains or reoccurs, contact a service technician.	

Acknowledging alarms

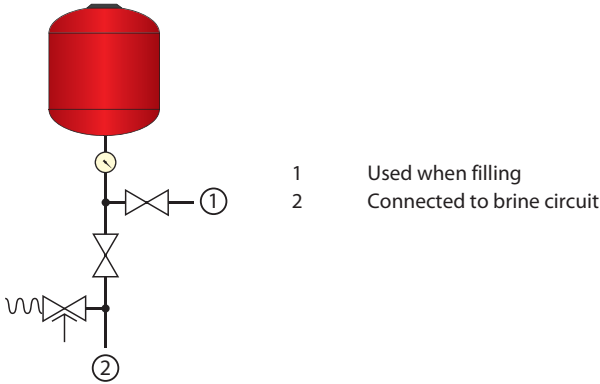
Press  to reset all alarms.

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

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.

7.5 In the event of leakage

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.

7.6 Cleaning the filters for the heating and brine circuits

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.



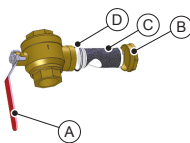
The cleaning of filters may cause air ingress to the brine or heating system that may cause operational disturbances.



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.



- 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 Maintenance check for frequency inverter

Warning



Work on the frequency inverter must be made by authorized personnel. Make sure that the main power is switched off.

Avoid dust from depositing on the drive surface, circuit boards and other electric components. These deposits act as insulation layers and hamper heat transfer to the ambient air, reducing the cooling capacity. The increased heat load causes an accelerated aging of the electrical components, thus decreasing the service life. Dust deposits that accumulate on the heat sink located on the back of the VFD will also decrease the service life of the unit.

The drive cooling fans have small bearings into which dust can penetrate and act as an abrasive. This leads to bearing damage and fan failure.

Under the conditions described above, it is advisable to clean the frequency converter during periodic maintenance. Remove dust off the heat sink and fans.

7.8 Checking high pressure switch
















The function of the high pressure switch shall be checked regularly, once a year or in accordance with applicable national directives/rules that define control of safety equipment in pressurized devices, EN-378-4.






















Contact your installer if you are not sure how to perform check

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.
	Page navigation. To browse through pages and sub-menus. Press the arrows to navigate. 2/3 means that you are on page 2 of 3.
	Home. Back to start screen.
	Information. Shows information about the respective page.
	This symbol indicates that the text that follows can be pressed to open a new view.
	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"> ▪ Outdoor temperature ▪ etc.
	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"> ▪ Language ▪ System settings
	Back. Back to previous view.

Symbol	Description
	Push-pull control. Used for raising or lowering values. Press on the "handle" and push it to the sides. Alternatively, press "+" or "-".
	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.
	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.
	Certain menu selections are locked to prevent unauthorised use. An authorisation code is required.
	Anti legionella mode. Visible in the top of the display when the heat pump is in anti legionella mode.
	Compressor mode. Visible in the top of the display when the heat pump is producing heat or hot water with the compressor. During oilboost, the compressor's own automatic maintenance function, the text "Oilboost" will be visible with the compressor symbol in the drop down menu.
	Cooling mode. Visible in the top of the display when the heat pump is in cooling mode.
	External auxiliary mode. Visible in the top of the display when the heat pump is producing heat or hot water with the external auxiliary heater.
	Idle mode. Visible in the top of the display when the heat pump has no heating, cooling or hot water demand.
	Internet connection. Visible in the top of the display when the heat pump has an internet connection.
	Network connection. Visible in the top of the display when the heat pump has a network connection.
	Pool heating mode. Visible in the top of the display when the heat pump is in pool heating mode.
	Space heating mode. Visible in the top of the display when the heat pump is in space heating mode.
	Restriction timer. Visible in the top of the display when the heat pump is in restriction to start.
	Tap water mode. Visible in the top of the display when the heat pump is in tap water heating mode.
	Virtual keyboard. Opens up a virtual keyboard. Changes must be acknowledged in the keyboard window AND in the view in which the changes are made.
	Reconnect button. Used when re-establishing connection between primary and secondary heat pump, in Primary/secondary view

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 the supply temperature for water that is sent out on 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.

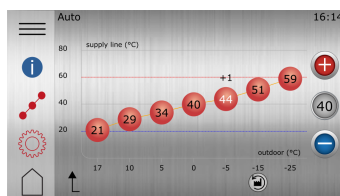


Fig. 3: Heat curve 40

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".

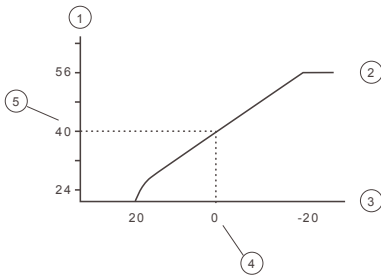
Combination systems with both underfloor heating and radiators may need different heat curves. This can be obtained with, for example, an additional distribution circuit if that has been prepared by the installer. See the Distribution Circuit chapter.

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:



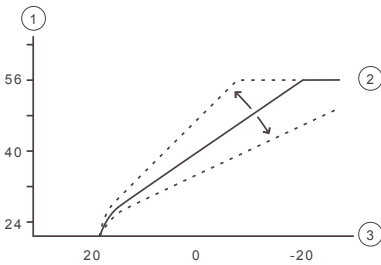
- 1 Desired system supply temperature (°C)
- 2 Maximum setpoint value
- 3 Outdoor temperature (°C)
- 4 Example: 0°C
- 5 Example: Set value (standard 40°C).

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 **40** 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 Desired system supply 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

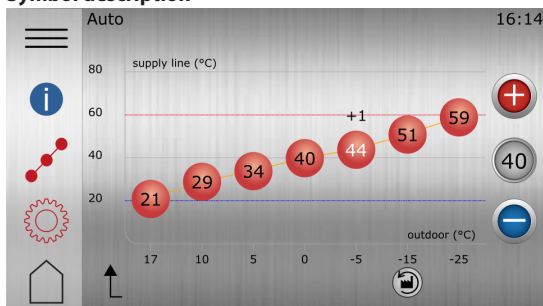
















Fig. 1: The figure shows the standard curve 40

Symbol	description
(+1) 	Shows when the curve is comfort-adjusted. The digit shows how much the deviation is from the default value.
	Information. Shows information about the respective page.
	Shows that the heat curve window is inactive. Press on the symbol to open heat curve settings.
	Shows that the heat curve window is active. This window is the default window.
	Shows that the heating settings window is inactive. Press on the symbol to open heating settings.
	Shows that the heating settings window is active.
	Press  to reset the heat curve to the 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 decrease, adjust the Comfort setting instead. See Comfort settings in this appendix.

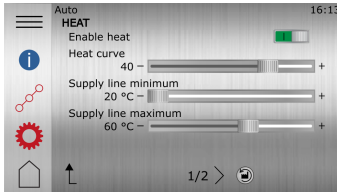


Fig. 5: Heating Settings

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 the recommended temperature from the floor manufacturer. 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 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.

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.

8.5 Comfort settings

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

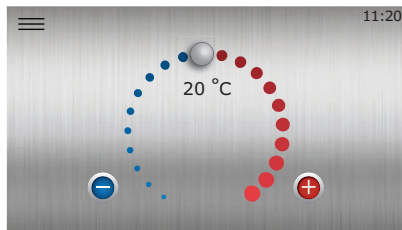
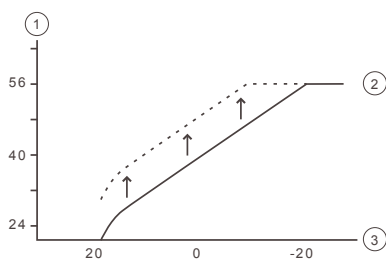


Fig. 6: Comfort Settings

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 1°C for every degree change of the comfort setting.

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 (does not apply for all models)
- 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
- High pressure switch checked

___ °C. Fill in the measured freezing point of the collector circuit's brine fluid.

Customer information

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

10 Installation carried out by:

Piping installation

- Date:

- Company:

- Name:

- Tel. No:

Electrical Installation

- Date:

- Company:

- Name:

- Tel. No:

System adjustment

- Date:

- Company:

- Name:

- Tel. No:





Thermia AB
Box 950
SE 671 29 ARVIKA
Phone +46 570 81300
E-mail: info@thermia.com
Internet: www.thermia.com

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