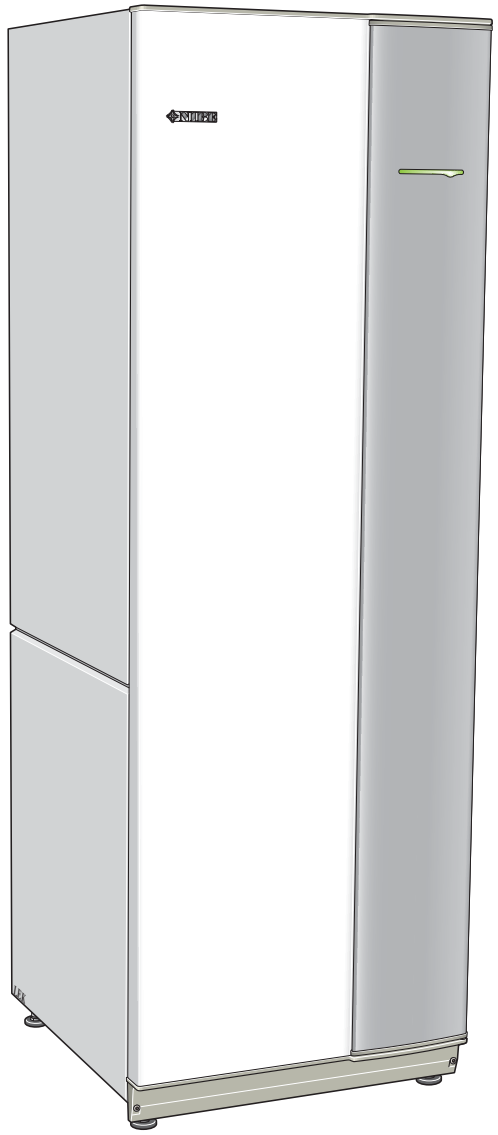
MOS GB 0844-5
NIBE FIGHTER 1250
031132

INSTALLATION AND MAINTENANCE INSTRUCTIONS

NIBE FIGHTER 1250



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Transport / Installation B
Commissioning / Adjustment C
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General

- In order to get the ultimate benefit from your NIBE FIGHTER 1250 heat pump you should read through this Installation and Maintenance Instruction.
  - Section A contains information that may be of use to the end user.
- NIBE FIGHTER 1250 is a Swedish made, quality product offering a long life span and safe operation.

Installation data

Icompleted by the installation engineer when the heat pump is installed

Serial number (95), should always be stated with all correspondence with NIBE.

— — — — — — — — — — — — — —

NIBE FIGHTER 1250

Installation date

Installer

Corrosion protection

☐Enamel ☐Stainless steel ☐Copper

Type of brine - Mixing proportion/freezing point

Active drilling depth/collector length

Settings

Menu no.	Name	Fact. Setting.	Set	EBV(2) Knob	Name	Factory set Mode	Set
1.4	Start temperature HW	47		100	Fuse	20	
1.5	Stop temperature HW	54		101	Max electrical output, mode	D	
1.6	Stop temp XHW	60		102	Max hot water temperature, mode	C (65 °C)	
1.8	Interval XHW	14					
2.1	Curve coefficient	9					
2.2	Offset heating curve	0					
2.3	Flow line temp/Min	15					
2.4	Flow line temp/Max	55					
5.6	Max return line	53					
2.7	Circ. pump controls heat	100					

Accessories

✓	Product
	Exhaust air module FLM 30
	Room sensor RG 10
	Extra shunt ESV 21
	Pool control POOL11
	Communication module RCU 11

Date _____ Signed _____

A

USER GUIDE

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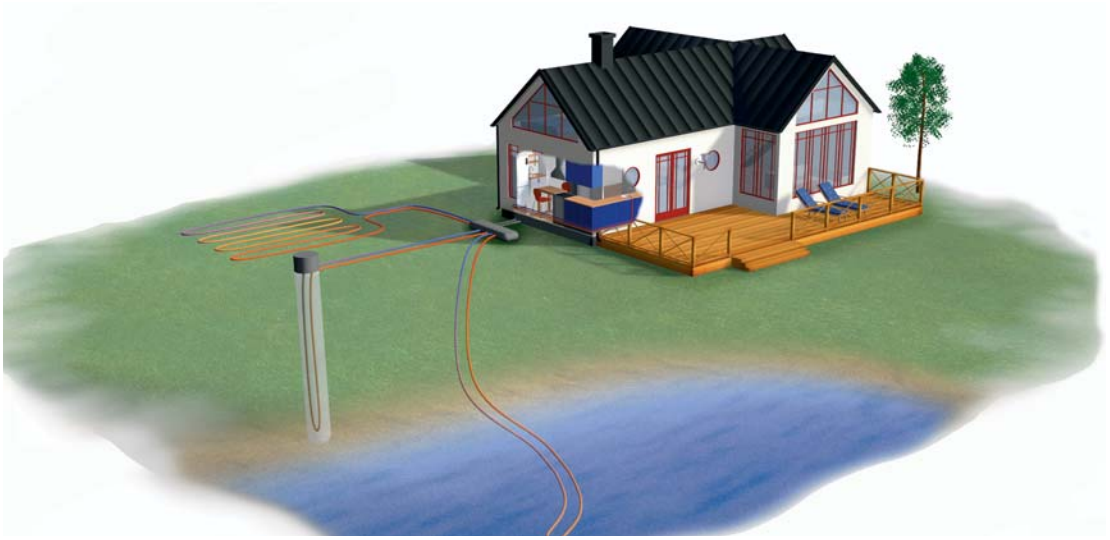
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General information about the heat pump



Product information

NIBE FIGHTER 1250 is a complete modern heat pump that offers effective technical energy saving and reduced carbon dioxide emissions. Heat production is safe and economical with integrated hot water heater, immersion heater, circulation pumps and control system.

Heat is obtained via a closed system where water mixed with antifreeze circulates in a hose out to the heat source (rock/ground/lake). As the temperature in the ground remains relatively constant throughout the year, the heat pump can efficiently recover the renewable "solar energy" that is stored there.

Features of NIBE FIGHTER 1250 :

- Optimal annual heating factor thanks to the inverter controlled compressor.
- Inverter controlled brine pump that supplies the heat pump with suitable brine flow.
- Minimal operating costs, no expensive peaks when it is cold outside. The compressor adapts as necessary.
- Integrated hot water heater.
- High temperature range
  – Flow line temperature 65 °C
  – Return line temperature 56 °C.
- Integrated clock for scheduling extra hot water and temperature lowering/increasing the flow line temperature.
- Prepared for pool heating.
- Prepared for control of two heating systems.

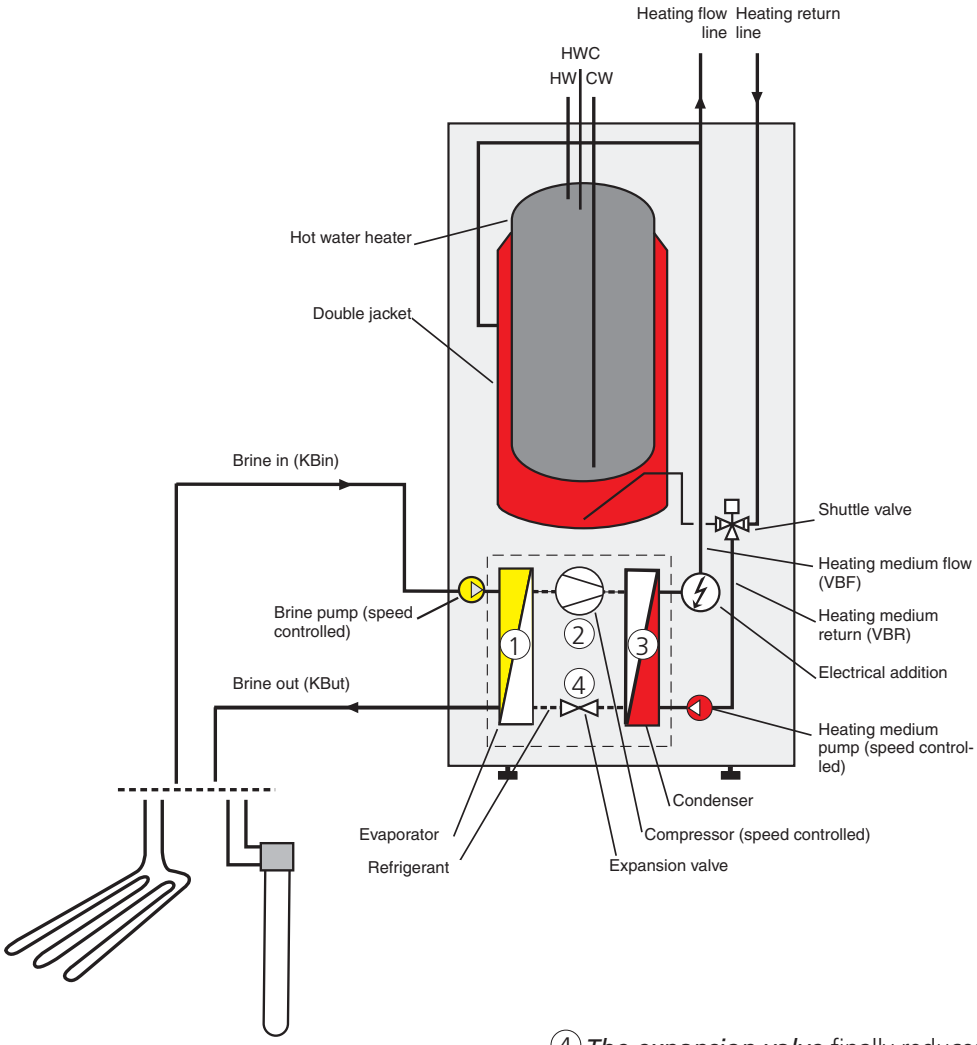
What the heat pump can do

NIBE FIGHTER 1250 is part of a new generation of heat pumps that can supply your house with cheap and environmentally friendly heat via an efficient inverter controlled compressor. The heated water circulates around the house's heating unit and heats the water in the 160 litre hot water heater, which is insulated with EPS (environmentally friendly cellular plastic) for minimal heat loss.

The heat pump can be connected to an optional low temperature distribution system. e.g. radiators, convectors or under floor heating. It is also prepared for connection to several different products and accessories, e.g. extra hot water heater, ventilation recovery, pool, free cooling and heating systems with different temperatures.

An 8 kW immersion heater connects automatically as reserve operation if something unexpected should occur. FIGHTER 1250 is equipped with a control computer for many options, e.g. good comfort, good economy and safe operation. Clear information about status, operation time and all temperatures in the heat pump are shown on the backlit front panel. This means, for example, that external unit thermometers are not necessary.

The heat pump's sub system and its function



Some heat pump technology

The heat pump functions can easily be divided into four sub processes: ① – ④

① Fluid (***the refrigerant***) that is used in our heat pump boils* at a very low temperature in the ***evaporator***. The heat retrieved by the circulating fluid (***the brine***) from the ground/rock/lake is enough to cause it to boil.

② The steam (gas) that is produced when the refrigerant boils, is drawn into the speed controlled ***compressor***. There it is compressed just enough for the relevant heat demand. As the pressure of the gas increases it also becomes extremely hot.
(The low temperature refrigerant has been converted to a high tempered gas)

③ The hot gas is routed into a heat exchanger (***condenser***) where it releases its heat into the heating system's water (***heating medium***). It passes through the same condenser but on the other side of a separating wall so that the mediums do not mix.
When heat is transferred to the heating medium the gas is cooled and converted to a fluid again (condenses).

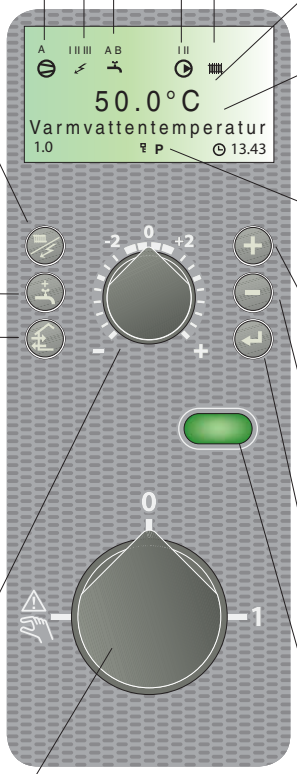
④ ***The expansion valve*** finally reduces the pressure of the fluid (refrigerant, so that it can be re-boiled at a low temperature) at the same time as it only releases the exact amount of fluid to the evaporator that is to be reheated and evaporated by the heat retrieved from the ground.

- The described process is repeated over and over and only the compressor and circulation pumps require electrical energy during normal operation.
- The energy for the heating system - and domestic hot water is obtained, as described above, from the ground. The heat pump's COP value determines how effectively this is carried out(heating factor). The value is a measurement of how much heat is obtained in relation to consumed electrical energy.

*) *The boiling point of different fluids varies but the pressure in the vessel is important. Water boils at +100 °C in a saucepan on a hob but would have done so at +80 °C if the air pressure in the room had been half as high. This is a property that is used within heat pump technology.*

Note that all material that has a greater temperature than -273 °C contains heat that is possible to recover, the greater the temperature of the refrigerant the more effectively this can be carried out.

The front panel



Addition. heat symbol

If electrical addition is connected

"I" Electrical step 1

"II" Electrical step 2

"I II" Electrical step 1+2

Flashing text means that the load monitor limits the electrical output.

Compressor symbol

- Compressor is operational

Flashing symbol means that the load monitor limits compressor operation.

Operating mode

Button pressing (the change does not need to be confirmed with the enter button).

- Current operating mode is shown in the display.
- Further button press changes operating mode.

Press **the enter button** returns to the normal display mode.

For information about the different operating modes, see Chapter A "Heating settings", "Controlling the heat supply-> Operating mode.

Extra hot water (XHW)

The change does not need to be confirmed with the enter button.

No function

Offset heating curve

- Turning clockwise (+) increases the room temperature.

When the knob is turned menu 2.0 is shown on the display and the value for the calculated flow temperature changes.

Switch

1 Normal mode
All control functions connected

0 Shutdown

Standby mode
Only the circulation pump and electrical addition (electrical step 2) are operational.

Hot water symbol

The heat pump charges the hot water.

"A" Temporary temperature increase in progress.

"B" Time based temperature increase in progress, e.g. periodic.

Circulation pump symbol

"I" Circulation pump is in operation.

"II" Circulation pump 2 is in operation (accessory ESV 21 required).

Heating system symbol

House heating in progress

Current display parameter

In normal mode hot water temperature is displayed.

Description of current display parameter

Information symbols

1.0 Menu number

P Pool heating in progress.

Key lock activated.

Timer function

Plus button

- Scroll forward in the menu system
- Increase the value of the selected parameter

See the section "Control – General"

Minus button

- Scroll back in the menu system
- Reduce the value of the selected parameter

See the section "Control – General"

Enter button

- Select lower menu in the menu system
- Parameter change activated
- Parameter change confirmed

See the section "Control – General"

Status lamp

During normal operation, the status lamp lights green. In the event of an alarm, it lights red.

This is how to use the front panel

All the most common settings are made from the panel as well as control computer instructions such as comfort etc. that you require the heat pump system to fulfil.

In order for the installation to be used optimally, certain default settings must have been made (see the section "Default settings") and the installation is carried out according to the relevant instructions.

Menu types



Menu 1.0 is normally shown on the display
(the temperature in the hot water heater)

The plus and minus buttons and the enter button are used to scroll through the menu system as well as to change the set value in some menus.

Control is divided into different menu types depending on how "deep" into the controls you need to go.

- Normal [N]: The settings you as a customer often need.
- Extended [E]: Shows all detailed menus except the service menus.
- Service [S]: Shows all menus.

Changing of menu type is done from menu 8.1.1

Quick movement

To quickly return to the main menu from a sub menu, press one of the following buttons:

1. Operating mode button 
2. The Enter button 

Note! Ensure that the operating mode (Auto, Summer, Only additional heat, alarm mode) is not altered during quick movement.

Key lock

A key lock can be activated in the main menus by simultaneously pressing the plus and the minus buttons. The key symbol will then be shown on the display.



The same procedure is used to deactivate the key lock.

Control computer

The heat pump is controlled by a computer that ensures that all component parts work in the most efficient way for the relevant operation.

It controls and monitors hot water production and provides information about set control conditions. In the event of a malfunction, an alarm and warnings are transmitted to the front panel to keep the user informed about the conditions at all time. At the same time, the heat pump is controlled in a way that prevents damage to the installation.

Extra accessories

Accessories for controlling extra heating circuit and pool heating for example, are also controlled by the control computer according to the settings carried out on the front panel. If necessary, it is also possible to connect a room temperature sensor.

Heating settings

The indoor temperature depends on several factors.

- Sunlight and heat emissions from people and household machines are normally sufficient to keep the house warm during the warmer parts of the year.
- When it gets colder outside, the heating system must be started. The colder it is outside, the warmer radiators and under floor heating systems must be.

Controlling heat production

Normally the heat pump heats the water (heating medium) to the temperature required at a certain outdoor temperature. This occurs automatically on the basis of the collected temperature values from the outdoor sensor and sensors on the lines to the radiators (flow line sensors).

However, the correct default settings must be made on the heat pump first, see the section "Default settings".

The temperature information that the outdoor sensor (mounted on an exterior wall of the house) sends to the heat pump's control computer senses variations in the outdoor temperature early on. It does not have to be cold inside the house before the control system is activated, as soon as the temperature drops outside, the temperature of the water to the radiators inside the house automatically increases.

Radiator temperature

The temperature of the radiators in relation to the outdoor temperature can be determined by you by selecting a heat curve and by using the "Offset heat curve" knob on the heat pump's front panel.

Changing the room temperature manually

If you want to temporarily or permanently increase or lower the indoor temperature turn the "Offset heating curve" knob clockwise or anticlockwise. One line approximately represents a 1 degree change in room temperature.

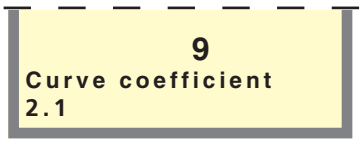
Note!

An increase in the room temperature may be inhibited by the radiator or underfloor heating thermostats, if so these must be turned up.

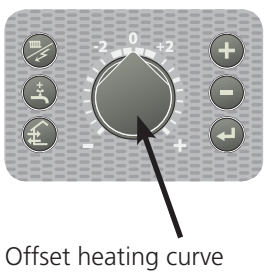
Default setting

The basic heating is set using menu 2.1 and with the "Heating curve offset" knob.

If you do not know the correct settings use the basic data from the map opposite.



Menu 2.1 Curve coefficient



Offset heating curve

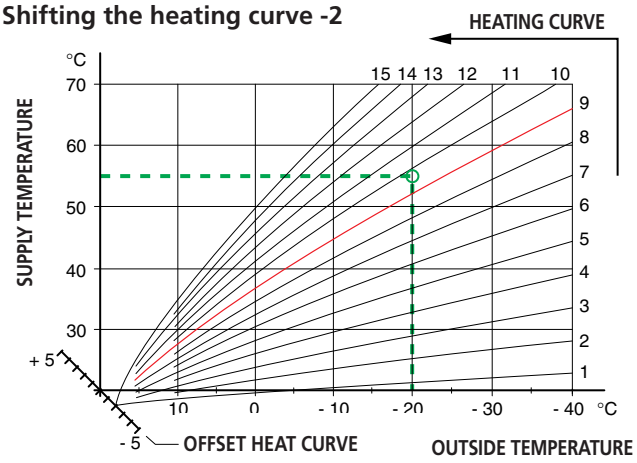
Note!

Wait one day between settings so that the temperatures have time to stabilise.

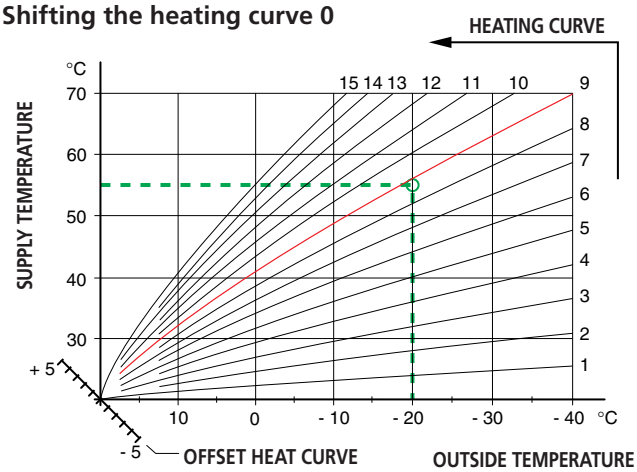
Setting with diagrams

The diagram is based on the dimensioned outdoor temperature in the area and the dimensioned supply temperature of the heating system. When these two values "meet", the heating control's curve coefficient can be read. This is set under menu 2.1, Curve coefficient.

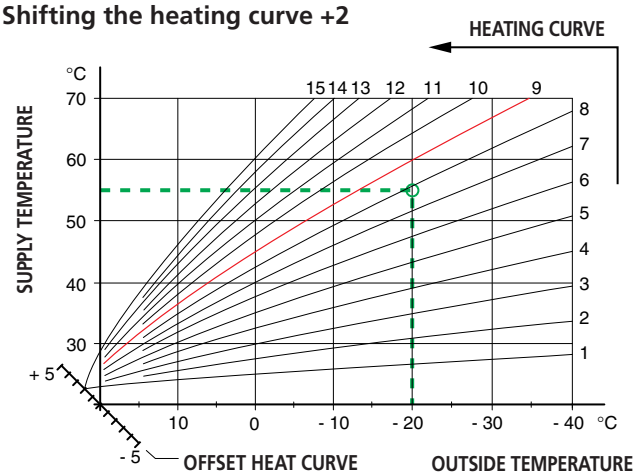
Shifting the heating curve -2



Shifting the heating curve 0



Shifting the heating curve +2



Basic values for the automatic heating control

The values stated on the map apply for the "Curve slope".

The first value applies for low temperature* radiator systems. "Offset heating curve" is set to -2.

The value in brackets refers to floor heating systems** installed in concrete floor structures. When the system is installed in a timber floor structure you can use the number before the brackets, but this value must be reduced by two units. In these cases the "Offset heating curve" is set to -1.

The map values are usually a good starting point and concern an approximate room temperature of 20 °C. The values can be adjusted later if necessary.

Examples of basic data selection:

1. House with low temperature* radiator systems
   London = Area 15 (8). Set 15 on menu 2.1, and -2 on the knob "Offset heating curve".

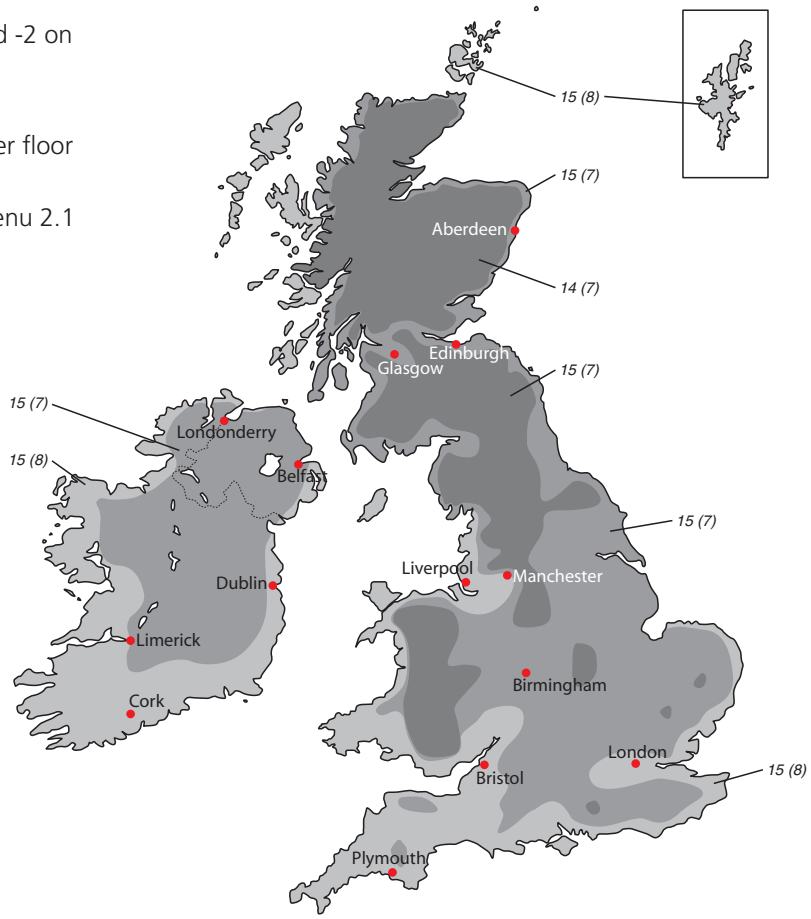
2. House with floor heating** installed in a concrete floor structure
   London = Area 15 (8). Set 8 on menu 2.1, and -2 on the knob "Offset heating curve".

3. House with floor heating** installed in a timber floor structure
   London = Area 15 (8). Set 13 (15-2=13) on menu 2.1 and -1 on the "Offset heating curve" knob.

Readjustment the default settings

If the required room temperature is not obtained, readjustment may be necessary.

- Cold weather conditions
  - When the room temperature is too low, the "Curve coefficient" value is increased in menu 2.1 by one increment.
  - When the room temperature is too high, the "Curve coefficient" value is decreased in menu 2.1 by one increment.
- Warm weather conditions
  - If the room temperature is low, increase the heating curve offset setting by one step.
  - If the room temperature is high, reduce the "Heating curve offset" setting by one step.



* A low temperature radiator system refers to a system where the flow temperature needs to be 55 °C on the coldest day.

** Floor heating can be dimensioned very differently. Examples 2 and 3 above refer to a system where the flow temperature needs to be approximately 35–40 °C resp 45–50 °C on the coldest day.

Controlling the heat supply

After adjustment (according to selected settings of the curve coefficient and offset) the correct amount of heat is supplied in relation to the actual outdoor temperature. The heat pump's flow temperature (menu 2.0) will hover around the theoretical required value (the value in brackets on the display). Extra accessories such as room sensors, can influence the temperature.

"Degree minutes

For subnormal temperatures the control computer calculates a heating deficit in the form of "degree-minutes", which means that heating production is accelerated. The larger the subnormal temperature, the greater the heat production.

The degree minute value is the basis for controlling the heating mode.

Operating mode



The "Operating mode" button is used to set the required operating mode with regard to permitting/blocking the circulation pump and additional energy.

The change does not need to be confirmed with the enter button.

The current operating mode is shown on the front panel display when the button is pressed and the mode changes when you continue to press the button.

The display returns to the normal display mode once the enter button is pressed.

The different operating modes are:

1. **"Auto(without electricity)", "Auto(with electricity)" or "Auto(Summer)"**
   - FIGHTER 1250 automatically selects the operating mode by taking the outdoor temperature into account.
   - The circulation pump is permitted to operate when there is a need.
   - The electrical addition is permitted if "On" is selected in menu 8.2.3.
   - However, when "Extra hot water" is activated the electrical addition is connected.
2. **"Summer mode"**
   Only production of hot water with FIGHTER 1250.
   - The circulation pump and electrical addition are blocked.
   - However, when "Extra hot water" is activated the electrical addition is connected.
3. **"Only addition"**
   - Compressor and brine pump blocked. The function is activated/deactivated by pressing in the "operating mode button" for 7 seconds.
4. **"Alarm mode"**
   - In the event of an alarm, FIGHTER 1250 selects this operating mode.

Standby mode

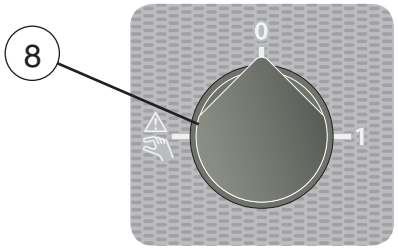
Standby mode is activated by setting switch (8) to "⚠".

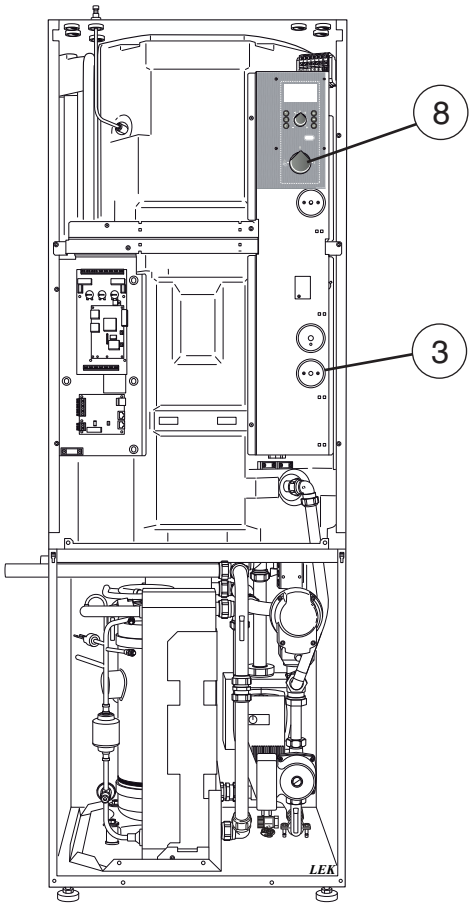
- The front panel is not lit and the control computer is not connected.
- The temperature is controlled by the thermostat (3). It can be set to either 35 °C or 45 °C.
- The compressor and refrigerant pump are off and only the heating medium pump and electrical addition are active (in standby a 6 kW electrical step is connected).

Note!

Hot water is not produced in standby mode.

(Component numbering, see section F "List of components")





Quick guide – menu settings heat production

Operating mode

The menu can be accessed via the operating mode button. Here you select whether heat production is permitted.

Menu 2.1 Curve coefficient [N]

The selected curve coefficient (heating curve) is shown here. At value 0, the function "Own curve" is activated, see menu 2.6.0.

The value can be set between curves 0 and 15.
- Factory setting: 9

Menu 2.2 Offset heating curve [N]

The selected heating curve offset is shown here.
Note! The value is changed using the "Heating curve offset" knob.

The value can be set between -10 and +10.
- Factory setting: 0

Menu 2.3 Flow temp./Min [E]

The set minimum level for the supply temperature to the heating system is shown here.
The calculated flow temperature never drops below the set level irrespective of the outdoor temperature, curve coefficient or offset heating curve.

The value is adjustable between 2 and 80 °C
- Factory setting: 15 °C

Menu 2.4 Flow temp./Max [E]

The set maximum level for the supply temperature to the heating system is shown here.

The calculated supply temperature never exceeds the set level irrespective of the outdoor temperature, curve coefficient or offset heating curve.

The value is adjustable between 10 and 80 °C
- Factory setting: 55 °C

Menu values



Menu 1.0 is normally shown on the display (the temperature in the hot water heater)

The plus and minus buttons and the enter button can be used to scroll in the menu system and change values in certain menus. (See Front panel section)

Hot water settings

The integrated hot water heater is surrounded by the circulating water that the heat pump heats.

During "normal" consumption it is enough to run the heat pump's compressor to supply the different tapping points of the house with hot water. The temperature of the hot water at the top of the hot water heater then varies between the set values.

(See controlling "Hot water temperature")

Prioritizing

If the water in the heater needs heating, the heat pump prioritizes this and shifts to hot water mode with the entire heat pump output.

No room heat is produced in this mode.

Prioritizing can be affected via settings in the front panel.

(See controlling "Hot water temperature")

Extra Hot Water

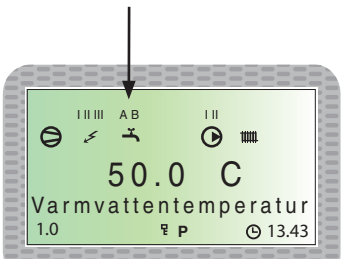
The "Extra hot water" function temporarily increases the temperature of the hot water. The temperature is first increased to an adjustable level by the compressor (menu 1.7) and then the electrical addition increases until the stop temperature is reached (menu 1.6).

Temporary "Extra hot water" is activated manually, whilst time based extra hot water is activated using the settings made in the control computer.

When:

- "A" appears above the -icon, temporary extra hot water is active.
- "B" appears above the -icon, time based extra hot water is active.

(See controlling "Hot water temperature")



Menu values

Menu 1.0 is normally shown on the display (the temperature in the hot water heater)

The plus and minus buttons and the enter button can be used to scroll in the menu system and change values in certain menus. (See Front panel section)

Note!

"Extra hot water" can mean that the electrical addition has been activated and therefore increases the electrical consumption.

"Extra hot water" can be activated in three different ways:

1. **Periodic time based extra hot water**
   - The increase starts when the compressor increases the HW temp to the set temperature in menu 1.7, then the electrical addition increases the temperature to 65 °C.
   - The increased temperature is maintained by the electrical addition for one hour.
   - Interval between increases selected in menu 1.8. Menu 1.9 shows when the next increase is due.

2. **Schedule time based extra hot water**
   - The increase starts when the compressor increases the HW temp to the set temperature in menu 1.7, then the electrical addition increases the temperature in menu 1.6. The increased temperature is maintained by the electrical addition for the selected period.
   - The start and stop times for the day of the week that the increase is required is set in the sub menus to menu 7.5.0.

3. **Temporary extra hot water**



   - The current "extra hot water" mode is shown on the display when the button is pressed and when you continue to press the button the mode changes in steps 3, 6, 12, and 24 hours and the standby mode.
   - The increase starts when the compressor increases the HW temp to the set temperature in menu 1.7, then the electrical addition increases the temperature in menu 1.6. The increased temperature is maintained by the electrical addition until the period of time has expired.

(See controlling "Hot water temperature")

Quick guide – menu settings for hot water charging

Menu 1.2 Time period [N]

The length of time is set here.

The value is adjustable between 5 and 60 minutes.
- Factory setting: 60 min

Menu 1.3 MAX-time HW-period [N]

Here you select how much time of the period time (menu 1.2) is to be used to heat the hot water when there is a need of both heating and hot water.

The value is adjustable between 5 and 60 minutes.
- Factory setting: 20 min

Menu 1.4 HW-temp/Starttemp.HW [N]
Start temp.HW

The temperature when the heat pump starts hot water charging is set here. When brackets are shown containing a minus symbol, this means the high pressure pressostat has tripped during hot water charging and FIGHTER 1250 has automatically lowered the set temperature by the value in brackets. The reduction is removed when the start value is changed.

The value is adjustable between 25 and 55 °C
- Factory setting: 47 °C

Menu 1.5 HW-temp/Stop temp.HW [N]
Stop temp.HW

The temperature when the heat pump stops hot water charging is set here. When brackets are shown containing a minus symbol, this means the high pressure pressostat has tripped during hot water charging and FIGHTER 1250 has automatically lowered the set temperature by the value in brackets. The reduction is removed when the stop value is changed.

The value is adjustable between 30 and 60 °C
- Factory setting: 54 °C

Quick guide – menu settings extra hot water

Extra Hot Water

The menu can be accessed by pressing the "Extra hot water" button (See previous page).

Menu 1.6 Stop temp XHV [E]

The desired stop temperature for extra hot water is set here.

The value is adjustable between 40 and 70 °C
- Factory setting: 60 °C

Menu 1.7 Stop compressor XHV [E]

The temperature to stop the compressor for extra hot water is set here.

The value is adjustable between 50 and 60 °C
- Factory setting: 55 °C

Menu 1.8 Interval XHV [E]

Periodic time based extra hot water is selected here. Extra hot water is shut-off when 0 is set. Extra hot water starts when the value has been confirmed.

The value is adjustable between 0 and 90 days.
- Factory setting: 14 days

Menu 1.9 Next XHV action [E]

Future increases to the "Extra hot water" level are shown here.

Menu values

Menu 1.0 is normally shown on the display (the temperature in the hot water heater)

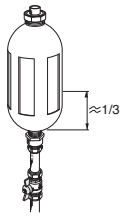
The plus and minus buttons and the enter button can be used to scroll in the menu system and change values in certain menus. (See Front panel section)

Maintenance

Your heat pump is, in principle, maintenance free and therefore requires minimal care after commissioning.

The heat pump, however, consists of many parts and therefore has integrated monitoring functions to assist you.

- If something abnormal occurs, a message appears about malfunctions in the form of different "alarm" texts in display.
- The brine that obtains the heat in the ground is not normally consumed but just pumped around. There is a level vessel where you can check if there is sufficient fluid in the system. The level can vary due to the fluid's temperature. If the level is about 1/3, top up. (See section "Readjustment, collector side")
- Check for leakage.



Note!

Never carry out any work on a heat pump that requires special permission e.g. on electrical or cooling parts.

Safety valves

- The heating system's and hot water heater's safety valves can, at temperature changes, release a little water.
- The overflow water pipes from the safety valves must not be obstructed and must be visible.
- The safety valves must be checked regularly to prevent blockages. This is usually done by turning the safety valve's knob anti-clockwise. The water should then flow through the safety valve. If this does not happen, replace the safety valve.

The appearance and location of the safety valves differs between different installations. Contact your installer for information.

Emptying the hot water heater

The siphon principle is used to empty the hot water heater. This can be done either via the drain valve on the incoming cold water pipe or by inserting a hose into the cold water connection.

Saving tips

Your heat pump installation produces heat and hot water according to your needs. It also attempts to carry out all requirements with all available "aids" from the control settings made.

Known factors that affect the energy consumption are, for example, the indoor temperature, hot water consumption and the insulation level of the house, as well as the level of comfort you require.

Also remember:

- Open the thermostat valves fully (with the exception of those rooms that may be required to be cooler, e.g. bedrooms).

Thermostat valves in the radiators and floor loops can negatively affect the energy consumption. They slow the flow in the heating system, which the heat pump wants to compensate with increased temperatures. It then works harder and consumes more electrical energy.

Comfort disruption

Use the following list to find and remedy any heating or hot water problems.

Symptom	Cause	Action
Low hot water temperature or a lack of hot water	Circuit or main MCB tripped.	Check and replace blown fuses.
	Compressor and immersion heater do not heat.	Check and replace any blown circuit and main fuses.
	Possible earth circuit-breaker tripped.	Reset the earth circuit-breaker, if the earth circuit-breaker trips repeatedly, call an electrician.
	Switch (8) set to 0.	Set the switch to 1.
	Large hot water demand.	Wait a few hours and check if the hot water temperature rises.
	Too low start temperature setting on the control system.	Adjust the start temperature setting menu 1.4.
Low room temperature.	Possible earth circuit-breaker tripped.	Reset the earth circuit-breaker, if the earth circuit-breaker trips repeatedly, call an electrician.
	Compressor and immersion heater do not heat.	Check and replace any blown circuit and main fuses.
	The compressor does not run because of a too low set value on the heating curve.	Check and possibly raise the Offset heating curve (knob on the front panel) or Curve coefficient.
	Circuit or main MCB tripped.	Check and replace blown fuses.
	Heat pump in incorrect operating mode "Summer".	Change operating mode to "Auto".
High room temperature.	Incorrect setting of Curve coefficient and/ or Offset heating curve	Adjust the setting.
The compressor does not start.	Minimum time between compressor starts has not been reached (see menu 5.4).	Wait 30 minutes and check if the compressor starts.
	Alarm tripped.	See section "Alarms".
	Alarm cannot be reset.	Activate operating mode "Only additional heat".
Panel gone out.		Check and replace any blown circuit and main fuses.
		Set switch (8) to standby " ⚠ ".

Menu values

Menu 1.0 is normally shown on the display (the temperature in the hot water heater)

The plus and minus buttons and the enter button can be used to scroll in the menu system and change values in certain menus. (See Front panel section)

Alarm indications

There are many monitoring functions integrated in the heat pump system. To alert you to any malfunctions, the control computer transmits alarm signals that can be read from the front panel display.

Different types of alarms

- Alarms with automatic reset
  (do not need to be acknowledged when the cause has disappeared).
- Existing alarms that require corrective action by you or the installer.

In the event of an alarm

- The background lighting in the display starts flashing and the status lamp lights red.

Certain alarms switch off hot water charging to alert you to an error, at the same time, the operating mode shifts to "Only additional heat" and additional heat is engaged.

Acknowledging alarms

(No harm in acknowledging an alarm)

- When an alarm has been triggered, it can be acknowledged by switching the switch (8) off and on for FIGHTER 1250.
- When the alarm cannot be reset using the switch (8), the operating mode, "Only additional heat", can be activated to have access to hot water gain.
  This is most easily carried out by holding the "Operating mode" button in for 7 seconds.



Note!

Recurring alarms mean that there is a fault in the installation.
Contact your installer!

The table shows the types of alarms that may occur in the event of a malfunction.

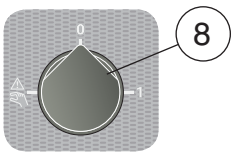
Alarm text on the display	Alarm description	Check/remedy before installers/service technicians are called
LP alarm	Tripped low pressure pressostat	That there is brine in the level vessel.
HP alarm	Tripped high pressure pressostat	That thermostats for the radiators/under floor heating loops are open.
Inverter error	Inverter error	Check and replace any blown circuit and main fuses.
Panel gone out		Check and replace any blown circuit and main fuses.
		Set switch (8) to standby " ⚠ ".

Other alarm, see section E "Control"

Menu values

Menu 1.0 is normally shown on the display
(the temperature in the hot water heater)

The plus and minus buttons and the enter button can be used to scroll in the menu system and change values in certain menus.
(See Front panel section)



B

TRANSPORT / INSTALLATION

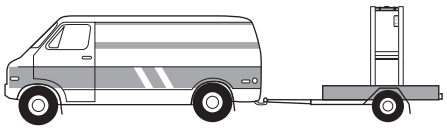
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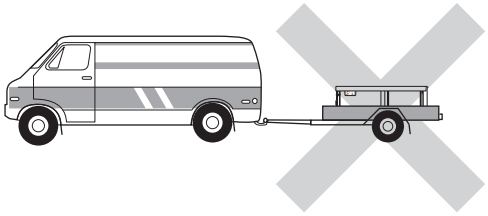
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Connecting the outside sensor 28
Alarm/alarm outputs 28

Transport and installation

The FIGHTER 1250 must be transported and stored upright and dry. FIGHTER 1250 may be carefully laid on its back when being moved into a building.



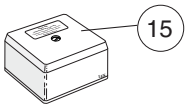


In addition to the actual heat pump, components are enclosed on delivery

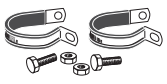
In a bag on top of the heat pump there are:

- Outside sensor
- Clips for connecting pipe brine
- Particle filter
- Level vessel with safety valve
- Cover plates, brine
- Connecting pipe brine, with insulation
- Current transformers
- Installation and Maintenance Instruction

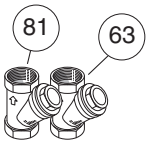
(Component numbering, see section F "List of components")



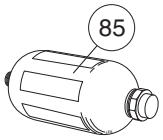
Outside sensor



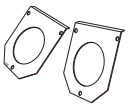
Clips for connecting pipe brine



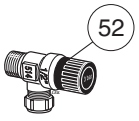
Particle filter



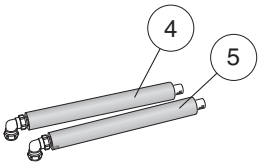
Level vessel



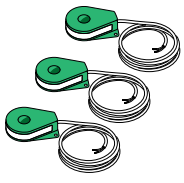
Cover plates, brine



Safety valve



Connecting pipe brine, with insulation



Current transformers

Location

Place the heat pump:

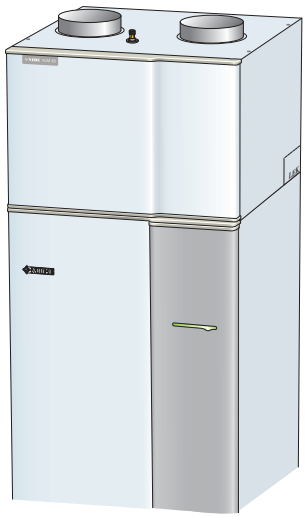
- on a firm base, preferably on a concrete floor or foundation.
- Install FIGHTER 1250 with its back to an outside wall, ideally in a room where noise does not matter. If this is not possible, avoid placing it against a wall behind a bedroom or other room where noise may be a problem.
- Wherever the unit is located, walls to sound sensitive rooms should be fitted with sound insulation.
- Route pipes so they are not fixed to an internal wall that backs on to a bedroom or living room.

Service area

A distance of 800 mm is needed in front of FIGHTER 1250 and leave 400 mm of space free to the right and left of the heat pump for servicing.

When FLM is fitted on FIGHTER 1250 the distance to the wall should be at least 50 mm.

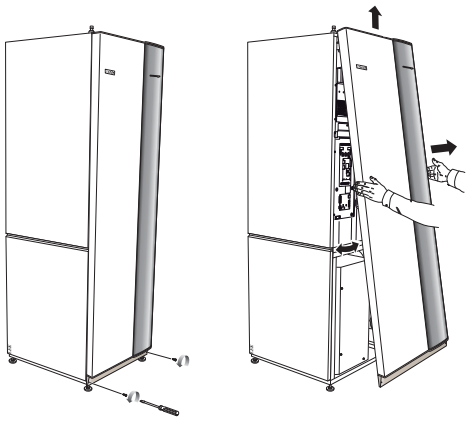
FLM



Removing the covers

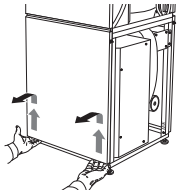
Front cover

1. Remove the screws from the lower edge of the front cover.
2. Lift the cover up and out.



Side covers

1. Lift the cover up and out at the lower edge.



Inspection of the installation

Present regulations require the heating installation to be inspected before it is commissioned. The inspection must be carried out by a suitably qualified person and should be documented. The above applies to closed heating systems. If the heat pump is replaced, the installation must be inspected again.

Checklist: Installation inspection of FIGHTER1250

✓	General description	Notes	Signature	Date
Brine				
	System flushed			
	System vented			
	Antifreeze			
	Level vessel			
	Particle filter			
	Safety valve			
	Shut-off taps			
Heating medium				
	System flushed			
	System vented			
	Expansion vessel			
	Particle filter			
	Safety valve			
	Shut-off taps			
Electricity				
	Fuses heat pump			
	Fuses property			
	Outside sensor			
	Current transformers			
	Isolator switch			
	Earth circuit-breaker			

Pipe connections

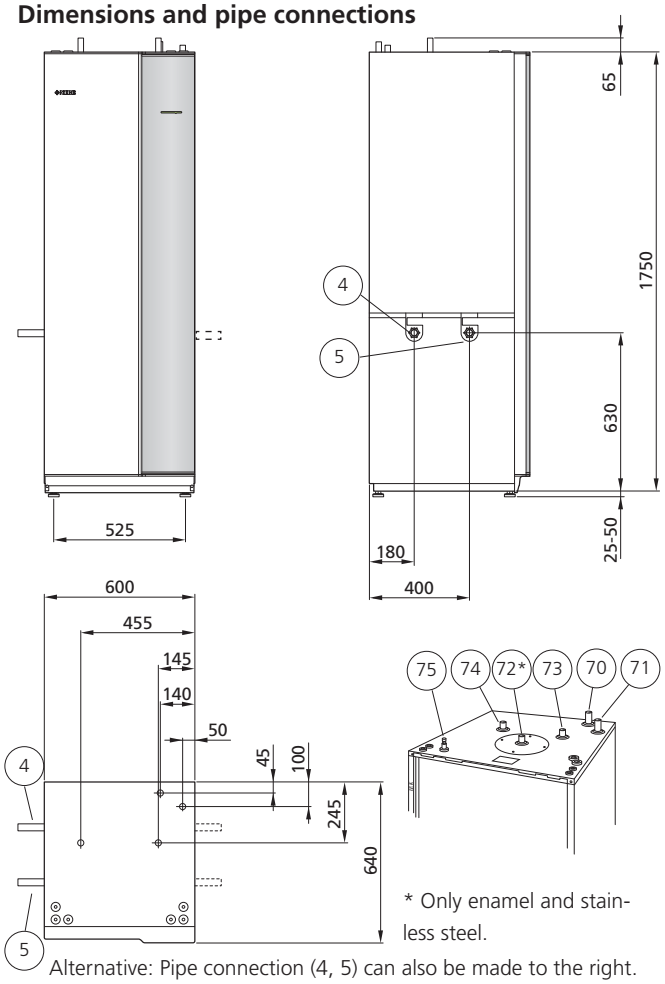
General

Pipe installation must be carried out in accordance with current norms and directives. The heat pump can operate with a return temperature of up to 56 °C and an outgoing temperature from the heat pump of 65 °C.

FIGHTER 1250 is not equipped with shut off valves; these must be installed outside the heat pump to facilitate any future servicing.

During assembly of FLM the pipes for the heating medium and hot water heater and possibly hot water circulation are routed backwards. The distance between FIGHTER 1250 and the wall ought to be 50 mm.

Dimensions and pipe connections



* Only enamel and stainless steel.

Alternative: Pipe connection (4, 5) can also be made to the right.

Collector

The length of the collector hose varies depending on the rock/soil conditions and on the heating system, e.g. radiators or under floor heating.

Max length per coil for the collector should not exceed 400 m.

Where there is more than one collector, they must be connected in parallel, with a means of adjusting the flow.

For surface soil heat, the hose should be buried at a depth of about 1 metre and the distance between the hoses should be at least 1 metre.

For several bore holes, the distance between the holes must be at least 15 metres.

Pumps

Circulation pump

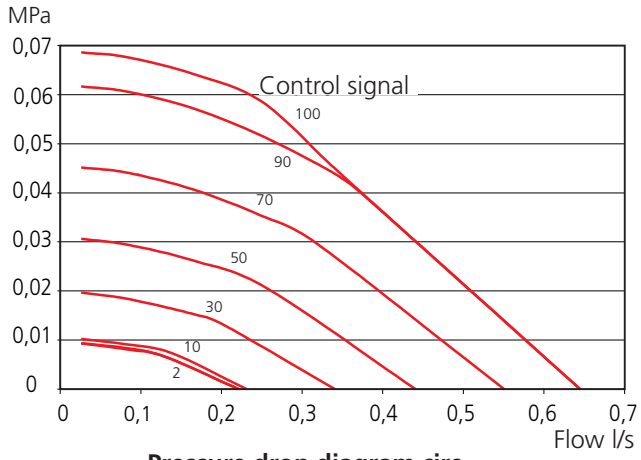
Set the HM flow by setting the Circ. pump's control signal in the relevant menu. The signal changes the pump's speed.

The flow for hot water heating menu 1.11.4 and 1.11.5 is set to an optimal value at the factory.

The flow for house warming is set to max, and changed when necessary in menu 2.7.

The flow for pool heating is set at 50 %, and changed in menu 8.4.5.

Operational pressure

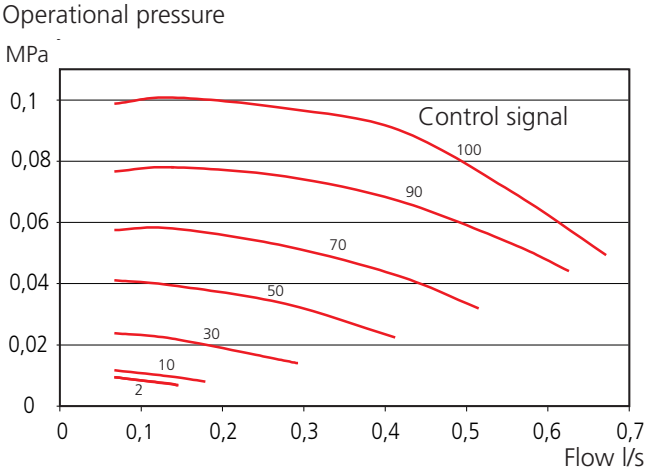


Pressure drop diagram circ. pump

Brine pump

Control of the brine flow occurs automatically. The temperature difference between KBin and KBut is normally maintained within 2 - 5 °C.

Operational pressure



Pressure drop diagram brine pump

Connecting the brine

When dimensioning the collector, consideration must be given to the geographical location, type of rock and ground and the degree of coverage provided by the heat pump.

- When installing the collector hose ensure it rises constantly towards the heat pump to avoid air pockets. If this is not possible, install high points to vent the air.
- All brine lines must be insulated.
- The level vessel (NK) must be installed as the highest point in the brine system and on the incoming pipe before the brine pump.
- The accompanying safety valve (SÄV) must be installed under the level vessel as illustrated. The overflow pipe from the safety valve must be routed enclosed along its entire length to prevent water pockets and be frost proof.
- Note that condensation may drip from the level vessel. Position the vessel so that this does not harm other equipment.

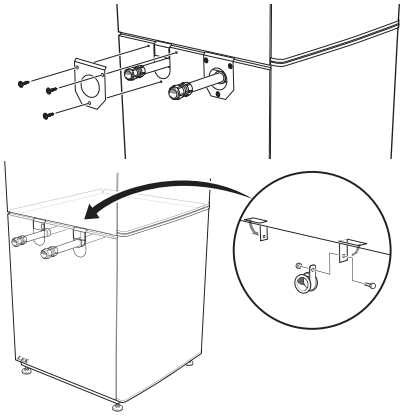
As the temperature of the brine system can fall below 0 °C it must be protected against freezing down to -15 °C. One litre of ready mixed brine per metre of collector hose (applies when using PEM-hose 40 x 2.4 PN 6.3) is used as a guide value when making the volume calculation.

- Details of the antifreeze used must be shown on the level vessel.
- The brine system may be connected from the left or from the right.
- The lower side panels are swapped over to suit the chosen connection option. The enclosed connecting pipes for the brine are secured using the clips in the punched tabs that are folded down on the side in question.
- Shut-off valves should be installed as close to the heat pump as possible.
- Fit the supplied particle filter on the incoming pipe.

In the case of connection to an open groundwater system, an intermediate frost-protected circuit must be provided, because of the risk of dirt and freezing in the evaporator. This requires an extra heat exchanger.

Cover plates

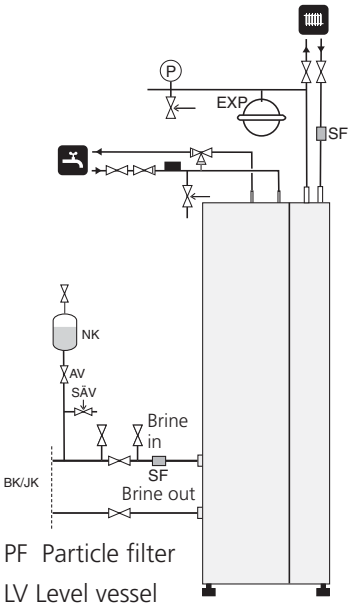
The enclosed cover plates are fitted on the side panel, see figure.



Connecting the heating medium

Pipe connections for the heat medium side are made at the top.

- All required safety devices, shut-off valves (as close to the heat pump as possible), and particle filter (supplied) must be fitted.
- The safety valve must have a maximum 2.5 bar opening pressure and be installed on the outgoing heating medium as illustrated. The overflow pipe from the safety valve must be routed enclosed along its entire length to prevent water pockets and be frost proof.
- When connecting to a system with thermostats on all radiators, a relief valve must be fitted, or some of the thermostats must be removed to ensure sufficient flow.



PF Particle filter

LV Level vessel

Connecting the hot water heater

The hot water heater in the heat pump must be supplied with necessary set of valves.

- There must be a mixer valve if the temperature exceeds 60 °C.
- The safety valve must have a maximum 9.0 bar opening pressure and be installed on the incoming domestic water line as illustrated. The overflow pipe from the safety valve must be routed enclosed along its entire length to prevent water pockets and be frost proof.

Note!

The pipe system needs to be flushed out before the heat pump is connected so that debris cannot damage component parts.

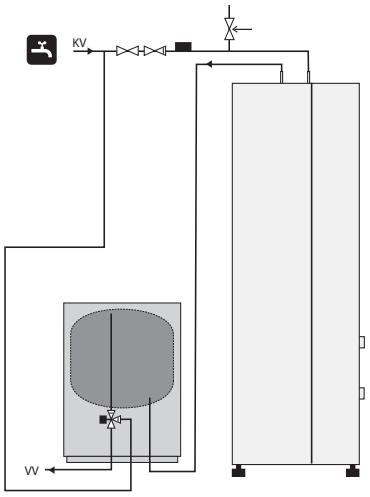
Connections/Dockings

FIGHTER 1250 can be connected in several different ways, some of which are shown below.
More information about the options is available at: www. nibe.com/docking

For control conditions, see "section D" where you can find function descriptions and quick guides.

Extra electric hot water heater

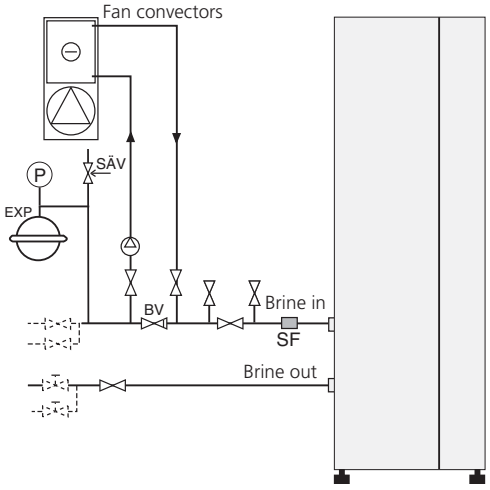
The heat pump should be supplemented with an electric water heater if a bubble pool or other significant consumer of hot water is installed.



Connecting free cooling

The installation can be supplemented with fan convectors, for example, in order to allow connections for free cooling.

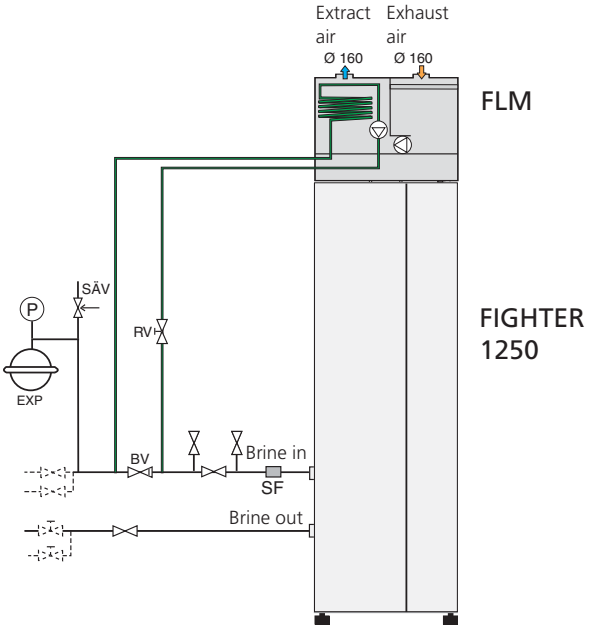
- Pipes and other cold surfaces must be insulated with diffusion-proof material to prevent condensation.
- Where the cooling demand is high, fan convectors with drip trays and drain connection are needed.
- The brine system must be supplied with a pressure expansion vessel. If there is a level vessel this should be replaced.



Connecting ventilation recovery

The installation can be supplemented with the exhaust air module FLM to provide ventilation recovery.

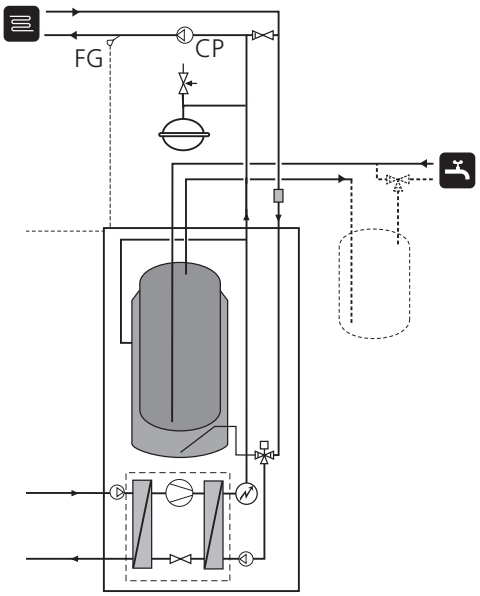
- Pipes and other cold surfaces must be insulated with diffusion-proof material to prevent condensation.
- The brine system must be supplied with a pressure expansion vessel. If there is a level vessel this should be replaced.



FIGHTER with under floor heating systems.

The external circulation pump (CP) is dimensioned for the under floor heating system's demand. The flow through the heat pump is adjusted using the menu system (menu 2.7).

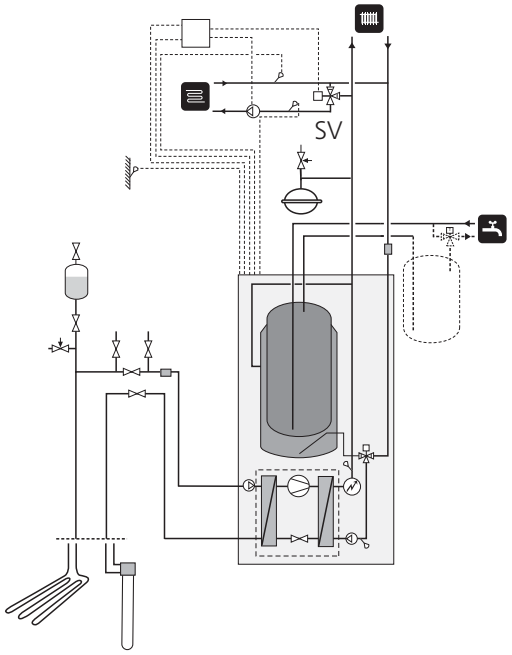
The internally mounted flow line sensor must move out on the flow line.



FIGHTER with two heating systems (floating condensing)

The shunt valve lowers the temperature to the under floor heating system.

Accessory ESV 21 is required for this connection:

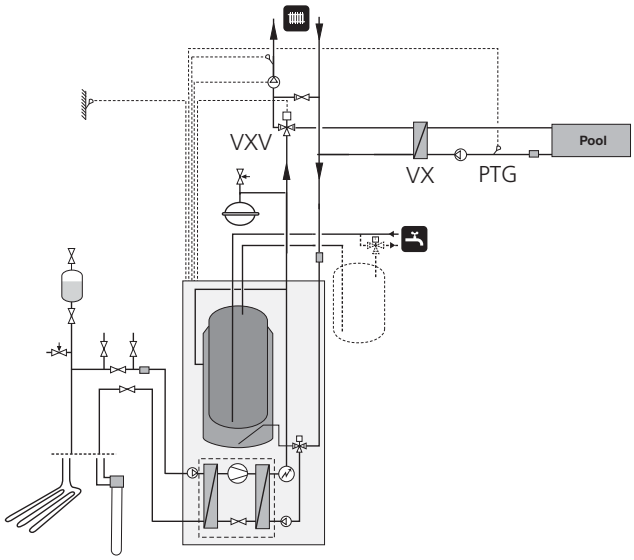


FIGHTER with pool (floating condensing)

Charging of the pool is controlled by the pool sensor. In the case of low pool temperatures the shuttle valve reverses direction and opens towards the pool exchanger.

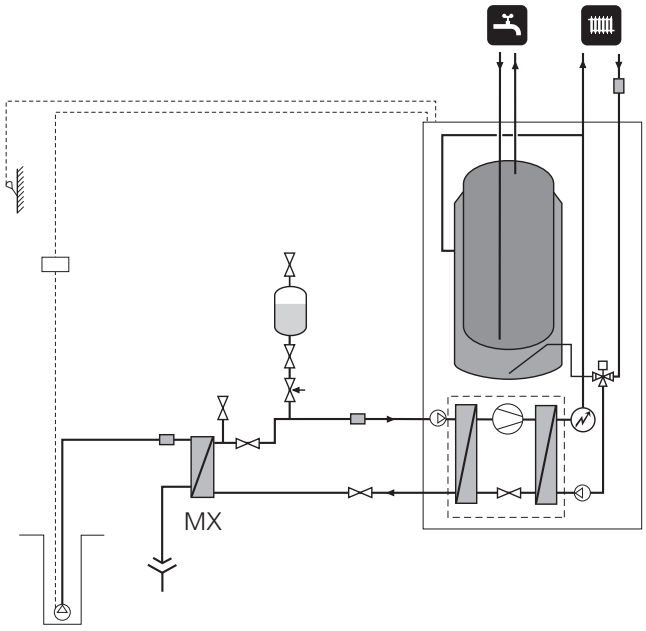
The heating medium flow is adjusted in menu 8.4.5 so that the temperature difference over the pool heat exchanger is 10 - 15 °C.

Accessory POOL 11 is required for this connection.



FIGHTER with ground water system

In which case an intermediate heat exchanger (MX) is used to protect the heat pump's exchanger from dirt. The water is released into a buried filtration unit or a drilled well.



AV	Shut-off valve
BV	Non-return valve
CP	Circulation pump
EXP	Expansion vessel
FG	Flow sensor
MX	Intermediate heat exchanger
PTG	Pool sensor
RV	Control valve
SF	Particle filter
SV	Shunt valve
SÄV	Safety valve
VX	Pool exchanger
VXV	Shuttle valve

Electrical connections

FIGHTER 1250 must be installed via an isolator switch with a minimum breaking gap of 3 mm.

Incoming electricity is connected on terminal block (9) via cable gland (99).

Other electrical equipment, except the outdoor sensors and the current transformers are ready connected at the factory.

- Disconnect the heat pump before insulation testing the house wiring.
- If a miniature circuit breaker is used this should have motor characteristic "D" (compressor operation).

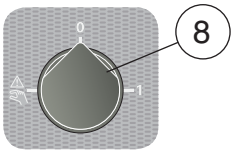
  For fuse ratings, see technical data, "Fuse protection".
- When the building is equipped with an earth-fault breaker the heat pump should be equipped with a separate one.
- Connection must not be carried out without the permission of the electricity supplier and under the supervision of a qualified electrician.

Miniature circuit-breaker

The automatic heating control system, circulation pumps and their wiring, are internally fuse protected with a miniature circuit breaker (1).

Note!

The switch (8) must not be moved from "1" or "⚠" until the boiler has been filled with water. Otherwise the temperature limiter, thermostat, compressor and the immersion heater can be damaged.



Temperature limiter

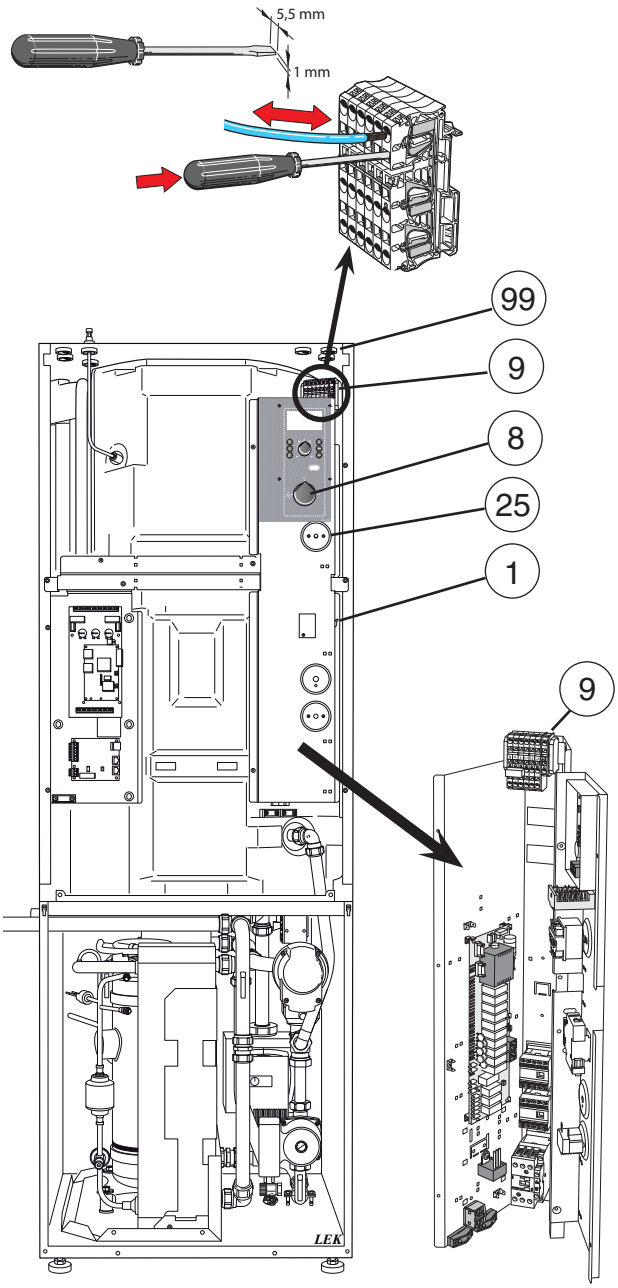
The temperature limiter (25) cuts the current supply to the electrical addition if the temperature rises up between 90 and 100 °C and can be manually reset.

Resetting

The temperature limiter (25) is accessible behind the front cover. The temperature limiter is reset by firmly pressing in its button.

Note!

Reset the temperature limiter, it may have tripped during transport.



Note!

Electrical installation and service must be carried out under the supervision of a qualified electrician. Electrical installation and wiring must be carried out in accordance with the stipulations in force.

Setting electrical addition

The setting of the maximum output on the electrical addition is done using the knob (101) on the load monitor card (2).

The setting can be checked in menu 8.3.5.
A maximum of one electrical step is permitted during compressor operation.

Phase currents

Max Electrical addition (kW)	Electrical step	Knob position	Phase current L1 (A)	Phase current L2 (A)	Phase current L3 (A)
0	0	A	14,8	12	12
2	1	B	14,8 (2,8)	16,3 (4,3)	16,3 (4,3)
6	2	C	(11,5)	(8,7)	(8,7)
8	3	D*	(11,5)	(13)	(13)

Currents within brackets apply to operating mode "Only additional heat"

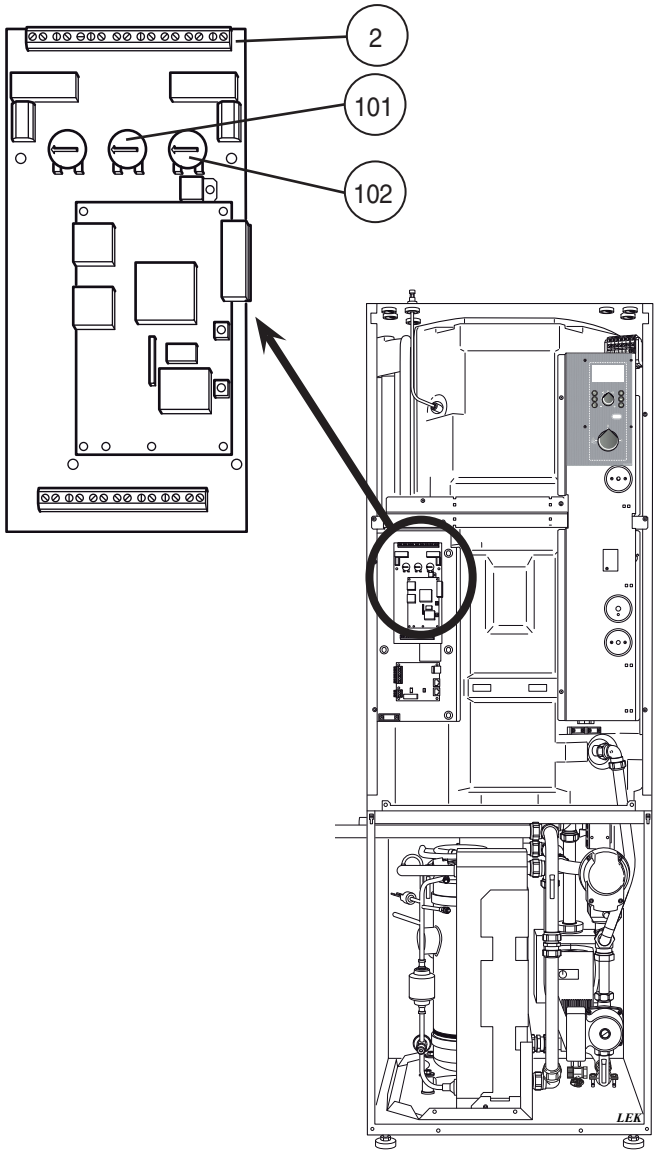
Setting hot water temperature

The maximum hot water temperature is set using the knob (102) on the load monitor card (2).

The setting can be checked in the menu 9.2.1.

Max hot water temperature

Max HW temp	Knob position
50	A
55	B
65	C*
70	D
75	E
80	F



* Factory setting

Centralised load control and load monitor

Load monitor

When many power consumers are connected in the property at the same time as the electric addition is operating, there is a risk of the property's main fuse tripping. The heat pump is equipped with an integrated load monitor that controls the electrical steps on the electrical addition.

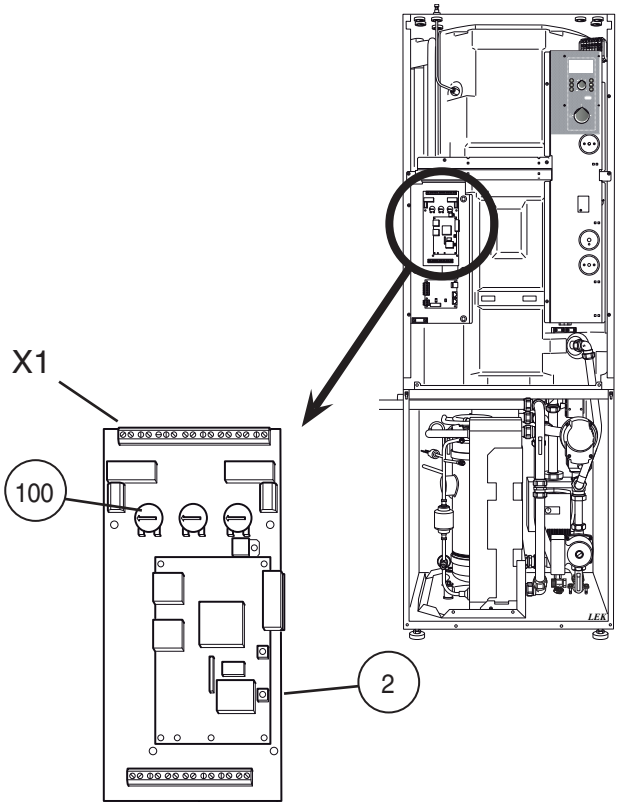
When the phase current is at a level where there is a risk of the main fuses tripping, the load monitor first trips any electrical additions. If this is not sufficient, the compressor is limited to 60 Hz i.e. half the maximum output (The value can be adjusted in menu 9.12.4). This is indicated by a flashing compressor symbol in the display. Reconnection occurs when other current consumption is reduced.

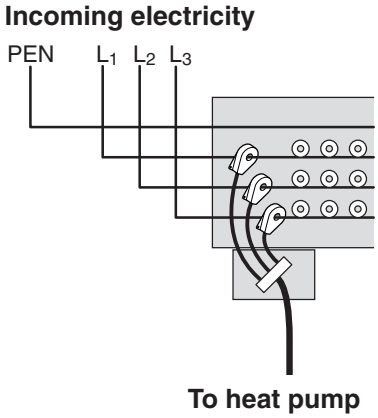
A current transformer should be installed on each incoming phase conductor in to the distribution box to measure the current. The distribution box is an appropriate installation point.

Connect the current transformers to a multi-core cable in an enclosure next to the distribution box. Use a multi-core cable of at least 0.50 mm^2, from the enclosure to the heat pump.

In the heat pump the cable is connected to the load monitor card, (2) on terminal X1:8 – X1:11. X1:11 is the common terminal for the three current transformers.

The size of the property's main fuse is set using the knob (100) on the load monitor card, (2). The setting can be read in menu 8.3.4.





Centralised load/Tariff

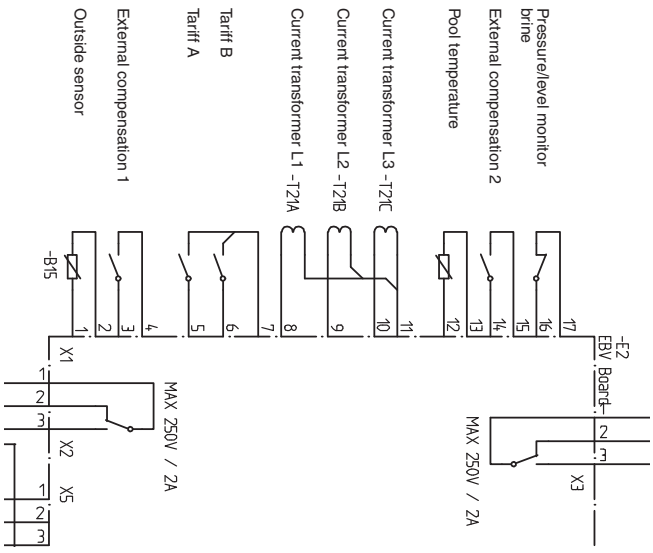
In those cases centralised load control or tariff control is used this can be connected to the terminal X1 on the load monitor card (2), which is positioned behind the front cover.

Tariff A, electrical addition disconnected. Connect a potential free contact function to terminals X1:5 and X1:7.

Tariff B, compressor disconnected. Connect a potential free contact function to terminals X1:6 and X1:7.

Tariff A and tariff B can be combined.

A closed contact results in the electrical output being disconnected.



External contacts

RG 10, sensor for changing the room temperature

An external sensor can be connected to FIGHTER 1250 to change the flow temperature and with that set the room temperature, for example, a room sensor (RG 10, accessory). The sensor is connected on terminals X1:3, X1:4 and X1:14 on the load monitor card (2).

Activated in menu 9.2.18

The difference between the room temperature and the set room temperature affects the flow temperature. The required room temperature is set using the knob on RG10 and is shown in menu 6.0.

Contact for changing the room temperature

Heating system 1: An external contact function can be connected to FIGHTER 1250 to change the flow temperature and in doing so change the room temperature, for example, a room thermostat (accessory) or a timer. The contactor should be potential free and momentary and is connected to terminals X1:3 and X1:4 on the load monitor card (2).

When the contact is made, the heating curve offset is changed by the number of steps shown here. The value is adjustable between -10 and +10. The value for the change is set on menu 2.5, "Compensation external".

Heating system 2: An external contact function can be connected to FIGHTER 1250 to change the flow temperature and in doing so change the room temperature, for example, a room thermostat (accessory) or a timer. The contactor should be potential free and momentary and is connected to terminals X1:14 and X1:15 on the load monitor card (2).

When the contact is made, the heating curve offset is changed by the number of steps shown here. The value is adjustable between -10 and +10. The value for the change is set on menu 3.5, "Compensation external 2".

Contact for activation of "Extra hot water"

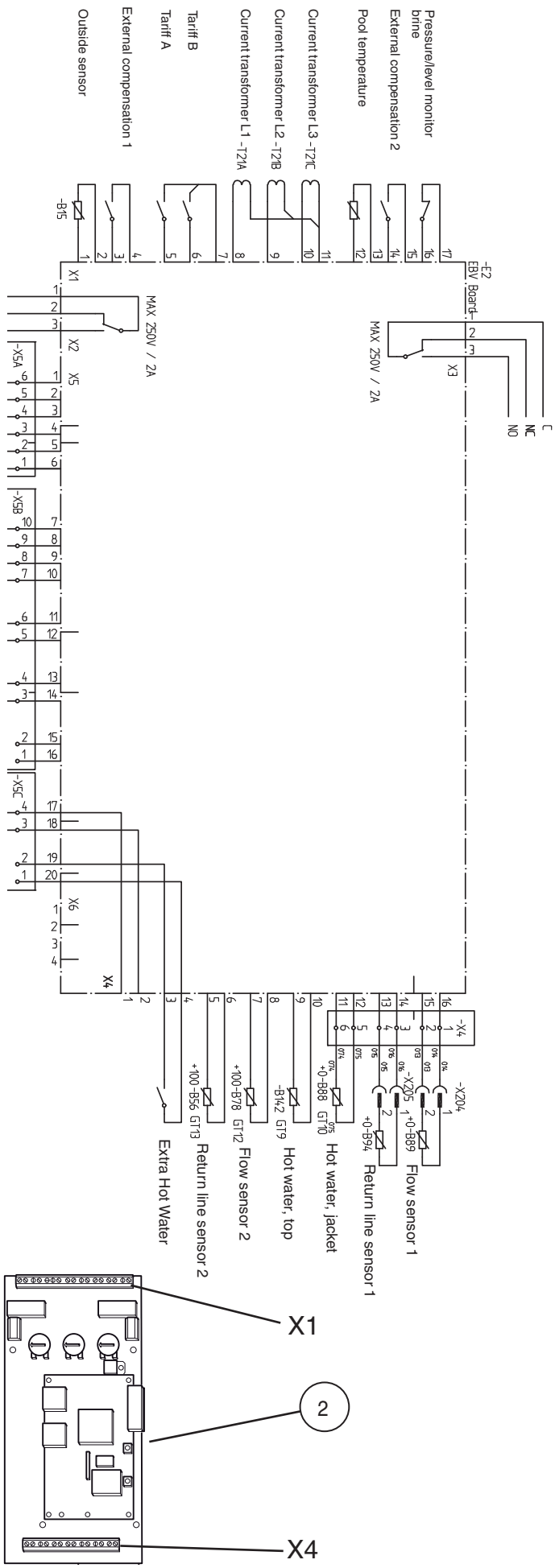
An external contact function can be connected to FIGHTER 1250 for activation of the "Temporary extra hot water" function. The contactor should be potential free and momentary and is connected to terminals X4:3 and X4:4 on the load monitor card (2).

When the contact makes for at least one second, the "Temporary Extra hot water" function is activated. An automatic return to the previously set function occurs after 24 hours.

NV 10, pressure/level monitor brine

When a level monitor NV 10 (accessory) is required for the brine installation, this can be connected to terminals X1:16 and X1:17. In order for this to be active you must change menu 9.2.11, brine pressostat, to "On".

The contact shall be made during normal operating conditions.



Connecting the outside sensor

Install the outside temperature sensor in the shade on a wall facing north or north-west, so it is unaffected by the morning sun. The sensor is connected to terminals X1:1 and X1:2 on the load monitor card (2). Use a two-core cable of at least 0.5 mm.^{2}.

If the outside sensor cable runs close to power cables, shielded cable must be used.

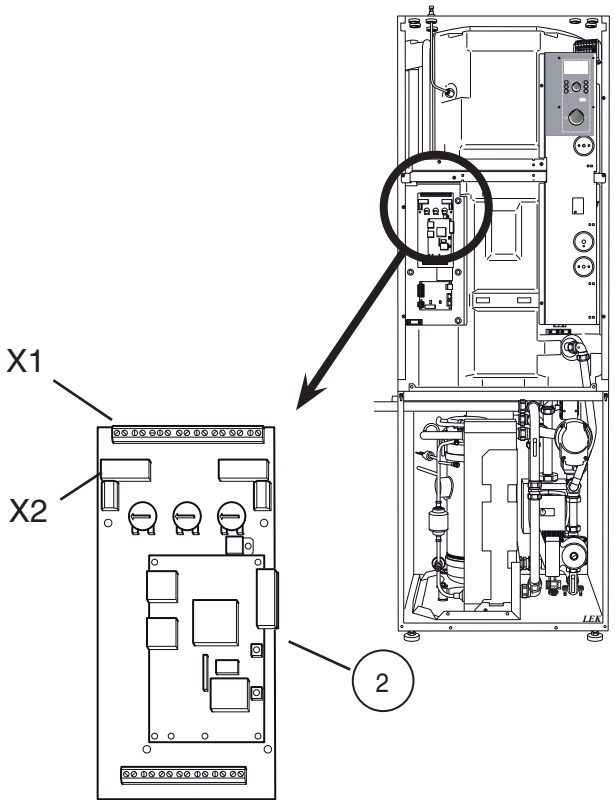
If a conduit is used it must be sealed to prevent condensation in the sensor capsule.

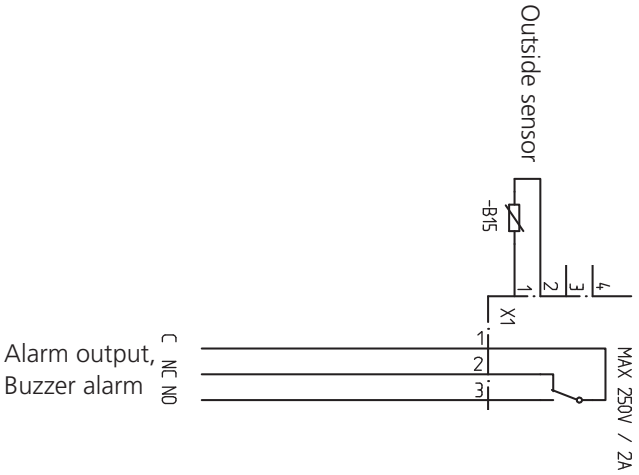
Alarm/alarm outputs

External indication of external buzzer alarms is possible through the relay function on the load monitor card (2), terminals X2:1–3.

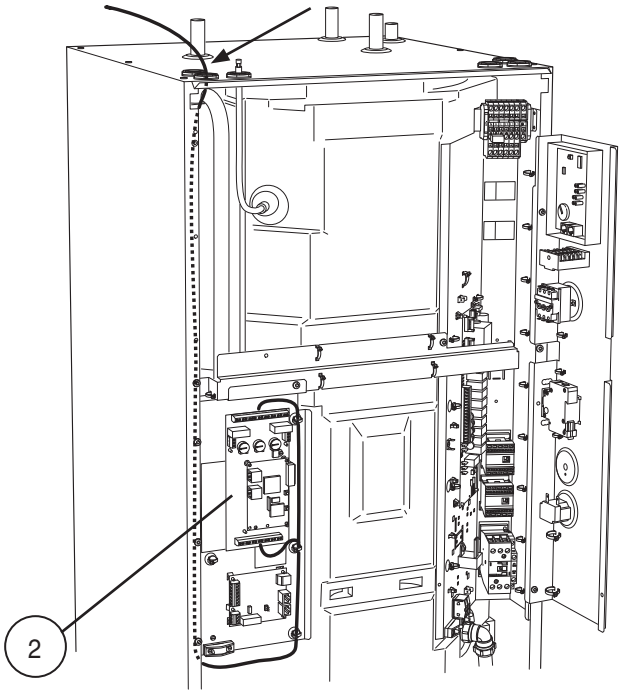
The picture shows the relay in the alarm position.

When switch (8) is in the 0 or "⚠" position the relay is in the alarm position.





Cable routing for outdoor sensors and alarms



COMMISSIONING / ADJUSTMENT

C

COMMISSIONING / ADJUSTMENT 29
Filling and venting the brine system 30
Filling and venting the heating medium system 30
Internal air vent valve, brine 30

Start-up and inspection 31
Readjusting, heating medium side 31
Readjusting, brine side 31

Emptying the hot water heater 31

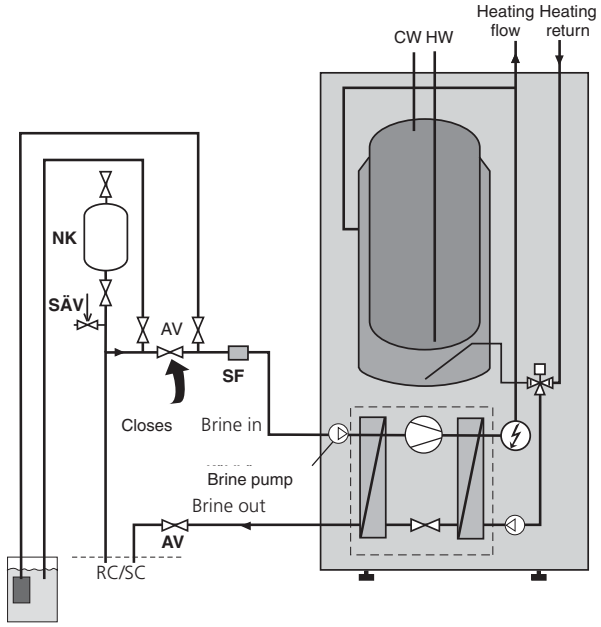
Filling and venting the heating medium system

Fill the heating medium system with water to the required pressure and vent the system.

Filling and venting the brine system

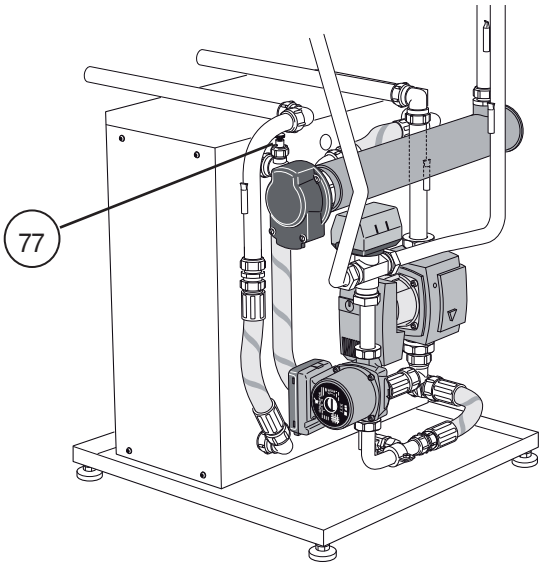
When filling the brine system mix the water with anti-freeze in an open container. The mix must have freezing protection down to -15 °C. Fill brine by connecting a filling pump.

1. Check the brine system for leakage.
2. Connect the filling pump and return line on the brine system's service connections as shown in figure.
3. Close the valve under the level vessel.
4. Close the valve between the service connections.
5. Open the valves on the service connections.
6. Start the filling pump, and fill until there is fluid in the return pipe.
7. Turn the heat pump's switch (8) to 1. NOTE! There must be water in the heating medium system.
8. Select "Service" in menu 8.1.1.
9. Select "On" in menu 8.2.2.
10. Select "Continuously" in menu 9.2.12. The filling pump and the heat pump's brine pump are now operational. The fluid should circulate via the mixing container until it emerges from the return hose without being mixed with air.
11. Select "Intermittent" in menu 9.2.12.
12. Stop the filling pump and clean the particle filter.
13. Start the filling pump; open the valve between the service connections.
14. Close the valve on the service connection's return line. Now pressurise the system (to max 3 bar) with the filling pump.
15. Close the valve on the service connection closest to the level vessel.
16. Stop the filling pump.
17. Fill the level vessel with liquid up to around 2/3.
18. Open the valve below the level vessel.
19. Select "Off" in menu 8.2.2.
20. Select the auto operating mode using the operating mode button.



AV	Shut-off valve	RC	Rock collector
SÄV	Safety valve	SC	Soil collector
CW	Cold water	HW	Hot water
NK	Level vessel		
SF	Particle filter		

Internal air vent valve (77), brine



Start-up and inspection

1. Set the switch (8) to 1.
2. Select operating mode "Auto".



3. Adjust the heating "Offset heat curve" knob so there is no heating requirement.
4. Select "Service" in menu 8.1.1.
5. Select "On" in menu 8.2.2.
6. Select "10 times cont." in menu 9.2.12. The brine pump runs continuously for 10 days, and then returns to intermittent operation.
7. Check that the cooling and heating medium systems are vented.
8. Check that cooling and circulation pumps are operational. If necessary help the pumps to start.
9. Check that the brine temperatures in menu 5.0 correspond with the ground/rock temperature, which indicate brine flow.
10. Select "Off" in menu 8.2.2.
11. Select "On" in menu 9.3.
12. Adjust the "Offset heat curve" knob so there is a heating requirement.
13. Ensure that the heat pump produces heating for the radiators/under floor heating system.
14. Select "On" in menu 9.11.2
15. Select "60" in menu 9.11.1.
16. Wait until the value in menu 5.12.0 is 60.
17. Check the flow and return line temperatures in menu 2.8. Adjust the flow so that the difference between these temperatures is 4 – 6 °C, by changing the speed of the HM pump in menu 2.7.
18. Read off the temperature difference for the brine in menu 5.0. The difference between these temperatures should be 2 - 5 °C.
19. Select "Off" in menu 9.11.2.
20. Set the date and time in menu 7.1 and 7.2.
21. Fill in the commissioning report on page 2.
22. Set the control system according to the needs of the property.

Note!

The compressor must not be forced to start with periods shorter than 1 start per 15 minutes.

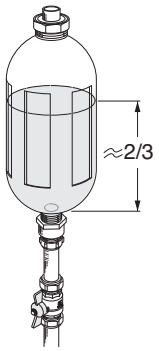
Readjusting, heating medium side

Air is initially released from the hot water and venting may be necessary. If bubbling sounds can be heard from the heat pump, the entire system requires further venting. When the system is stable (correct pressure and all air eliminated) the automatic heating control system can be set as required.

Readjusting, brine side

Check the fluid level in the level vessel (85). If the level has dropped, close the valve under the vessel. You can then fill through the connection at the top of the vessel. After filling, open the valve again.

The pressure is raised by closing the valve on the incoming main line when the brine pump is running and the level vessel is open, so that liquid is drawn down from the vessel.



Emptying the hot water heater

The siphon principle is used to empty the hot water heater. This can be done either via the drain valve on the incoming cold water pipe or by inserting a hose into the cold water connection.

D

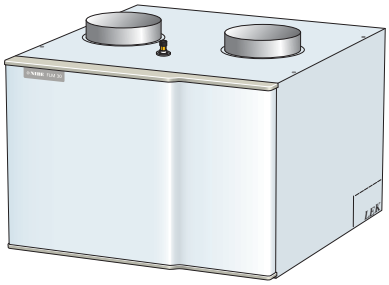
Accessories with quick guide

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Accessories 34

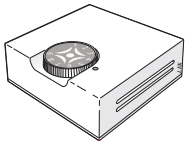
Quick guide – menu settings Communication module RCU 11 35
Quick guide – menu settings Extra shunt ESV 21 36
Quick guide – menu settings Room sensor RG 10 36
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Quick guide – menu settings RE 10 38

Accessories

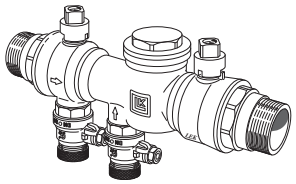
Exhaust air module FLM 30
Part no. 067 020



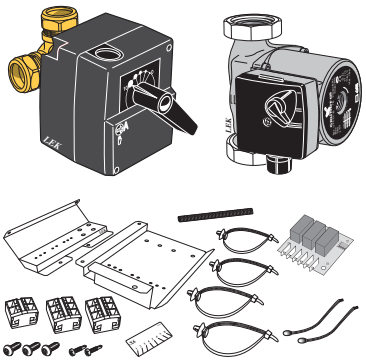
Room sensor RG 10
Part no. 018 433



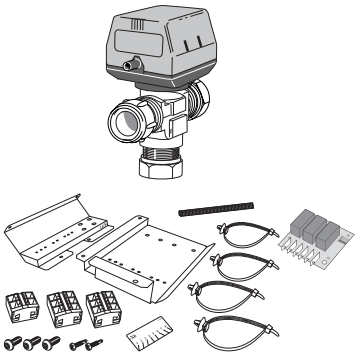
Filling set (max 30 kW)
KB R32 including insulation
Part No 089 971



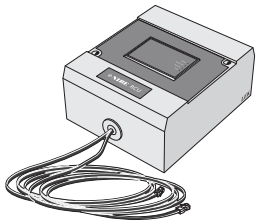
Extra shunt ESV 21
Part No 067 012



POOL 11
Part No 089 435



Communication unit RCU 11
Part No 067 006



Room unit RE 10
Part No 067 004



Exhaust air module FLM 30

FLM 30 is an exhaust air module specially designed to combine recovery of mechanical exhaust air with an energy collector in the ground or in rock.

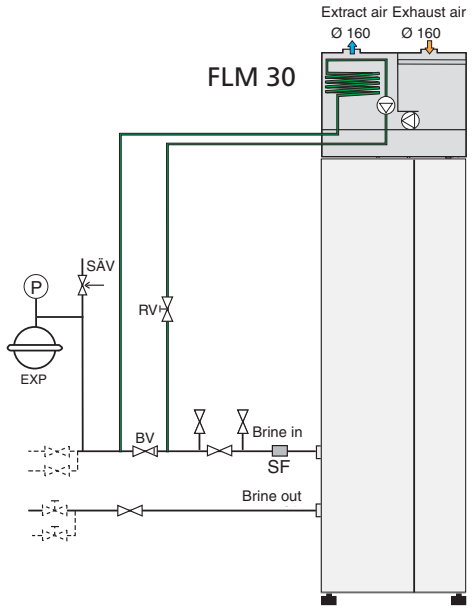
FLM 30 is designed to connect to the FIGHTER 1250 type of ground source heat pump.

The integrated fan in FLM 30 extracts the air from the wet areas of the house to the recovery unit. Here the energy is transferred to the heat pump's brine, whereby the temperature increases and raises the heat pump's heating factor. Energy is stored in the ground or rock collector even if the heat pump is not in operation, which fully utilises the exhaust air energy.

The heat pump capacity is not bound by the amount of air, but the output can be optimally adapted to suit the size of the house.

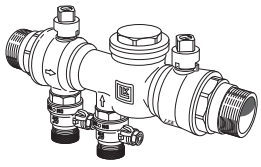
FLM 30 is positioned directly on FIGHTER 1250. but can also be mounted using brackets (accessory) on the wall.

Pipe connection see section B (Pipe connections "Connection/Dockings").



Filling set KB R32

Filling set connection DN 32 for filling the brine in the collector hose to the ground source heat pump max. output 30 kW incl. particle filter and insulation.



Communication module RCU 11

FIGHTER 1250 can be controlled and monitored externally with accessory RCU 11.

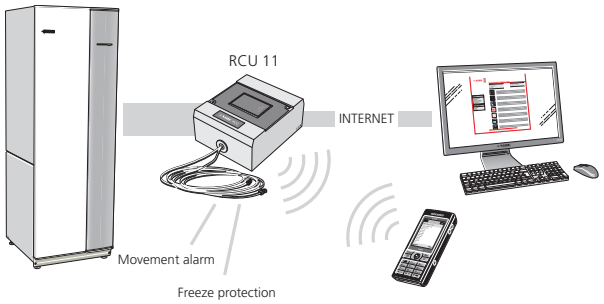
The RCU 11 consists of a communications module, a GSM modem with an antenna and a separate power supply unit with jack for plugging into a wall socket. The antenna can be placed outside the enclosure.

The RCU 11 enables operations to be controlled and monitored using a computer connected to a local network or via the internet. The integrated GSM module also enables control and monitoring by sending text messages from a mobile phone. For the GSM function to work, the communications module must be equipped with a valid GSM subscription. This may for example be a cash card or a special telematics subscription. It is possible to connect to the RCU 11 two independent switch functions to detect external events such as a movement alarm or freezing protection.

Note that all configuration of the unit requires that a computer be connected, even if only text messaging is going to be used.

Program version 1.03 is required for RCU 11 to be able to function.

For further presentation, visit www.nibe.eu



Quick guide – menu settings RCU 11

Menu 8.1.1 Menu type **[N]**

The menu type is chosen here.

[N] Normal, covers the normal user's needs.

[E] Extended, shows all menus except the service menus.

[S] Service, shows all menus, returns to the previous menu level 30 minutes after the last button was pressed.

Selection option Normal, Extended or Service.
- Factory setting: Normal

Select "Service".

Menu 9.2.15 RCU Present **[S]**

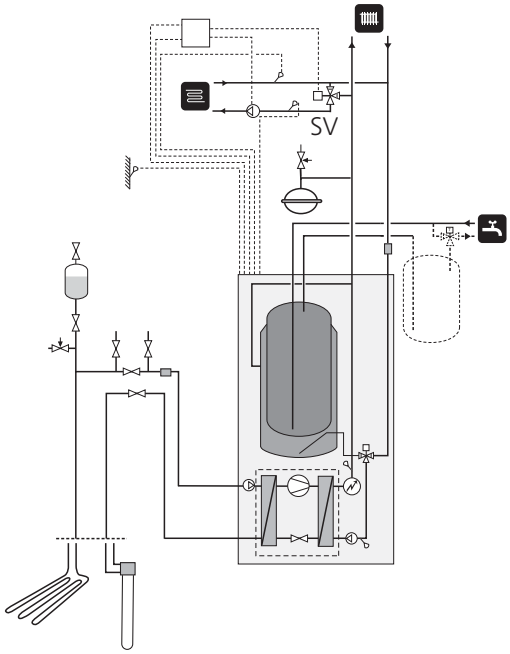
Here you select "On" whether RCU is installed.

Selection option Off and On.
- Factory setting: Off

Extra shunt ESV 21

This accessory is used when FIGHTER 1250 is installed in houses with two different heating systems that require different flow line temperatures, for example, in cases where the house has both a radiator system and an under floor heating system. Heating system 1 covers the system that requires the greater temperature and that is connected to the normal flow line respectively return line connection.

Heating system 2 covers the heating system that works at the lower temperature.



Quick guide– menu settings Extra shunt ESV 21

Menu 8.1.1 Menu type **[N]**

The menu type is chosen here.

[N] Normal, covers the normal user's needs.

[E] Extended, shows all menus except the service menus.

[S] Service, shows all menus, returns to the previous menu level 30 minutes after the last button was pressed.

Selection option Normal, Extended or Service.
- Factory setting: Normal

Select "Service".

Menu 9.2.5 System 2 present **[S]**

Select "On" if heating system 2 is installed. Menu 3.0 can be accessed.

Selection option Off and On.
- Factory setting: Off

Room sensor RG 10

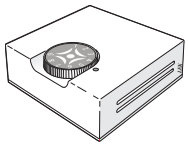
The room sensor is primarily intended to correct decreases in room temperature due to causes other than changes in the outdoor temperature, for example, solar incident radiation.

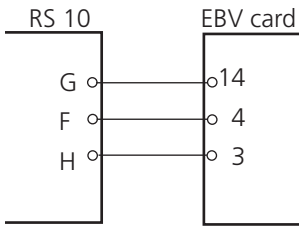
The required temperature can be set using the knob on the room sensor unit. The number 5 corresponds to 21 °C (depending on house type relevant setting of the heat curve and parallel offset). The set temperature can be read on the display screen on the heat pump.

The room sensor corrects the parallel offset so that the flow temperature changes. If the room temperature changes, the room sensor senses it and allows the control computer to change the flow line temperature.

Any radiator valves ought to be fully open in areas that the room sensor is to control.

For connection, see section B (Electrical connections "External contacts").





Quick guide – menu settings Room sensor RG 10

Menu 8.1.1 Menu type **[N]**

The menu type is chosen here.

N] Normal, covers the normal user's needs.

[E] Extended, shows all menus except the service menus.

[S] Service, shows all menus, returns to the previous menu level 30 minutes after the last button was pressed.

Selection option Normal, Extended or Service.
- Factory setting: Normal

Select "Service".

Menu 9.2.18 Room sensor type **[S]**

Room sensor type is selected here. Menu 6.0 can be accessed.

Selection option From, RG05, RG10 or Room unit
- Factory setting: Off

Menu 6.1 Room compensation **[E]**

A factor is selected here that determines how much the flow temperature is affected by the difference between the room temperature and the set room temperature. A higher value gives a greater change.

The value can be set between 0.2 and 3.0.
- Factory setting: 1,0

Menu 6.2 Heating system **[E]**

You select here whether the room sensor should activate heating system 1 (menu 2.0) or heating system 2 (menu 3.0).

Selection option From, System 1, System 2 or System 1+2.
- Factory setting: Off

POOL 11

POOL 11 is an accessory that enables pool heating with FIGHTER 1250.

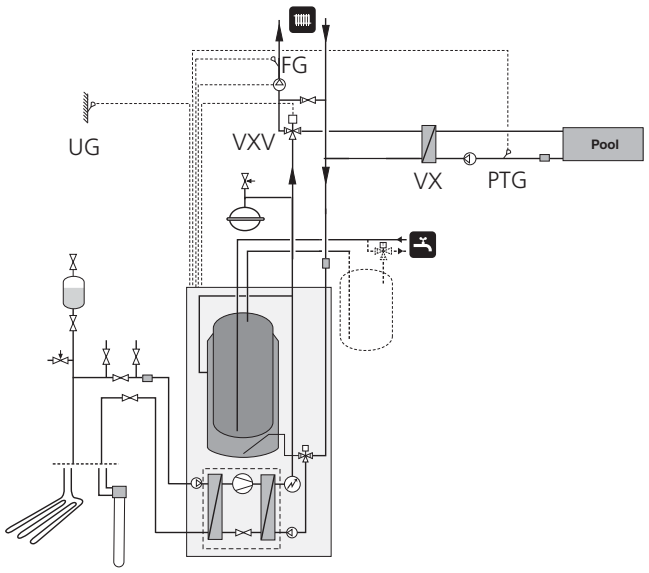
FIGHTER 1250 prioritises charging of hot water. The heat pump is controlled by the outdoor sensor and flow sensor.

When the pool temperature drops below the set start temperature (menu 8.4.1 – menu 8.4.3) and there is no hot water or heating requirement, the shuttle valve switches direction and opens towards the pool heat exchanger.

Pool heating will run for at least the set pool heating time (menu 8.4.3) even when a heating or hot water requirement arises.

The heating medium flow is adjusted in menu 8.4.5 so that the temperature difference over the pool heat exchanger is 10 - 15 °C.

The shuttle valve and external circulation pump is controlled by FIGHTER 1250.
This outline diagram assumes that the pool circulation pump is in continuous operation.



Quick guide – menu settings POOL 11

Menu 8.1.1 Menu type [N]

The menu type is chosen here.

[N] Normal, covers the normal user's needs.

[E] Extended, shows all menus except the service menus.

[S] Service, shows all menus, returns to the previous menu level 30 minutes after the last button was pressed.

Selection option Normal, Extended or Service.
- Factory setting: Normal

Select "Service".

Menu 9.2.10 Pool control [S]

Select "On" if POOL11 is installed.
Menu 8.4.0 can be accessed.

Selection option Off and On.
- Factory setting: Off

Menu 8.4.0 Pool adjustments

Current pool temperature is displayed here.

(activated in menu 9.2.10)

Menu 8.4.1 Pooltemp./Setting [E]

The stop temperature for pool heating is selected here.

The value is adjustable between 5 and 55 °C
- Factory setting: 20 °C

Menu 8.4.2 Diff. pool/min-temp [E]

The difference from the value in menu 8.4.1 when pool heating starts is stated here.

The value is adjustable between 0.5 and 9.5 °C
- Factory setting: 1.5 °C

Menu 8.4.3 Pool time [E]

The maximum time for pool heating is selected here, for more than one heating demand.

The value is adjustable between 5 and 60 minutes.
- Factory setting: 20 min

Menu 8.4.4 Comp speed pool [E]

The compressor frequency for pool heating is selected here.

The value is adjustable between 30 and 120 Hz.
- Factory setting: 60 Hz

Menu 8.4.5 Circ-pump speed pool [E]

The speed of the circulation pump during pool heating is selected here.

The value is adjustable between 1 and 100 %
- Factory setting: 50 %

Menu 8.4.6 Pool heating [E]

Settings whether pool heating should be "On" or "Off".
Selection option Off and On.
- Factory setting: Off

Room unit RE 10

Room unit RE 10 functions as an external display with integrated room sensor for FIGHTER 1250. The RE 10 can be used to read and modify menus and values which are accessible in the heat pump. With the integrated room sensor the calculated flow line is corrected from the heat pump in a way that means that the room temperature can be held at a constant level in the room.



Quick guide – menu settings Room unit RE 10

Menu 8.1.1 Menu type [N]

The menu type is chosen here.

N] Normal, covers the normal user's needs.

[E] Extended, shows all menus except the service menus.

[S] Service, shows all menus, returns to the previous menu level 30 minutes after the last button was pressed.

Selection option Normal, Extended or Service.
- Factory setting: Normal

Select "Service".

Menu 9.2.6 Room disp Present [S]

Select "On" here whether the Room control unit is to be activated or not.

Selection option Off and On.
- Factory setting: Off

Menu 9.2.18 Room sensor type [S]

Room sensor type is selected here. Menu 6.0 can be accessed.

Selection option From, RG05, RG10 or RE 10
- Factory setting: Off

Settings for desired room temperature etc can be selected in the sub-menus to 6.0.

Control / Description of functions

E

CONTROL / FUNCTION DESCRIPTION 39
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Quick movement 40

Changing parameters 41
Example 41

Menu tree 42

Main menus 52
1.0 Hot water temperature 53
2.0 Flow line temp/Hot water charging 54
3.0 Flow line temp 2 55
4.0 Outdoor temperature 56
5.0 Brine in/out 56
6.0 Room temperature/Setting 58
7.0 Clock 58
8.0 Other settings 59
9.0 Service menus 61

Alarm 66

General

The menu tree shows all the menus. Changing of menu type is done from menu 8.1.1

When the menu number ends with a zero this indicates there is a submenu.

Three different menu types can be selected.

[N] Normal, covers the normal user's needs.

[E] Extended, shows all menus except the service menus.

[S] Service, shows all menus, returns to the previous menu level 30 minutes after the last button was pressed.

The display screen shows information about the status of the heat pump. Menu 1.0 is normally shown on the display. The plus and minus buttons and the enter button are used to scroll through the menu system as well as to change the set value in some menus.



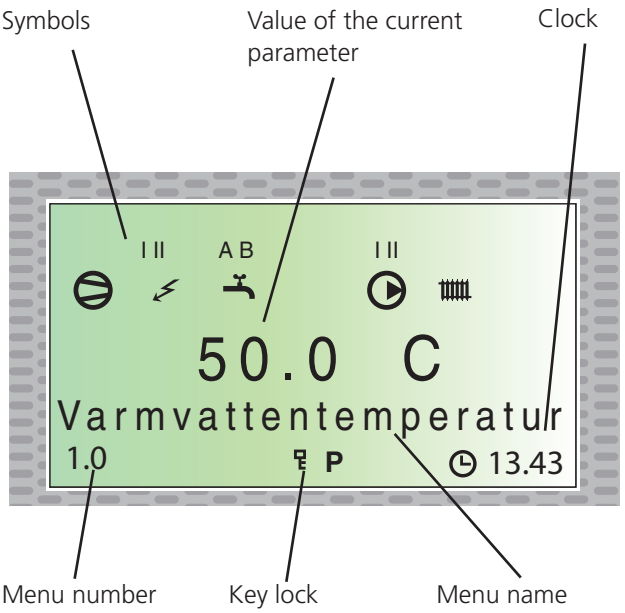
The Plus button is used to move forward to the next menu on the current menu level and to increase the value of the parameter in menus where this is possible.



The Minus button is used to move back to the previous menu on the current menu level and to decrease value of the parameter in menus where this is possible.



The Enter button is used to select submenus of the current menu, to permit parameters to be changed and to confirm any changes to parameters.



Key lock



A key lock can be activated in the main menus by simultaneously pressing the plus and the minus buttons. The key symbol will then be shown on the display.

The same procedure is used to deactivate the key lock.

Quick movement

To quickly return to the main menu from sub-menus press the following:

1. Operating mode button 

2. The Enter button 

Note!

Ensure the operating mode is not changed during quick movement

Changing parameters

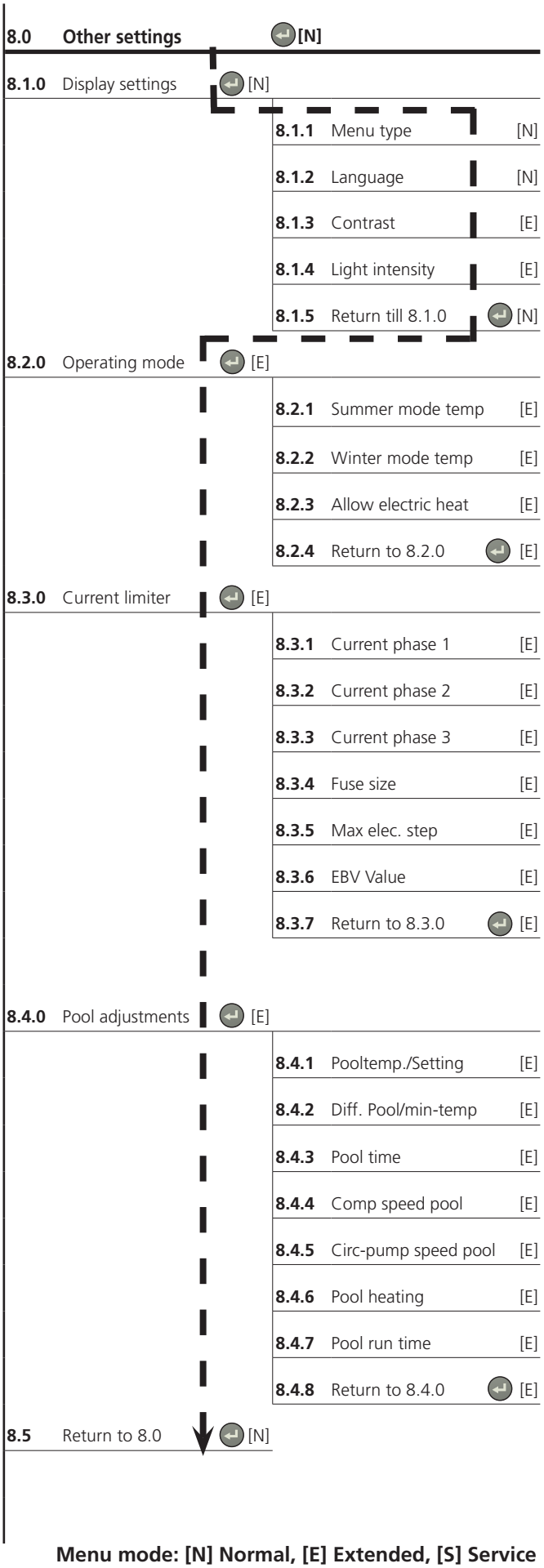
Changing a parameter (value):

- Access the required menu.
- Press the enter button, the numerical value starts to flash.
- Increase or decrease the value with the Plus/Minus buttons.
- Confirm by pressing the enter button.
- Menu 1.0 is automatically displayed again 30 minutes after pressing the last button..

Example

Changing the Menu type/Service mode menu 8.1.1.

- The starting point is menu 1.0.
- Press the plus button to move to menu 8.0.
- Press the enter button to move to menu 8.1.0.
- Press the enter button to move to menu 8.1.1.
- Press the enter button to allow the value to be changed.
- Change the value using the plus or minus button.
- Confirm the chosen value by pressing the enter button.
- Press the minus button to move to menu 8.1.5.
- Press the enter button to move to menu 8.1.0.
- Press the minus button to move to menu 8.5.
- Press the enter button to move to menu 8.0.
- Press the plus button to move to menu 1.0.



Menu mode: [N] Normal, [E] Extended, [S] Service

- **1.0 Hot water temp.** [N]
  - **1.1** Time period HW/Total [N]
    Time Heating/Set.
    Time HW/Set.
  - **1.2** Time period [N]
  - **1.3** MAX-time HW-period [N]
  - **1.4** HW-temp/Starttemp.HW [N]
    Start temp.HW
  - **1.5** HW-temp/Stop temp.HW [N]
    Stop temp.HW
  - **1.6** Stop temp XHW [E]
  - **1.7** Stop compressor XHW [E]
  - **1.8** Interval XHW [E]
  - **1.9** Next XHW action [E]
  - **1.10** HW running time [E]
  - **1.11.0** HW production cont. [E]
    - **1.11.1** CompFreq HW1 [E]
    - **1.11.2** CompFreq HW2 [E]
    - **1.11.3** Shift-temp HW1-HW2 [E]
    - **1.11.4** Circ-pump cont. HW1 [E]
    - **1.11.5** Circ-pump cont. HW2 [E]
    - **1.11.6** Return to 1.11.0 [E]
  - **1.12** Return to 1.0 [N]

- **2.0 Flow temperature Hot water heating** [N]
  - **2.1** Curve coefficient [N]
  - **2.2** Offset heating curve [N]
  - **2.3** Flow temp./MIN [E]
  - **2.4** Flow temp./MAX [E]
  - **2.5** External adjustment [E]
  - **2.6.0** Own curve definition [E]
    - **2.6.1** Flow temp.at +20 [E]
    - **2.6.2** Flow temp.at -20 [E]
    - **2.6.3** Set temperature [E]
    - **2.6.4** Flow temp at set [E]
    - **2.6.5** Return to 2.6.0 [E]
  - **2.7** Circ-pump cont.heat [E]
  - **2.8** Heat in-/out- temp. [E]
  - **2.9** Degree minutes [E]
  - **2.10** Return to 2.0 [N]

Menu mode: [N] Normal, [E] Extended, [S] Service

3.0* Flow temp. system 2 ↵ **[N]**

3.1	Curve coefficient 2	[N]
3.2	Offs.heating curve 2	[N]
3.3	Flow temp.2/MIN	[E]
3.4	Flow temp.2/MAX	[E]
3.5	External adjustment2	[E]
3.6.0	Own curve def. 2 ↵	[E]
3.6.1	Flow temp.at +20	[E]
3.6.2	Flow temp.at -20	[E]
3.6.3	Set temperature 2	[E]
3.6.4	Flow at set 2	[E]
3.6.5	Return to 3.6.0 ↵	[E]
3.7	Return temp.2	[E]
3.8	Return to 3.0 ↵	[N]

* Only shown when "On" is selected in menu 9.2.5. for System 2 Present (accessory ESV 21 required).

4.0 Outdoor temperature ↵ **[N]**

4.1	Outdoor av.temp 24h	[E]
4.2	Outdoor av.temp 1m	[E]
4.3	Return to 4.0 ↵	[E]

Menu mode: [N] Normal, [E] Extended, [S] Service

5.0	**Brine in-/out- temp**	**[N]**
5.1	Status compressor	[N]
	Time to start	
5.2	Number of starts	[N]
5.3	Comp. acc. run time	[N]
5.4	Time between starts	[E]
5.5	Compr. starts at	[E]
5.6	Max returnt. act/set	[E]
5.7	Hot gas temp.	[E]
5.8	Liquid line temp.	[E]
5.9	Bulb temperature	[E]
5.10	Cond out temp./Max	[E]
5.11.0	Brine diff set/pro	[E]
5.11.1	Brine-pump status	[E]
5.11.2	Brine-pump cont.sign	[E]
5.11.3	Brine-pump man Cont	[E]
5.11.4	BrineDiffAt min freq	[S]
5.11.5	BrineDiffAt max freq	[S]
5.11.6	BrineDiff regP	[S]
5.11.7	BrineAdvanceRegP	[S]
5.11.8	BrineDiffregKstepval	[S]
5.11.9	Brine ret. temp./Min	[E]
5.11.10	Autoreset brinealarm	[E]
5.11.11	Return to 5.11.0	[E]
5.12.0	Compressor freq	[E]
5.12.1	Inverter temperature	[E]
5.12.2	Power in W	[E]
5.12.3	Comp phase current	[E]
5.12.4	VDC link	[E]
5.12.5	Comp load I2T	[E]
5.12.6	Comp energy	[E]
5.12.7	Return to 5.12.0	[E]
5.13	Return to 5.0	[N]

6.0**	**Room temp./Settings**	**[N]**
6.1	Room compensation	[E]
6.2	Heating system	[E]
6.3	Set room temp.	[N]
6.4	Room temp avg 1min	[E]
6.5	Return to 6.0	[N]

** Only shown when the accessory RG 10 is installed.

Menu mode: [N] Normal, [E] Extended, [S] Service

7.0 Clock [N]

- **7.1** Date [N]
- **7.2** Time [N]
- **7.3.0** Temp set back time 1 [E]
  - **7.3.1** Heating sys per. 1 [E]
  - **7.3.2** Set back temp. +/- Room temp change [E]
  - **7.3.3** Set time Monday- [E]
  - **- 7.3.9** - Sunday [E]
  - **7.3.10** Return to 7.3.0 [E]
- **7.4.0** Temp set back time 2 [E]
  - **7.4.1** Heating sys per. 2 [E]
  - **7.4.2** Set back temp. +/- Room temp change [E]
  - **7.4.3** Set time Monday- [E]
  - **- 7.4.9** - Sunday [E]
  - **7.4.10** Return to 7.4.0 [E]
- **7.5.0** Timer XHW [E]
  - **7.5.1** Timer HW [E]
  - **7.5.2** Extra HW Monday- [E]
  - **- 7.5.8** - Sunday [E]
  - **7.5.9** Return to 7.5.0 [E]
- **7.6** Reset timers [E]
- **7.7** Return to 7.0 [N]

8.0 Other settings [N]

- **8.1.0** Display settings [N]
  - **8.1.1** Menu type [N]
  - **8.1.2** Language [N]
  - **8.1.3** Contrast [E]
  - **8.1.4** Light intensity [E]
  - **8.1.5** Return to 8.1.0 [N]
- **8.2.0** Operating mode [E]
  - **8.2.1** Summer mode temp. [E]
  - **8.2.2** Only electric heat [E]
  - **8.2.3** Allow electric heat [E]
  - **8.2.4** Return to 8.2.0 [E]
- **8.3.0** Current limiter [E]
  - **8.3.1** Current phase 1 [E]
  - **8.3.2** Current phase 2 [E]
  - **8.3.3** Current phase 3 [E]
  - **8.3.4** Fuse size [E]
  - **8.3.5** Max elec. step [E]
  - **8.3.6** EBV value [E]
  - **8.3.7** Return to 8.3.0 [E]
- **8.4.0** Pool adjustments [N]
  - **8.4.1** Pooltemp./Setting [E]
  - **8.4.2** Diff. Pool/min-temp [E]
  - **8.4.3** Pool time [E]
  - **8.4.4** Comp speed pool [E]
  - **8.4.5** Circ-pump speed pool [E]
  - **8.4.6** Pool heating [E]
  - **8.4.7** Pool run time [E]
  - **8.4.** Return to 8.4.0 [E]
- **8.5** Return to 8.0 [N]

Menu mode: [N] Normal, [E] Extended, [S] Service

9.0 Service menus [S]

- **9.1.0** Add. heat settings [S]
  - **9.1.1** Start Add. heating [S]
  - **9.1.2** Diff. Add. heating [S]
  - **9.1.3** Add heat run time [S]
  - **9.1.4** Return to 9.1.0 [S]
- **9.2.0** Operating mode set [S]
  - **9.2.1** Max HW temp [S]
  - **9.2.2** Flow diff HP [S]
  - **9.2.3** Diff HP Add [S]
  - **9.2.5** System 2 Present [S]
  - **9.2.6** Room disp Present [S]
  - **9.2.7** Circ. pump 1 [S]
  - **9.2.8** Circ. pump 2 [S]
  - **9.2.9.0** Floor drying set [S]
    - **9.2.9.1** Floor drying [S]
    - **9.2.9.2** Numb. of days per. 1 [S]
    - **9.2.9.3** Temp. period 1 [S]
    - **9.2.9.4** Numb. of days per. 2 [S]
    - **9.2.9.5** Temp. period 2 [S]
    - **9.2.9.6** Return to 9.2.9.0 [S]
  - **9.2.10** Pool control [S]
  - **9.2.11** Brine pressostat [S]
  - **9.2.12** Oper. mode brinepump [S]

continued on next page 9.2.14

Menu mode: [N] Normal, [E] Extended, [S] Service

cont. **Service menus**

from previous page

- **9.2.14** Factory setting [S]
- **9.2.15** RCU Present [S]
- **9.2.17** TL-alarm activated [S]
- **9.2.18** Room sensor type [S]
- **9.2.19** Return to 9.2.0 ↵ [S]

9.3 Quick start [S]

9.4.0 TEST/Forced operat. ↵ [S]

- **9.4.1.0** Forced operation ↵ [S]
  - **9.4.1.1** Forced operation [S]
  - **9.4.1.2** RE1- [S]
  - **-9.4.1.15** - RE14 [S]
  - **9.4.1.16** REX2 [S]
  - **9.4.1.17** REX3 [S]
  - **9.4.1.18** Return to 9.4.1.0 ↵ [S]

continued on next page 9.4.2.0

Menu mode: [N] Normal, [E] Extended, [S] Service

cont. Service menus

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9.4.2.0	Input status	[S]			
			9.4.2.1	X1:1-2	[S]
			9.4.2.2	X1:3-4	[S]
			9.4.2.3	X1:5-7	[S]
			9.4.2.4	X1:6-7	[S]
			9.4.2.5	X1:8-11	[S]
			9.4.2.6	X1:9-11	[S]
			9.4.2.7	X1:10-11	[S]
			9.4.2.8	X1:12-13	[S]
			9.4.2.9	X1:14-15	[S]
			9.4.2.10	X1:16-17	[S]
			9.4.2.11	X4:1-2	[S]
			9.4.2.12	X4:3-4	[S]
			9.4.2.13	X4:5-6	[S]
			9.4.2.14	X4:7-8	[S]
			9.4.2.15	X4:9-10	[S]
			9.4.2.16	X4:11-12	[S]
			9.4.2.17	X4:13-14	[S]
			9.4.2.18	X4:15-16	[S]
			9.4.2.19	X5:1-2	[S]
			9.4.2.20	X5:3-4	[S]
			9.4.2.21	X5:5-6	[S]
			9.4.2.22	X5:7-8	[S]
			9.4.2.23	X5:9-10	[S]
			9.4.2.24	X5:11-12	[S]
			9.4.2.25	X5:13-14	[S]
			9.4.2.26	X5:15-16	[S]
			9.4.2.27	X5:17-18	[S]
			9.4.2.28	X5:19-20	[S]
			9.4.2.29	X6:1-2	[S]
			9.4.2.30	X6:3-4	[S]
			9.4.2.31	J8:1-2	[S]
			9.4.2.32	J8:3-4	[S]
			9.4.2.33	PCB 102 X1.5-6	[S]
			9.4.2.34	PCB 102 X1.7-8	[S]
9.4.3	Return to 9.4.0	[S]	**9.4.2.35**	Return to 9.4.2.0	[S]

cont. Service menus

9.5.0 Log 1-
-9.8.0 - Log 4 [S]

9.x.1	Time	[S]
9.x.2	Alarm number	[S]
9.x.3	Charging type	[S]
9.x.4	Brine in	[S]
9.x.5	Brine out	[S]
9.x.6	Outdoor temp.	[S]
9.x.7	Flow temp.	[S]
9.x.8	Return temp.	[S]
9.x.9	Hot water temp.	[S]
9.x.10	Hot gas temp.	[S]
9.x.11	Compr. time	[S]
9.x.12	Electric b. time	[S]
9.x.13	Circ-pump cont.sign	[S]
9.x.14	Brine-pump cont.sign	[S]
9.x.15	CompFreq cont.sign	[S]
9.x.16	Relay 1-8	[S]
9.x.17	Relay 9-14	[S]
9.x.18	Inv. current (Apeak)	[S]
9.x.19	Inv. VDC	[S]
9.x.20	Inv. speed (RPM)	[S]
9.x.21	Inv. error code	[S]
9.x.22	Return to 9.x.0	[S]

Menu mode: [N] Normal, [E] Extended, [S] Service

cont. Service menus

- **9.9** Reset log [S]
- **9.10** Reset Alarm [S]
- **9.11.0** Add. heat settings [S]
  - **9.11.1** CompFreq act/set [S]
  - **9.11.2** Manual CompFreq [S]
  - **9.11.3** Max deltaF act/set [S]
  - **9.11.4** CompFreq regP [S]
  - **9.11.5** Time min freq start [S]
  - **9.11.6** Time min freq heat [S]
  - **9.11.7** Max diff flow-cFlow [S]
  - **9.11.8** Return to 9.11.0 [S]
- **9.12.0** Other inverter adj. [S]
  - **9.12.1** Min CompFreq act/set [S]
  - **9.12.2** Max CompFreq act/set [S]
  - **9.12.3.0** CompFreq blockFreq [S]
    - **9.12.3.1** BlockFreq 1 from [S]
    - **9.12.3.2** BlockFreq 1 to [S]
    - **9.12.3.3** BlockFreq 2 from [S]
    - **9.12.3.4** BlockFreq 2 to [S]
    - **9.12.3.5** BlockFreq 3 from [S]
    - **9.12.3.6** BlockFreq 3 to [S]
    - **9.12.3.7** BlockFreq 4 from [S]
    - **9.12.3.8** BlockFreq 4 to [S]
    - **9.12.3.9** BlockFreq 5 from [S]
    - **9.12.3.10** BlockFreq 5 to [S]
    - **9.12.3.11** Return to 9.12.3.0 [S]
  - **9.12.4** CompFreq powerguard [S]
  - **9.12.5.0** Inverter param rev [S]
    - **9.12.5.1** Download inv para [S]
    - **9.12.5.2** Return to 9.12.5.0 [S]

cont. Service menus

from previous page

9.12.6.0 Inv. templimit setup [S]

- **9.12.6.1** Inv. templimit on [S]
- **9.12.6.2** Inv. templimit diff [S]
- **9.12.6.3** CompFreq dec/min [S]
- **9.12.6.4** Return to 9.12.6.0 [S]

9.12.7 Return to 9.12.0 [S]

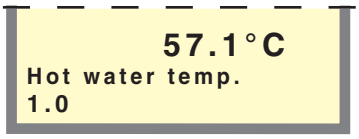
9.13.0 System info [S]

- **9.13.1** Com. Type Error [S]
- **9.13.2** CompReStartCounter [S]
- **9.13.3** InvResetCounter [S]
- **9.13.4** Inv. OnOffCounter [S]
- **9.13.5** SW ver. PCB relay [S]
- **9.13.6** SW ver. PCB 102 [S]
- **9.13.7** Return to 9.13.0 [S]

9.14 Return to 9.0 [S]

Main menus

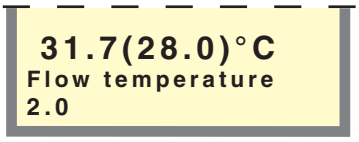
[N]



Menu 1.0 Hot water temp.

The current hot water temperature in the upper part of the hot water heater is shown here.

[N]

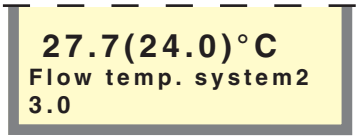


Menu 2.0 Flow temperature

The current flow line temperature for heating system and the current calculated flow line temperature in brackets.

"Hotwater heating" is displayed during hot water heating.

[N]



Menu 3.0 Flow temp. system2*

The current flow line temperature for heating system 2 and the current calculated flow line temperature in brackets.

Activated in menu 9.2.5.

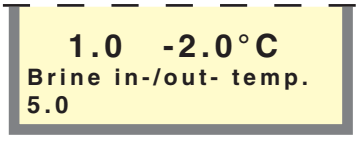
[N]



Menu 4.0 Outdoor temperature

The current outdoor temperature is shown here.

[N]

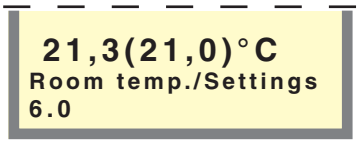


Menu 5.0 Brine in-/out- temp.

Readings regarding the temperatures and compressor are made from the sub-menus to this menu.

* Accessories

[N]



Menu 6.0 Room temp./Settings*

The room temperature is shown here and the set room temperature in brackets. Settings concerning the factor for the room sensor and which heating system the sensor should control are made on the sub-menus to this menu. Activated in menu 9.2.18.

[N]



Menu 7.0 Clock

Settings regarding the date and time are made in the sub-menus of this menu. Different temperature reductions and increases at selected times are also set from this menu.

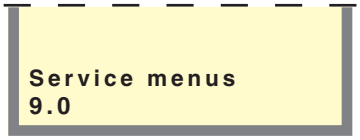
[N]



Menu 8.0 Other settings

Settings regarding the menu type, language, operating mode settings and load monitor reading are made in the sub-menus to this menu.

[S]



Menu 9.0 Service menus

This menu and its sub-menus are only shown on the display screen when access has been selected in menu 8.1.1.

Values can be read and various settings can be made from these sub-menus.

Note! These settings should only be made by persons with the necessary expertise.

[N] Normal, covers the normal user's needs.

[E] Extended, shows all menus except the service menus.

[S] Service, shows all menus, returns to the previous menu level 30 minutes after the last button was pressed.

1.0 Hot water temp.

Menu 1.1 Time period HW/Total [N]

The time of the hot water period and the time for the whole period are shown here. Shown for both hot water charging and heat when necessary:

Time Heating/Set. when heating is in progress.
Time HW/Set when hot water charging is in progress.

Menu 1.2 Time period [N]

The length of time is set here.

The value is adjustable between 5 and 60 minutes.
- Factory setting: 60 min

Menu 1.3 MAX-time HW-period [N]

Here you select how much time of the period time (menu 1.2) is to be used to heat the hot water when there is a need of both heating and hot water.

The value is adjustable between 5 and 60 minutes.
- Factory setting: 20 min

Menu 1.4 HW-temp/Starttemp.HW [N]
Start temp.HW

The temperature when the heat pump starts hot water charging is set here. When brackets are shown containing a minus symbol, this means the high pressure pressostat has tripped during hot water charging and FIGHTER 1250 has automatically lowered the set temperature by the value in brackets. The reduction is removed when the start value is changed.

The value is adjustable between 25 and 55 °C
- Factory setting: 47 °C

Menu 1.5 HW-temp/Stop temp.HW [N]
Stop temp.HW

The temperature when the heat pump stops hot water charging is set here. When brackets are shown containing a minus symbol, this means the high pressure pressostat has tripped during hot water charging and FIGHTER 1250 has automatically lowered the set temperature by the value in brackets. The reduction is removed when the stop value is changed.

The value is adjustable between 30 and 60 °C
- Factory setting: 54 °C

Menu 1.6 Stop temp XHW [E]

The desired stop temperature for extra hot water is set here.

The value is adjustable between 30 and 80 °C
- Factory setting: 60 °C

Menu 1.7 Stop compressor XHW [E]

The temperature to stop the compressor for extra hot water is set here.

The value is adjustable between 30 and 60 °C
- Factory setting: 55 °C

Menu 1.8 Interval XHW [E]

Periodic time based extra hot water is selected here. Extra hot water is shut-off when 0 is set. Extra hot water starts when the value has been confirmed.

The value is adjustable between 0 and 90 days.
- Factory setting: 14 days

Menu 1.9 Next XHW action [E]

Future increases to the "Extra hot water" level are shown here.

Menu 1.10 HW running time [E]

How long hot water heating has been in progress is shown here (accumulated).

Menu 1.11.0 HW production cont. [E]

Hot water charging settings are made in the sub-menus for this.

Menu 1.11.1 CompFreq HW1 [E]

The compressor frequency for hot water charging at low temperatures in the heater is selected here.

The value is adjustable between 45 and 120 Hz.
- Factory setting: 80 Hz

Menu 1.11.2 CompFreq HW2 [E]

The compressor frequency for hot water charging at high temperatures in the heater is selected here.

The value is adjustable between 45 and 120 Hz.
- Factory setting: 45 Hz

Menu 1.11.3 Shift-temp HW1-HW2 [E]

The number of degrees during Stoptemp.HW (menu 1.5) that shift between HW1 and HW2 is selected here.

The value is adjustable between 0 and 20 °C.
- Factory setting: 5 °C

Menu 1.11.4 Circ-pump cont. HW1 [E]

The speed of the circulation pump during hot water charging at low temperature in the hot water heater is selected here.

The value is adjustable between 1 and 100 %.
- Factory setting: 15 %

Menu 1.11.5 Circ-pump cont. HW2 [E]

The speed of the circulation pump during hot water charging at high temperature in the hot water heater is selected here.

The value is adjustable between 1 and 100 %.
- Factory setting: 1 %

Menu 1.11.6 Return [E]

Pressing the enter button returns you to Menu 1.11.0

Menu 1.12 Return [N]

Pressing the enter button returns you to Menu 1.0

2.0 Flow temperature Hot water heating

Menu 2.1 Curve coeffcient [N]

The selected curve slope (heating curve) is shown here. At value 0, the function "Own curve" is activated, see menu 2.6.0.

The value can be set between curves 0 and 15.
- Factory setting: 9

Menu 2.2 Offset heating curve [N]

The selected heating curve offset is shown here.
Note! The value is changed using the "Heating curve offset" knob.

The value can be set between -10 and +10.
- Factory setting: 0

Menu 2.3 Flow temp./Min [E]

The set minimum level for the supply temperature to the heating system is shown here.
The calculated flow temperature never drops below the set level irrespective of the outdoor temperature, curve slope or offset heating curve.

The value is adjustable between 2 and 80 °C
- Factory setting: 15 °C

Menu 2.4 Flow temp./Max [E]

The set maximum level for the supply temperature to the heating system is shown here.

The calculated supply temperature never exceeds the set level irrespective of the outdoor temperature, curve coefficient or offset heating curve.

The value is adjustable between 10 and 80 °C
- Factory setting: 55 °C

Menu 2.5 External adjustment [E]

Connecting an external contact, see "Electrical connections - External contacts", for example, a room thermostat (accessory) or a timer allows you to temporarily or periodically raise or lower the room temperature. When the external contact is made, the heating curve offset is changed by the number of steps shown here.

The value can be set between -10 and +10.
- Factory setting: 1

Menu 2.6.0 Own curve definition [E]

Here you can select your own curve definition. This is an individual linear curve with one break point. You select a break point and the associated temperatures.
Note! The "Curve coefficient" in menu 2.1 must be set to 0 to activate this function.

Menu 2.6.1 Flow temp.at +20°C [E]

The flow temperature at an outside temperature of +20°C is chosen here. The value is adjustable between 0 and 60°C.
- Factory setting: 15 °C

Menu 2.6.2 Flow temp.at -20°C [E]

The supply temperature at an outside temperature of -20 is selected here.

The value is adjustable between 0 and 60 °C
- Factory setting: 35 °C

Menu 2.6.3 Set temperature [E]

Here you select at what outside temperature the break point shall occur.

The value is adjustable between -15 and +15 °C
- Factory setting: 0 °C

Menu 2.6.4 Flow temp at set [E]

You set the required flow temperature for the break point here.

The value is adjustable between 0 and 60 °C
- Factory setting: 20 °C

Menu 2.6.5 Return [E]

Pressing the enter button returns you to Menu 2.6.0

Menu 2.7 Circ-pump cont.heat [E]

The speed of the heating medium pump during house heating is selected here.

The value is adjustable between 1 and 100 %
- Factory setting: 100 %

Menu 2.8 Heat in-/out- temp. [E]

The current actual flow and return line temperatures are shown here.

Menu 2.9 Degree minutes [E]

Current value for number of degree-minutes. For example, this value can be changed to accelerate the start of heating production.

The value is adjustable between -800 and 100.

Menu 2.10 Return [N]

Pressing the enter button returns you to Menu 2.0

3.0 Flow temp. system2

Menu 3.1 Curve coefficient 2 [N]

The selected curve slope (heating curve) is shown here. At value 0, the function "Own curve definition" is activated, see menu 3.6.0.

The value can be set between curves 0 and 15.
- Factory setting: 9

Menu 3.2 Offs.heating curve 2 [N]

The selected heating curve offset is shown here.
The value can be set between -10 and +10.
- Factory setting: -1

Menu 3.3 Flow temp.2/MIN [E]

The set minimum level for the supply temperature for heating system 2 is shown here.

The calculated flow temperature never drops below the set level irrespective of the outdoor temperature, curve slope or offset heating curve.

The value is adjustable between 10 and 80 °C
- Factory setting: 15 °C

Menu 3.4 Flow temp.2/MAX [E]

The set maximum level for the flow line temperature for heating system 2 is shown here.
The calculated flow line temperature never exceeds the set level irrespective of the outdoor temperature, curve slope or heating curve offset.

The value is adjustable between 10 and 80 °C
- Factory setting: 45 °C

Menu 3.5 External adjustment2 [E]

Connecting an external contact, see "Electrical connections - External contacts", for example, a room thermostat (accessory) or a timer allows you to temporarily or periodically raise or lower the room temperature. When the external contact is made, the heating curve offset is changed by the number of steps shown here.

The value can be set between -10 and +10.
- Factory setting: 1

Menu 3.6.0 Own curve def. 2 [E]

Here you can select your own curve definition. This is an individual linear curve with one break point. You select a break point and the associated temperatures.
Note! The "Curve slope" in menu 3.1 must be set to 0 to activate this function.

Menu 3.6.1 Flow temp.at +20ºC [E]

The flow line temperature at an outside temperature of +20 is selected here.

The value is adjustable between 0 and 60 °C
- Factory setting: 15 °C

Menu 3.6.2 Flow temp.at -20ºC [E]

The flow line temperature at an outside temperature of -20 is selected here.

The value is adjustable between 0 and 60 °C
- Factory setting: 35 °C

Menu 3.6.3 Set temperature 2 [E]

Here you select at what outside temperature the break point shall occur.

The value is adjustable between -15 and +15 °C
- Factory setting: 0 °C

Menu 3.6.4 Flow at set 2 [E]

You set the required flow temperature for the break point here.

The value is adjustable between 0 and 60 °C
- Factory setting: 20 °C

Menu 3.6.5 Return [E]

Pressing the enter button returns you to Menu 3.6.0

Menu 3.7 Return temp.2 [E]

The return line temperature for heating system 2 is shown here.

Menu 3.8 Return [N]

Pressing the enter button returns you to Menu 3.0.

4.0 Outdoor temperature

Menu 4.1 Outdoor av.temp 24h [E]

Shows the average outdoor temperature over the last 24 hours.

Menu 4.2 Outdoor av.temp 1m [E]

Shows the average outdoor temperature over the last minute.

Menu 4.3 Return [E]

Pressing the enter button returns you to Menu 4.0.

5.0 Brine in-/out- temp.

Menu 5.1 Status compressor [N]
Time to start

Shows the compressor status for the heat pump.

"Start in XX minutes", means the compressor will start as soon as the time condition permits.

"Compr. OFF" means that the compressor is not operational.

"Compr. ON" means that the compressor is operational.

Menu 5.2 Number of starts [N]

The accumulated number of starts with the compressor is shown here.

Menu 5.3 Comp. acc. run time [N]

The accumulated time that the compressor has been in operation is shown here.

Menu 5.4, Time between starts [E]

Time between compressor starts is set here.

The value is adjustable between 10 and 60 minutes.
- Factory setting: 20 min

Menu 5.5 Compr. starts at [E]

How low the degree-minutes may drop before the compressor start can take place is set here.

The value can be set between -250 and -5.
- Factory setting: -60

Menu 5.6 Max returnt. act/set [E]

Shows the set max return temperature and calculated depending on brine temperature.

The value is adjustable between 40 and 56 °C
- Factory setting: 53 °C

Menu 5.7 Hot gas temp. [E]

Shows the hot gas temperature.

Menu 5.8 Liquid line temp. [E]

Shows the liquid line temperature.

Menu 5.9 Bulb temperature [E]

Shows the bulb temperature.

Menu 5.10 Cond out temp./Max [E]

Shows the current and max temperature after the condenser. Max temperature drops automatically at low brine temperature.

Menu 5.11.0 Brine diff set/pro [E]

Shows the actual and desired value for the brine's temperature.

Menu 5.11.1 Brine-pump status [E]

Shows the brine pump's status, On or Off .

Menu 5.11.2 Brine-pump cont.sign [E]

The brine's pump's speed in percent.
Setting the speed during manual control.

The value is adjustable between 1 and 100 %

Menu 5.11.3 Brine-pump man. Cont. [E]

Select "On" to manually control the brine pump.

Selection option Off and On.
- Factory setting: Off

Menu 5.11.4 BrineDiffAt min freq [S]

Select the brine temperature difference at lowest compressor frequency.

The value is adjustable between 1.0 and 6.0 °C
- Factory setting: 2.5 °C

Menu 5.11.5 BrineDiffAt max freq [S]

Select the brine temperature difference at highest compressor frequency.

The value is adjustable between 1.0 and 6.0 °C
- Factory setting: 4.5 °C

Menu 5.11.6 BrineDiff regP [S]

Select P part for Brine pump regulator.

The value can be set between 1 and 20.
- Factory setting: 2

Menu 5.11.7 BrineAdvanceRegP [S]

Select feed forward value of CompFreq to the brine pump regulator.

The value can be set between 0 and 100.
- Factory setting: 20

Menu 5.11.8 BrineDiffregKstepval [S]

To select threshold value on CompFreq change when feed forward to the brine pump regulator is to be used.

The value can be set between 1 and 10.
- Factory setting: 4

Menu 5.11.9 Brine ret. temp./MIN [E]

The lowest permitted outgoing brine temperature is set here.

The value is adjustable between -10 and 12 °C
- Factory setting: -10 °C

Menu 5.11. 10 Autoreset brinealarm [E]

Automatic restart after an BR alarm, when the temperature rises 3 °C above the selected alarm level (menu 5.11.9) for brine out is selected here.

Selection option Off and On.
- Factory setting: Off

Menu 5.11.11 Return [E]

Pressing the enter button returns you to Menu 5.11.0

Menu 5.12.0 Compressor freq [E]

The current compressor frequency is shown here.

Menu 5.12.1 Inverter temperature [E]

The current inverter temperature is shown here.

Menu 5.12.2 Power in W [E]

Actual supplied power to inverter shown here.

Menu 5.12.3 Comp phase current [E]

Shows actual phase current between inverter and compressor.

Menu 5.12.4 VDC link [E]

The actual internal DC in the inverter is shown here.

Menu 5.12.5 Comp load I2T [E]

Shows the compressor load.

Menu 5.12.6 Comp energy [E]

The compressor's accumulated energy consumption in kWh. Note! Only the compressor's consumption applies. Circulation pumps, control and electrical addition do not apply.

Menu 5.12.7 Return [E]

Pressing the enter button returns you to Menu 5.12.0

Menu 5.13 Return [N]

Pressing the enter button returns you to Menu 5.0

6.0 Room temp./Settings

Menu 6.1 Room compensation [E]

A factor is selected here that determines how much the flow temperature is affected by the difference between the room temperature and the set room temperature. A higher value gives a greater change.

The value can be set between 0.2 and 3.0.
- Factory setting: 1,0

Menu 6.2 Heating system [E]

You select here whether the room sensor should activate heating system 1 (menu 2.0) or heating system 2 (menu 3.0).

Selection option From, System 1, System 2 or System 1+2.
- Factory setting: Off

Menu 6.3 Set room temp. [N]

Only shown when accessory RG05 is selected in menu 9.2.18.

The value is adjustable between 5 and 40 °C
- Factory setting: 20 °C

Menu 6.4 Room temp avg 1min [E]

Shows the average room temperature over the last minute.

Menu 6.5 Return [N]

Pressing the enter button returns you to Menu 6.0.

7.0 Clock

Menu 7.1 Date [N]

The current date is set here.

Menu 7.2 Time [N]

Here the current time is set.

Menu 7.3.0 Temp set back time 1 [E]

Settings, e.g. for night reduction can be selected in the sub-menus to this menu.

Menu 7.3.1 Heating sys per. 1 [E]

Here you set which heating system is to be influenced by day changes period 1. When heating system 2 is installed both system 1 and/or 2 can be selected.
If room sensor is selected, the system choice is made in menu 6.2.

Selection option From, System 1, System 2 or System 1+2 or Room sensor.
- Factory setting: Off

Menu 7.3.2 Set back temp. +/- Room temp change [E]

Changes to the room temperature with a day change, e.g. the night reduction is set here.
The value can be set between -10 and +10.
Factory setting: 0

Menu 7.3.3 – 7.3.9 Set time Monday – Sunday [E]

The time for the day change, e.g. night reduction is chosen here.

The value can be set between 00:00 and 23:45.
- Factory setting: 00:00-00:00

Menu 7.3.10 Return [E]

Pressing the enter button returns you to Menu 7.3.0

Menu 7.4.0 Temp set back time 2 [E]

Settings, e.g. for night reduction can be selected in the sub-menus to this menu.

Menu 7.4.1 Heating sys per. 2 [E]

Here you set which heating system is to be influenced by day changes period 2. When heating system 2 is installed both system 1 and/or 2 can be selected.
If room sensor is selected, the system choice is made in menu 6.2.

Selection option From, System 1, System 2 or System 1+2 or Room sensor.
- Factory setting: Off

Menu 7.4.2 Set back temp. +/- Room temp change [E]

Changes to the room temperature with a day change, e.g. the night reduction is set here.

The value can be set between -10 and +10.
Factory setting: 0

Menu 7.4.3 – 7.4.9 Set time [E]
Monday – Sunday

The time for the day change, e.g. night reduction is chosen here.

The value can be set between 00:00 and 23:45.
- Factory setting: 00:00-00:00

Menu 7.4.10 Return [E]

Pressing the enter button returns you to Menu 7.4.0

Menu 7.5.0 Timer XHW [E]

Settings are made in the sub-menus of this menu when extra hot water is required on a specific day.

Menu 7.5.1 Timer XHW [E]

Settings whether timer should be "On" or "Off".

Selection option Off and On.
- Factory setting: Off

Menu 7.5.2 – 7.5.8 Extra HW [E]
Monday – Sunday

Here you select the period for respective days when extra hot water should be activated. Hours and minutes for both start and stop are shown. Equal values or the stop time before the start time mean that extra hot water is not activated.

The value can be set between 00:00 and 23:45.
- Factory setting: 00:00-00:0

Menu 7.5.9 Return [E]

Pressing the enter button returns you to Menu 7.5.0

Menu 7.6 Reset timers [E]

You can choose here to reset the timers. Automatic return to "Off" after one minute.

Selection option Off and On.
- Factory setting: Off

Menu 7.7 Return [N]

Pressing the enter button returns you to Menu 7.0.

8.0 Other settings

Menu 8.1.0 Display settings [N]

Settings concerning language and menu type are set on the sub-menus to this menu.

Menu 8.1.1 Menu type [N]

The menu type is chosen here.

[N] Normal, covers the normal user's needs.

[E] Extended, shows all menus except the service menus.

[S] Service, shows all menus, returns to the previous menu level 30 minutes after the last button was pressed.

Note!

Incorrect settings in service menus can damage the heat pump

Selection option Normal, Extended or Service.
- Factory setting: Normal

Menu 8.1.2 Language [N]

Language settings are made here.

Menu 8.1.3 Contrast [E]

The display's contrast is set here.

The value can be set between 0 and 31.
- Factory setting: 20

Menu 8.1.4 Light intensity [E]

The light intensity in idle mode is set here. Idle mode starts 30 minutes after the last button was pushed.

Selection option 0=shut-off, 1=low, 2=average.
- Factory setting: 1

Menu 8.1.5 Return [N]

Pressing the enter button returns you to Menu 8.1.0

Menu 8.2.0 Operating mode [E]

Settings regarding auto mode can be made in the sub-menus to this menu.

Menu 8.2.1 Summer mode temp. [E]

Here you select the average temperature when the heat pump, in auto mode, shall switch to summer mode. In summer mode the circulation pump and electrical addition are blocked, only hot water is produced.

The value is adjustable between 0 and 30 °C
- Factory setting: 25 °C

Menu 8.2.2 Only electric heat [E]

Selected if electric addition is to be used to produce hot water and heat.

Selection option Off and On.
- Factory setting: Off

Menu 8.2.3 Allow electric heat [E]

To select if the electric addition is to be permitted during room heating in operating mode Auto.

Selection option Off and On.
- Factory setting: Off

Menu 8.2.4 Return [E]

Pressing the enter button returns you to Menu 8.2.0

Menu 8.3.0 Current limiter [E]

Settings and readings regarding the load monitor are set on the sub-menus to this menu.

Menu 8.3.1 Current phase 1 [E]

Shows the measured current from phase 1. If the value falls below 2.0 A "low" is shown.

Menu 8.3.2 Current phase 2 [E]

Shows the measured current from phase 2. If the value falls below 2.0 A "low" is shown.

Menu 8.3.3 Current phase 3 [E]

Shows the measured current from phase 3. If the value falls below 2.0 A "low" is shown.

Menu 8.3.4 Fuse size [E]

The setting selected on the EBV card (2) knob (100) is shown here.

Menu 8.3.5 Max elec. step [E]

The setting selected on the EBV card (2) knob (101) is shown here.

Menu 8.3.6 EBV value [E]

The transfer value must be defined depending on the current transformers used for the EBV card.

The value can be set between 100 and 600 in increments of 5.
- Factory setting: 300

Menu 8.3.7 Return [E]

Pressing the enter button returns you to Menu 8.3.0

Menu 8.4.0 Pool adjustments [N]

Current pool temperature is displayed here.
(activated in menu 9.2.10)

Menu 8.4.1 Pooltemp./Setting [E]

The stop temperature for pool heating is selected here.

The value is adjustable between 5 and 55 °C
- Factory setting: 20 °C

Menu 8.4.2 Diff. Pool/min-temp [E]

The difference from the value in menu 8.4.1 when pool heating starts is stated here.

The value is adjustable between 0.5 and 9.5 °C
- Factory setting: 1.5 °C

Menu 8.4.3 Pool time [E]

The maximum time for pool heating is selected here, for more than one heating demand.

The value is adjustable between 5 and 60 minutes.
- Factory setting: 20 min

Menu 8.4.4 Comp speed pool [E]

The compressor frequency for pool heating is selected here.

The value is adjustable between 30 and 120 Hz.
- Factory setting: 60 Hz

Menu 8.4.5 Circ-pump speed pool [E]

The speed of the circulation pump during pool heating is selected here.

The value is adjustable between 1 and 100 %
- Factory setting: 50 %

Menu 8.4.6 Pool heating [E]

Settings whether pool heating should be "On" or "Off".
Selection option Off and On.
- Factory setting: Off

Menu 8.4.7 Pool run time [E]

Shows accumulated pool time.

Menu 8.4.8 Return [E]

Pressing the enter button returns you to Menu 8.4.0.

Menu 8.5 Return [N]

Pressing the enter button returns you to Menu 8.0.

9.0 Service menus

Menu 9.1.0 Add. heat settings [S]

Settings regarding additional heat in the heat pump are made from the sub-menus in this menu.

Menu 9.1.1 Start Add. heating [S]

To select which degree minutes the addition is to start at during house heating.

The value can be set between -500 and -30.
- Factory setting: -400.

Menu 9.1.2 Diff. Add. heating [S]

To select the difference between engaging and disengaging the electric steps.

The value can be set between -100 and 0.
Factory setting: -100

Menu 9.1.3 Add heat run time [S]

The accumulated running time for the electric addition since the first start is shown.

Menu 9.1.4 Return [S]

Pressing the enter button returns you to Menu 9.1.0

Menu 9.2.0 Operating mode set [S]

Settings regarding accessories, floor drying and a return to the factory settings can be made on the sub-menus in this menu.

Menu 9.2.1 Max HW temp [S]

Here the maximum hot water temperature is shown. The value is selected on the load monitor card (2) using knob (102).

The value is adjustable between 50 and 80 °C
- Factory setting: 65 °C (mode C)

Menu 9.2.2 Flow diff HP [S]

When the current flow temperature **deviates** from the set value compared to that calculated, the heat pump is forced to stop/start irrespective of the degree-minute figure.

If the current supply temperature **exceeds** the calculated flow with the set value, the degree-minute figure is set to 0. The compressor stops when there is only a heating requirement.

If the current supply temperature **falls below** calculated flow with set value, the degree minute number is set to -61. This means that the compressor will start.

The value is adjustable between 3 and 25 °C
- Factory setting: 10 °C

Menu 9.2.3 Diff HP Add [S]

If "Allow electric heat" (menu 8.2.3) is selected "On" and the current flow temperature drops below that calculated by the set value, plus the value from menu 9.2.2, the degree-minute value is set to -401. This means that the additional heat can be engaged directly.

The value is adjustable between 1 and 8 °C
- Factory setting: 3 °C

Menu 9.2.5 System 2 Present [S]

Select "On" if heating system 2 is installed. (accessory ESV 21 required). Menu 3.0 can be accessed.

Selection option Off and On.
- Factory setting: Off

Menu 9.2.6 Room disp Present [S]

Select here whether the Room control unit is to be activated or not.

Selection option Off and On.
- Factory setting: Off

Menu 9.2.7 Circ. pump 1 [S]

Here you set whether heating medium pump 1 should run constantly in "Summer mode".
The value changes to "Off" with a restart.

Selection option Off and On.
- Factory setting: Off

Menu 9.2.8 Circ. pump 2 [S]

Here you set whether heating medium pump 2 should run constantly in "Summer mode".
The value changes to "Off" with a restart.

Selection option Off and On.
- Factory setting: Off

Menu 9.2.9.0 Floor drying set [S]

Settings for the floor drying program are made in the sub-menus to this menu.

Menu 9.2.9.1 Floor drying [S]

The floor drying program is chosen from this sub-menu. The function requires another operating mode than "Auto (summer)" or "Summer mode".
In "Prog 1 On", menus 9.2.9.2 – 9.2.9.5 are shown. After time period 1 a switch is made to time period 2 followed by a return to the normal settings.

In "Prog 2 On", a fixed program over 11 days follows. The flow temperature is increased from 20 °C to 45 °C for 4 days, it then remains constant for 3 days. The temperature then steps down to 25 °C for 4 days, and then returns to the normal settings.

Selection option From Prog 1 On, Prog 2 On.
- Factory setting: Off

Menu 9.2.9.2 Numb. of days per. 1 [S]

Selection of the number of days in period 1.

The value can be set between 1 and 5.
- Factory setting: 5

Menu 9.2.9.3 Temp. period 1 [S]

Selection of the flow temperature in period 1.

The value is adjustable between 15 and 50 °C

- Factory setting: 25 °C

Menu 9.2.9.4 Numb. of days per. 2 [S]

Selection of the number of days in period 2.

The value can be set between 1 and 5.
- Factory setting: 5

Menu 9.2.9.5 Temp. period 2 [S]

Selection of the flow temperature in period 2.

The value is adjustable between 15 and 50 °C
- Factory setting: 40 °C

Menu 9.2.9.6 Return [S]

Pressing the enter button returns you to Menu 9.2.9.0

Menu 9.2.10 Pool control [S]

Select "On" if POOL11 is installed.
Menu 8.4.0 can be accessed.

Selection option Off and On.
- Factory setting: Off

Menu 9.2.11 Brine pressostat [S]

You set here whether an external brine pressostat/load monitor is connected to the load monitor card.

Selection option Off and On.
- Factory setting: Off

Menu 9.2.12 Oper. mode brinepump [S]

Operating mode for the brine pump set here.

Selection option :

Intermittent: The brine pump starts 60 seconds before and stops after the compressor.

Continuous: Continuous operation.

10 days cont: Continuous operation for 10 days at max speed Then the pump shifts to intermittent operation.

- Factory setting: Intermittent

Menu 9.2.14 Factory setting [S]

Here you can restore factory settings in FIGHTER 1250. When returning to the factory settings the language switches to English.

Selection option Off and On.
- Factory setting: Off

Menu 9.2.15 RCU Present [S]

Here select "On" if RCU is installed.

Selection option Off and On.
- Factory setting: Off

Menu 9.2.17 TL-alarm activated [S]

Settings whether temperature limiter should be "On" or "Off".

Selection option Off and On.
- Factory setting: On

Menu 9.2.18 Room sensor type [S]

Room sensor type is selected here. Menu 6.0 can be accessed.

Selection option From, RG05, RG10 or RE10
- Factory setting: Off

Menu 9.2.19 Return [S]

Pressing the enter button returns you to Menu 9.2.0

Menu 9.3 Quick start [S]

When "On" is selected, the heat pump starts within 5 minutes. Returns automatically to "Off", which indicates that quick start is activated.

Selection option Off and On.
- Factory setting: Off

Note!

Incorrect management of the menus below can seriously damage the heat pump.

Menu 9.4.0 TEST/Forced operat. [S]

Pressing the enter button takes you to sub-menus that can be used during installation to check that the correct connection has been carried out.

Menu 9.4.1.0 Forced operation [S]

Menu 9.4.1.1 Forced operation [S]

When "On" is selected in this menu, the user temporarily takes control of the relays in the heat pump. The setting automatically returns to "Off", 30 minutes after the last button was pushed or after a restart.

Selection option Off and On.
- Factory setting: Off

Menu 9.4.1.2 – 9.4.1.15 RE1 – RE14 [S]

To select manual control of the relays.

Selection option Off and On.
- Factory setting: Off

Menu 9.4.1.16 REX2 [S]

To select manual test of alarm relay X2.

Selection option Off and On.
- Factory setting: Off

Menu 9.4.1.17 REX3 [S]

To select manual control of alarm relay X3.

Selection option Off and On.
- Factory setting: Off

Menu 9.4.1.18 Return [S]

Pressing the enter button returns you to Menu 9.4.1.0

Menu 9.4.2.0 Input status [S]

Menu 9.4.2.1 X1:1-2 [S]

Menu 9.4.2.2 X1:3-4 [S]

Menu 9.4.2.3 X1:5-7 [S]

Menu 9.4.2.4 X1:6-7 [S]

Menu 9.4.2.5 X1:8-11 [S]

Menu 9.4.2.6 X1:9-11 [S]

Menu 9.4.2.7 X1:10-11 [S]

Menu 9.4.2.8 X1:12-13 [S]

Menu 9.4.2.9 X1:14-15 [S]

Menu 9.4.2.10 X1:16-17 [S]

Menu 9.4.2.11 X4:1-2 [S]

Menu 9.4.2.12 X4:3-4 [S]

Menu 9.4.2.13 X4:5-6 [S]

Menu 9.4.2.14 X4:7-8 [S]

Menu 9.4.2.15 X4:9-10 [S]

Menu 9.4.2.16 X4:11-12 [S]

Menu 9.4.2.17 X4:13-14 [S]

Menu 9.4.2.18 X4:15-16 [S]

Menu 9.4.2.19 X5:1-2 [S]

Menu 9.4.2.20 X5:3-4 [S]

Menu 9.4.2.21 X5:5-6 [S]

Menu 9.4.2.22 X5:7-8 [S]

Menu 9.4.2.23 X5:9-10 [S]

Menu 9.4.2.24 X5:11-12 [S]

Menu 9.4.2.25 X5:13-14 [S]

Menu 9.4.2.26 X5:15-16 [S]

Menu 9.4.2.27 X5:17-18 [S]

Menu 9.4.2.28 X5:19-20 [S]

Menu 9.4.2.29 X6:1-2 [S]

Menu 9.4.2.30 X6:3-4 [S]

Menu 9.4.2.31 J8:1-2 [S]

Menu 9.4.2.32 J8:3-4 [S]

Menu 9.4.2.33 PCB 102 X1.5-6 [S]

Menu 9.4.2.34 PCB 102 X1.7-8 [S]

Menu 9.4.2.35 Return [S]

Pressing the enter button returns you to Menu 9.4.2.0

Menu 9.4.3 Return [S]

Pressing the enter button returns you to Menu 9.4.0.

Menu 9.5.0 – 9.8.0 Log 1 – Log 4 [S]

The alarm logs are shown in the sub-menus of this menu. Log 1 is the last alarm, log 2 the next last, etc.

Menu 9.x.1 Time [S]

Menu 9.x.2 Alarm number [S]

Alarm number	Cause
1	HP alarm
2	LP alarm
4	TL alarm
5	Ext KB alarm
6	Low KB alarm
7	High VBF1
8	High VBR1
9	High KF
10	High VVM
11	High hotgas
20	Sensor fault VBF1
21	Sensor fault VBR1
22	Sensor fault VVM
23	Sensor fault VBF2
24	Sensor fault KF
25	Sensor fault KBin
26	Sensor fault KBout
27	Sensor fault HG
28	Sensor fault UG
100-116	Inverter error

Menu 9.x.3 Charging type [S]

Menu 9.x.4 Brine in [S]

Menu 9.x.5 Brine out [S]

Menu 9.x.6 Outdoor temp. [S]

Menu 9.x.7 Flow temp. [S]

Menu 9.x.8 Return temp. [S]

Menu 9.x.9 Hot water temp. [S]

Menu 9.x.10 Hot gas temp. [S]

Menu 9.x.11 Compr. time [S]

Menu 9.x.12 Electric b. time [S]

Menu 9.x.13 Circ-pump cont.sign [S]

Menu 9.x.14 Brine-pump cont.sign [S]

Menu 9.x.15 CompFreq cont.sign [S]

Menu 9.x.16 Relay 1-8 [S]

Menu 9.x.17 Relay 9-14 [S]

Menu 9.x.18 Inv. current (Apeak) [S]

Menu 9.x.19 Inv. VDC [S]

Menu 9.x.20 Inv. speed (RPM) [S]

Menu 9.x.21 Inv. error code [S]

Menu 9.x.22 Return [S]

Pressing the enter button returns you to Menu 9.x.0.

Menu 9.9 Reset log [S]

Select "On" to erase the entire alarm log. The settings returns to "Off" once the action has been carried out.

Selection option Off and On.
- Factory setting: Off

Menu 9.10 Reset Alarm [S]

Select "On" to reset/acknowledge alarms in FIGHTER 1250. The setting returns to "Off" when the action has been carried out.

Selection option Off and On.
- Factory setting: Off

Menu 9.11.0 Add. heat settings [S]

Menu 9.11.1 CompFreq act/set [S]

Shown here are the set and actual set point frequencies to the compressor after any blocks have occurred.
Setting the set point during manual control of the compressor frequency.

The value is adjustable between 0 and 120 Hz.

Menu 9.11.2 Manual CompFreq [S]

Select "On" to manually control the compressor frequency.

Selection option Off and On.
- Factory setting: Off

Menu 9.11.3 Max deltaF act/set [S]

The parameter for the heat regulator's max change of the set point is selected here. Display of the actual and set via the display.

The value is adjustable between 1 and 10 Hz.
- Factory setting: 3 Hz

Menu 9.11.4 CompFreq regP [S]

Select P part for heat regulator.

The value can be set between 1 and 60.
- Factory setting: 5

Menu 9.11.5 Time min freq start [S]

Select here the time that the compressor during room heating, is to run at min speed, after start.

The value is adjustable between 2 and 120 minutes.
- Factory setting: 70 min

Menu 9.11.6 Time min freq heat [S]

Select here the time that the compressor is to run at fixed frequency after shifting to heating. The compressor then runs at min frequency or at the frequency it had before hot water/pool heating.

The value is adjustable between 3 and 60 minutes.
- Factory setting: 8 min

Menu 9.11.7 Max diff flow-cFlow [S]

Select here limitation of circ-pump flow when the degree minute regulator is way off the set point. Max difference between heating medium flow and calculated heating medium flow.

The value is adjustable between 0.5 and 10.0 °C
- Factory setting: 1.0 °C.

Menu 9.11.8 Return [S]

Pressing the enter button returns you to Menu 9.11.0

Menu 9.12.0 Other inverter adj. [S]

Menu 9.12.1 Min CompFreq act/set [S]

Select here the min compressor frequency Display of the actual and set via the display.

The value is adjustable between 30 and 120 Hz.
- Factory setting: 30 Hz

Menu 9.12.2 Max CompFreq act/set [S]

Select here the max limit for the compressor. Display of the actual and set via the display.

The value is adjustable between 30 and 120 Hz.
- Factory setting: 120 Hz

Menu 9.12.3.0 CompFreq blockFreq [S]

In the sub menus to this menu, the frequency range that the compressor is not permitted to work in set due to noise and vibrations.

Menu 9.12.3.1 BlockFreq 1 from [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.2 BlockFreq 1 to [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.3 BlockFreq 2 from [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.4 BlockFreq 2 to [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.5 BlockFreq 3 from [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.6 BlockFreq 3 to [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.7 BlockFreq 4 from [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.8 BlockFreq 4 to [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.9 BlockFreq 5 from [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.10 BlockFreq 5 to [S]

Selection option From or between 30 and 120 Hz.
- Factory setting: Off

Menu 9.12.3.11 Return [S]

Pressing the enter button returns you to Menu 9.12.3.0

Menu 9.12.4 CompFreq powerguard [S]

Select here the frequency for the compressor when the current limiter limits the compressor.

The value is adjustable between 45 and 120 Hz.
- Factory setting: 60 Hz

Menu 9.12.5.0 Inverter param rev [S]

Shows the actual version of the parameter list in the inverter.

Menu 9.12.5.1 Download inv para [S]

Selection option Off and On.
- Factory setting: Off

Menu 9.12.5.2 Return [S]

Pressing the enter button returns you to Menu 9.12.5.0

Menu 9.12.6.0 Inv. templimit setup [S]

Shows the actual inverter temperature.

Settings regarding the temperature protection for the inverter can be made in the sub-menus to this menu.

Menu 9.12.6.1 Inv. templimit on [S]

Set the temperature at which frequency reduction should come into force here.

The value is adjustable between 45 and 92 °C
- Factory setting: 87 °C

Menu 9.12.6.2 Inv. templimit diff [S]

Set how long during setting 9.12.6 that the frequency reduction should stop here.

The value is adjustable between 2 and 15 °C
- Factory setting: 5 °C

Menu 9.12.6.3 CompFreq dec/min [S]

How much the frequency is to be reduced each minute when the temperature protection is active is set here .

The value is adjustable between 1 and 20 Hz
- Factory setting: 4 Hz

Menu 9.12.6.4 Return [S]

Pressing the enter button returns you to Menu 9.12.6.0.

Menu 9.12.7 Return [S]

Pressing the enter button returns you to Menu 9.12.0

Menu 9.13.0 System info [S]

The sub menus to this menu contain information that is used when troubleshooting.

Menu 9.13.1 Com. Type Error [S]

Shows which unit that is not communicating with the CPU card in the event of communication fault type 50.

Codes: 0x14 - "RCU" 0xF1 - "Buster card" 0xF5 - "Relay card" 0xF9 - "Internal display" 0xFA - "External display".

Menu 9.13.2 CompReStartCounter [S]

Shows the number of compressor start attempts, resets at normal compressor stop or alarm reset.

Menu 9.13.3 InvResetCounter [S]

Shows the number of reset attempts with command D01 of the inverter.

Menu 9.13.4 Inv. OnOffCounter [S]

Shows the number of reset attempts to start restart the inverter by cutting the voltage with the contactor.

Menu 9.13.5 SW ver. PCB relay [S]

Shows the version number of the relay card 1.00 = 100.

Menu 9.13.6 SW ver. PCB 102 [S]

Shows the version number of the Buster card 1.00 = 100.

Menu 9.13.7 Return [S]

Pressing the enter button returns you to Menu 9.13.0

Menu 9.14 Return [S]

Pressing the enter button returns you to Menu 9.0.

Alarm indications

- In the event of an alarm, the background lighting in the display and status lamp light red continually.
- An alarm log is created with each alarm containing a number of temperatures, times and the status of outputs. The four most recent alarms are saved on menu 9.5.0 - 9.8.0.

If the alarm blocks hot water heating and it cannot be acknowledged, you can gain access by selecting "Winter mode temp.".
This is most easily carried out by holding the operating mode button in for 7 seconds.

Acknowledge alarm

Select "On" in menu 9.10, or switch the power off and then on to FIGHTER 1250 with switch (8).

Alarm that blocks the compressor (operating mode "Winter mode temp." without hot water connecting).

Alarm no.	Alarm text on the display	Description	May be due to
1	HP alarm	The high pressure pressostat in Fighter 1250 has tripped.	- No or low flow in the heating medium system. - Closed valves to the radiators or under floor heating.
2	LP alarm	The low pressure pressostat in Fighter 1250 has tripped.	- Low flow in the brine system due to poor venting. - Defective brine pump. - Ice in evaporator due to low concentration of antifreeze. - Leakage in the brine system.
4	TL alarm	The temperature limiter in Fighter 1250 has tripped.	- No flow through the immersion heater.
6	Low Brine pump alarm	Brine temperature is lower than that set in menu 5.11.8. Automatic reset can be selected in menu 5.11.9	- Low flow in the brine system.
7	High VBF1	The alarm deploys when the flow sensor shows 90 °C.	- No or low flow in the heating medium system.
10	High VVM	The alarm deploys when jacket sensor in the hot water heater shows 90 °C.	
11	High hot-gas	The alarm deploys when the hot gas sensor shows 135 °C. 3 alarms /4 hours permitted with automatic reset.	
100-116	Inverter error		- Property's main fuse or heat pump group fuse has blown.

Alarms that can be selected via the display

Alarm no.	Alarm text on the display	Description	May be due to
5	Ext KB alarm	Deployed Brine pressostat/level monitor. Alarm blocks compressor and operating mode "Winter mode temp." without hot water connecting. The alarm is activated in menu 9.2.11.	- Leakage in the brine system.

Sensor alarm: Fault cause defective sensor or break in the sensor cable

Alarm no.	Alarm text on the display	Description
20	Sensor fault VBF1	Hot water heating blocked. Heating controlled with sensor VBF1 replaced with KF. The set point is set to the set value in menu 2.3.
21	Sensor fault VBR1	Hot water heating blocked. Heating controlled with sensor VBR1 replaced with KF. The set point is set to the set value in menu 2.3.
22	Sensor fault VVM	Hot water heating blocked.
23	Sensor fault VBF2	Hot water heating blocked. Heating controlled with sensor VBF2 replaced with VBR2. The set point is set to 15 °C.
24	Sensor fault KF	Hot water heating blocked. Protective function replaced with VBF1.
25	Sensor fault KBin	Hot water heating blocked. Brine pump runs at maximum speed.
26	Sensor fault KBout	Hot water heating and compressor blocked.
27	Sensor fault HG	Hot water heating and compressor blocked.
28	Sensor fault UG	Hot water heating blocked. The set point is set to the set value in menu 2.3.

Alarm with automatic reset when the temperature has dropped 2 °C

Alarm no.	Alarm text on the display	Description	May be due to
8	High VBR1	The alarm trips when the return sensor's temperature is greater than the set value in menu 5.6 at room heating.	- Incorrectly set values in the display.
9	High KF	The alarm deploys when the heating medium temperature after the condenser exceeds 65 °C.	- Incorrectly set values in the display.

Comfort disruption

see section A "Comfort disruption"

F

Technical data

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Component locations 71

Dimensions and setting-out coordinates 72

Electrical circuit diagram 73
Outline Diagram 78

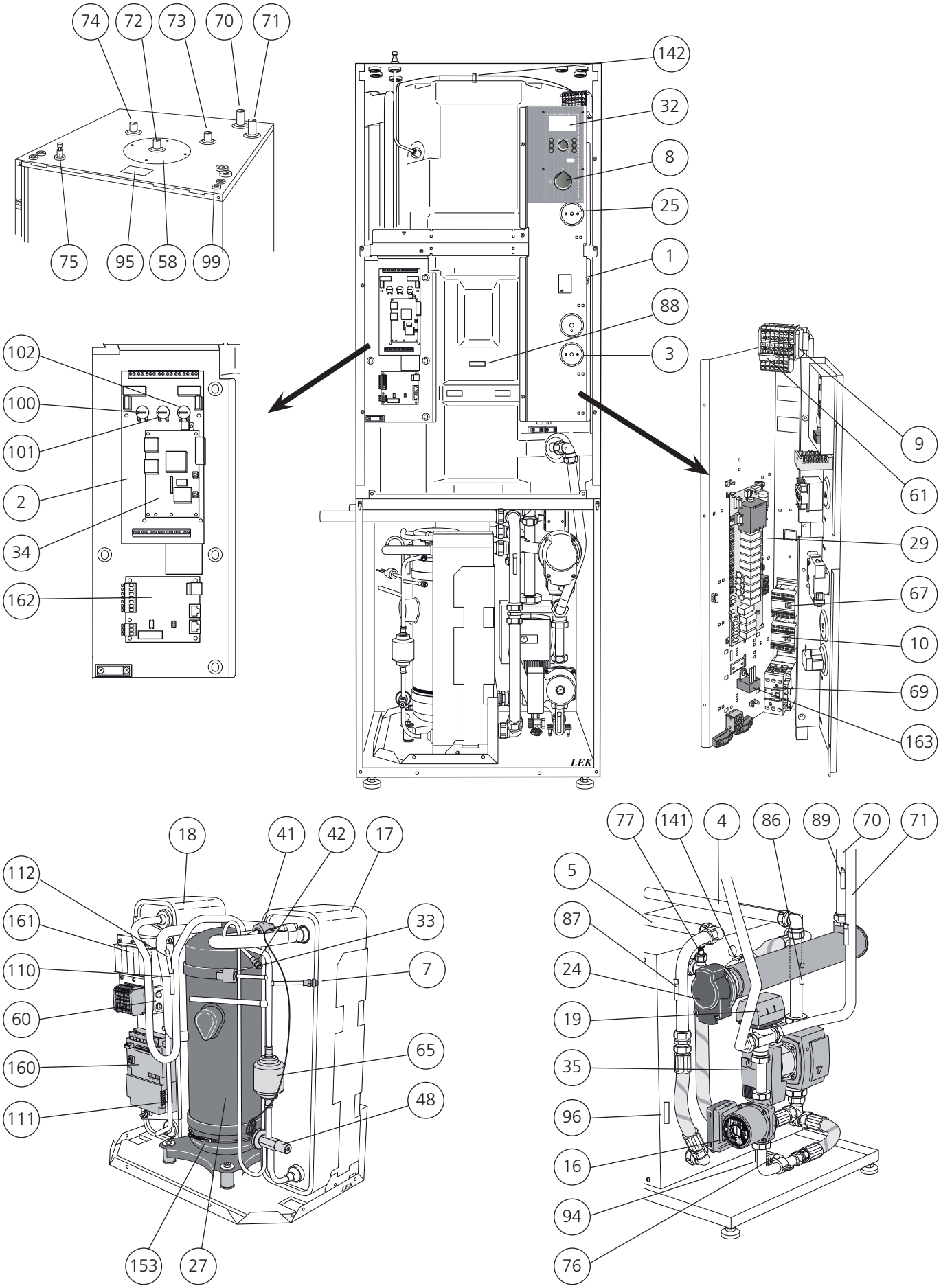
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List of components

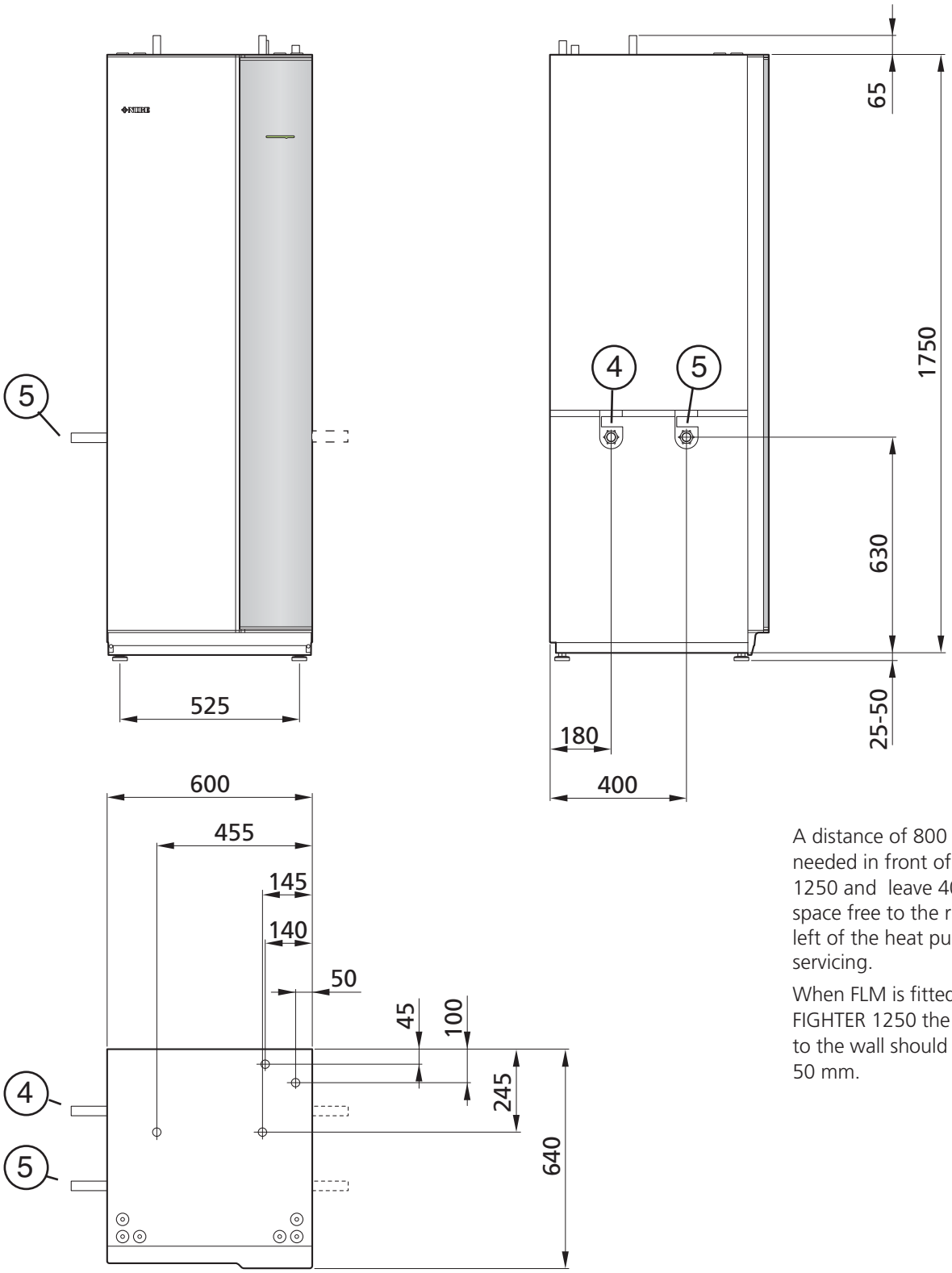
1 Miniature circuit-breaker, +1-F1
2 EBV card, current limiter card, +2-E2
3 Thermostat, standby mode, +1-B3
4 Connection, Brine in (KBin)
5 Connection, Brine out (KBut)
7 Service connection, high pressure
8 Switch, 1 – 0 – ⚠, +1-S1
9 Terminal block, incoming electricity, +1-X9
10 Contactor, electric addition step 1, +1-K10
15 * Outdoor sensor (UG), GT6, +1-B15
16 Circulation pump,(VB-pump), P2, +0-M16
17 Evaporator, VVX1
18 Condenser, VVX2
19 Three way valve, heating system/hot water heater, SV2, +0-M19
24 Electrical addition, EL1, +0-R1
25 Temperature limiter, +1-D25
27 Compressor, K1, +3-M1
29 Relay card with power supply unit, +1-E29
32 Display unit, +1-E11
33 High pressure pressostat (HP), GP1, +3-B33
34 CPU-unit, control system, +2-E34
35 Brine pump (KB pump), P1, +0-M35
41 Low pressure pressostat (LP), GP2, +3-B41
42 Service connection, low pressure
48 Expansion valve, SV1
52 * Safety valve, collector side
58 Anode cover (enamel only)
60 EMC-filter, +3-Z2
61 Suppression capacitor, +1-C61
63 * Particle filter (KBin) R25 int.
65 Drying filter
67 Contactor, electric addition step 2, +1-K67
69 Contactor, inverter, +1-K69
70 Connection, heating medium flow ø 22 mm ext
71 Connection, heating medium return ø 22 mm ext
72 Hot water circulation (VVC)
Enamel: G 20
Stainless steel: Ø15 mm ext
73 Connection, cold water (CW)
Copper: Ø 22 mm ext
Stainless steel: Ø 22 mm ext
Enamel: G 20
74 Connection, hot water (HW)
Copper: Ø 22 mm ext
Stainless steel: Ø 22 mm ext
Enamel: G 20
75 Venting valve, double jacket
76 Draining, heating system
77 Venting valve, brine system
81 * Particle filter (VBR) R20 int.
85 * Connection, level vessel to system, R25 ext.
86 Temperature sensor, Brine in (KBin), GT1, +0-B86
87 Temperature sensor, Brine out (KBut), GT1, +0-B87
88 Temperature sensor, hot water jacket (VVM), GT10, +2-B88
89 Temperature sensor, heating medium flow (VBF1), GT11, +0-B89
94 Temperature sensor, heating medium return (VBR1), GT8, +0-B94
95 Type plate/serial number
96 Type plate, cooling section
99 Cable gland, incoming electricity
100 Knob, setting "Fuse"
101 Knob, setting "Max electric addition"
102 Knob, setting "Max hot water temperature"
110 Temperature sensor, hot gas (HG), GT5, +3-B110
111 Temperature sensor, liquid line, GT3, +3-B111
112 Temperature sensor, bulb, GT4, +3-B112
115 Electric anode (enamel only)
116 Power unit, electric anode (enamel only)
141 Temperature sensor, condenser flow (KF), GT7, +0-B141
142 Temperature sensor, hot water top, GT9, +2-B142
153 Compressor heater, +3-R1
160 Inverter, +3-A1
161 Choke, +3-Z1
162 Card 102, -E1
163 CapBox, +1-C1

* Enclosed

Component locations



Dimensions and setting-out coordinates

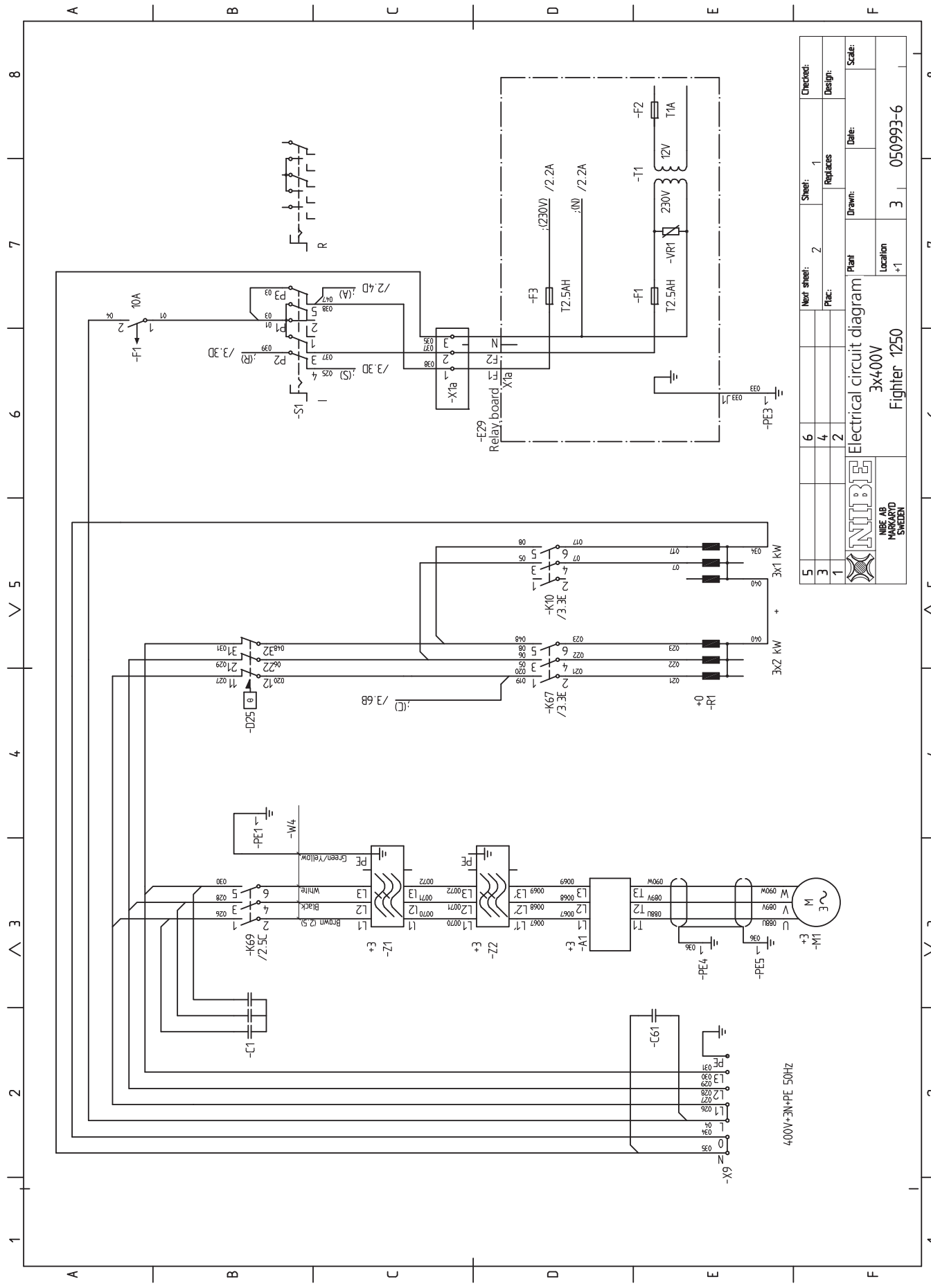


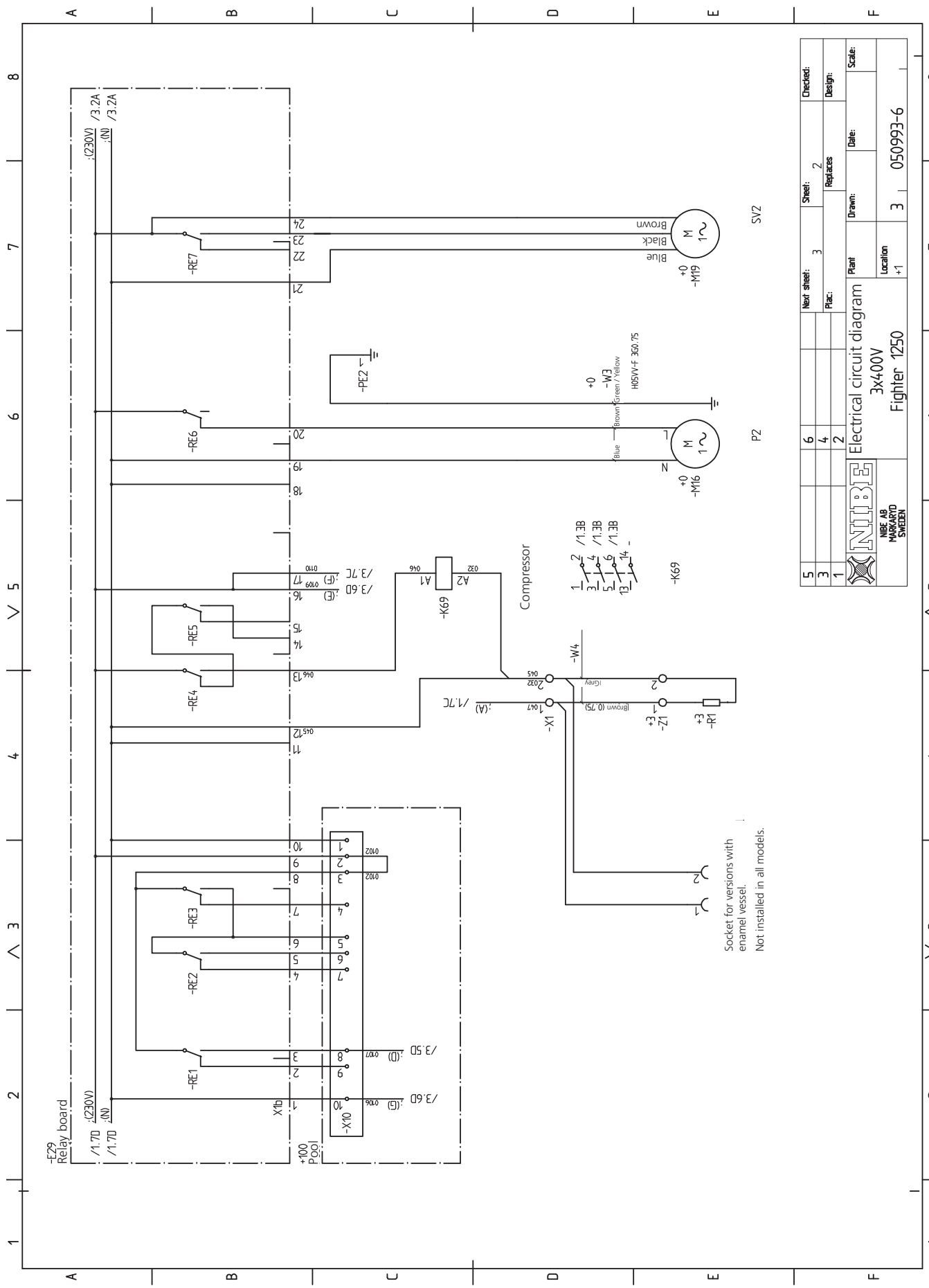
A distance of 800 mm is needed in front of FIGHTER 1250 and leave 400 mm of space free to the right and left of the heat pump for servicing.

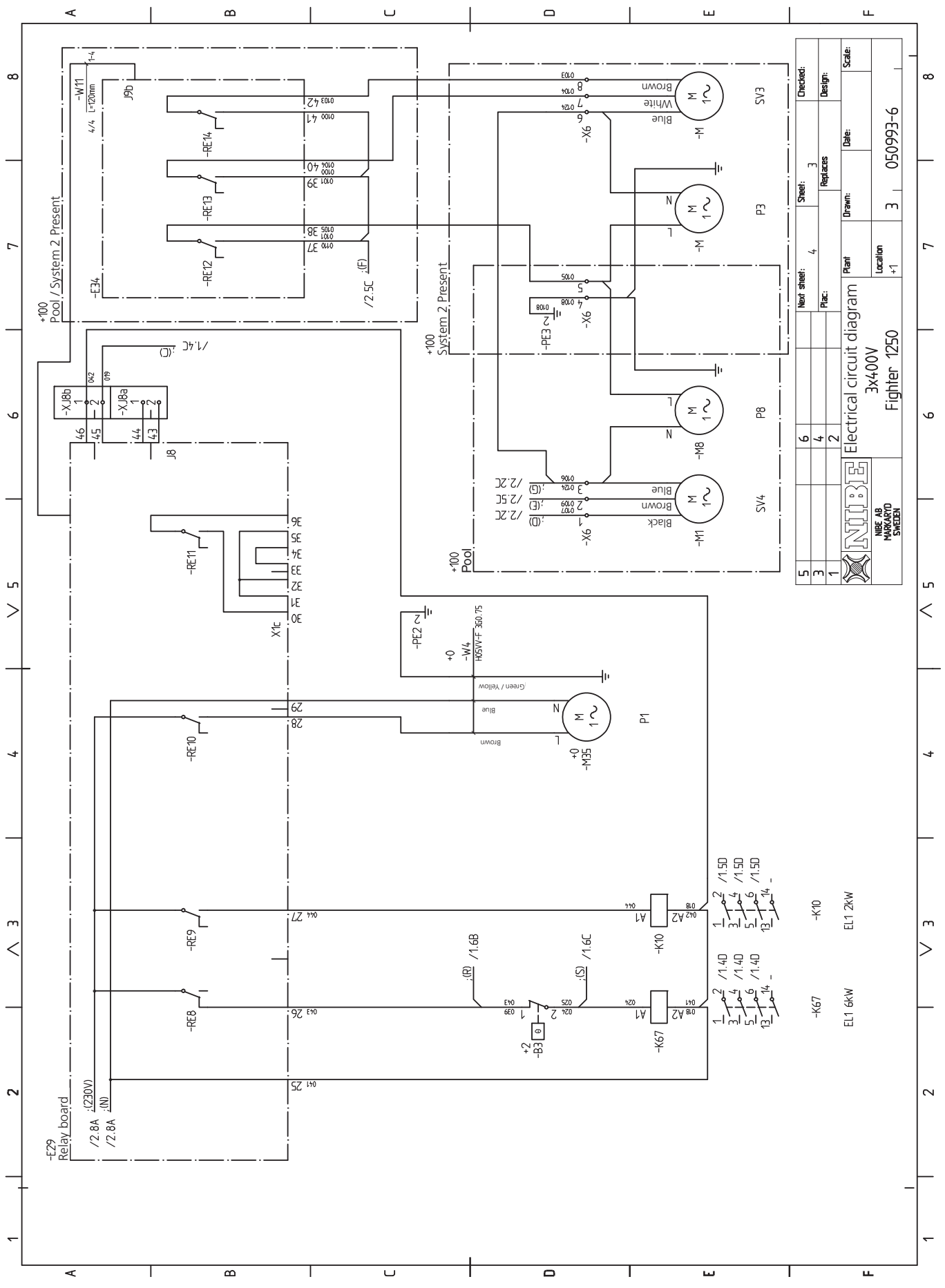
When FLM is fitted on FIGHTER 1250 the distance to the wall should be at least 50 mm.

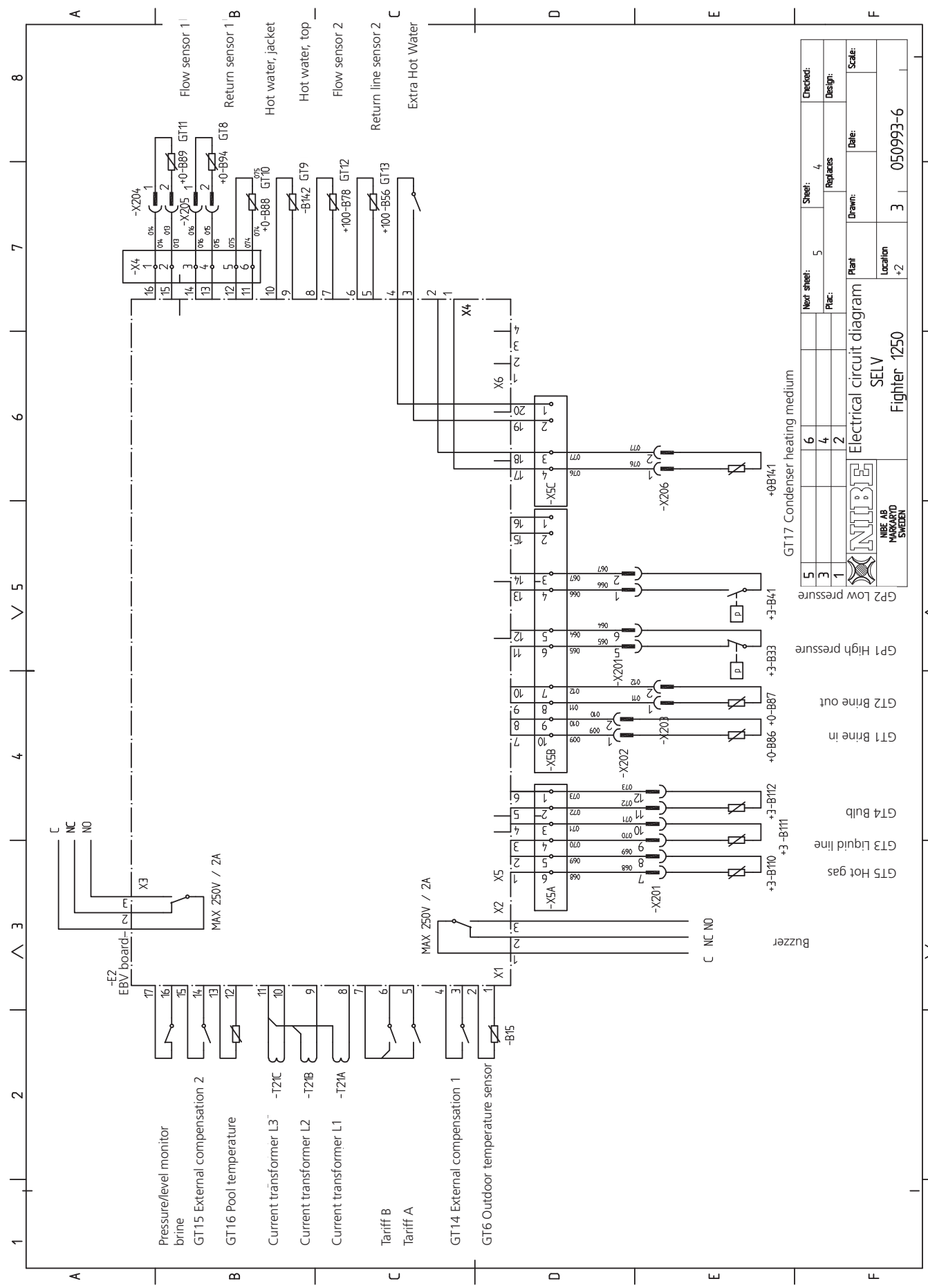
Alternative:
Pipe connection (4, 5) can also be made to the right.

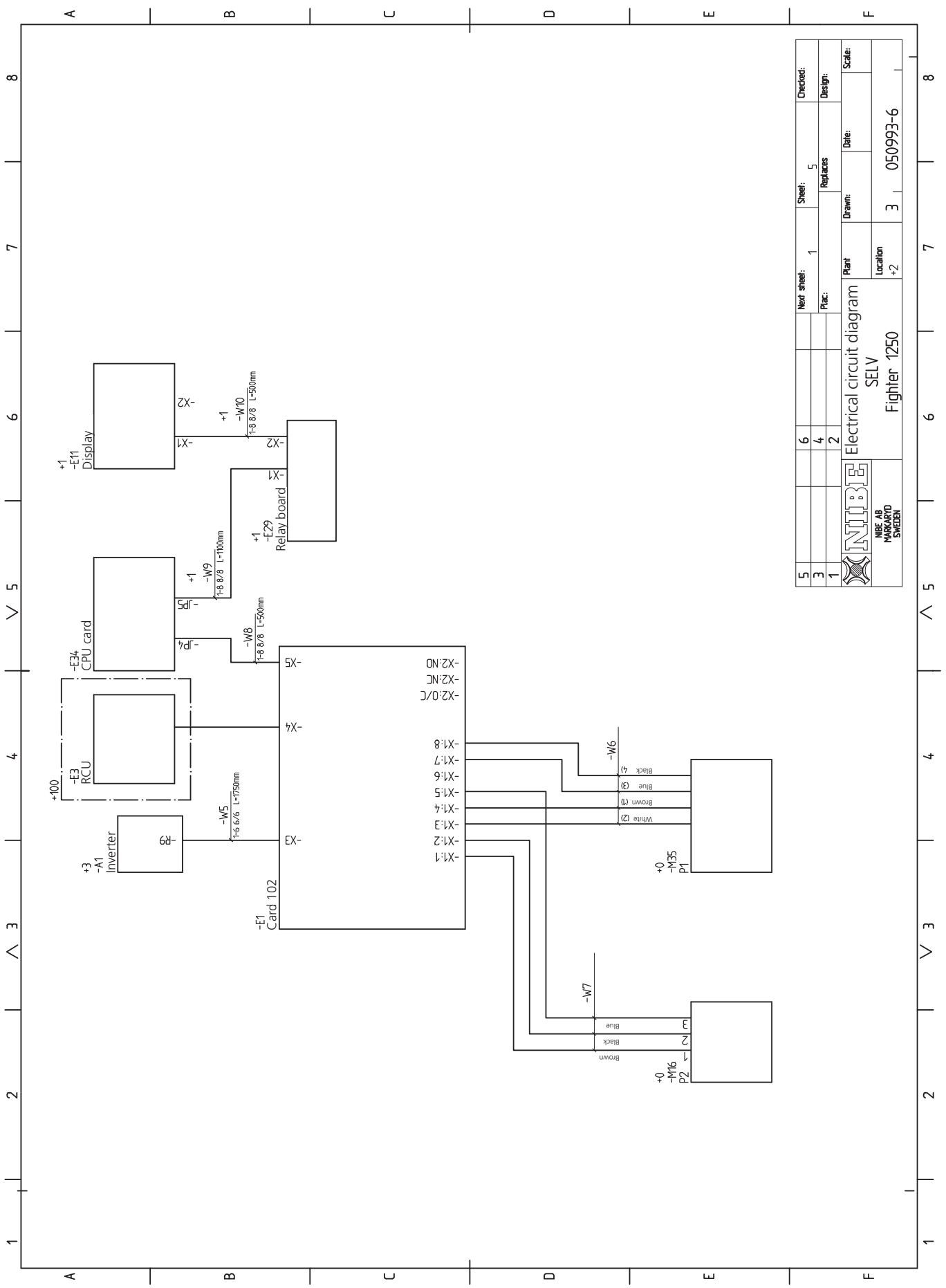
Electrical circuit diagram (with accessory)



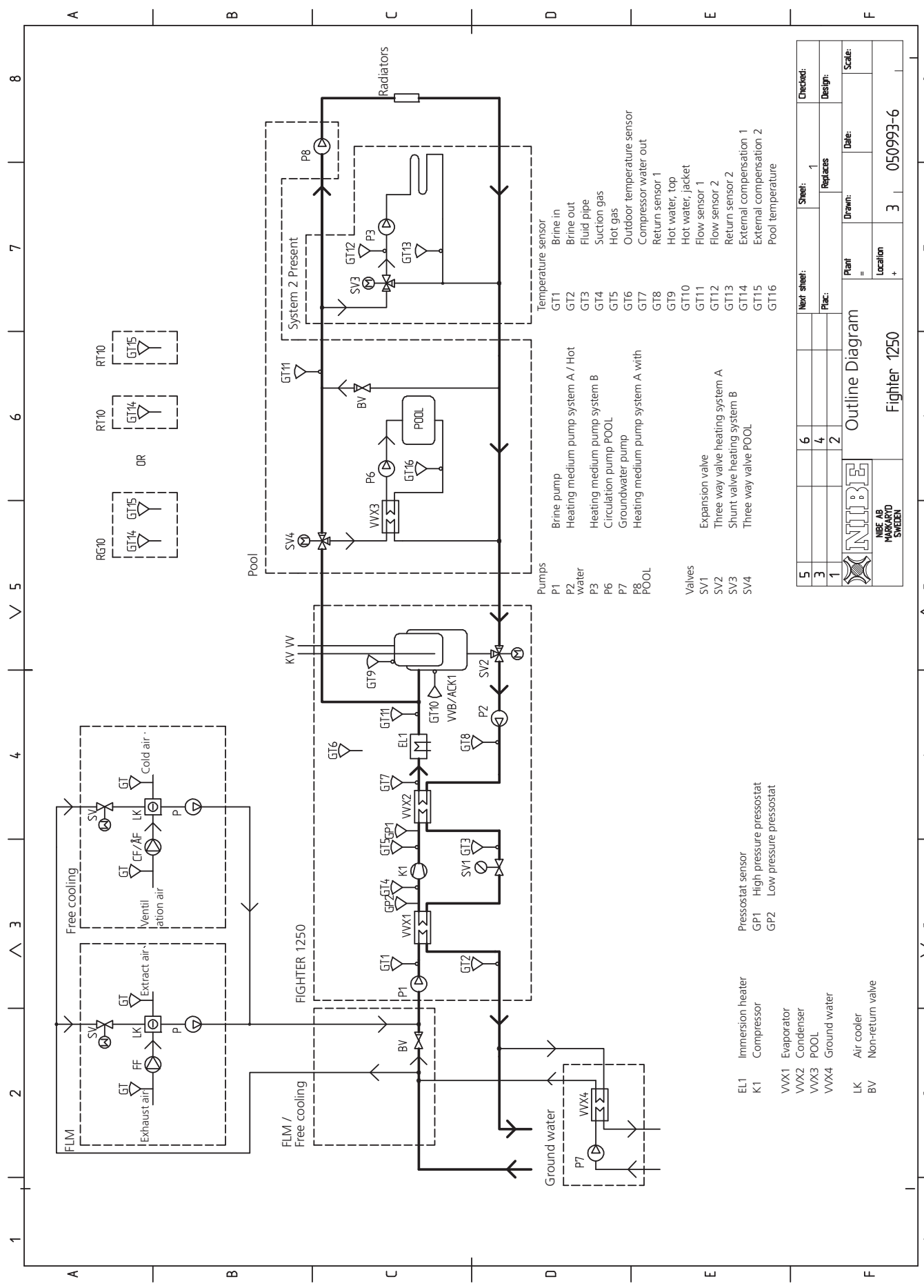

Electrical circuit diagram
3x400V
Fighter 1250
NIBE AB
MARKARYD
SWEDEN
050993-6
-E29
Relay board
+100
Pool
-RE1
-RE2
-RE3
-RE4
-RE5
-RE6
-RE7
-K69
Compressor
-W4
-X1
-Z1
-R1
-W3
H05VV-F 3G0.75
Green / Yellow
Brown
Blue
-M16
-M19
P2
SV2
Socket for versions with enamel vessel.
Not installed in all models.


Electrical circuit diagram
3x400V
Fighter 1250
050993-6
NIBE AB
MARKARYD
SWEDEN
Pool / System 2 Present
System 2 Present
Pool
Relay board
-E29
-E34
-W11
-W4
-PE2
-PE3
-M35
-M1
-M8
-M
-X6
-X1c
-X.J8b
-X.J8a
J8
J9b
-RE8
-RE9
-RE10
-RE11
-RE12
-RE13
-RE14
-K10
-K67
-B3
P1
P3
P8
SV3
SV4
Brown
Blue
White
Black
Green / Yellow
EL1 2kW
EL1 6kW


Flow sensor 1
Return sensor 1
Hot water, jacket
Hot water, top
Flow sensor 2
Return line sensor 2
Extra Hot Water
GT17 Condenser heating medium
GP2 Low pressure
GP1 High pressure
GT1 Brine in
GT2 Brine out
GT4 Bulb
GT3 Liquid line
GT5 Hot gas
Buzzer
MAX 250V / 2A
Pressure/level monitor brine
GT15 External compensation 2
GT16 Pool temperature
Current transformer L3
Current transformer L2
Current transformer L1
Tariff B
Tariff A
GT14 External compensation 1
GT6 Outdoor temperature sensor
Electrical circuit diagram
SELV
Fighter 1250
NIBE AB
MARKARYD
SWEDEN
050993-6


Electrical circuit diagram
SEL V
Fighter 1250
NIBE AB
MARKARYD
SWEDEN
050993-6
Next sheet: 1
Sheet: 5
Plant
Location +2
Drawn:
Date:
Checked:
Design:
Scale:
Replaces
Place:
-E1 Card 102
-E3 RCU
-E34 CPU card
-E11 Display
-E29 Relay board
-A1 Inverter
-M35 P1
-M16 P2
-W1
-W5
-W7
-W8
-W9
-W10
-X1:1
-X1:2
-X1:3
-X1:4
-X1:5
-X1:6
-X1:7
-X1:8
-X2:NO
-X2:NC
-X2:C
-X3
-X4
-X5
-JP4
-JP5
-X1
-X2
Brown
Black
Blue
White (2)
Brown (1)
Blue (3)
Black 4)

Outline Diagram (Not wiring diagram)



Technical specifications

CE IP 21

Type		FIGHTER 1250
Nominal rated/supplied power at 0/45 °C 60 Hz [1), 2)]	(kW)	8,3/2,5
Rated output 30 Hz - 120 Hz at 0/45 °C [2)]	(kW)	3,9 - 15,8
Operating voltage	(V)	3 x 400 V + N + PE 50 Hz
Max phase current	(A)	16,3
Fuse		protection type D
Max operating current, compressor	(A)	12
Electrical addition	(kW)	Only addition 8 (2+6), Standby mode 6
Max output brine pump	(W)	140
Max output heating medium pump	(W)	70
Connection Brine male Ø	(mm)	28
Connection heating medium male Ø	(mm)	22
Connection cold water ext Ø	(mm)	22
Connection hot water ext Ø	(mm)	22
Volume, hot water heater	(litres)	160
Volume double jacket	(litres)	45
Max pressure in hot water heater	(MPa/bar)	0,9 / 9
Max pressure in double jacket volume	(MPa/bar)	0,25 / 2,5
Max pressure brine system	(MPa/bar)	0,3 / 3
Min pressure brine system	(MPa/bar)	0,08 / 0,8
Refrigerant quantity (R407C)	(kg)	2,2
Nominal pressure drop in evaporator	(kPa)	7,8
Nominal flow brine 60 Hz	l/s	0,47
Available pressure brine system	(MPa/bar)	see pumps section B
Operating temperature brine in	(°C)	-5 – +20
Nominal flow heating medium at 60 Hz	(l/s)	0,4
Available pressure, heating medium	(MPa/bar)	see pumps section B
Pressure drop condenser at nominal flow	(kPa)	3,6
Max temperature (Supply/return pipes)	(°C)	65 / 56
Cut-out value pressostat HP	(MPa/bar)	2,9 / 29
Difference pressostat HP	(MPa/bar)	-0,7 / -7
Cut-out value pressostat LP	(MPa/bar)	0,15 / 1,5
Difference pressostat LP	(MPa/bar)	+0,15 / +1,5
Enclosure class		IP 21
Dimensions (WxDxH)	(mm)	600 x 628 x 1750
Required ceiling height [3)]	(mm)	1950
Net weight	(kg)	285
Part No	Cu	065 070
Part No	E	065 071
Part No	R	065 072

1) Output data at 0/45 °C 60 Hz is according to EN 14511. Electrical addition not included.

2) Driving power for circulation pumps not included EN 14511.

3) With feet and pipe connections dismantled the height is 1890 mm.

G

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