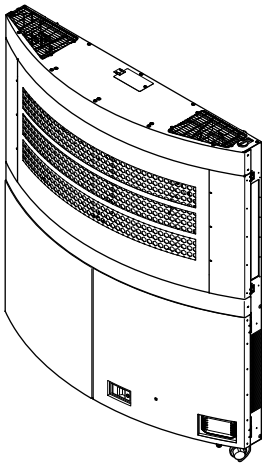
Operation manual

Exigo E1500 Trailer Refrigeration Unit



EZESHP20AUAW1B
EZLSHP20AUAW1B

Operation manual
Exigo E1500 Trailer Refrigeration Unit

English

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1 About this document

Thank you for purchasing this product. Please:

- Read the documentation carefully before operating the user interface to ensure the best possible performance.
- Keep the documentation for future reference.
- Always keep this document together with the unit. After use, always store it in the storage compartment.

Target audience

End users

INFORMATION

This appliance is intended to be used by expert or trained users.

Documentation set

This document is part of a documentation set. The complete set consists of:

- **Installation manual:**
  - Installation instructions
  - Format: Paper (in the box of the unit) + Digital files on https://www.daikin.eu. Use the search function to find your model.
- **Operation manual:**
  - User instructions
  - Format: Paper (in the box of the unit) + Digital files on https://www.daikin.eu. Use the search function to find your model.

Latest revisions of the supplied documentation may be available on the regional Daikin website or via your installer.

The original instructions are written in English. All other languages are translations of the original instructions.

Technical engineering data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of the latest technical data is available on the Daikin Business Portal (authentication required).
- A printed version of the declaration of conformity, the wiring- and piping diagrams is included with the unit.

24/7
+32 59 55 24 77

For questions, information or support contact the 24/7 number +32 59 552477.

A QR code with a direct link to the online manuals can be found:

- On a decal, located on the right door, below the HMI.
- On the user interface, Menu → USAGE DATA

2 General safety precautions

2.1 About the documentation

- The original instructions are written in English. All other languages are translations of the original instructions.
- The precautions described in this document cover very important topics, follow them carefully.
- The installation of the system, and all activities described in the installation manual must be performed by an authorised installer.

2.1.1 Meaning of warnings and symbols

The action-related warnings are there to warn you against residual risks and precede a dangerous action step.

DANGER
Indicates a situation that results in death or serious injury.

DANGER: RISK OF ELECTROCUTION
Indicates a situation that could result in electrocution.

DANGER: RISK OF BURNING/SCALDING
Indicates a situation that could result in burning/scalding because of extreme hot or cold temperatures.

DANGER: RISK OF EXPLOSION
Indicates a situation that could result in explosion.

WARNING
Indicates a situation that could result in death or serious injury.

WARNING: PROTECT AGAINST FROST
Indicates a situation that could result in equipment or property damage.

WARNING: FLAMMABLE MATERIAL

CAUTION
Indicates a situation that could result in minor or moderate injury.

NOTICE
Indicates a situation that could result in equipment or property damage.

INFORMATION
Indicates useful tips or additional information.

Symbols used on the unit:

Symbol	Explanation
	Before installation, read the installation and operation manual, and the wiring instruction sheet.
	Before performing maintenance and service tasks, read the service manual.
	For more information, see the installer and user reference guide.

Symbols used in the documentation:

Symbol	Explanation
	Indicates a figure title or a reference to it. **Example:** "▲ 1–3 Figure title" means "Figure 3 in chapter 1".
	Indicates a table title or a reference to it. **Example:** "▦ 1–3 Table title" means "Table 3 in chapter 1".

2.2 Hazard identification

Risk of poisoning

The unit contains poisonous substances:

- Diesel fuel
- Engine oil
- Refrigerant (R452A)
- Compressor oil
- Glycol
- Lead-Acid Battery

In case of ingestion/inhalation/contact, contact the anti-poisoning center.

Compressor oil

Hazard statements:	
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:	
Prevention:	
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves.
Response:	
P302	IF ON SKIN: Wash with plenty of soap and water.
P352	
P333	If skin irritation or rash occurs: Get medical advice/ attention.
P313	
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.

Disposal:	
P501	Dispose of contents/container to an approved waste disposal plant.

Refrigerant R452A

Hazard statements:	
H280	Contains gas under pressure; may explode if heated.

Precautionary statements:	
Prevention:	
P410	Protect from sunlight.
P403	Store in a well-ventilated place.

Further data:	
	Greenhouse fluorinated gas falling within Kyoto Protocol

Engine oil

Hazard statements:	
H304	May be fatal if swallowed and enters airways.

Diesel

Hazard statements:	
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure (thyme, liver, bone marrow).
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:	
Prevention:	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapor/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/ face protection.

Response:	
P301	IF SWALLOWED: Immediately call a POISON CENTER or a doctor.
P310	
P331	Do NOT induce vomiting.

Disposal:	
P501	Dispose of contents/container in accordance with local/ regional/national/international regulation.

Glycol

Hazard statements:	
H302	Harmful if swallowed.
H373	May cause damage to kidneys through prolonged or repeated exposure.

Precautionary statements:	
Prevention:	
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P260	Do not breathe vapours.
P270	Do not eat, drink or smoke when using this product.

Response:	
P314	Get medical advice/attention if you feel unwell.

Disposal:	
P501	Dispose of contents/container to an official chemical waste depot.

Additional labelling (for all packaging sizes):	
	Contains: Ethanediol .

Battery

Hazard statements:	
H412	Hazardous to the aquatic environment: Chronic 3; Harmful to aquatic life with long lasting effects.
H302	Acute toxicity (oral): Category 4; Harmful if swallowed.
H318	Serious eye damage/eye irritation: Category 1; Causes serious eye damage.
H314	Skin corrosion/irritation: Category 1A; Causes severe skin burns and eye damage.
H360Df	Reproductive toxicity: Category 1A; May damage the unborn child. Suspected of damaging fertility.
H362	Reproductive toxicity; May cause harm to breast-fed children.
H372	STOT-repeated exposure: Category 1; Causes damage to organs through prolonged or repeated exposure.

Environmental hazard due to operating materials

- Operating materials can endanger the environment. Leaking fluid should never seep into the ground, because of the risk of contaminating groundwater.
- Always use a suitable collecting recipient when checking for leaks.
- Do not let fluid(s) escape when performing maintenance on the diesel engine.
- Always use a suitable recipient to collect fluids. Keep the recipient ready before opening housings or components containing fluid.
- Dispose of the operating materials according to the country-specific legislations.

Damage caused by wrong operating materials

- Using the wrong operating material can cause loss in performance and damage to the unit. Use only the approved operating materials.

2.3 In case of emergency

WARNING

Stop operation and shut OFF the power in case of an incident.

Leaving the unit running may cause electrical shock, fire or breakage.

INFORMATION

112 is the single European **emergency number**. The European Electronic Communications Code ensures that Europeans can call the European emergency number 112 wherever they are in Europe, free of charge. 112 is also used in some countries outside the EU - such as Switzerland and South Africa - and is available worldwide on GSM mobile networks.

European emergency number 112

- You can **call 112** from fixed and mobile phones to contact any emergency service: an ambulance, the fire brigade or the police.
- Give a brief and objective report of the events and situation.
- A specially trained operator will either deal with the request directly or transfer the call to the most appropriate emergency service depending on the national organization of emergency services.
- Operators in many countries can answer the calls not only in their national language, but also in English or French. If the caller does not know where he is, the operator will identify where the person making the call is physically located and will pass it to the emergency authorities so that these can help immediately.

Actions to take in the event of an emergency

- Call 112 if the severity of the incident dictates it.
- Safeguard the incident location.
- If necessary, provide first aid.
- In event of eye injury, use an eyewash bottle.

- Extinguish smaller fires using a fire extinguisher.

  Use an extinguisher with an ABC rating. This is suitable for use with fires involving ordinary combustibles, flammable liquids and energized electrical equipment. An extinguisher that is rated for use with multiple hazards should include a symbol for each hazard type.

2.4 For the user

General

If you are NOT sure how to install or operate the unit, contact your dealer.

WARNING

Before any intervention, make sure that the unit cannot start unexpectedly by disconnecting the battery.

DANGER: RISK OF BURNING/ SCALDING

Allow the PM generator, the engine, the engine exhaust, the engine- cooling system, the evaporator defrost heaters and the water discharge heater to cool down before touching any of these parts.

WARNING

Improper installation or attachment of equipment or accessories could result in electrical shock, short-circuit, leaks, fire or other damage to the equipment. ONLY use accessories, optional equipment and spare parts made or approved by Daikin.

WARNING

If diesel leaks from the fuel system, it evaporates. These vapors are irritating to eyes, respiratory system and skin and can ignite if an open flame is in the area.

WARNING

When the unit is operating, a magnetic field is generated. This can disturb the functioning of cardiac devices like pacemakers and defibrillators. People who have such devices implanted must stay clear of the working unit when the service doors are opened.

WARNING

When the unit is operating in GRID MODE and a power blackout occurs, the unit will automatically switch to ROAD MODE.

This function MUST be disabled when the cold room is parked in a confined space or an area where fumes from the engine could become trapped and cause serious injury or death (e.g. indoor parking, ferry). In these cases select FORCED-GRID mode.

DANGER

Malfunctions can lead to poisoning and explosions. Never put the safety devices out of operation, nor tamper with them so as to impair their function.

WARNING

Avoid contact of skin with corrosive substances. After skin contact, wash immediately with soap and water.

WARNING

Acid fumes and explosive hydrogen may be released during battery charging. No open flame or smoking near the battery.

WARNING

Condenser, radiator and evaporator have fins that can result in injury by cutting/severing or scalding/frostbite. Do not touch these components without adequate protective equipment.

WARNING

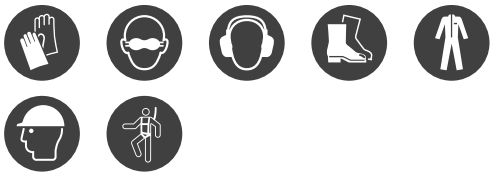
Rotating components, electrical hazards and hot surfaces can cause severe injury or death.

- Do not operate with service doors open.
- Keep the service doors locked.
- Only qualified, authorized and trained persons have access to the service compartment.

WARNING

The unit has several cutting parts and sharp edges. Use adequate personal protective equipment when working on or near these parts.

CAUTION



Working on or around the unit raises multiple risks. Use adequate personal protective equipment as indicated when installing, maintaining or servicing the system.

INFORMATION

The sound power level (according to 2000/14/CE) is less than 96 dBA. It is recommended to wear ear protection when in the vicinity of the working unit.

WARNING

The screws for fixing the upper grids and the engine belt guard are captive. Do not replace the existing captive screws with not-captive types.

CAUTION

Diesel is a polluting substance. Any diesel leaking from the fuel system may not be released in the environment.

NOTICE

Excessive vibrations indicate a mechanical defect. This must be reported immediately, and examined by a qualified person.

NOTICE

It is recommended to park the working unit in a shaded area.

NOTICE

Never leave the unit unused for longer than a month.

DANGER: RISK OF ELECTROCUTION

The unit must be switched off when cleaning the unit.

Do not clean the unit while the electric plug is connected.

NOTICE

To clean the exterior:

- Do not use any cleaning agents or chemicals.
- Do not use pressurised water.

NOTICE

To clean the interior:

- Even if the main components of the device have a sufficiently high IP rating, do not wash the device and its electrical components and electrical boxes with pressurized water.

INFORMATION

When the unit/cold room is in electric "grid" mode, it delivers the same performance as when powered by the diesel engine.

INFORMATION

Turn the unit off during loading and unloading of the cold room.

WARNING

Daikin is not responsible for cold room safety.

Make sure that no people are left in the cold room before you close the doors:

- Risk of suffocation. 12 m^3 must be left empty inside the cold room.
- Risk of frostbite.
- Risk of freezing to death.

DANGER

Always use a safety harness when working at height.

CAUTION

The top panel of the unit is fragile.

- Do not lean, sit or stand on it.
- Do not place any objects or equipment on it.

CAUTION

Use a door lock system to block the service doors when working inside the service compartment.

CAUTION

Turn on the light before entering the cold room, and take a portable torch with you.

Refrigerant

The unit is factory charged with refrigerant, no additional charging of refrigerant is required.

WARNING

Refrigerant under pressure can escape due to breaks in the cooling system, or during maintenance on the cooling system.

WARNING

Take sufficient precautions in case of refrigerant leakage. If refrigerant gas leaks, ventilate the area immediately. Possible risks:

- Excessive refrigerant concentrations in a closed room can lead to oxygen deficiency.
- Toxic gas might be produced if refrigerant gas comes into contact with fire.

WARNING

- NEVER directly touch any accidental leaking refrigerant. This could result in severe wounds caused by frostbite.
- Do NOT touch the refrigerant pipes during and immediately after operation as the refrigerant pipes may be hot or cold, depending on the condition of the refrigerant flowing through the refrigerant piping, compressor, and other refrigerant cycle parts. Your hands may suffer burns or frostbite if you touch the refrigerant pipes. To avoid injury, give the pipes time to return to normal temperature or, if you must touch them, be sure to wear proper gloves.

Electrical

DANGER: RISK OF BURNING/ SCALDING

Allow the evaporator defrost heaters and the water discharge heater to cool down before touching them.

DANGER: RISK OF ELECTROCUTION

- Turn OFF all power supply before removing the switch box cover, connecting electrical wiring or touching electrical parts.
- Disconnect the power supply for more than 60 seconds, and measure the voltage at the terminals of main circuit capacitors or electrical components before servicing. The voltage MUST be less than 50 V DC before you can touch electrical components. For the location of the terminals, see the wiring diagram.
- Do NOT touch electrical components with wet hands.
- Do NOT leave the unit unattended when the service cover is removed.

WARNING

NEVER touch the person receiving an electrical shock, or you could suffer one too. Do NOT touch the person until you are sure power is turned off.

Electrical shocks always need emergency medical attention, even if the person seems to be fine.

WARNING

- After finishing the electrical work, confirm that each electrical component and terminal inside the electrical components box is connected securely.
- Make sure all covers are closed before starting up the unit.

Engine

WARNING

Do no operate the unit in road mode (with diesel engine running) in confined spaces and areas where fumes from the engine could become trapped and cause serious injury or death.

WARNING

Keep your hands, clothing and tools clear of moving parts such as fans and engine belt when the unit is working.

DANGER: RISK OF BURNING/ SCALDING

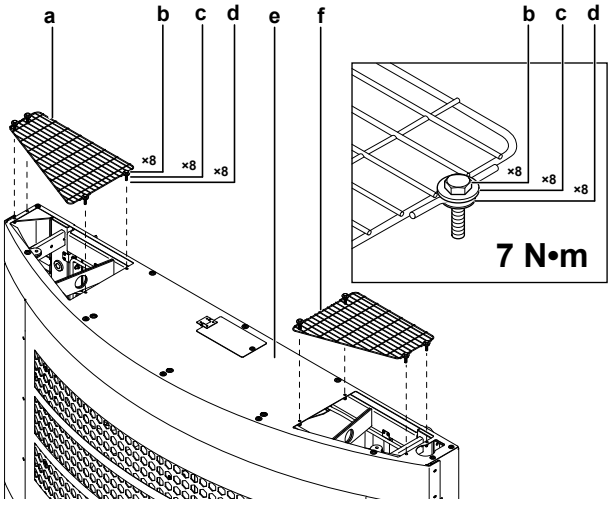
Allow the PM generator, the engine, the engine exhaust and the engine-cooling system to cool down before touching any of these parts.

2.5 How to secure a safety harness

DANGER

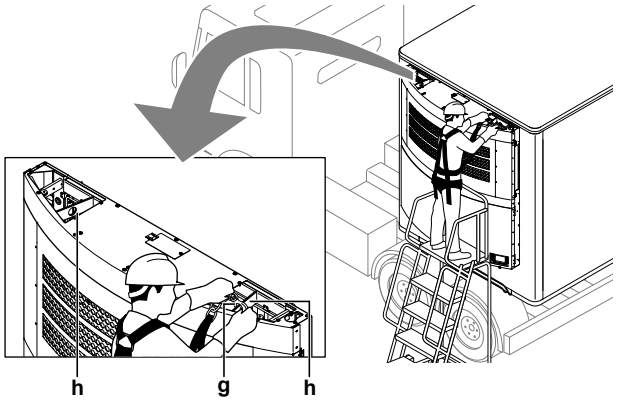
Always use a safety harness with adjustable sling length and fall damper.

1 Remove one of the grids (a or f). **Note:** Use an industrial ladder or another safe platform.



a Upper right grid
b Bolt (M6×25, DIN 931 INOX A2)
c Contact washer (Ø6.1×18×1.4 INOX)
d Retainer washer (Ø6)
e Top panel
f Upper left grid

2 Hook the safety harness sling (g) onto one of the two fixing points (h).



g Safety harness sling
h Fixing point A1

3 Set the adjustable fall damper to 6 kg/Nm.

4 Adjust the length of the sling to prevent the user from colliding with the ground, structure, or any other obstacle in case of a fall.

3 About the unit and options

3.1 About the system

NOTICE

The unit is designed to be installed by a bodybuilder on a cold room trailer for transporting material or goods (e.g. fresh or frozen food) that must be transported at a controlled temperature, within the unit's operating area.

Transporting livestock is not part of the unit's purpose.

The system consists of a self-contained, diesel/electric powered thermoregulation (cooling/heating) unit and a complete fuel system.

It is mounted on the front wall of the cold room, and consists of the following main components:

- A variable speed engine-generator module powering the unit in road operation.
- Variable speed brushless condenser and evaporator fans.
- Two microchannel condenser coils made of long life alloy for corrosion resistance.
- An inverter driven variable speed compressor with vapor injection and economizer.

NOTICE

Phase advancing capacitors are not installed, and power lines with phase advancing capacitors MUST NOT be used.

- A programmable microcontroller developed by Daikin.
- Electronic Expansion Valves (EEV).
- Electrical heaters for heating and defrost operations.
- A high resolution color HMI, accessible from the outside to control and command the unit.
- A telematics module with IP67 protected box mounted on the front of the cold room to remotely control and monitor the unit's parameters and alarms (Daikin by WeMob option).

Furthermore, there is also a complete fuel system that consists of the following components:

- A fuel pre-filter to filter the fuel and remove water from the fuel before it enters the fuel pump.
- An optional integrated heater to warm up the fuel in cold circumstances can be installed.
- A fuel pump and fuel lines to transport the fuel towards the front of the cold room and to the unit.

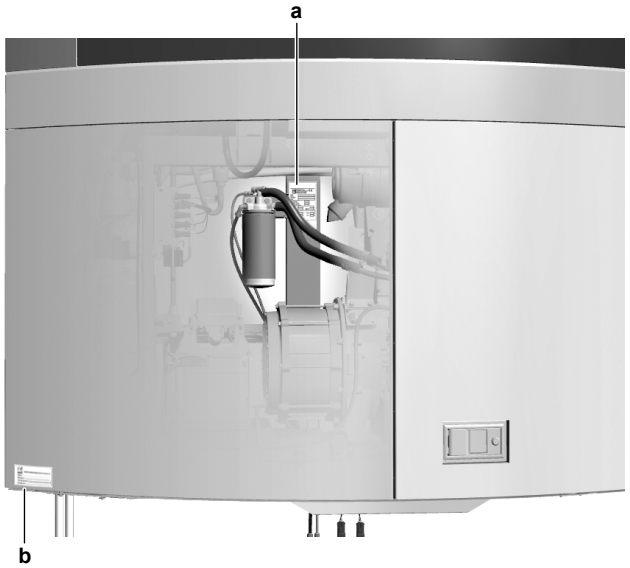
INFORMATION

The unit power supply MUST be 400V, 3P+N, 50Hz, 25A.

INFORMATION

The sound power level (according to 2000/14/CE) is less than 96 dBA. It is recommended to wear ear protection when in the vicinity of the working unit.

3.2 Certification labels

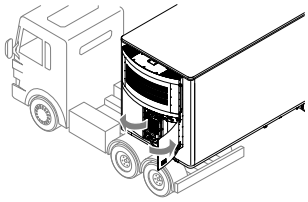


a CE label
b ATP label

3.3 Components

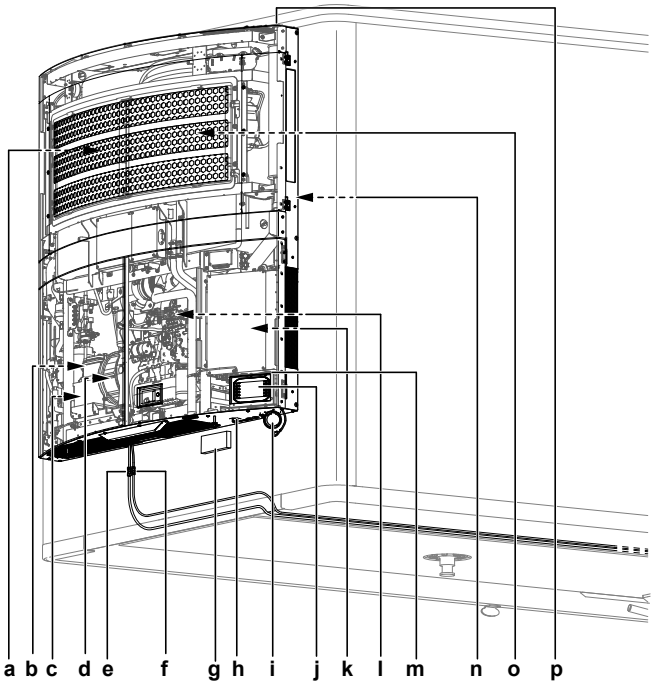
INFORMATION

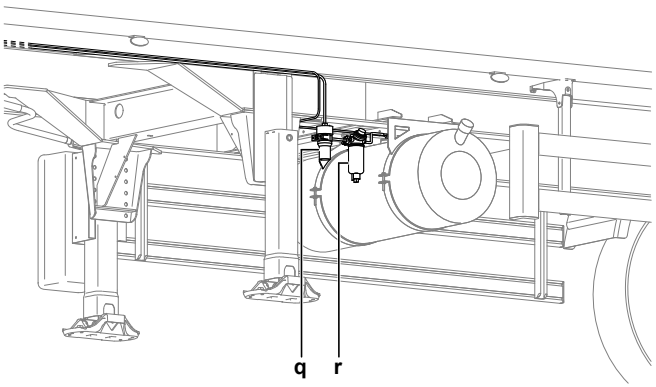
The service doors of the unit can only be opened when the trailer is NOT coupled to the truck, or when the truck and trailer are at a sharp angle.



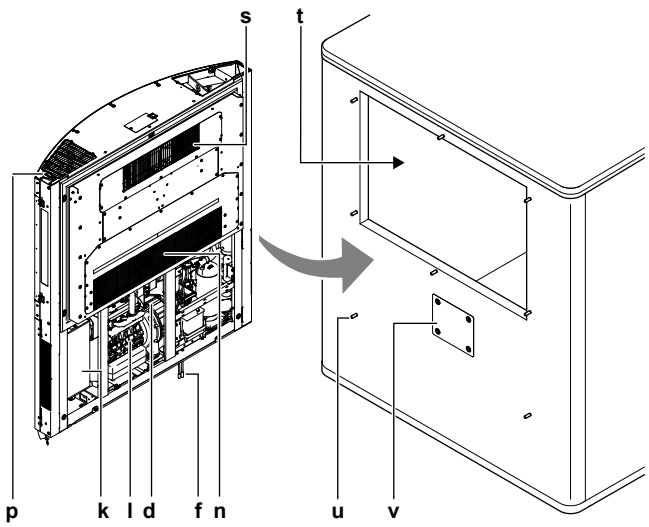
INFORMATION

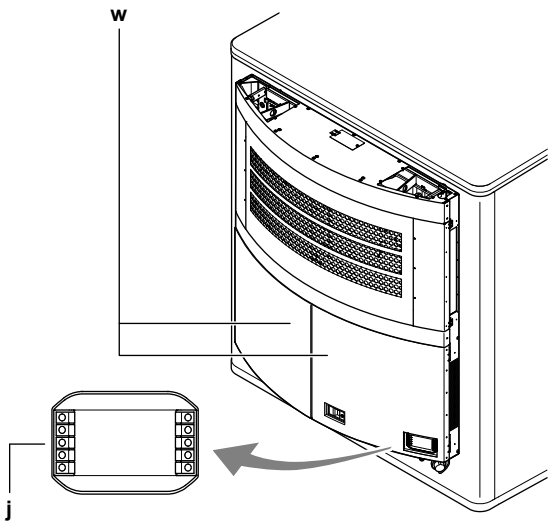
The following figures are examples and may NOT completely match your system layout.





a Evaporator fans
b Compressor
c Battery
d Generator
e Fuel lines
f Fuel line connectors
g IoT module
h USB Serial Port
i Electrical plug
j User interface
k Electrical box
l Engine
m ON/OFF switch
n Evaporator
o Radiator
p Exhaust
q Fuel pump
r Fuel pre-filter





a~r See legend above
s Evaporator fans
t Cold room
u Mounting bolts (M12)
v Heat Shield
w Service doors

3.4 Safety systems

- Engine coolant temperature sensor:

  Measures the temperature of the coolant/antifreeze mix in the engine cooling system. This information allows the engine control unit to regulate the cooling appropriately, and so, prevent overheating. The information of the engine coolant temperature sensor can also lead to a shutdown of the engine.
- Low oil pressure switch:

  The oil pressure switch is installed in the oil circuit of the engine. It monitors the oil pressure and sends a signal to the controller when the oil pressure is low. An alarm is then triggered, and if the signal persists for a certain time, a shutdown of the engine will be the result.
- Overload Relay:

  The overload relay protects the generator. The overload relay opens the electric circuit of the generator if it overloads for any reason. This also sends a signal to the controller and an alarm is then triggered.
- Smart FETs:

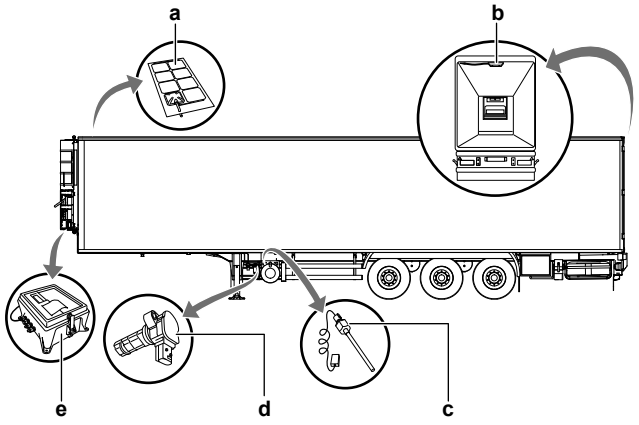
  Smart FETs in the PCB protect some circuits and components from an overcurrent condition.

- Fuses:
  Fuses are located in different harnesses and in the power distribution module (PDM).
- 2 thermal switches on the wall behind the evaporator:
  One self-resetting and one manually resetting.
- Isometer (insulation monitoring device):
  To detect fault currents on the unit, in order to advice personnel near the unit. with shutdown function.
- High Pressure Switch (HPS):
  Switches off the unit in case of excessive pressure in the refrigerant circuit.

3.5 Possible options for the unit

INFORMATION

Certain options may NOT be available in your country.



a Solar panel
b Rear door switch
c Fuel level probe
d Pre-filter heater
e Cold chain data logger

Solar panel

Solar panel and charge controller to ensure the efficiency of the 12V battery and to save energy.

Rear door switch

Metallic IP grade switch to be connected with Exigo unit and telematics to detect the opening of trailer doors.

The micro switch signal interrupts the thermoregulation mode as soon as the cold room door opens.

Fuel level probe

Compact and robust advanced capacitance sensor for continuously monitoring the fuel level in the tank.

Fuel pre-filter heater

Heater based on a PTC heating element controlled by bi-metallic switch. The heating element is designed to create a small channel in the filter head where diesel remains liquid instead of becoming gel at low ambient temperatures.

Cold chain data logger

Temperature recorder that allows continuous temperature monitoring and proof of compliance from origin to destination.

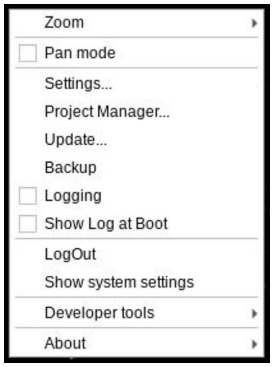
4 User interface

CAUTION

- NEVER touch the internal parts of the controller.
- Do NOT open up the controller. Some parts inside are dangerous to touch and appliance problems may happen.

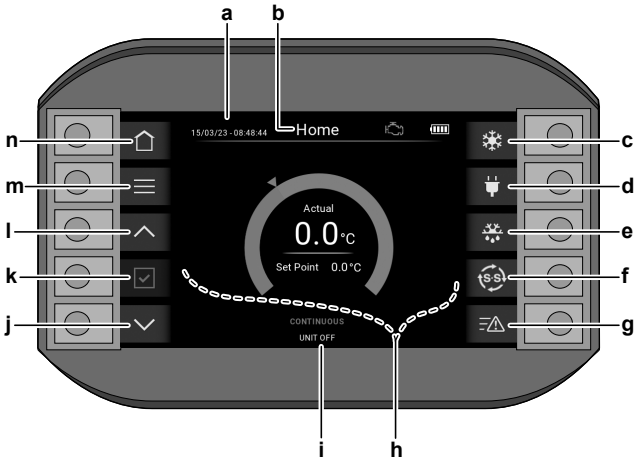
Disclaimer

If this pop-up appears on the home page, it may be ignored. Tap anywhere on the screen to dismiss it.



This operation manual offers a non-exhaustive overview of the main functions of the system.

4.1 Overview

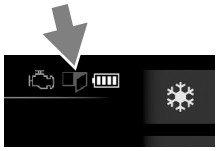


a Date and time
b Screen name
c Thermoregulation
d Road/grid mode
e Manual defrost
f Start & stop/Continuous mode
g Active alarm menu
h Information zone
i Unit status (e.g. UNIT OFF)
j Down arrow
k Enter (Stop button during start-up see "4.2 Basic functions" [▶ 12])
l Up arrow
m Menu
n Homepage

INFORMATION

When the optional door micro switch is installed, the door icon is visible when the cold room door is open.

Note At least one of these two "microdoor functionality" or "visualization only" modes must be enabled.



4.1.1 Function of the HMI buttons

The physical buttons of the display are divided in two sections:

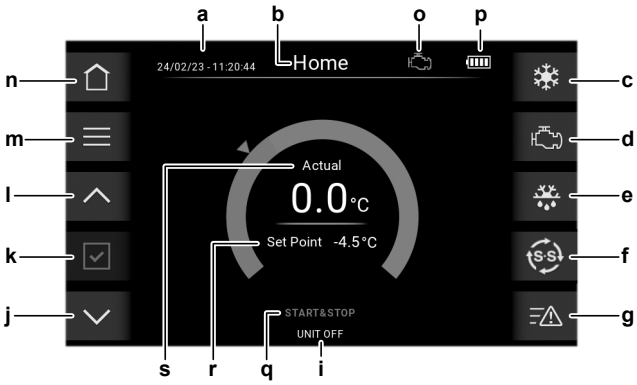
- Commands: All the buttons on the right side are reserved for basic commands of the unit. The functionality of these buttons never changes, no matter which page is displayed.
- Navigation: All the left side buttons are reserved for navigation commands. The functionality of these buttons can change depending on the active page.

4.1.2 Overview of the pages behind the buttons

Homepage (n):

Whatever page the HMI is showing, pushing the homepage button (n) makes the HOME page appear.

All the main information is on the HOME page of the HMI:



On the home page you can see:

- Date and time (a).
- Page name (b).
- Engine condition (o).
- Battery condition (p).
- Thermoregulation status (c).
- Road or grid mode status (d).
- Manual defrost status (e).
- Start & stop or continuous mode activated (f).
- Alarms menu status (g).
- Unit status (e.g. UNIT OFF) (i).
- Start & stop or continuous mode status (q).
- Set point value (e.g. –4.5°C) (r).
- Actual temperature inside the cold room (e.g. 0.0°C) (s).

On the home page you can control:

- The set point; using the "Up" or "Down" buttons to set.
- The status of the thermoregulation (c), the road or grid mode (d), the manual defrost (e) and the start & stop or continuous mode (f).
- Active alarms (g).

Menu (m):

Pushing the Menu button (m) makes the menu page appear. To enter the page, see "4.2.7 To go through the menu" [▷ 17].

Up arrow (l):

This Push button allows to navigate in the upward direction.

Enter (k):

This Push button allows to select the desired value.

Down arrow (j):

This Push button allows to navigate in the downward direction.

Thermoregulation ON/OFF (c):

This Push button allows to change the thermoregulation status from ON → OFF and OFF → ON, see "4.2.4 To change an operation mode from ON to OFF" [▷ 16].

Road/grid mode selection (d):

This Push button allows to select the desired mode; road or grid. See "4.2.6 To select a working mode" [▷ 17].

Manual defrost (e):

This Push button allows to activate the defrost operation manually, see "4.2.14 To manually start the defrost mode" [▷ 21].

Start & stop/continuous (f):

This Push button allows to change the thermoregulation management, see "4.2.15 To change the start & stop/continuous mode selection" [▷ 22].

Alarms menu (g):

This Push button allows users to see if there are any active alarms, see "9 Troubleshooting" [▷ 30].

4.2 Basic functions

4.2.1 To update the HMI and PCB software

NOTICE

Remove the electrical plug (400V/3N/50 Hz) before starting the update procedure.

Minor and major updates

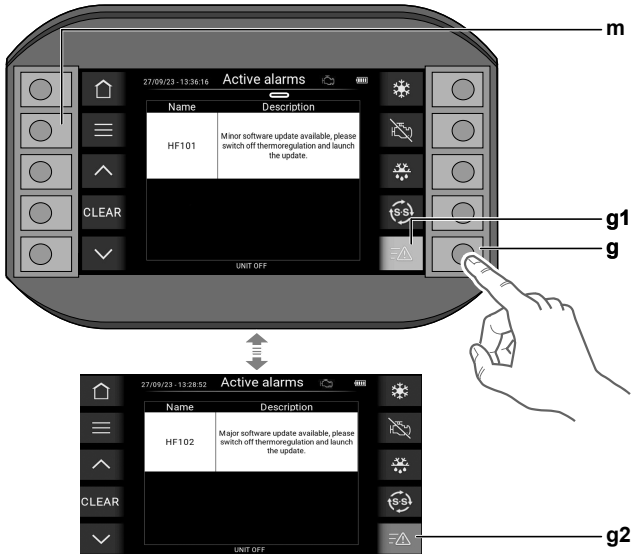
At any time, the unit can receive an Over The Air (OTA) update, from the interface platform.

There are two types of OTA updates:

- Minor update: when a minor update is present, an active alarm (g1) appears, and the icon is yellow-colored.

- Major update: when a major update is present, an active alarm (g2) appears, and the icon is orange-colored.

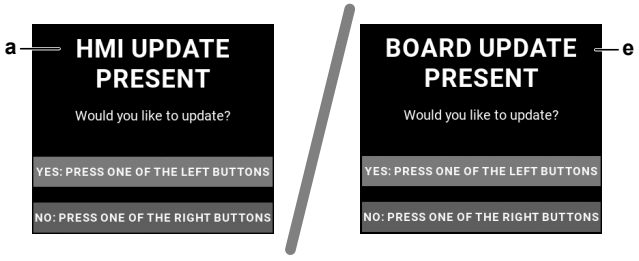
1 Push the alarm button (g) to see the message indicating whether it is a minor (g1) or a major (g2) update.



2 Push Menu button (m) to go back to the menu.

Two scenarios can occur when an OTA update is present:

- With thermoregulation OFF:
  - A pop-up appears together with the alarm, asking to proceed with the update. The pop-up also informs about which software is ready to be updated: HMI (a) or Board (e).



- With thermoregulation ON:
  - Only the alarm is present.
  - When thermoregulation is then turned OFF, the pop-up asking to proceed with the update appears.

When a minor update is present:

INFORMATION

In case a minor update is present, the user can choose either to proceed or to not proceed with the update. However, it is recommended to launch the minor update when present.

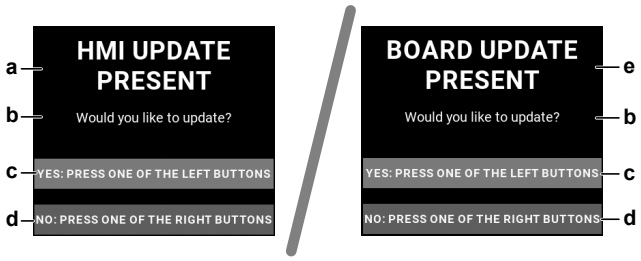
There is also the possibility to clear the corresponding alarm by pushing the CLEAR button (which corresponds to the Enter button) (k).

When a major update is present:

It is mandatory to launch the update and the user is forced to proceed with the update.

It is not possible to clear the alarm; pushing the CLEAR button (k) will have no effect.

To start the update



a HMI UPDATE PRESENT
b Would you like to update
c YES: PRESS ONE OF THE LEFT BUTTONS
d NO: PRESS ONE OF THE RIGHT BUTTONS
e BOARD UPDATE PRESENT

3 After the above pop-up appears, you can choose (only for minor updates, for major updates it is mandatory to proceed with the update):

- If you want to update, press one of the left buttons.
- If you don't want to update, press one of the right buttons (this will have no effect when it is a major update).

4 Press any button on the left side of the HMI to start the update process.

Result: The " TRANSFERING UPDATE FILE" message (f) appears.

Result: The "Please wait" message (g) appears.

5 Wait until the bar reaches to end.

Result: The "EXTRACTING" message (h) appears.

Result: The "Please wait" message (i) appears.

6 Wait until the bar reaches to end.

Result: The "CHECKING FILE INTEGRITY" message (j) appears.

Result: The "Please wait" message (k) appears.

7 Wait until the bar reaches to end.

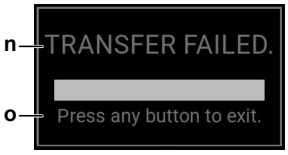
Result: The "FILE LOADED SUCCESSFULLY" message (l) appears.

Result: The "Restart the unit" message (m) appears.

8 Restart the unit by turning the main power switch off, and on again.

Result: The software package update starts, and one of the screens below appears.

If the transfer failed; the "TRANSFER FAILED" message (n) and the "Press any button to exit" message (o) appear.



If the update file is corrupted; the "UPDATE FILE IS CORRUPTED" message (p) and the "Press any button to exit" message (q) appear.

NOTICE

Do NOT turn off the unit before the complete update is finished. Switching the unit off at this point poses a high risk of damaging the PCB.

r HMI UPDATE IN PROGRESS PLEASE WAIT
s BOARD UPDATE IN PROGRESS PLEASE WAIT

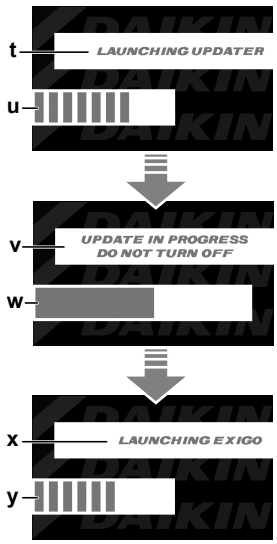
9 Wait for the complete update process to finish:

Result: The "LAUNCHING UPDATER" message (t) appears together with the status bar (u).

Result: The "UPDATE IN PROGRESS DO NOT TURN OFF" message (v) appears together with the status bar (o).

Result: The "LAUNCHING EXIGO" message (n) appears together with the status bar (w). The "LAUNCHING EXIGO" message (x) is only related to the PCB update (board update).

Result: The update process is completed when the progress bar (y) reaches the end.



Result: The HMI home screen appears automatically when the update is fully completed.

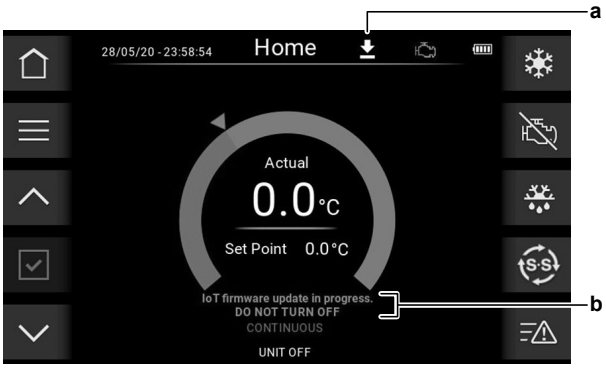
If something went wrong during the software update, the following screen with the "MAIN PROJECT NOT DETECTED" message (z) will be shown:

10 To solve the problem, restart the HMI and repeat the complete procedure.

4.2.2 IoT FW update occurence

When the unit receives an IoT firmware update:

- A download icon (a) appears.
- A notification (b) appears, saying "Iot firmware update in progress. DO NOT TURN OFF".



Wait for the complete update process to finish.

4.2.3 To start up

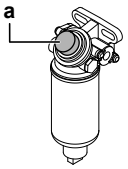
1 Turn the unit's main switch on.

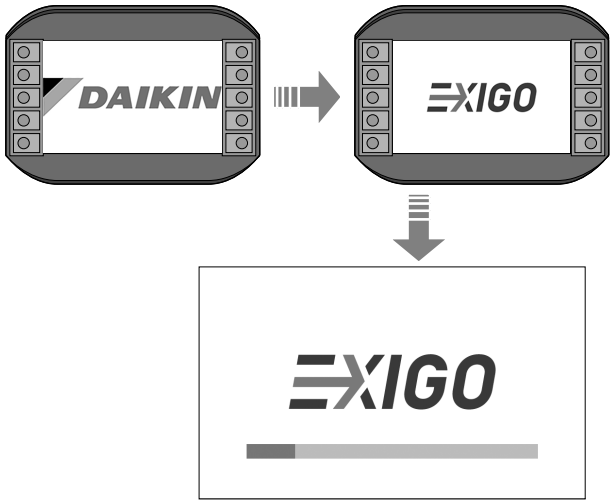
Result: The display turns on, showing first the Daikin logo and then the Exigo logo.

Result: If no updates are present, the system will start the initialization procedure. During the startup the blue loading bar is visible.

INFORMATION

The electric fuel pump carries the fuel from the tank to the unit. In exceptional circumstances (e.g. if the fuel tank suction pipe is empty after running out of fuel), the hand pump (a) on the fuel pre-filter can be used to get the fuel (faster) to the fuel pump and the unit.





INFORMATION

After the initialization procedure ends, two scenarios can occur depending on whether the user has enabled or disabled auto-start in the unit settings menu.

To manage the autostart of the unit, the user needs to navigate to the "Menu" page, select ”SETTINGS”, and then choose ”UNIT SETTINGS”. In the "Unit Settings" menu, the user can manage the parameter "FH_THERMO_AUTOSTART_hpr". If this parameter is set to 1, autostart is enabled. If the parameter is set to 0, autostart is disabled.

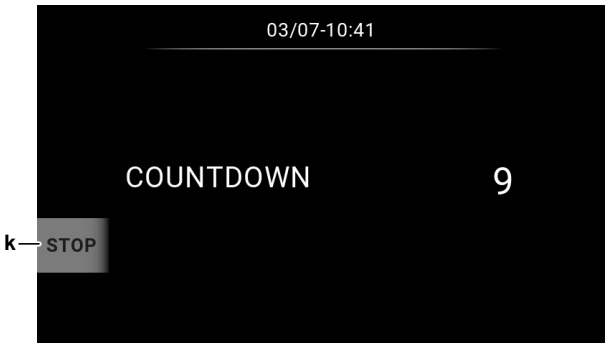
By default "FH_THERMO_AUTOSTART_hpr" value is set to 0.

If Autostart is enabled:

INFORMATION

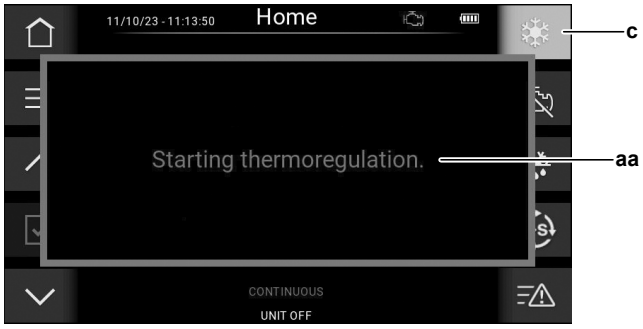
The unit will attempt to start in grid mode. If the grid is not present, the software will automatically switch to road mode.

- A page with a countdown from 10 to 0 will appear.



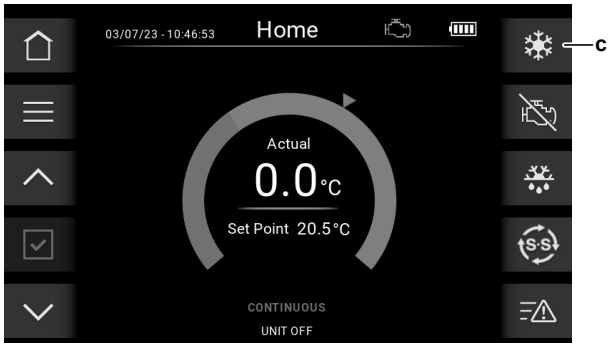
- The button (k) will change to STOP. If the user presses the "STOP" button (k) before the countdown elapses, the HMI will launch the homepage with thermoregulation (c) turned off.

- If the user lets the countdown expire, the unit will automatically load homepage and start the thermoregulation (c). A popup "Starting thermoregulation" (aa) appears.



If Autostart is disabled:

- The HMI will load the homepage with thermoregulation (c) turned off after the initialization procedure is completed.

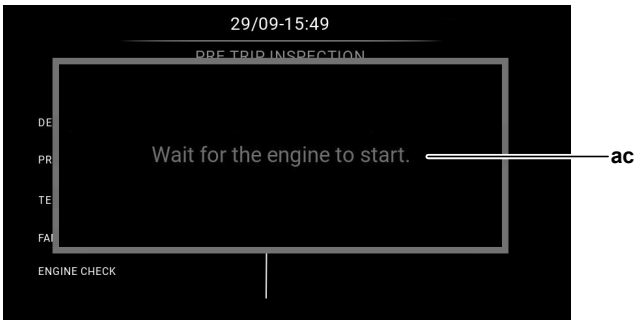


INFORMATION

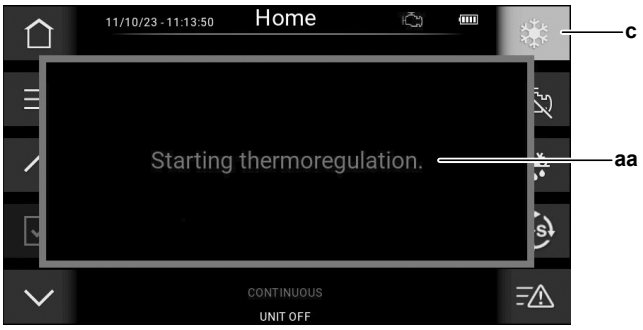
The unit will set itself in "FORCED-GRID" mode. If the user wants to start in "ROAD MODE", he has to select "engine" from the specified button.

- When thermoregulation is activated, either if the Autostart is enabled or if the user pushes the corresponding button (d), at first the thermoregulation icon (c) becomes yellow, meaning that thermoregulation is starting.
- If the unit is in Road mode, the following pop-up appears: "Wait until the engine has started, to stop now use the Main switch" (ab).

- If the engine start procedure is not interrupted, the following pop-up appears: "Wait for the engine to start" (ac).

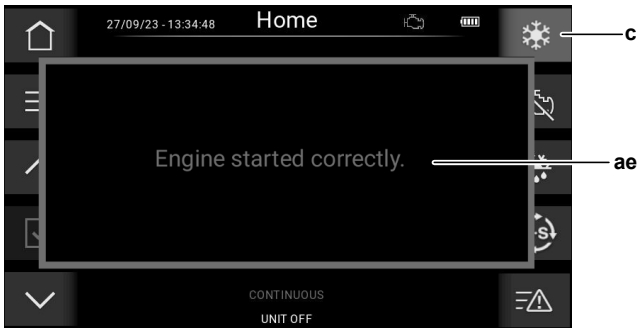


- If the unit is in grid mode or in forced grid mode, the following pop-up appears: "Starting thermoregulation" (aa).



- After the unit performs system checks:
  - If the unit is in grid mode or in forced grid mode, the icon (c) becomes blue.

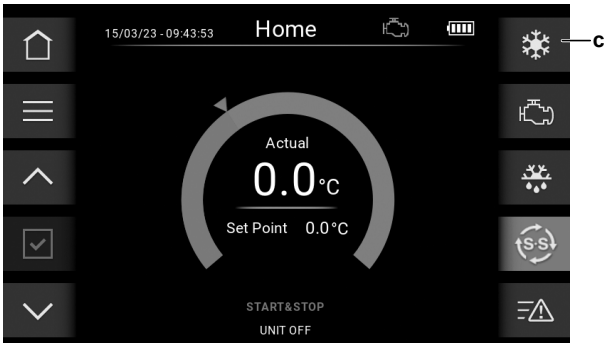
  - If the unit is in road mode, the icon (c) becomes blue, and the following pop-up appears: "Engine started correctly" (ae).



4.2.4 To change an operation mode from ON to OFF

(e.g. thermoregulation)

1 In the home page, press the button (o) next to the thermoregulation icon (c).



Result: The thermoregulation icon (c) goes to grey.

Result: Thermoregulation mode is set to OFF.

Changing the operation mode from OFF to ON is done in the same manner.

INFORMATION

When the cold room door is closed, the optional micro switch (NO contact) sends a signal to the unit.

4.2.5 To set the Set Point

1 Press the "Home page" button (n).

2 Press the "Down" (j) or "Up" (l) button to change the set point.

4.2.6 To select a working mode

There are three possible working modes for the unit:

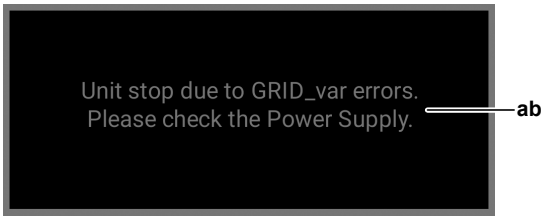
- "FORCED-GRID"
- "GRID" mode
- "ROAD" mode

"GRID" mode always has priority on "ROAD" mode. When "FORCED-GRID" is selected, the unit never switches automatically to "ROAD" mode.

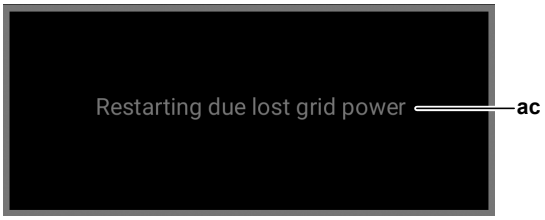
When a problem related to the power supply mode occurs, one of the following pop-ups appear:

- "Engine unable to start." (aa)

- "Unit stop due to GRID_var errors. Please check the Power Supply." (ab)

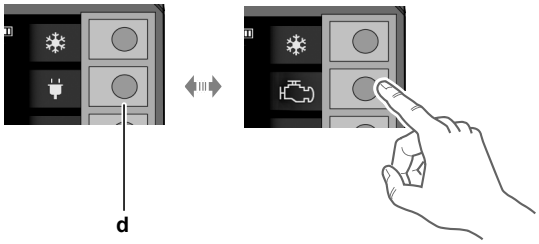


- "Restarting due lost grid power" (ac)



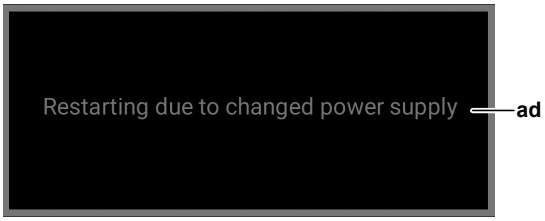
Switching from one working mode to another can be done manually or happens automatically.

Manualy switching the working mode



To switch from "ROAD" mode to "GRID" mode and vice versa, push the road/grid mode button (d).

- If thermoregulation is already ON, the unit will restart showing the popup "Restarting due to changed power supply" (ad). The icon (d) will change according to the selected mode.



Automatic switching working mode

- If the unit is in "ROAD" mode and the user inserts the electrical plug, the unit will automatically switch to "GRID MODE".
- If the unit is in "GRID" mode but the electric power supply becomes unavailable, the unit will automatically switch to "ROAD MODE". If in "ROAD MODE" problems occur during startup, the unit switches off and does not attempt any automatic mode change.

Blackout during forced grid operations

Anytime the unit is working in "FORCED-GRID MODE" mode and a blackout occurs:

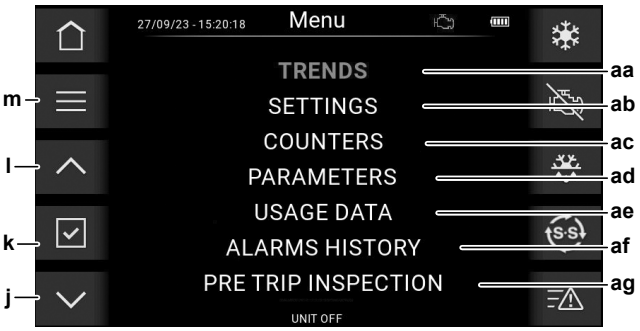
- The unit will turn OFF showing the "GRID POWER FAIL" popup (ae) showing the "Exigo will automatically launch thermoregulation once power is restored. Press any button to exit this procedure." message (af).

- The unit will restart automatically as soon as the grid power supply becomes available again.
  - This automatic start-up procedure can be exited at any time pushing any button on the HMI.

4.2.7 To go through the menu

1 Push the "Menu" button (m).

Result: The Menu page appears.



2 Use the "Up" (l) or "Down" (j) button to scroll to the "TRENDS" (aa), "SETTINGS" (ab), "COUNTERS" (ac), "USAGE DATA" (ae) or "PRE TRIP INSPECTION" (ag) page. See "6.4.1 Pre-trip inspection (PTI)" [▶ 24] for information about the "PRE TRIP INSPECTION" page (ag).

3 Push the "Enter" button (k) to select the page.

INFORMATION

The "PARAMETERS" (ad) and "ALARMS HISTORY" (af) pages are protected by password.

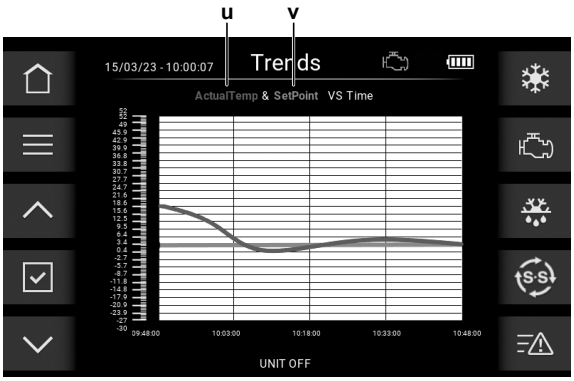
4.2.8 To view the TRENDS page

1 Push the "Menu" button (m).

Result: The Menu page appears.

2 Use the "Up" (l) or "Down" (j) button to scroll to the "TRENDS" page.

3 Push the "Enter" button (k) to select the page.



Result: The Trends page appears, showing a graphic comparing the Acual temperature (u) against the Set Point temperature (v) over a Time period.

INFORMATION

Sampling time is 1 second.

4 Push the "Menu" button (m) to go back to the Menu page.

4.2.9 To adapt the settings

"BRIGHTNESS", "DATE AND TIME" and "LANGUAGE" settings

1 Push the "Menu" button (m).

Result: The Menu page appears.

2 Use the "Up" (l) or "Down" (j) button to scroll to the "SETTINGS" page.

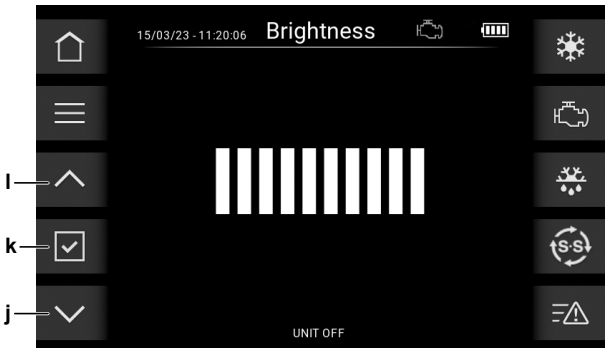
3 Push the "Enter" button (k) to select the page.

Result: The Settings page appears.

4 Use the Up (l) or Down (j) button to scroll through the Settings page.

5 Push the "Enter" button (k) to select a page (e.g. BRIGHTNESS page).

Result: The Brightness page appears.



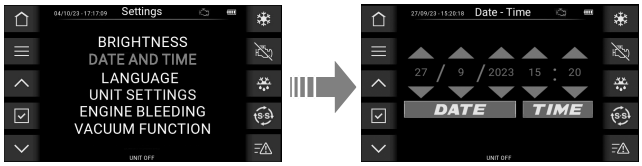
6 Use the Up (l) or Down (j) button to adjust the brightness.

7 Push the "Enter" button (k) to confirm.

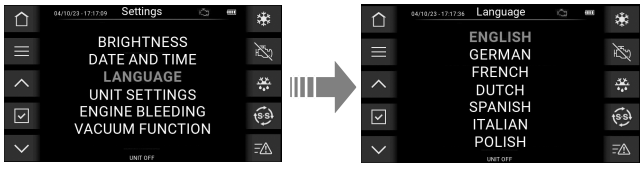
Result: The new brightness level is saved.

Result: The brightness page disappears and the screen goes back to the Settings page.

In the same manner the Date/Time settings can be changed.



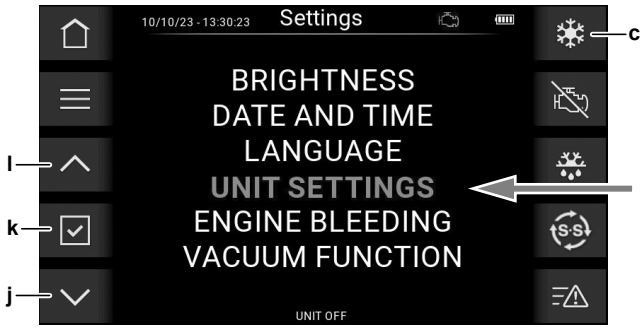
In the same manner the Language settings can be changed.



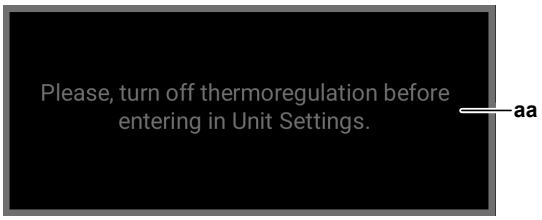
"UNIT SETTINGS"

1 Use the Up (l) or Down (j) button to scroll through the Settings page.

2 Push the "Enter" button (k) to select the "UNIT SETTINGS" page.

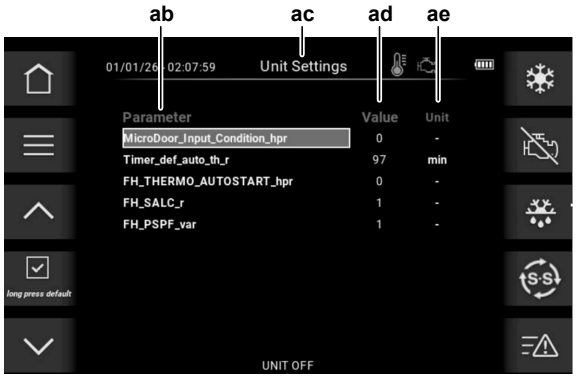


Result: To be able to access "UNIT SETTINGS", thermoregulation (c) must be OFF. If thermoregulation is on and the user tries to enter "UNIT SETTINGS", the pop-up "Please, turn off thermoregulation before entering in Unit Settings." (aa) appears.



3 Select "UNIT SETTINGS".

Result: The Unit Settings page (ac) will appear, showing all the modifiable parameters (ab), together with their corresponding actual value (ad) and the measurement unit (ae).



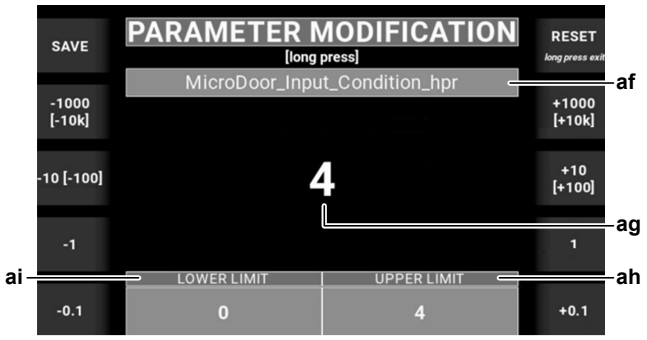
Parameter	Description
MicroDoor_Input_Condition_hpr	Active door switch functionality mode based on the range described below.
Timer_def_auto_th_r	Auto defrost timeout.
FH_THERMO_AUTOSTART_hpr	Flag that User can use to start the thermoregulation automatically.
FH_SALC_r	Flag that User can use for enable Supply air limit control.
FH_PSPF_var	Flag that User can use for enable Perishable Sensitive Product Functional Parameter.

4 Push the up (l) or down arrow (j) to select (k) the parameter (ab) of interest.

5 Push the enter button (k) to select one of the listed parameters.

Result: The page for the selected parameter appears

- At the top of the page the name of the parameter (af) is shown.
- Number at the center (ag) is the current value of the parameter.
- At the bottom of the page the allowed lower (ai) and upper limits (ah) are visible.



Parameter range is from 0 to 4

0 = Not connected

1 = Connected, normally open

2 = Connected, normally closed

3 = Connected, normally open, only icon visualisation

4 = Connected, normally closed, only icon visualisation

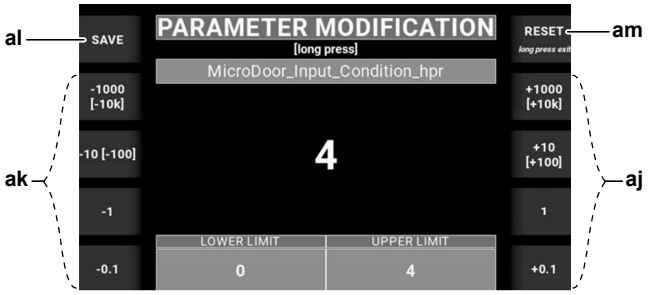
INFORMATION

If required, restore the default values for all the listed parameters by long-pressing the enter button (k).

6 Push one of the right side buttons (aj) to increase the value by +0.1, +1, +10, +1000.

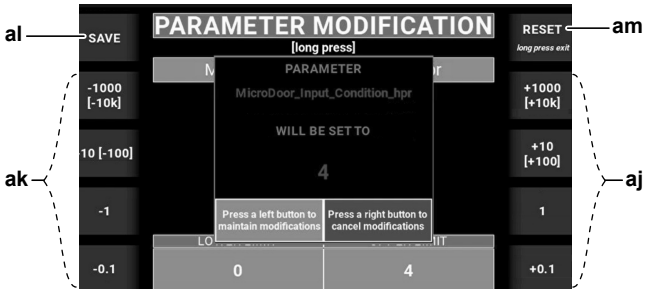
7 Long-press the buttons showing [+100] and [+10k] in order to increase the value by +100 or +10000, respectively.

8 Use the left side buttons (ak) in the same way to decrease the value.



9 Push the "SAVE" button (al) to save the value.

Result: A pop-up appears, asking if the user wants to save the change.



- If yes, push one of the left buttons.
  - A pop-up "Overwriting parametrization file. Please wait." (an) appears.
  - The pop-up disappears when the progress bar (ao) reaches the end.

- If no, push one of the right buttons.

10 If required, push the "RESET" button (am) to reset the value to the default one.

11 Long-press the "RESET" button (am) to exit.

4.2.10 To activate the engine bleeding function

1 Push the "Menu" button (m).

Result: The Menu page appears.

2 Use the "Up" (l) or "Down" (j) button to scroll to the "Settings" page.

3 Push the "Enter" button (k) to select the page.

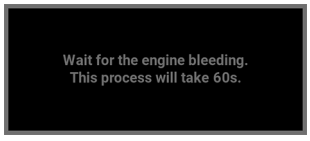
Result: The Settings page appears.

4 Use the Up (l) or Down (j) button to scroll through the Settings page.

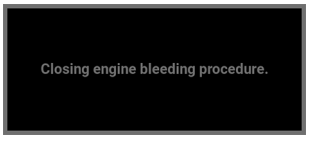
5 Push the "Enter" button (k) to select "ENGINE BLEEDING".

Result: If the unit is ON, a pop up "Stop the unit before to launch engine bleeding" appears.

6 At the start, a blocking pop-up "Wait for the engine bleeding. This process will take 60s" will show and the HMI will be locked for 60s.



After 60s a new pop-up "Closing engine bleeding procedure" appears to announce the end of the procedure. The pop-up will close after 5s.



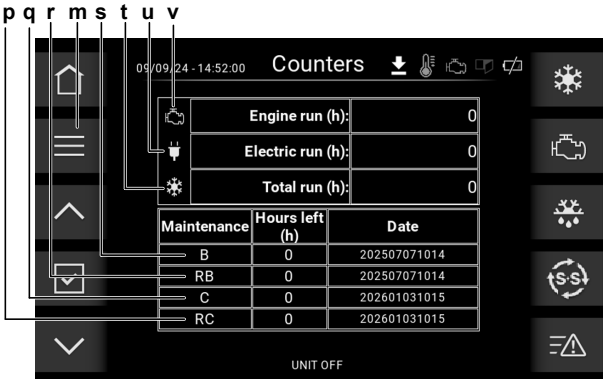
4.2.11 To view the COUNTERS page

1 Push the "Menu" button (m).

Result: The Menu page appears.

2 Use the "Up" (l) or "Down" (j) button to scroll to the "COUNTERS" page.

3 Push the "Enter" button (k) to select the page.



Result: The Counter page appears, showing:

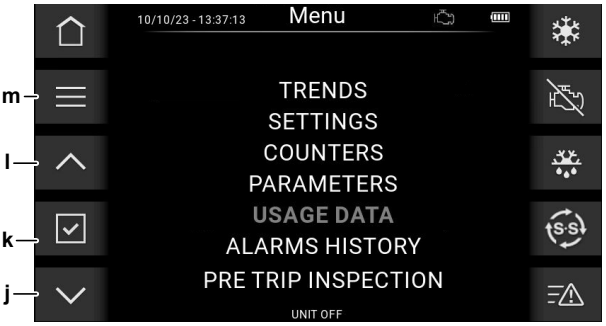
- The Engine run time (v)
- The Electric run time (u)
- The Total run time (t)
- Maintenance B (s), indicating when maintenance B should be performed (year, month, day, hour and minutes).
- Maintenance RB (r), indicating when maintenance B should be performed.
- Maintenance C (q), indicating when maintenance C should be performed.
- Maintenance RC (p), indicating when maintenance C should be performed.

4 Push the "Menu" button (m) to go back to the Menu page.

4.2.12 To view usage data

1 Push the "Menu" button (m).

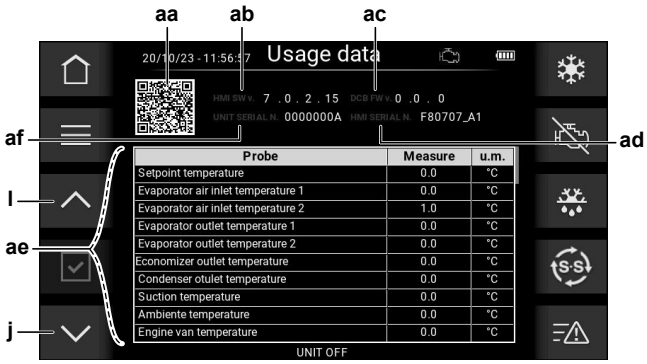
Result: The Menu page appears.



2 Use the "Up" (l) or "Down" (j) button to scroll to the "USAGE DATA" page.

3 Push the "Enter" button (k) to select the page.

Result: The Usage data page appears, showing:



- QR code redirecting to the manuals (aa).
- HMI software version (ab).
- PCB firmware version (ac).
- Unit serial number (af).
- HMI serial number (ad).
- A table (ae) showing information on probes and parameters of the unit with the relative value and unit measurements. It is possible to see all the listed items by scrolling through the items using the "Up" (l) or "Down" (j) buttons.

4.2.13 To access the password-protected pages

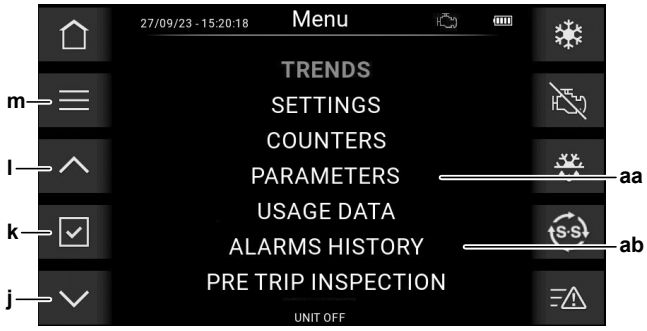
INFORMATION

These menus are accessible only to authorized personnel.

The "PARAMETERS" (aa) and "ALARMS HISTORY" (ab) page are protected by a password.

1 Push the "Menu" button (m).

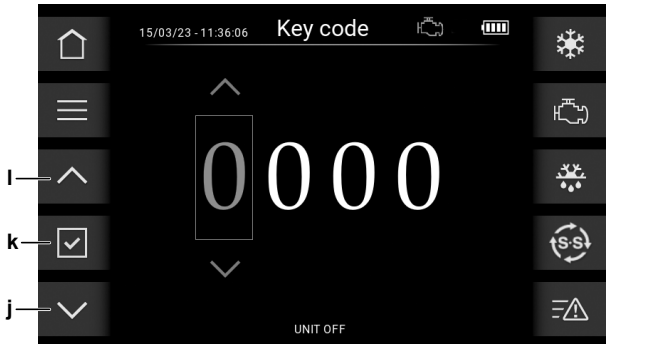
Result: The Menu page appears.



2 Use the "Up" (l) or "Down" (j) button to scroll to the password protected page (e.g. "PARAMETERS" (aa)).

3 Push the "Enter" button (k) to select the page.

Result: The Key code page appears.



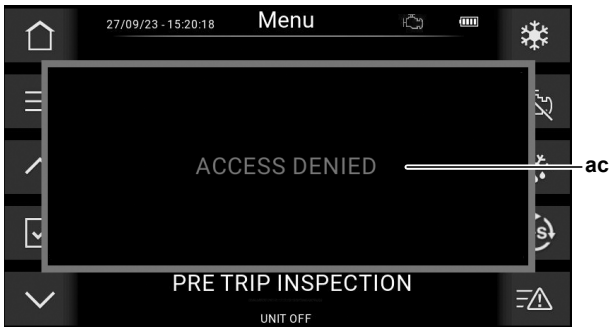
4 Use the "Up" (l) or "Down" (j) button set each individual number.

5 Push the "Enter" button (k) to go to the next number in line.

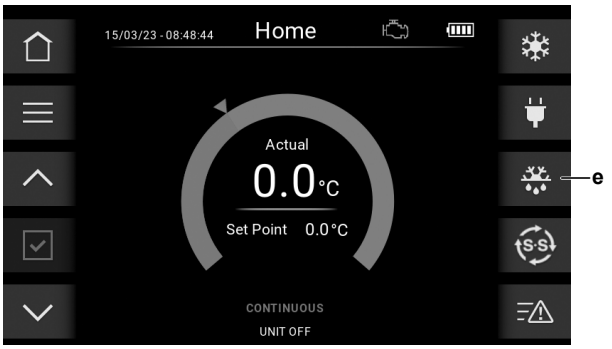
6 Push the "Enter" button (k) to confirm the password.

Result: If the password is correct, you can continue on the "PARAMETERS" page (aa).

Result: If the password is not correct, the "ACCES DENIED" popup screen (ac) appears.



4.2.14 To manually start the defrost mode



1 Push the "Manual defrost" button (e).

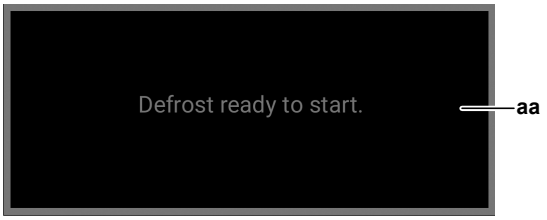
Result: The "Manual defrost" icon (e) becomes blue and a clock appears on the icon .

Result: The unit will wait for the right conditions before starting defrost. (see " Reasons why the unit can't go in the defrost mode" below).

INFORMATION

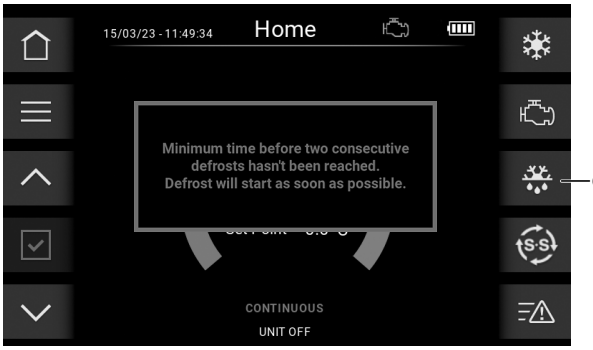
If a manual defrost is requested, and the unit can't start the defrost, after 10 minutes the request elapses.

When the unit is able to start defrost, the "Defrost ready to start." pop-up (aa) appears.

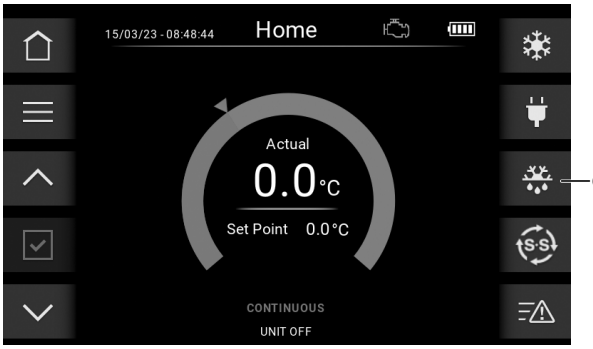


Reasons why the unit can't go in the defrost mode

- The minimum time interval between defrost cycles has not yet elapsed.
  - The "Minimum time before two consecutive defrosts hasn't been reached. Defrost will start as soon as possible." pop up screen appears.



- The start-up phase is not yet completed (see "4.2.3 To start up" [▶ 14]).
  - The defrost cycle will start as soon as start-up has finished.



- Evaporator temperature is too high.
  - A popup appears with "Defrost will start as soon as the defrost probe temperature condition will be fulfilled".
- Abnormal operation or Protection control active.
  - A popup appears with "Defrost cannot start because of abnormal operation or Protection control active".
  - The defrost cycle will start as soon as possible.

4.2.15 To change the start & stop/continuous mode selection

The "Start & stop/Continuous" button (f) allows to change the thermoregulation management.

NOTICE

Depending on the time parameter set and operating conditions, the temperature can vary over the goods-admissible range. For accurate temperature control, "continuous mode" is preferred.

1 If the thermoregulation (c) is ON, switch it OFF. Changing the start & stop/continuous mode selection is not possible while the thermoregulation is ON.

Result: If the thermoregulation is ON, the popup " PLEASE STOP THERMOREGULATION BEFORE CHANGING WORKING MODE" (aa) appears.

2 Push the "Start & stop/Continuous" button (f).

Result: The "Start & stop" icon (f) lights up blue, the unit is in "START & STOP" mode.

Result: In "START & STOP" mode the unit will shut the engine down as soon as the set point is reached, until it is necessary to restart.

A number of conditions must be met in order for the unit to start and stop, these are related to:

- Battery voltage
- Coolant temperature,
- Box temperature
- On/off timers.

Conditions to stop the engine are:

- The voltage must be above a certain parameter for a certain time.
- The engine coolant temperature has reached a minimum of 50°C.
- The cold room temperature parameters reached the target values.

If the condition(s) to stop the engine are met, the temporary popup "STOP DUE TO START&STOP" (ab) appears.

Conditions to start the engine are:

- If the unit is stopped but the battery voltage falls the threshold internal parameter, the unit will restart automatically.
- The cold room temperature parameters reached the target values.
- Max Off timer.

3 Push the "Start & stop/Continuous" button (f) again to return to the "CONTINUOUS" mode.

Result: The "Start & stop" icon (f) is no longer lit, the unit is in "CONTINUOUS" mode.

Result: In "CONTINUOUS" mode the unit never shuts down the engine during thermoregulation, even if the set point is reached and fans are continuously running.

4.2.16 To activate start & stop in perishable range

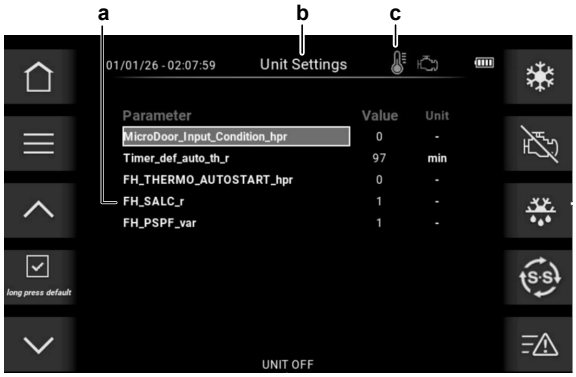
In order to activate Start&Stop in perishable range the parameter FH_SALC_r (a) must be enabled (set to 1) in the Unit Settings (b).

INFORMATION

The "perishable range mode" identifies a specific fine temperature regulation control for perishable goods.

If this functionality is active:

- The unit starts thermoregulating according to the measured evaporator outlet temperature.
- The perishable range icon (c) is visible.



NOTICE

The main switch does not reset the FH_SALC_r parameter. Reset the parameter to "0" if the functionality has to be disabled.

5 Before operation

NOTICE

NEVER inspect or service the unit by yourself. Ask a qualified service person to perform this work.

WARNING

Ask your dealer for improvement, repair, and maintenance. Incomplete improvement, repair, and maintenance may result in water leakage, electrical shock and fire.

WARNING

This unit contains electrical and hot parts.

WARNING

Before operating the unit, be sure the installation has been carried out correctly by an installer.

CAUTION

Do NOT insert fingers, rods or other objects into the air inlet or outlet. Do NOT remove the fan guard. When the fan is rotating at high speed, it will cause injury.

WARNING

Do NOT keep flammable materials inside the unit. They may cause an explosion or a fire.

WARNING

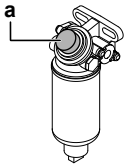
Improper installation or attachment of equipment or accessories could result in electrical shock, short-circuit, leaks, fire or other damage to the equipment. ONLY use accessories, optional equipment and spare parts made or approved by Daikin.

WARNING

Periodically check the user interface for alarms. An internal electrical insulation device can detect possible fault currents.

INFORMATION

The electric fuel pump carries the fuel from the tank to the unit. In exceptional circumstances (e.g. if the fuel tank suction pipe is empty after running out of fuel), the hand pump (a) on the fuel pre-filter can be used to get the fuel (faster) to the fuel pump and the unit.



6 Operation

6.1 Operation range

Use the system in the following temperature and humidity ranges for safe and effective operation.

Temperature range: –25°C to +50°C

Within the working range the cold room temperature can be set from –28°C to +25°C.

The fuel consumption depends on the outside temperature and the cold room temperature setting.

NOTICE

The operator should be aware of the available fuel supply so that the operation of the unit is never compromised.

6.2 Operation procedure

NOTICE

The correct choice of the target temperature and operation mode, based on the type of goods and environmental conditions, is the full responsibility of the user.

- Read the documentation carefully before operating the unit to ensure the best possible performance.
- If you select a function which is not available, the message **NOT AVAILABLE** appears on the user interface.
- The standard time to reach the desired temperature can vary approximately from 15 to 30 minutes, depending on the ambient temperature.
- Eliminate the humidity inside the cold room by switching to defrost mode (see "4 User interface" [▶ 11]).
- Choose the correct temperature setting for the product that is to be transported (see "4 User interface" [▶ 11]).

- Check the temperature of the product. Make sure it is at the correct storage temperature before loading.

WARNING

When the unit is operating in GRID MODE and a power blackout occurs, the unit will automatically switch to ROAD MODE.

This function MUST be disabled when the cold room is parked in a confined space or an area where fumes from the engine could become trapped and cause serious injury or death (e.g. indoor parking, ferry). In these cases select FORCED-GRID mode.

6.3 Loading the goods

CAUTION

Turn on the light before entering the cold room, and take a portable torch with you.

NOTICE

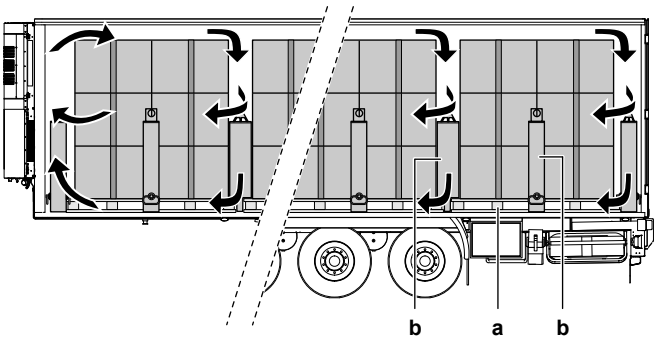
Do not cover the air intake and outlet openings towards the condenser and evaporator of the unit.

Maintaining the right temperature guarantees the preservation of the quality of the transported goods.

Good air circulation is fundamental to keep a uniform temperature throughout the entire cold room. Insufficient air circulation can cause heat pockets or ice formation.

For this reason:

- Use pallets that facilitate air circulation under the goods, protecting them from the heat coming from the cold room floor.
- Place the goods away from the cold room walls. Use spacers if necessary.
- Leave a space of approximately 20 cm between the goods and the cold room ceiling.
- Stack heat generating products, such as fruit and vegetables, in a way to create sufficient space to remove the generated heat by cold air circulation.
- Stack products which do not generate heat, such as meat and frozen foods, close to each other toward the center of the cold room.



a Pallet
b Spacer

WARNING

Daikin is not responsible for cold room safety.

Make sure that no people are left in the cold room before you close the doors:

- Risk of suffocation. 12 m^3 must be left empty inside the cold room.
- Risk of frostbite.
- Risk of freezing to death.

6.4 General recommended checks

INFORMATION

The following are a series of checks that are always recommended to perform before long trips.

It is best to perform the inspection without cargo in the cold room.

Before starting the engine

- Drain water from bottom of fuel tank.
- Drain water from the water separator on the pre-fuel filter of the trailer fuel tank.
- Check air filter and hoses (only if there are traces of Diesel fuel, engine coolant or oil inside the unit).
- Check engine oil level
- Check coolant level. Always use an industrial ladder (or other safe platform) to inspect the coolant tank located at the top of the unit.
- Check condition of water pump belt.
- Check battery cables and terminals.
- Check evaporator coil for cleanliness.
- Check condenser/radiator coil cleanliness.
- Check all defrost water drains.

After starting the engine

- Check fuel lines and filters for leaks.
- Check oil filter for leaks.
- Check coolant hoses for leaks.
- Check condenser fan for proper airflow.
- Check evaporator fan for proper airflow.
- Check for unusual noises.

6.4.1 Pre-trip inspection (PTI)

INFORMATION

The PTI is an automatic procedure to check the correct functioning of the components of the unit.

During PTI and after PTI is finished

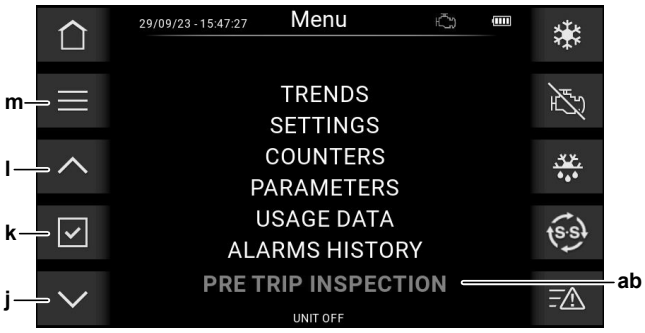
- Check for proper temperature control. It is recommended to do the PTI without cargo in the cold room. If cargo is present, it is the responsibility of the operator to ensure that the temperature does not rise above the permissible value.
- Check the PTI output results (failed steps and malfunctions signal).

To launch the pre-trip inspection

Thermoregulation must be OFF to launch the pre-trip inspection, otherwise the pop-up "PLEASE STOP THERMOREGULATION BEFORE RUNNING PRE TRIP INSPECTION" (aa) will appear:

1 Push the "Menu" button (m).

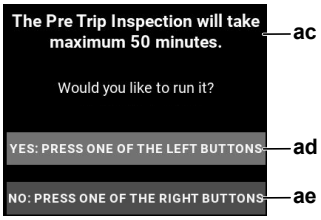
Result: The Menu page appears.



2 Use the "Up" (l) or "Down" (j) button to scroll to the "PRE TRIP INSPECTION" (ab) page.

3 Push the "Enter" button (k) to select the page.

Result: The pop-up message "The Pre Trip Inspection will take maximum 50 minutes. Would you like to run it?" (ac) asking the confirmation to proceed will appear.



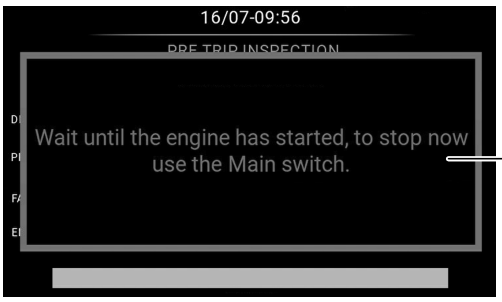
- YES: PRESS ONE OF THE LEFT BUTTONS (ad).
- NO: PRESS ONE OF THE RIGHT BUTTONS (ae)

Once the Pre Trip Inspection is selected the unit will start the engine.

INFORMATION

If problems occur when trying to turn on the engine please retry by restarting the unit from the main switch. If the problem persists, please contact the service center.

- The pop-up "Wait until the engine has started, to stop now use the Main switch." (af) will appear.
- The operation can be interrupted only via the Main switch.



After pre-trip inspection has started, the "PRE TRIP INSPECTION" page (ag) is shown. All the steps that have to be checked are listed here.

INFORMATION

Once the Pre Trip Inspection starts it will show a progress bar at the bottom of the screen, indicating that the inspection process is still ongoing. The blue section shows the portion of the inspection that has been completed, while the grey section indicates what is yet to be done.

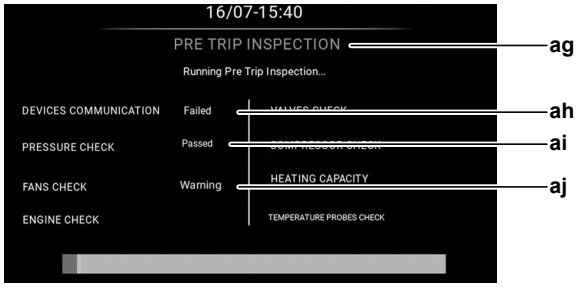
While running pre-trip inspection, three scenarios may occur:

- If a step is passed, the "Passed" (ah) label will appear at the side of the step name.
- If a step is failed, the "Failed" (ai) label will appear at the side of the step name.
- If a step is passed with some issues not compromising the functioning of the unit, the "Warning" (aj) label will appear at the side of the step name.

NOTICE

If a warning appears, it is suggested to contact the service center.

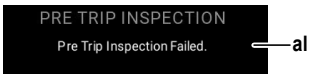
If a PTI step fails, please contact the service center as soon as possible.



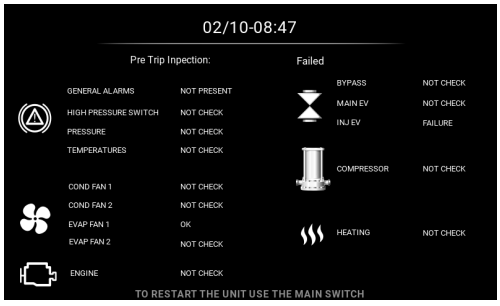
At the end of the PTI:

- If all the steps are passed, the pop-up "Pre Trip Inspection Passed." (ak) will appear.

- If one or more of the steps are failed, the pop-up "Pre Trip Inspection Failed." (al) will appear.



Immediately after all the steps are checked, the following page will appear, showing PTI results. For each component it shows whether the PTI has passed or failed, or if no check has been done.



To exit this page and let the unit run, it is necessary to restart the unit with the main switch.

7 Energy saving and optimum operation

If circumstances allow:

- Park the working unit in a shaded area when not driving.

- Cover the cold room with a heat shield.

Always:

- Reduce the opening time of the cold room doors.
- Make sure the goods are at their correct storage temperature before loading.
- Make sure that a good airflow is possible between the stored goods.
- Check that the evaporator is ice-free. Ice forms on the evaporator preventing air from flowing regularly. If necessary increase defrost termination temperature by some degrees or increase frequency of defrosts.
- Make sure that cold room doors are perfectly tight.
- Perform any inspection of the load through the inspection door on the side of the trailer, if present. This ensures less cold loss during any inspection.

8 Maintenance and service

The user has to assure that the unit follows maintenance prescriptions as in "8.5 Scheduled maintenance" [▷ 28].

NOTICE

At every maintenance session, the entire unit should be checked for rust, breaks or cracks and general contamination. Any problem that may occur should be addressed (or reported if necessary) immediately.

NOTICE

Maintenance MUST be done by an authorised installer or service agent.

We recommend performing maintenance at least once a year. However, applicable legislation might require shorter maintenance intervals.

CAUTION

Before accessing terminal devices, make sure to interrupt power supply. Then wait for 10 seconds for the electrical condensers to discharge before opening the electrical box cover.

DANGER: RISK OF BURNING/SCALDING

Allow the PM generator, the engine, the engine exhaust, the engine- cooling system, the evaporator defrost heaters and the water discharge heater to cool down before touching any of these parts.

DANGER: RISK OF BURNING/SCALDING

Allow the engine, the engine exhaust and the engine-cooling system to cool down before performing any fluid change.

WARNING

If diesel leaks from the fuel system, it evaporates. These vapors are irritating to eyes, respiratory system and skin and can ignite if an open flame is in the area.

WARNING

To prevent electrical shocks or fire:

- Do NOT rinse the unit.
- Do NOT operate the unit with wet hands
- Do NOT place any objects containing water on the unit.

CAUTION

Do NOT touch the heat exchanger fins. These fins are sharp and could result in cutting injuries. Wear safety gloves if you have to work on or around the heat exchanger fins.

NOTICE

Be careful not to damage any part of the unit, it may result in appliance problems.

About the refrigerant

This product contains fluorinated greenhouse gases. Do NOT vent gases into the atmosphere.

Refrigerant type: R452A

Global warming potential (GWP) value: 2140

NOTICE

Applicable legislation on **fluorinated greenhouse gases** requires that the refrigerant charge of the unit is indicated both in weight and CO_2 equivalent.

Formula to calculate the quantity in CO_2 equivalent tonnes: GWP value of the refrigerant × total refrigerant charge [in kg]/1000

Contact your installer for more information.

WARNING

- R452A is a non-combustible refrigerant. If the refrigerant does leak and comes into contact with open flames, this may result in the formation of a harmful gas.
- Turn OFF any combustible heating devices, ventilate the area, and contact the dealer from where you purchased the unit.
- Do NOT use the unit until a service person confirms that the part from which the refrigerant leaked has been repaired.

WARNING

- Do NOT pierce or burn refrigerant circuit parts.
- Do NOT use cleaning materials or means to accelerate the defrosting process other than those recommended by the manufacturer.
- Be aware that the refrigerant inside the system is odourless.

WARNING

Refrigerant under pressure can escape due to breaks in the cooling system, or during maintenance on the cooling system.

8.1 Cleaning the unit

8.1.1 To clean the exterior

DANGER: RISK OF ELECTROCUTION

The unit must be switched off when cleaning the unit.

Do not clean the unit while the electric plug is connected.

NOTICE

To clean the exterior:

- Do not use any cleaning agents or chemicals.
- Do not use pressurised water.

Clean with a soft cloth. If it is difficult to remove stains, use water or neutral detergent and wipe with a dry cloth.

8.1.2 To clean the interior

NOTICE

To clean the interior:

- Even if the main components of the device have a sufficiently high IP rating, do not wash the device and its electrical components and electrical boxes with pressurized water.

Remove dust and debris with a soft cloth.

Use a vacuum cleaner with a soft attachment to remove dust and debris from in between the components.

INFORMATION

Under normal working conditions the condenser, evaporator, and radiator coils should only be cleaned during scheduled maintenance inspections.

However, it may be necessary for the user to clean coils before the scheduled maintenance (see "8.5 Scheduled maintenance" [▶ 28]).

To clean the evaporator

When the unit goes into defrost mode, the melt water flowing out of the evaporator also removes any dirt on its way.

If, due to the operating conditions, the automatic defrosting mode is not sufficient to keep the evaporator clean, the defrosting mode can be activated manually to clean the evaporator.

See "4 User interface" [▶ 11] for how to activate the defrosting mode manually.

To clean the condenser

CAUTION

Be careful not to bend the fins when cleaning a coil.

Remove any debris reducing the air flow.

Start with the first step and, if necessary, then continue with the next steps until the desired result is achieved.

1 Wipe the air side of the coil with a cloth, going with the fins, across the tubes.

2 Use a vacuum cleaner with a soft attachment to remove dirt from the surface and from in between the fins and tubes.

3 Clean the coils with compressed air at a maximum pressure of 3 bar. It is advisable to blow from the non-air side, so that no dirt located on the outside is blown deeper into the coil.

CAUTION

Do not direct the pressured air at an angle less than 75°.

Should the fins nevertheless get bent:

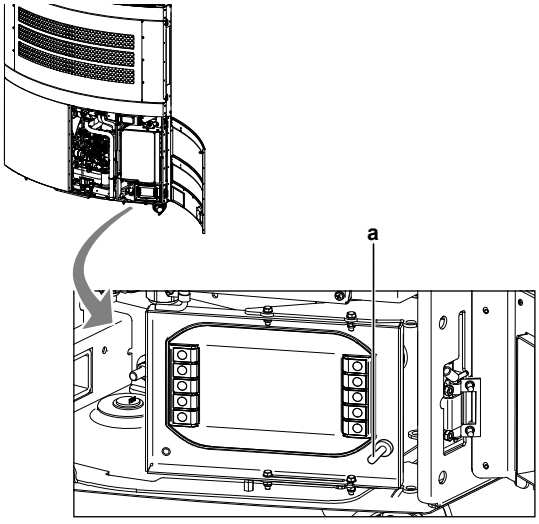
4 Straighten them carefully using a fin comb for cleaning/ straightening.

8.2 Maintenance before a long stop period

1 Turn the ON/OFF switch(a) OFF.

2 Disconnect the negative (–) battery terminal.

3 Disconnect the positive (+) battery terminal.



When the ON/OFF switch is turned OFF, some components will still draw power from the battery (e.g. pcb, controller). This way the controller settings are retained.

However, if a very long stop period is expected, it is better to disconnect the battery.

If circumstances allow, connecting an automatic battery charger (designed to stay permanently connected to the battery) is a good solution. This will ensure that the controller settings are not lost.

WARNING

Acid fumes and explosive hydrogen may be released during battery charging. No open flame or smoking near the battery.

DANGER: RISK OF EXPLOSION

Always disconnect the negative battery terminal first when removing battery cables. When reconnecting the battery terminals, connect the positive terminal (+) first.

NOTICE

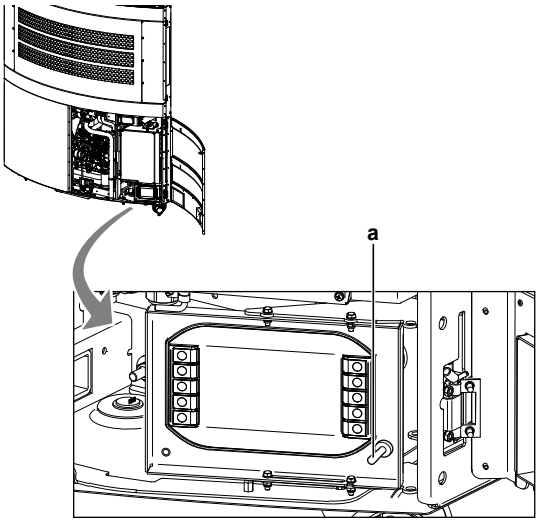
The frame is connected to the negative battery terminal (grounded). This means that with the negative terminal connected, a complete circuit exists from the positive terminal of the battery to the frame. Contacting the positive side and the frame simultaneously with a metal object will cause sparks or arcing, creating a fire hazard. Also, by this short-circuiting of the battery, hydrogen gases can be emitted, and an explosion might occur.

8.3 Maintenance after a long stop period

If the battery is still connected

1 If applicable, disconnect the automatic battery charger.

2 Turn the ON/OFF switch (a) ON.



If the battery is NOT connected

DANGER: RISK OF EXPLOSION

Always disconnect the negative battery terminal first when removing battery cables. When reconnecting the battery terminals, connect the positive terminal (+) first.

1 Connect the positive (+) battery terminal.

2 Connect the negative (–) battery terminal.

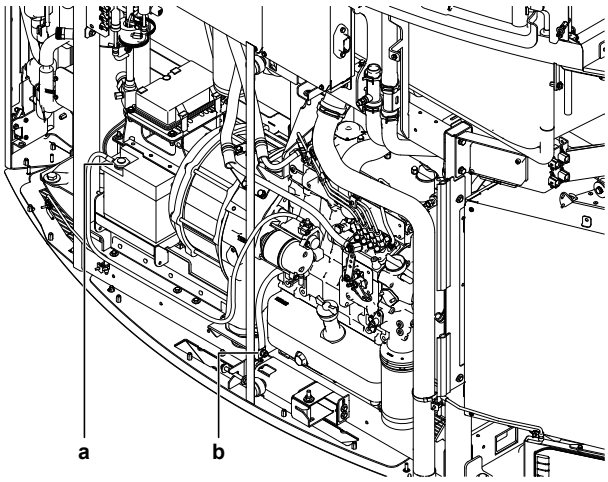
3 Turn the ON/OFF switch ON.

8.4 To jump-start the unit

WARNING

Acid fumes and explosive hydrogen may be released during battery charging. No open flame or smoking near the battery.

When the battery is dead or does not provide sufficient voltage it is possible to jumpstart the diesel engine.



a Positive (+) battery terminal of the unit
b Negative (–) terminal of the unit

1 Remove the positive (+) pole protection cap.

2 Connect the first clamp of the red jumper cable to the positive (+) battery terminal of the unit (a), and the other clamp to the positive (+) terminal of the back-up battery (e.g. the battery of a truck).

3 Connect the first clamp of the black jumper cable to the negative (–) battery terminal of the back-up battery, and the other clamp to the negative (–) terminal of the unit (b). The back-up battery or system must be 12V.

4 Start the unit.

5 Disconnect the clamp of the black jumper cable from the negative (–) terminal of the unit (b).

6 Disconnect the clamp of the red jumper cable from the positive (+) battery terminal of the unit (a).

7 Disconnect the clamp of the red jumper cable from the positive (+) battery terminal of the back-up battery.

8 Disconnect the clamp of the black jumper cable from the negative (–) battery terminal of the back-up battery.

9 Reinstall the positive (+) pole protection cap.

Have the battery changed as soon as possible by a qualified service person.

8.5 Scheduled maintenance

NOTICE

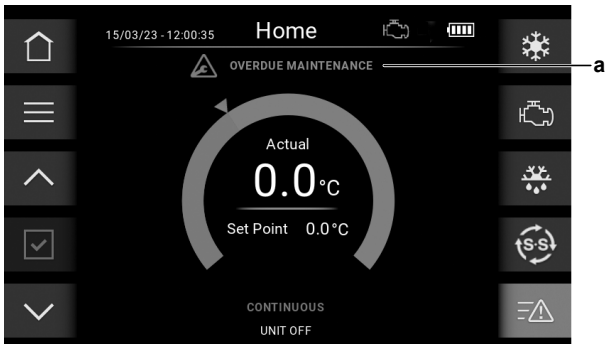
To ensure correct operation of the unit, keep the diesel tank clean, use quality diesel fuel and respect the maintenance schedule.

There are three types of scheduled maintenance:

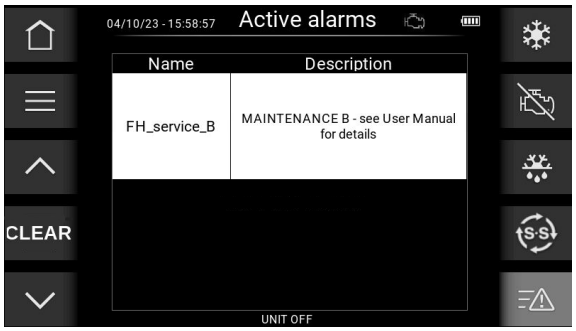
- Type A and RA, sheduled every 500 operation hours.
- Type B and RB, sheduled every two years or every 3000 operation hours, according to which first occurs.
- Type C and RC, sheduled every 4 years or every 6000 operation hours, according to which first occurs.

An alarm is triggered when the maintenance hour meter timer has expired to warn the user that scheduled maintenance is required.

- The "OVERDUE MAINTENANCE" message (a) appears on the interface.



- The Active alarms page shows the information about the required maintenance.



The clear button for maintenance alarms will have no effect.

Before every use	Maintenance type						Inspection and maintenance programs
	Type A	Type RA	Type B	Type RB	Type C	Type RC	
●	●	●	●	●	●	●	Pre-trip inspection, see "6.4.1 Pre-trip inspection (PTI)" [▶ 24]
	●	●	●	●	●	●	Check air intakes grid and hoses
	●	●	●	●	●	●	Check alarm list
	●	●	●	●	●	●	Check all defrost water drains
		●		●		●	Check coolant level[(a)]
					●	●	Check defrost air switch
	●	●	●	●	●	●	Check electrical box fan
					●	●	Check hoses and connections
		●					Check oil level[(b)]
				●		●	Change oil[(b)]
				●		●	Change oil filter cartridge[(b)]
		●					Check water pump belt[(c)]
				●		●	Change water pump belt
				●	●	●	Clean battery connections and cable terminals
			●	●	●	●	Clean condenser
			●	●	●	●	Clean evaporator
				●		●	Clean fuel pump filter
						●	Drain and flush cooling system
				●		●	Drain water from bottom of fuel tank
				●		●	Drain water from separator on pre-fuel filter
				●		●	Replace air filter[(d)]
				●		●	Replace fuel filter (inside unit)
				●		●	Replace fuel pre-filter[(e)]
			●	●	●	●	Tighten engine, compressor and unit mounting bolts[(f)]

[(a)] Factory used engine coolant: Shell coolant Long Life Concentrate RED.
The coolant should be replaced after a maximum of 4 years or 6000h off operation.
[(b)] Factory used engine oil: Shell Helix Ultra ECT C2/C3 0W-30.
Check the oil level after the first 500h of operation. Change engine oil and replace oil filter cartridge at the same time. The maximum oil change interval is 18 months, even if the engine has not run the necessary number of hours a "maintenance required" alarm will appear on the HMI.
[(c)] Minimum tension value below which the belt must be replaced is 118.5 Hz, for belt type: Line Gold XPA-SR (3CGT296), pretensioning: 180 N, mass: 0.080 kg/m.
[(d)] Very dusty or sandy driving conditions may make it necessary to clean or replace the air filter between prescribed replacement intervals.
[(e)] Humid conditions may make it necessary to drain the fuel pre-filter between the prescribed replacement intervals.
[(f)] Check the torque values on the images in "8.6 To check the engine-, compressor- and unit fixation bolts and nuts" [▶ 29].

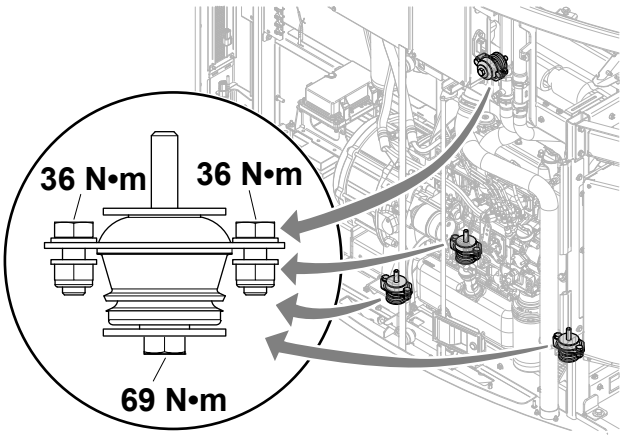
8.6 To check the engine-, compressor- and unit fixation bolts and nuts

1 Check that the bolts and nuts are tightened to the appropriate tension with a torque wrench.

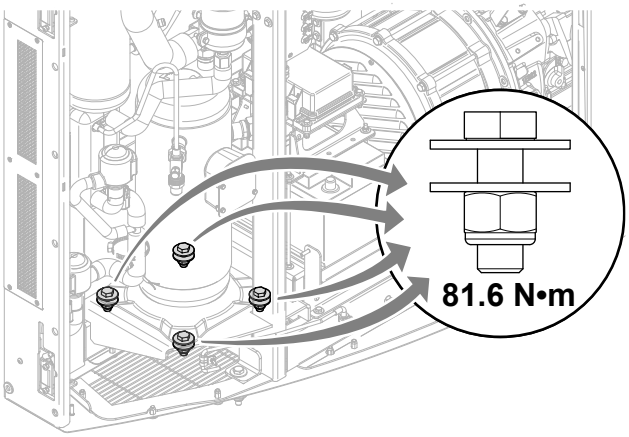
INFORMATION

When using electric or pneumatic tightening devices, minimal speed setting is recommended.

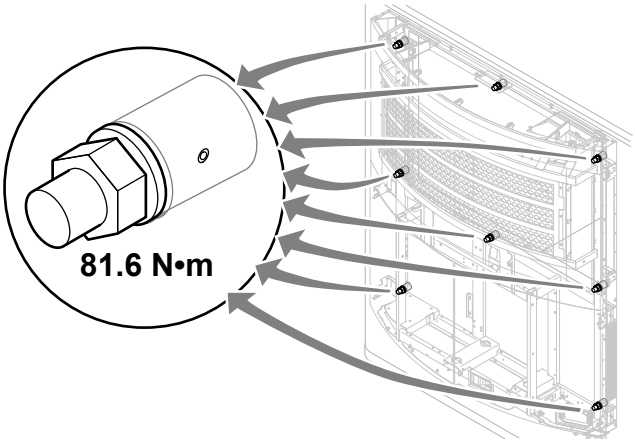
Engine installation



Compressor installation



Unit installation



9 Troubleshooting

If one of the following malfunctions occurs, take the measures shown below and contact your dealer.

- A remote support service is available; call your authorized area technical assistance service for on-road assistance.

WARNING

Stop operation and shut OFF the power if anything unusual occurs (burning smells etc.).

Leaving the unit running under such circumstances may cause breakage, electrical shock or fire. Contact your dealer.

The system MUST be repaired by a qualified service person.

Malfunction	Measure
If the system does not operate at all.	▪ Check for power failure. Wait until power is restored. If power failure occurs during operation, the system automatically restarts immediately after power is restored. ▪ For authorized personnel: Check if no fuse has blown or breaker is activated. Change the fuse or reset the breaker if necessary.
The system stops immediately after starting operation.	▪ Check if air inlet or outlet of outdoor or indoor unit is not blocked by obstacles. Remove any obstacles and make sure the air can flow freely.
The system operates but cooling is insufficient.	▪ Check if air inlet or outlet of outdoor or indoor unit is not blocked by obstacles. Remove any obstacles and make sure the air can flow freely. ▪ Check if the evaporator inside the cold room is not frosted up. Defrost the unit manually, or shorten the defrost operation cycle. ▪ Check if there are not too many articles inside the cold room, see "6.3 Loading the goods" [▸ 24]. ▪ Check if there is smooth air circulation inside the cold room. Reorganise the articles inside the cold room, see "6.3 Loading the goods" [▸ 24]. ▪ Check if there is not too much dust on the condenser and/or radiator. Remove the dust, see "8.1.2 To clean the interior" [▸ 27]. ▪ Check if there is cold air leaking out of the cold room. Stop the air from leaking outside. ▪ Check that the temperature is not set too high. Set the setpoint appropriately, see "4.2.5 To set the Set Point" [▸ 17]. ▪ Check if there are no high-temperature articles stored in the cold room. Always store articles after they have cooled down. ▪ Check if the door has been opened too long. Reduce the opening time of the door.
The user interface screen is visibly broken	▪ Shut down the unit.

Alarms

The alarm icon may light up in three colors depending on the severity of the problem, going from yellow over orange to red.

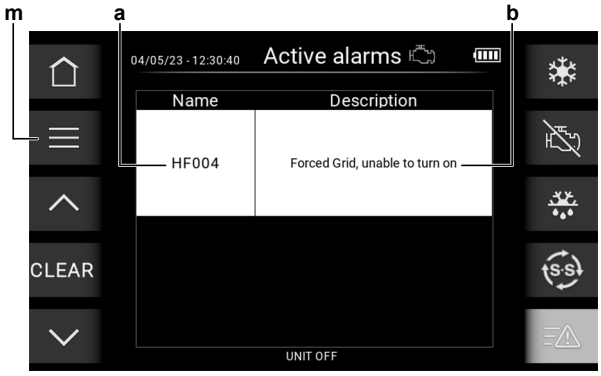
- Yellow: Warning condition, the unit remains fully operational. Some safety and/or operational limits are reached and the unit will react accordingly. These events are only visible in the alarm history and no action is required.
- Orange: Grid or road mode thermo operation stops.
  - Some orange alarms stop the engine (road mode), but the unit can run in grid mode.
  - Some orange alarms stop the grid power supply, but the unit can run in road mode.
- Red: Severe error. If a red alarm occurs, the unit is switched off. In some cases the unit tries autonomously to reset.

To access the alarm menu

1 Press the alarms menu button.

Result: You will enter the "Active alarms" screen, the Active alarms screen shows:

- The alarm code (a).
- A description of the problem (b).



2 Press the menu button (m) to exit the Active alarms page.

Disclaimer

Should you come into possession, legitimate or not, of the OEM password, you are prohibited from changing any parameters via that privileged access level. Daikin always reserves the possibility of performing an integrity check of the factory parameters. If these are found to have been tampered with, Daikin is in no way liable for any resulting failure, damage or warranty obligation.

Alarm reset

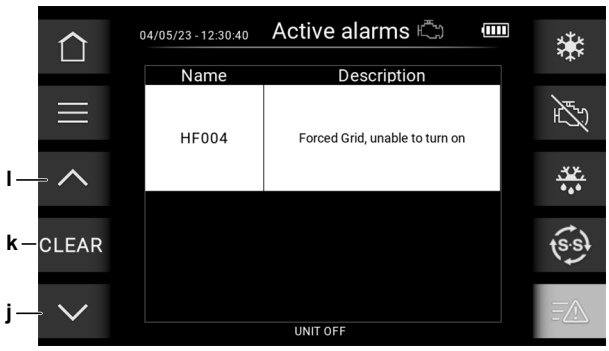
- AUTO: Some errors reset automatically once the error condition is solved.
- AUTO & MANUAL:
  - Alarm will AUTO reset for X times.
  - After X times a manual reset is required.
- MANUAL: Some errors need to be cleared manually. The root of the error needs to be solved or the error will reoccur.

To reset the alarm manually:

3 Go to the "Active alarms" menu.

4 Press the "up" (l) and "down" (j) arrows to navigate.

5 Press the enter/clear button (k) to reset the alarm.



INFORMATION

Pressing the CLEAR button (k) will only reset the yellow alarms. Orange and red alarms will remain listed.

Manually resetting orange and red errors is done by switching off and on the main switch, with the exception of maintenance errors that remain.

After checking all the items above, if it is impossible to fix the problem yourself, contact your installer and state the symptoms, the complete model name of the unit (with manufacturing number if possible) and the installation date.

9.1 Error codes: Overview

For your reference, a list with malfunction codes is provided. In case a malfunction code appears, contact your installer to inform him of the malfunction code and ask for advice.

Error codes

- D** errors: Dedicated errors for the battery charger
- F0** errors: Main Exigo error codes, related to any component and/or operation.
- FH** errors: Dedicated errors for maintenance purpose.
- HF*** errors: Dedicated errors for the HMI.
- K** errors: Dedicated errors for the engine control unit (ECU
- Z** errors: Dedicated errors for the V1R converter for the fans 55Vdc.

Display code	Color	Description
D01	Yellow	Battery high voltage
D02	Yellow	Battery low voltage
D03	Yellow	Charge timeout
D04	Yellow	Battery amp hour limit exceeded
D05	Yellow	Battery temperature out of range
D06	Yellow	Reverse polarity
D07	Yellow	Battery does not take current
D08	Yellow	Number of cells invalid
D09	Yellow	End of charge voltage not in algo
D10	Yellow	Upgrade failed
D11	Yellow	USB error
D12	Yellow	Storage error
D13	Yellow	Incompatible software
D14	Yellow	Active algo not set
D15	Yellow	High AC voltage
D16	Yellow	Charger failed to initialize
D17	Yellow	Low AC voltage oscillation
D18	Yellow	USB Script Error
D19	Yellow	USB Overcurrent
D20	Yellow	Incompatible algorithm
D21	Yellow	Communication CANbus error

Display code	Color	Description
D22	Yellow	Communication battery module error
D23	Yellow	Reference out of range
D24	Yellow	Communication heartbeat lost
D25	Yellow	Target voltage configuration too high
D26	Yellow	Battery capacity configuration not set
D27	Yellow	Target voltage configuration too low
D28	Yellow	Battery temperature sensor not installed
D29	Yellow	CAN Download Failed
D30	Yellow	Fan error
D31	Yellow	Button stuck down
D32	Yellow	Fan Supply Voltage Low
D33	Yellow	Software Internal Error
D34	Yellow	CAN Configuration Error
D35	Yellow	Battery Disconnected Alarm
D36	Yellow	Platform over voltage
D37	Yellow	Parallel charge multiple master
D38	Yellow	Parallel charge out of resource such as ID pool
D39	Yellow	A parallel charging disabled unit has received parallel charging specific CAN messages
D40	Yellow	A parallel charging enabled slave unit has not detected a master device on the CAN bus
D41	Yellow	A parallel charging enabled master has not detected any slaves on the CAN bus
D42	Yellow	A parallel charging slave has stopped communicating with the master
D43	Yellow	A parallel charging master has been disconnected from the load_The slaves are still connected
D44	Yellow	A parallel charging slave has been disconnected from the load_The master is still connected
D45	Yellow	A parallel charging slave has unexpectedly stopped charging
D46	Yellow	BMS status error
D47	Yellow	BMS master slave not established
D48	Yellow	BMS pre-charge timeout
D49	Yellow	Output stage fault
D50	Yellow	Input stage fault (excessive leakage)
D51	Yellow	Input stage fault (boost failed)
D52	Yellow	Internal current calibration failure
D53	Yellow	Output relay fault
D54	Yellow	Output current fault
D55	Yellow	D55 - HW Fault
F001	Yellow	Tdis1 Anomaly: Sensor is Out of range/broken/disconnected
F002	Yellow	Tdis2 Anomaly: Sensor is Out of range/broken/disconnected
F003	Red	Tsuc Anomaly: Sensor is Out of range/broken/disconnected
F004	Yellow	Tcond_out Anomaly: Sensor is Out of range/broken/disconnected
F005	Yellow	Teco_out Anomaly: Sensor is Out of range/broken/disconnected
F006	Yellow	Tamb Anomaly: Sensor is Out of range/broken/disconnected
F007	Yellow	Te_A_in1 Anomaly: Sensor is Out of range/broken/disconnected
F008	Yellow	Te_A_in2 Anomaly: Sensor is Out of range/broken/disconnected
F009	Yellow	Te_A_out1 Anomaly: Sensor is Out of range/broken/disconnected
F010	Yellow	Te_A_out2 Anomaly: Sensor is Out of range/broken/disconnected
F011	Yellow	Tdts Anomaly: Sensor is Out of range/broken/disconnected
F012	Red	Psuc Anomaly: Sensor is Out of range/broken/disconnected
F013	Yellow	Pdis Anomaly: Sensor is Out of range/broken/disconnected
F014	Red	HPS anomaly: Sensor is Out of range/broken/disconnected
F015	Yellow	DPS Anomaly: Broken/disconnected
F016	Yellow	Teng: Broken/disconnected
F017	Yellow	Tgen: Broken/disconnected
F018	Red	Tdis1 & Tdis2 Anomaly: Sensor is Out of range/broken/disconnected
F019	Red	Tamb & Teng Anomaly: Sensor is Out of range/broken/disconnected
F020	Red	Te_A_in1 & Te_A_in2 Anomaly: Sensor is Out of range/broken/disconnected
F021	Yellow	Te_A_out1 & Te_A_out2 Anomaly: Sensor is Out of range/broken/disconnected
F022	Red	Pdis & Tcond_out Anomaly: Sensor is Out of range/broken/disconnected
F023	Red	Cond Fan1 Modbus Anomaly: No communication
F024	Red	Evap Fan1 Modbus Anomaly: No communication
F025	Red	Inverter Modbus Anomaly: No communication
F026	Red	HMI Modbus Anomaly: No communication with HMI
F027	Red	Defrost end timer anomaly: Defrost exceed max time
FO29	Yellow	High pressure alarm
F030	Yellow	High temperature alarm 1
F031	Red	High Pdis alarm
F032	Red	High temperature alarm stop
F033	Yellow	Low pressure Alarm
F034	Red	Low pressure Alarm stop
F035	Red	Evap Fan2 Modbus Anomaly: No communication
F036	Red	Cond Fan2 Modbus Anomaly: No communication
F037	Red	Condenser Fan 1 Under Voltage Alarm
F038	Red	Condenser Fan 2 Under Voltage Alarm
F039	Red	Condenser Fan 1 Over Voltage Alarm
F040	Red	Condenser Fan 2 Over Voltage Alarm
F041	Red	Condenser Fan 1 Over Temperature Alarm
F042	Red	Condenser Fan 2 Over Temperature Alarm
F043	Red	Condenser Fan 1 Overcurrent Alarm
F044	Red	Condenser Fan 2 Overcurrent Alarm
F045	Red	Evaporator Fan 1 Under Voltage Alarm
F046	Red	Evaporator Fan 2 Under Voltage Alarm
F047	Red	Evaporator Fan 1 Over Voltage Alarm
F048	Red	Evaporator Fan 2 Over Voltage Alarm

Display code	Color	Description
F049	Red	Evaporator Fan 1 Over Temperature Alarm
F050	Red	Evaporator Fan 2 Over Temperature Alarm
F051	Red	Evaporator Fan 1 Overcurrent Alarm
F052	Red	Evaporator Fan 2 Overcurrent Alarm
F053	Red	Heatsink overheated (Hardware related)
F054	Red	Over current at acceleration state (Hardware related)
F055	Red	Over current at deceleration state (Hardware related)
F056	Red	DC BUS under voltage
F057	Red	DC Bus over voltage
F058	Red	Overcurrent at acceleration state
F059	Red	Over current at steady state
F060	Red	Over current at deceleration state
F061	Red	Communication loss time out
F062	Red	Heatsink temperature sensor error
F063	Red	Discharge temperature sensor error
F064	Red	Discharge temperature overheated
F065	Red	Motor startup fail
F066	Red	Motor position loss
F067	Red	Emergency stop
F068	Red	Heatsink overheated (Software related)
F069	Red	Discharge temperature overheated (Software related)
F070	Red	Overcurrent at steady state (Hardware related)
F071	Red	Compression ratio alarm
F072	Red	Heaters alarm
F073	Red	HPS activation
F074	Red	High Power consumption
F076	Red	Electrical problems
F078	Red	Max machine restart from protection
F079	Red	Abnormal PCB reset
F081	Red	High generator temperature
F082	Red	SH Anomaly
FH_service_A	Orange	MAINTENANCE A - see "8.5 Scheduled maintenance" [▶ 28] for details
FH_service_B	Orange	MAINTENANCE B - see "8.5 Scheduled maintenance" [▶ 28] for details
FH_service_C	Orange	MAINTENANCE C - see "8.5 Scheduled maintenance" [▶ 28] for details
HF003	Red	Mobus communication with PCB Loss
HF004	Yellow	Forced Grid unable to turn on
HF005	Red	Canbus communication loss with Converter V1R
HF006	Orange	Canbus communication to ECU Loss
HF007	Yellow	Canbus communication to Battery Charger Loss
HF008	Orange	Engine Starting Alarm
HF010	Yellow	Engine forced OFF
HF011	Red	Freeze State detected
HF012	Orange	Engine High Temperature Prevent
HF013	Orange	Insulation Loss
HF075	Orange	Problem with the engine and Impossible to run unit on engine mode
HF101	Yellow	Minor software update available, please switch off thermoregulation and launch the update
HF102	Orange	Major software update available, please switch off thermoregulation and launch the update
K01	Yellow	Oil pressure error
K02	Yellow	Engine overheat
K03	Yellow	Coolant temperature sensor HIGH
K04	Yellow	Coolant temperature sensor LOW
K05	Orange	Battery voltage HIGH
K06	Orange	Engine overrun
K07	Orange	Power supply voltage LOW
K08	Orange	Engine solenoid actuator is abnormal
K09	Yellow	CANBUS error
K10	Orange	Engine speed sensor abnormal
K11	Orange	Speed sensor pulse abnormal
Z01	Red	Logic failure 1
Z02	Red	Watchdog
Z03	Red	Mismatch volt
Z04	Yellow	Eeprom KO
Z05	Red	Logic failure 3
Z06	Red	Power failure 1
Z07	Red	Shorted output
Z08	Red	Can bus KO
Z09	Red	Overcurrent
Z10	Yellow	High temp
Z11	Yellow	Logic failure 2
Z12	Red	Wrong input volt
Z13	Red	Wrong marker EEP
Z14	Red	No mains
Z15	Red	Low temp
Z16	Red	Clk battery off
Z17	Red	Nodes mismatch
Z18	Red	Firmware mismatch
Z19	Red	BMS overvoltage
Z20	Red	Wrong protocol
Z21	Yellow	Address claim failed

9.2 Symptoms that are NOT system malfunctions

The following symptoms are NOT system malfunctions:

9.2.1 Symptom: The diesel engine does not start

Possible cause	Corrective action
The battery is dead or does not provide sufficient voltage.	Jump start the engine, see "8.4 To jump-start the unit" [▶ 28].
The fuel tank is empty	Fill the fuel tank with diesel.

10 Disposal

During normal operation of the unit, no substances arise that need to be disposed of in a special way.

The metal pallet on which the unit is fixed at delivery may be returned to sender or recycled, whichever is the most cost- and environment-friendly solution.

Wooden, plastic and polystyrene packing must be disposed of according to the regulations in force in the country where the unit is used.

NOTICE

Do NOT try to dismantle the system yourself: dismantling of the system, treatment of the refrigerant, oil and other parts MUST comply with applicable legislation.

Final disposal of the unit must be done by an authorised area technical assistance service, that has proper training, equipment and instructions for the dismantling. They are also responsible for reuse, recycling and recovery.

11 Glossary

Accessories
Labels, manuals, information sheets and equipment that are delivered with the product and that need to be installed according to the instructions in the accompanying documentation.

Applicable legislation
All international, European, national and local directives, laws, regulations and/or codes that are relevant and applicable for a certain product or domain.

Authorised installer
Technical skilled person who is qualified to install the product.

Bodybuilder
Technical skilled person who is qualified to install the product on a cold room trailer.

Dealer
Sales distributor for the product.

Field supply
Equipment NOT made by Daikin that can be combined with the product according to the instructions in the accompanying documentation.

HMI
Human Machine Interface. Screen that communicates information, data and metrics using graphics or visual representations.

Installation manual
Instruction manual specified for a certain product or application, explaining how to install, configure and maintain it.

Maintenance instructions
Instruction manual specified for a certain product or application, which explains (if relevant) how to install, configure, operate and/or maintain the product or application.

Operation manual
Instruction manual specified for a certain product or application, explaining how to operate it.

Optional equipment
Equipment made or approved by Daikin that can be combined with the product according to the instructions in the accompanying documentation.

PM generator
Permanent Magnet generator, engine driven.

Service company
Qualified company which can perform or coordinate the required service to the product.

User
Person who is owner of the product and/or operates the product.

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