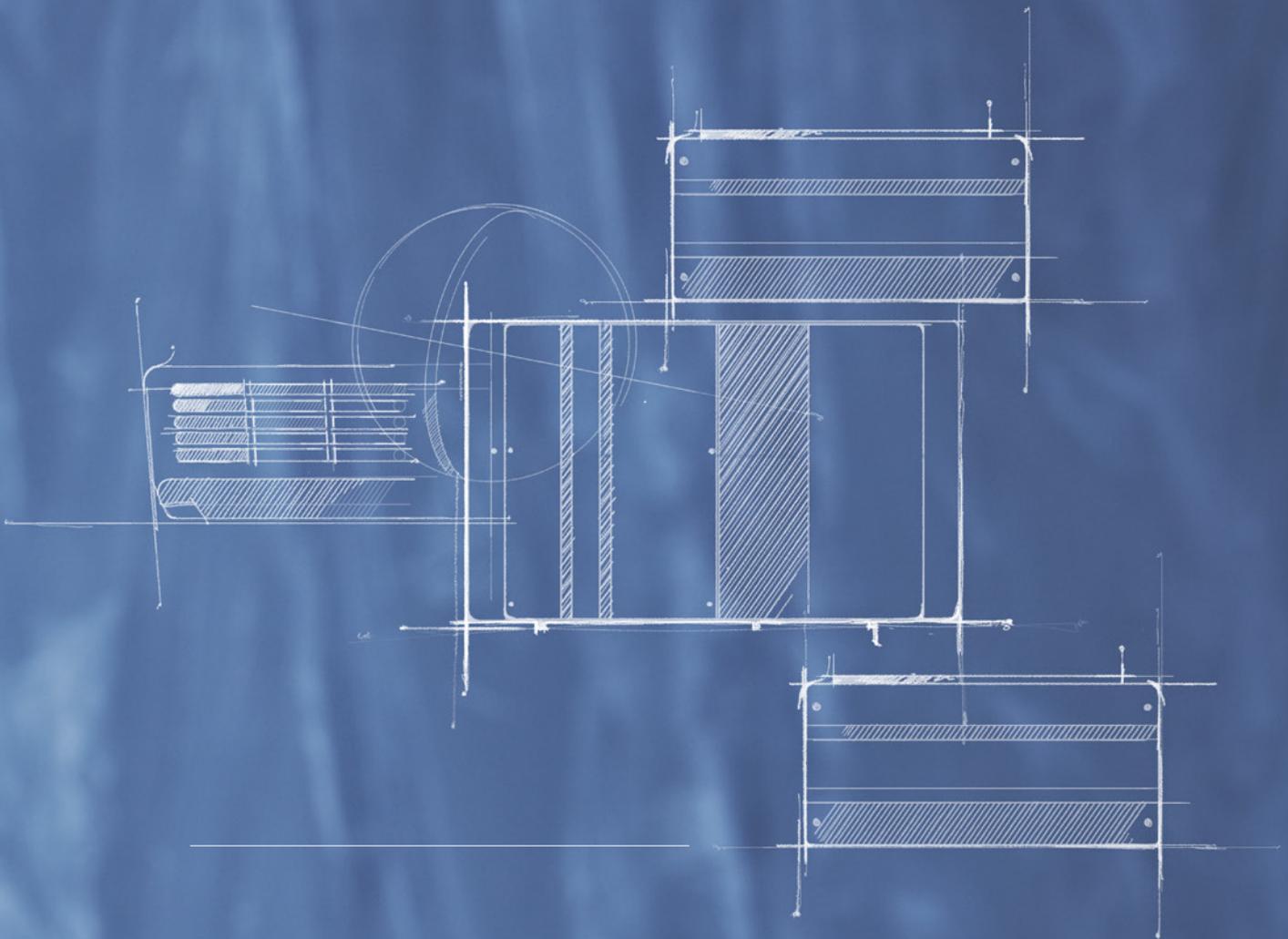


USER MANUAL

HULTSTEINS CONTROL PANEL ECOFRIDGE DISPLAY





HULTSTEINS DELIVERED the first refrigeration unit with hydraulic technology in 1962. Producing transport refrigeration with hydraulics was totally unique, and since then we have continued to drive the market forward with innovative solutions.

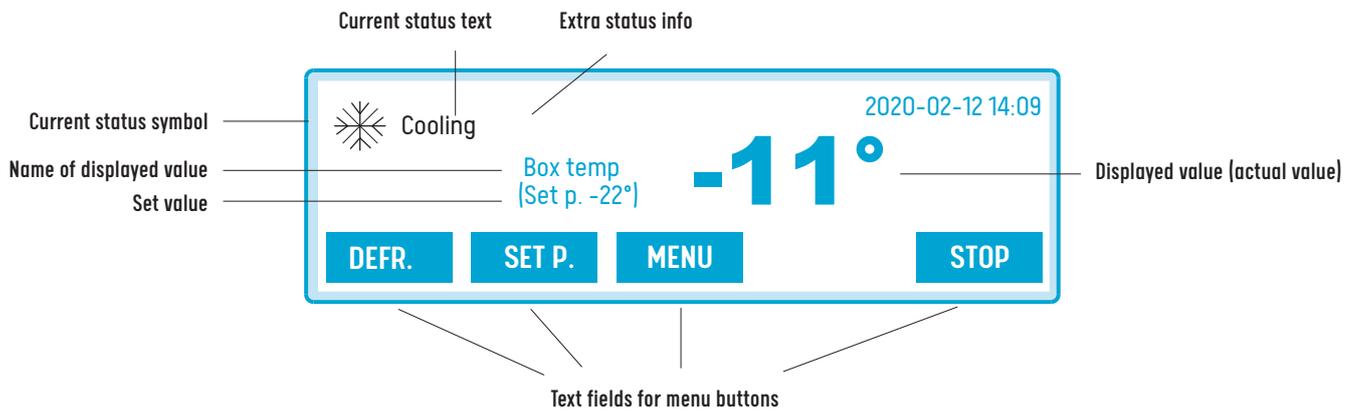
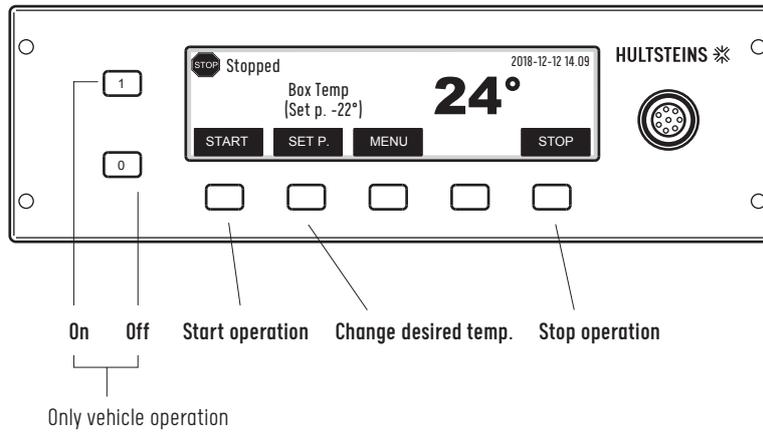
The result is reliable, fuel-efficient and environmentally-friendly refrigeration units which provide maximum customer benefit on the road.



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DISPLAY SYSTEM CONTROL PANEL



MENU SELECTION / CHANGE LANGUAGE

BUTTONS FOR MENU SELECTION

The five buttons under the display are used to control what is shown on the display and to adjust the various settings. The function of the buttons is displayed in the small text fields above the buttons. The button with the red border at the far right is always used to stop or cancel the current operation.

TO AND FROM BUTTONS

On the far left of the control panel are the **1** and **0** buttons used to turn on and turn off the system. These buttons are disabled when using the mains network.

HUR MAN BYTER SPRÅK / HOW TO CHANGE LANGUAGE

MENU

-Ner/Down

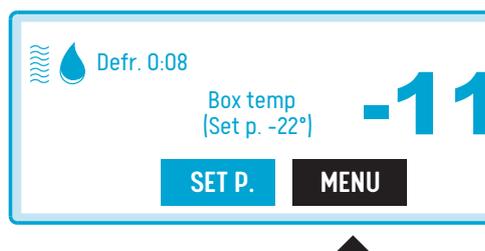
-Inställningar/Settings **-OK**

-Tillval/Optional **-OK**

- Ner/Down

-Välj språk/Select your language **-OK**

-Svenska/Swedish eller/ or Engelska/English **-OK**

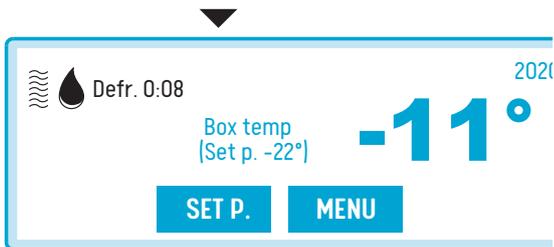


SERVICE CONTACT

Option to connect to a PC to perform software updates or read the log.

STATUS

Information about the current status is shown at the top left (also on the right for two zones). During normal operation, this a symbol and text showing the status. Sometimes there is additional information. The example below shows the defrosting time.



DATE AND TIME

The date and time is used for the internal logging function. It is therefore important that the clock is set correctly.



ACTUAL VALUE AND SET VALUE

The actual value, usually the temperature in the load compartment, is displayed in large digits. The name of the sensor is displayed to the left of the actual value. The text and numeric values vary depending on what is being controlled. In the example below, this is "Box" and the set value, in other words the set value you wish to achieve.



TEXT FIELDS FOR MENU BUTTONS

The button used to enter the menu and some shortcuts is displayed during normal operation.



NORMAL OPERATION

START-UP IMAGE

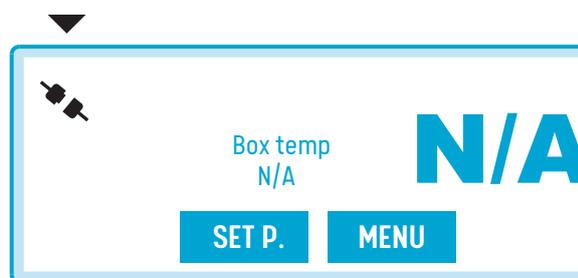
When switching on the system, it will take a few seconds before anything appears on the display. As soon as the panel is running, a start-up image is displayed, see below. The control panel is then in contact with the control unit. It may take a few seconds before contact is made with the control card.



NO CONTACT



During start-up, before the control panel makes contact with the control unit, the following image is displayed.



If the image is displayed longer than normal or if it appears during operation, this means that the control panel and control unit have lost contact with each other. **Contact Service.**



Stopped

TEMPERATURE CONTROL

The main function of the system is to control the temperature in the load compartment. Depending on the type of installation, this can be performed in a number of ways. This means using one or more zones (chamber 1/chamber 2). **Press the START button to start temperature control.**



Cooling

COOLING

When this symbol is displayed, the unit switches to cooling mode. **The symbol will illuminate while cooling is in progress.**



Heating

HEATING

When this symbol is displayed, the unit switches to heating mode. **The symbol will illuminate while heating is in progress.**



Defrosting 0.08

DEFROSTING

When this symbol is displayed, the unit switches to defrosting mode. **The symbol will illuminate when the defrosting is in progress.**

Defrosting is started automatically by a timer. The system can also calculate that the cooling element is iced up and so will start defrosting.

Defrosting can be requested manually by pressing the **DEFR** button when it is visible on the display. However, one condition must be met - the element must be +10° or colder.

Defrosting can be cancelled manually by pressing the **STOP** button. Defrosting is normally terminated by a timer, or depending on the measured values, in other words, the system calculates that the ice has melted.



Resting

REST

When the **REST** symbol is displayed, the unit is disabled, but electronic monitoring continues to work as normal, and the unit will start automatically when required.

ERRORS AND WARNINGS

THE SYSTEM HAS CONTROL FUNCTIONS that detect pre-programmed types of errors or warnings. Any errors that are found are displayed in text. Information displays the type of error and the menu system will display any recommended actions which may be required.

Some of these can be confirmed by pressing the **OK** or **CONF** buttons. The **ERROR** button may also be displayed.

If the machine is operating again and you followed the recommended actions, you can continue. But if the warning is repeated, contact service.

If you receive a warning or error notification, follow the information on the screen or highlight **WARNINGS AND ERROR**, then select either warning or error and press **OK**. The display then shows what has happened and suggests recommended actions. Follow the instructions on the screen.



Warning

WARNING

When a warning is given, a warning triangle flashes where the status indicator is normally displayed, alternating with the normal function symbol.

Some errors detected by the system do not force operation to be stopped. This could be due to the fact that it is a temporary error or a error which does not affect the current process. The user does not need to take any action immediately, but a warning is displayed.

If you receive a warning or error notification, follow the information on the screen or highlight **WARNINGS AND ERROR**, then select either warning or error and press **OK**. The display then shows what has happened and suggests recommended actions. Follow the instructions on the screen.



Operating error

OPERATING ERROR

If the error is such that the entire system must be stopped or if it affects the current process, the operating error symbol will appear. The symbol is displayed permanently.

If you receive a warning or error notification, follow the information on the screen or highlight **WARNINGS AND ERRORS**, then select either warning or error and press **OK**. The display then shows what has happened and suggests recommended actions. Follow the instructions on the screen.

Contact Service as soon as possible.

ERRORS AND WARNINGS

EXAMPLES

PRESSURE ERROR

An example of an operating error is the pressure sensor on the high pressure side measuring an unauthorised high pressure. Stop the compressor immediately. A error message is displayed, indicating the type of error that occurred.



When a error message is displayed, press the **OK** button (the middle button) to confirm that you have seen the message.

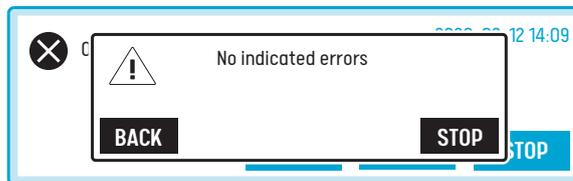
As long as the error remains, the shortcut key displays the text **error on the screen**. If the error message remains even if the pressure falls, you must enter the menu manually to close the error message. Do this by pressing the **ERROR** or **MENU** button.



The menu displays information about the error and how to rectify it. Read the text, follow the instructions and press the **CONF** button to show that the problem has been dealt with.



When the pressure error has disappeared and been acknowledged, the text **"No indicated errors"** is displayed.

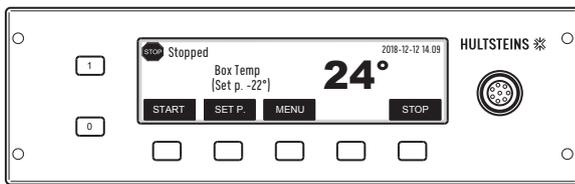


PANEL SETTINGS

PANEL SETTINGS (HUD)

All information and all settings have been collected together in a menu structure (found on the last page).

To make any changes, first enter the system and then return to the control panel to view the changes on the display. This normally means a small delay before the change are visible.



TWO-ZONE UNIT

For models with 2 zones, two temperatures and two symbols are displayed. These are called **Box 1** and **Box 2**. Box 1 is generally the master unit and Box 2 is the slave.

In the case of unit HS215, **Box 1** is always on the left side and **Box 2** on the right. This also means that you now have two units to control via the menus in future.



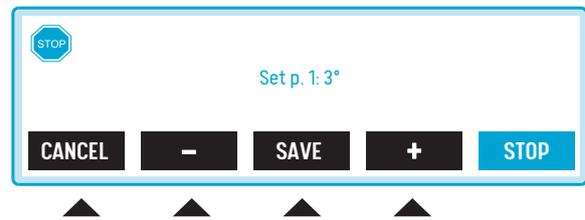
SETTING THE TEMPERATURE

SET. Press SET to access the temperature settings.

+ AND - The + and - buttons can be seen in the window. These are used to increase or decrease the set value.

SAVE. Press the SAVE button to send the new value to the system.

CANCEL The CANCEL button leaves the window without sending anything to the system. The old setting remains.



MENU SYSTEM

MENU SYSTEM

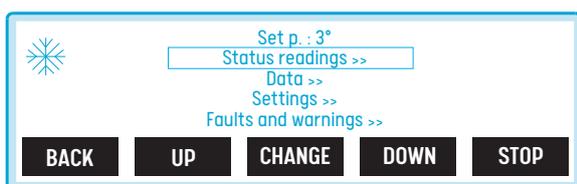
MENU. Press the MENU button to access the menu system's top level. In the example below, "Measured values" is highlighted.

UP/DOWN. Use the UP and DOWN buttons to scroll through the options.

CHANGE. Press CHANGE to select the highlighted option.

BACK Press BACK to scroll back through the menus.

STOP. The STOP button cancels the menu and returns directly to the normal display.



MAIN MENU

SET. Set value adjustment is found at the top of this menu.

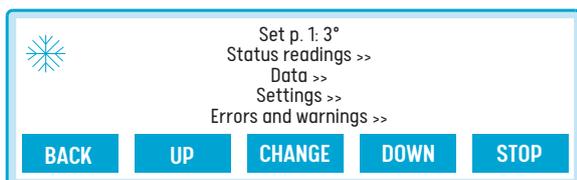
STATUS READINGS. Status readings are values that are variable and measured by the system.

DATA. The latest service unit data etc. is found here.

SETTINGS. Settings are values that can be changed by the user to modify the system's functions.

ERRORS AND WARNINGS. Errors and warnings contains a list of the various errors currently indicated, as well as information about how to rectify the error.

PRINT. Print reports.



STATUS READINGS

Examples of status readings are:

- the two pressures specified to one decimal place and in the unit Bar.
- the temperatures currently being measured on all connected sensors.
- the supply voltages.
- the operating time for day, night and total operation time.

The time of the most recent defrosting is displayed at the very top.

Latest defr. 1: 2020-02-24
 Set p. 1: 5,5°
 High pressure: 17,2 BAR
 Low pressure: 1,1 BAR
 Temperatures >>
 RPM: 0 Rpm
 Plus from AC: 0,1 V
 Battery voltage: 26,5 V
 Phase sequence guard: >>
 Running time daymotor: 123 Hrs
 Running time nightmotor: 35 Hrs
 Running time regulation: 523 Hrs

DATA

The latest service is displayed first, then the unit type, then the refrigerant used in the unit. Spare parts, customer details, version designations for system software and contact details for Hultsteins.

Latest service 2024-05-22
 Mashine >>
 Refrigerant >>
 Spare parts >>
 Customer >>
 HUS version >>
 Hultsteins contact >>

SETTINGS

There are different levels for different categories of settings. Those that are available for users are collected under the **OPTIONS** heading.

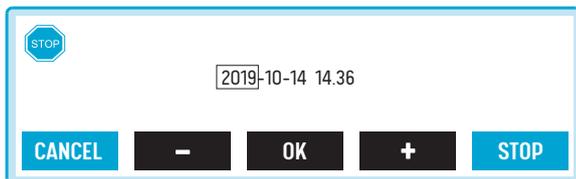
During operation, most options are blocked to prevent the machine from changing status while running. More advanced settings made by the workshop are password protected.

Options >>
 Display >>
 Password >>
 Workshop >>
 Hultsteins >>

OPTIONS



DATE AND TIME can be adjusted. This should be done at least in conjunction with the transitions between summer and winter time.



Press the **EDIT** button to access the editing window. Use **+ AND -** to increase or decrease one value at a time. Press **OK** after setting the minute figure to exit the window. The adjusted time will appear within one minute.

DEFROST AUTO can be turned off if desired. The values **OFF / ON** can be set via the **SWITCH** button.

FOR EACH DAY AND NIGHT OPERATION, the user can choose whether the process should start as soon as the power is switched on or if the **START** button needs to be pressed.

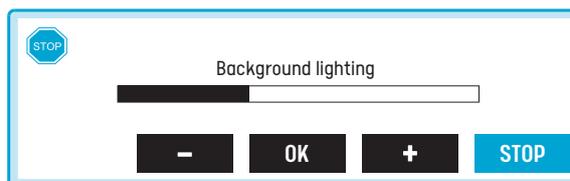
HEATING AT DEEP FREEZE TEMPERATURES is not normally used. Certain types of goods may require heating even in very cold temperatures.

HYSTERESIS is the permissible deviation from the set value. In other words, the temperature difference at which the refrigerating machine switches on or off. For example, the set point is set at 4° and the hysteresis at 2°. The unit stops at 2° and starts at 6° in cooling mode. A high value gives rougher control than a lower value. There will be a break of 30 minutes between cooling and heating. The block is removed for manual changes.

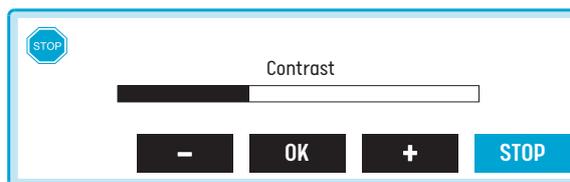
RESET SETTINGS sets all the values in this menu to the factory default values. Try a reset before you contact service for support. This can often help to rectify errors which are actually caused by one or more settings being set incorrectly in relation to the current operation.

DISPLAY

LIGHTING AND CONTRAST are set locally in the display module. They have an immediate effect. You can manually set the brightness of the backlight display. The system can switch off the backlight automatically to save power.



You can also adjust the contrast. Note that the panel location will affect the contrast that is needed. Try to find the best setting in view of the location. When the system is switched on, the contrast is briefly in an end position.



PASSWORD

Enter the seed code. If necessary, this can be given by Hultsteins to the service technician over the phone. The user will then be given a time-limited password to enter here.

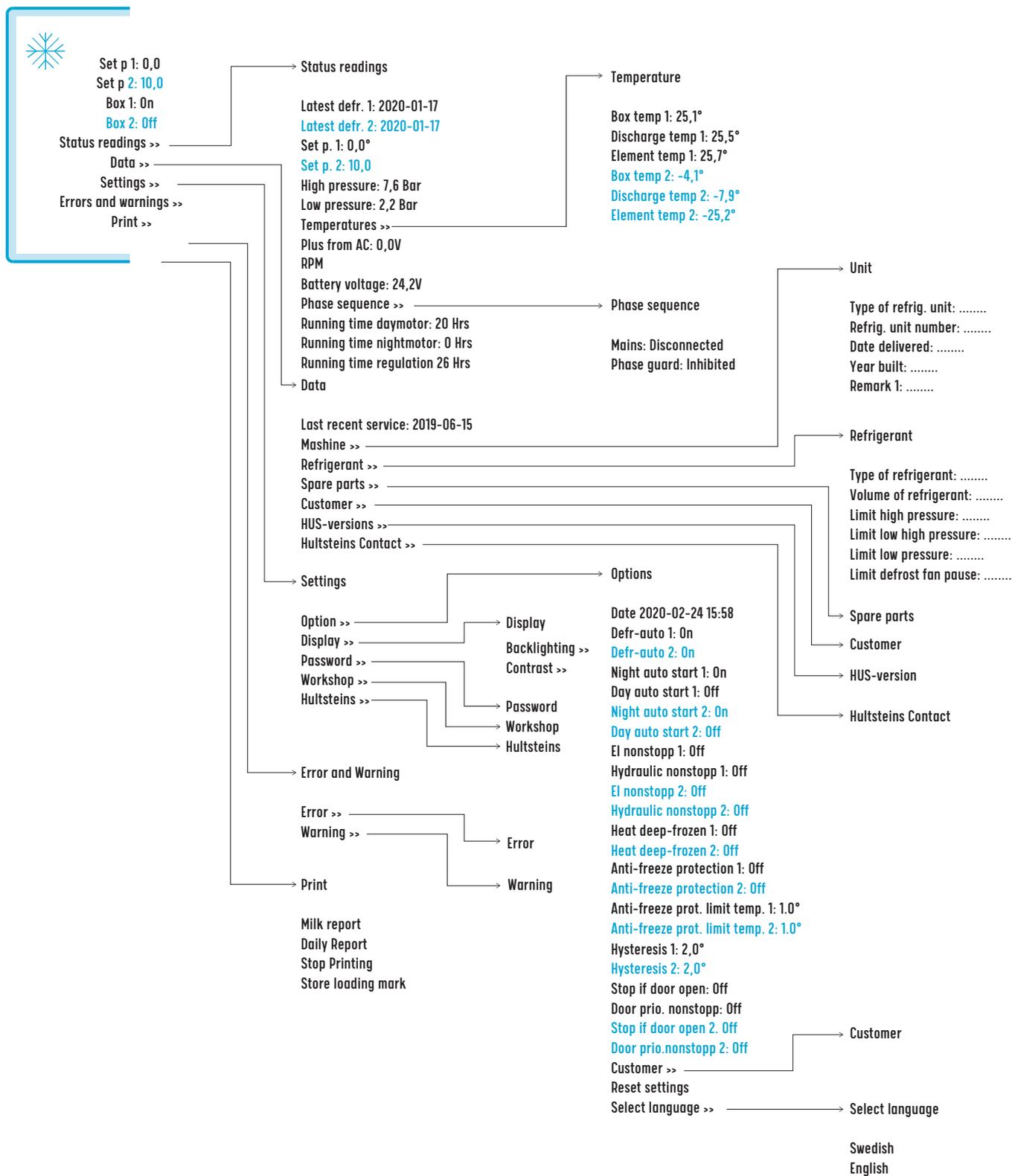
Scroll with the **<** and **>** buttons to the right number, letter or command and press **SELECT** to add the number to the password.

To delete an incorrect character, scroll to **DEL** and press **SELECT** to delete a character.

To finish, scroll to the word **SAVE** and press **SELECT**. The display then exits the menu. When you open it again, you will have to change your password. More options will now be available.



TWO-ZONE UNIT MENU





DIESEL FREE REFRIGERATION





COOLNESS ON THE MOVE

HULTSTEINS 

hultsteins.com