



W3000 TOUCH

USER MANUAL

C024456002-11-12-EN

For software versions IU04

Replaces C024456002-11-11-EN

EN

Contents

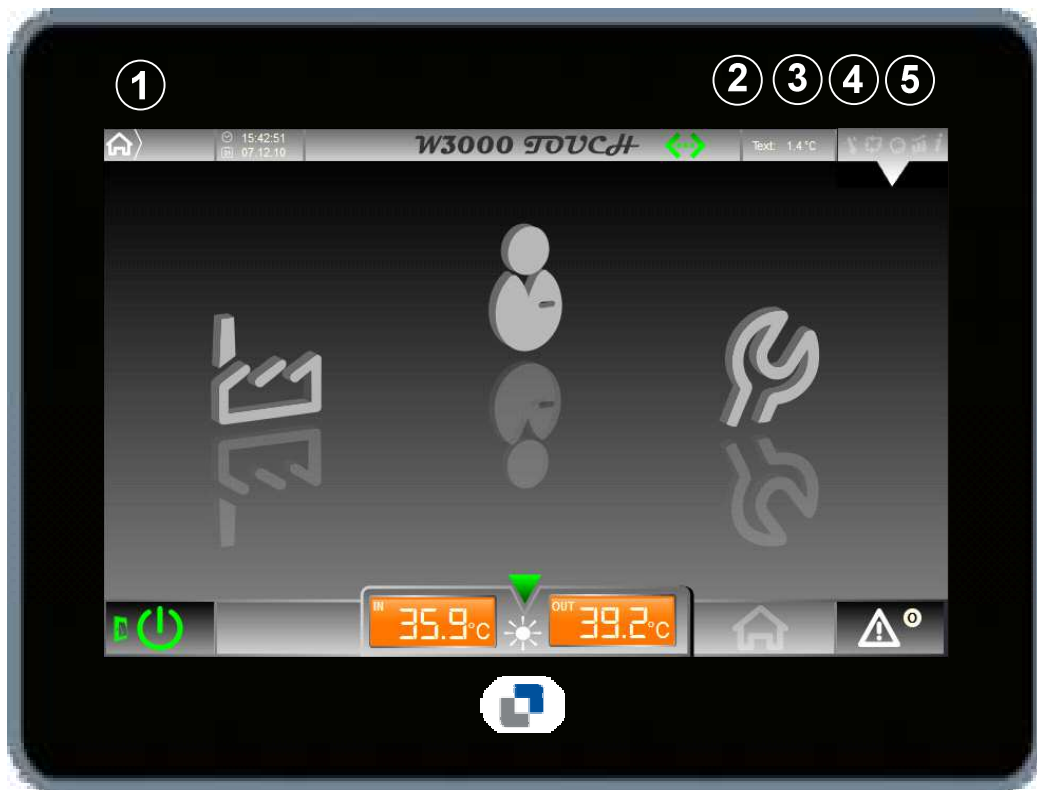
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Caution: *The Touch Screen interface software is protected by a digital signature. This means that it can only work on boards supplied by Climaveneta and not on boards purchased from other dealers.*

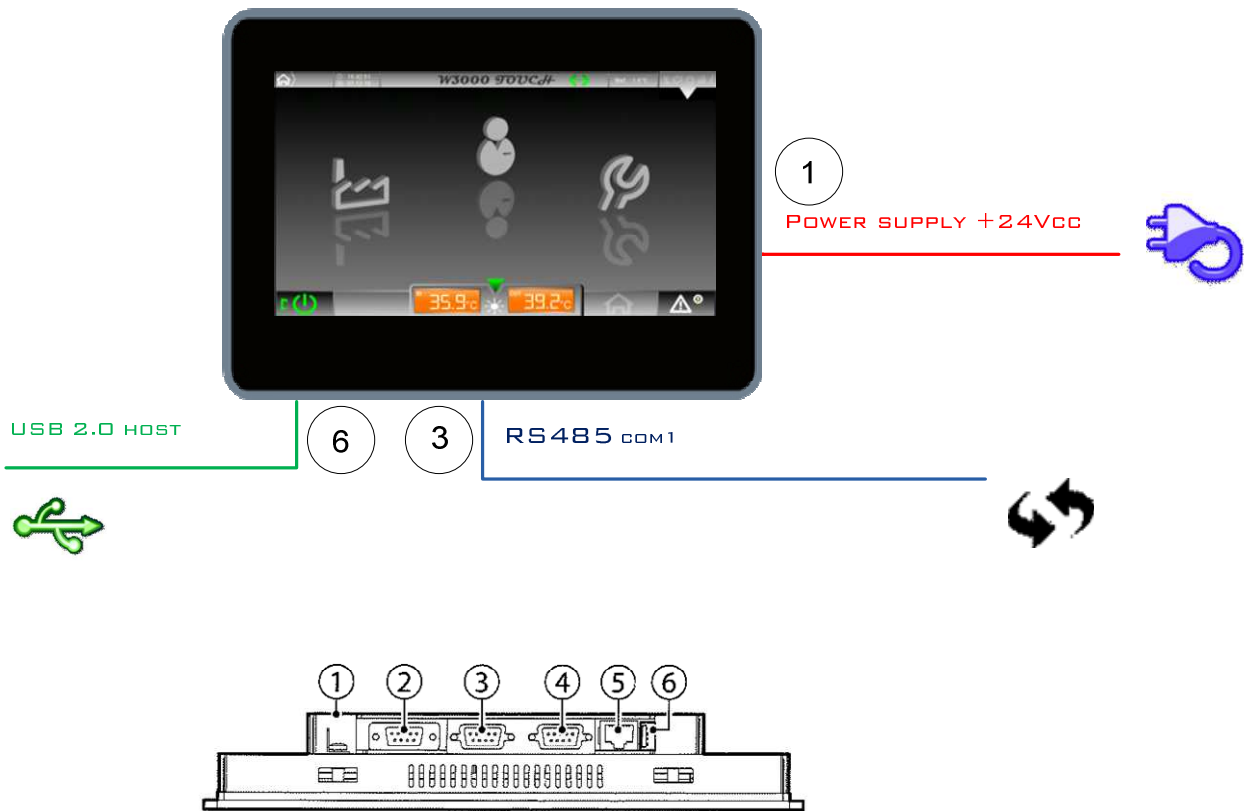
1 FRONT PANEL

The upper part of the front panel features 5 LED's.



LED n°	SYMBOL	DESCRIPTION
1		The red LED shines during device start-up (couple of seconds). The LED continues to shine in the event of hardware-related problems.
2		The red LED flashes if one or more alarms have tripped.
3		The green LED shines to indicate correct communication between touchscreen and PLC. The green LED flashes to indicate no communication between touchscreen and PLC.
4	/	Not used
5		The green LED shines when the panel is powered.

2 DESCRIPTION OF HARDWARE

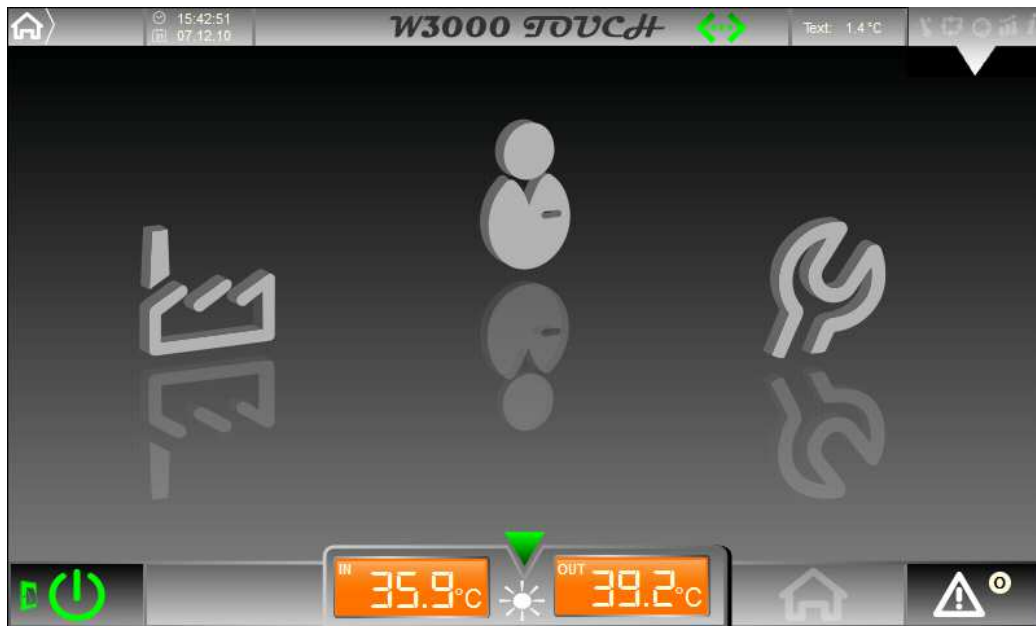



1. Power input: +24V dc
2. Aux Port: not active
3. PLC Port: RS485 Com1
4. PC/Printer: not active
5. Ethernet: service
6. USB Port: 2.0 Host

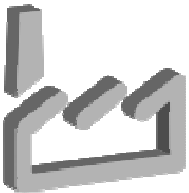
3 General precautions

1. The Touch Screen terminal can only be powered with **direct current 24V** (700 mA max. input).
2. Different input voltage and current values may destroy the device.
3. Use appropriate eye lugs for the relative terminals. Loosen each screw, insert the eye lugs and then tighten the screws. Afterwards, pull the cables slightly to check they are correctly tightened.
4. If used at particularly low temperatures, the response time of the display may increase noticeably. This is normal and does not indicate a malfunction.

4 HOMEPAGE



The Homepage  contains icons/buttons providing access to the manufacturer (left), user (centre) and service (right) menus.



Manufacturer Menu (colour with button pressed: orange)



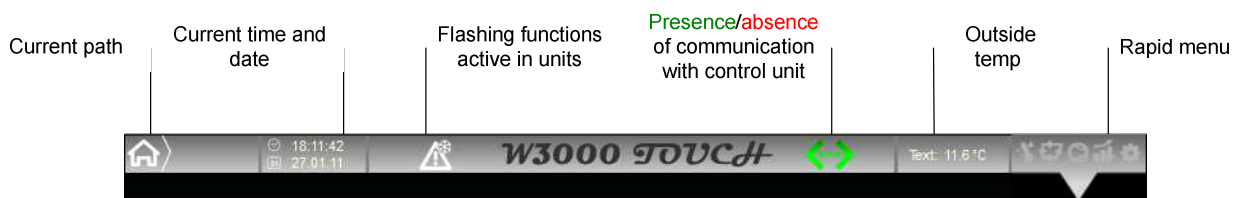
User Menu (colour with button pressed: green)



Service Menu (colour with button pressed: yellow)

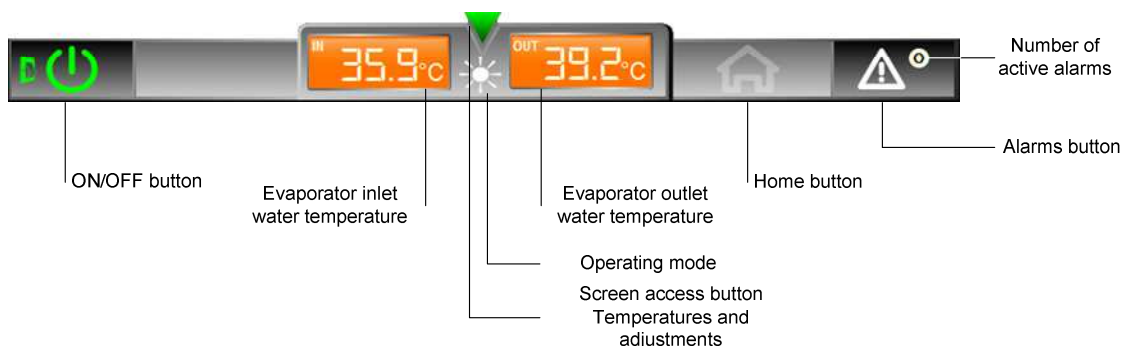
5 NAVIGATION

All the interface screens feature an upper and a lower bar:



The upper bar comprises, starting from the left:

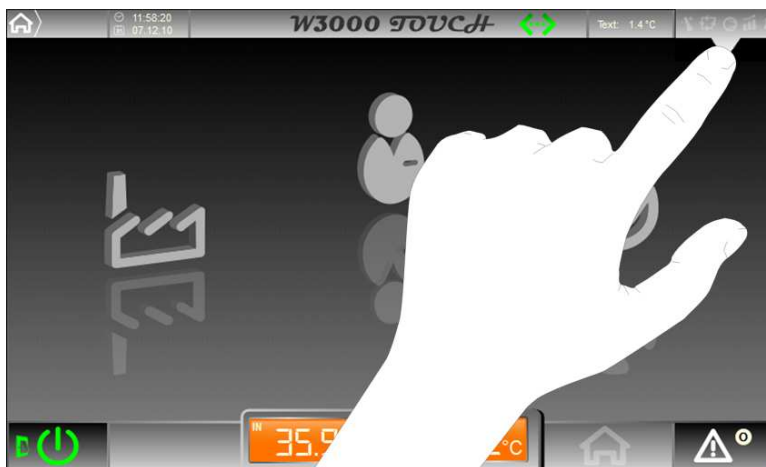
- Current path: Diagram of the path taken to reach the current screen (the example shows the Homepage)
- Current time and date
- Flashing icons representing the active functions in the unit
- Presence/absence of communication with the PLC
- External air temperature
- “Rapid menu” access button



The lower bar comprises, starting from the left:

- ON/OFF button for switching the unit on and off
- Temperature of the evaporator inlet water
- Access button for Temperature and adjustment screens
- Indication of the unit operating mode
- Temperature of the evaporator outlet water
- Home button for returning to the Homepage
- Alarms button for accessing the relative alarms management screen
- Indication of the number of alarms currently active

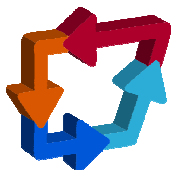
6 SLIDE-IN RAPID MENU



The drop-down “rapid menu” is used to access the following submenus:



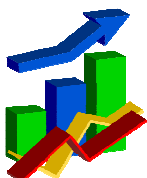
Setpoint submenu & Operating Mode



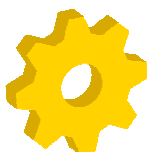
Circuits submenus



Compressors submenu



Charts submenu

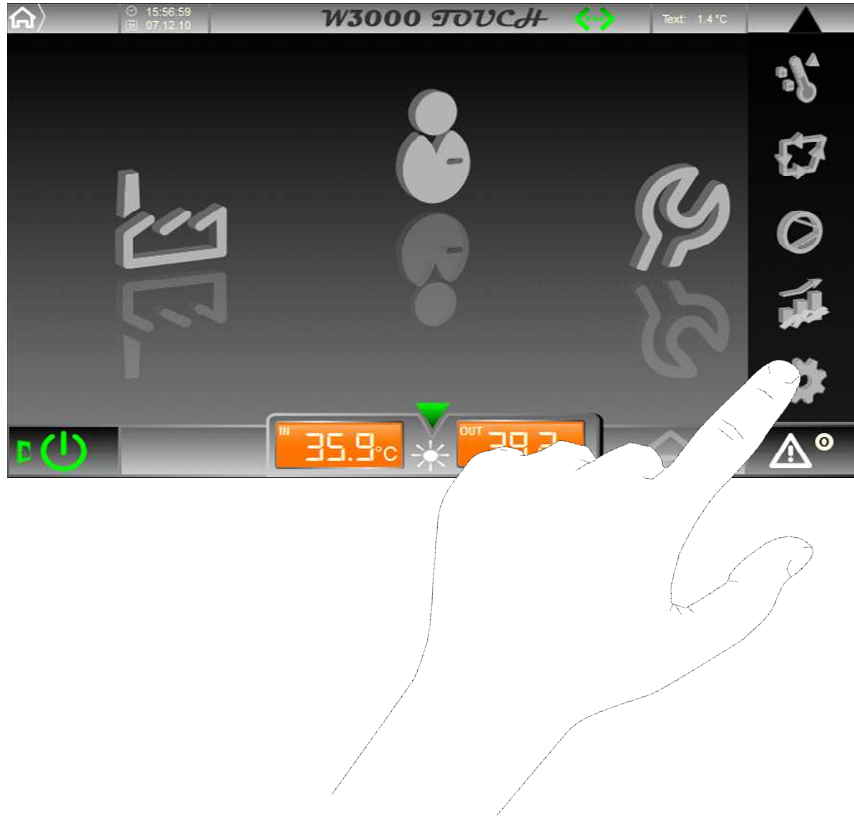


Setup submenu

7 SETTING THE LANGUAGE

To change the language of the user interface, proceed as follows:

- Select the Setup submenu from the “Rapid menu”



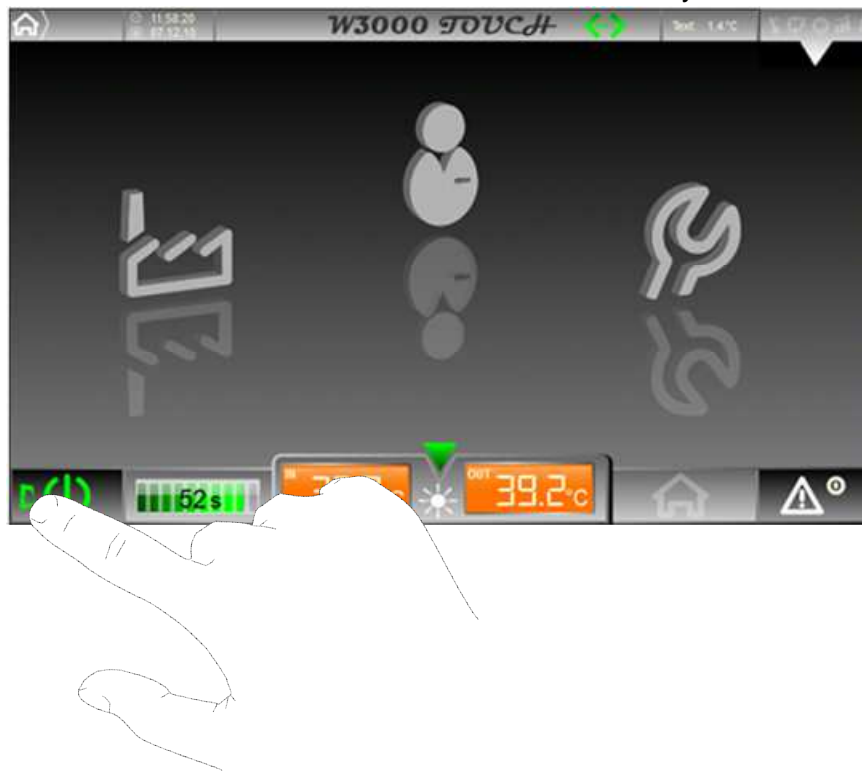
- Set the required language in the “Languages” page



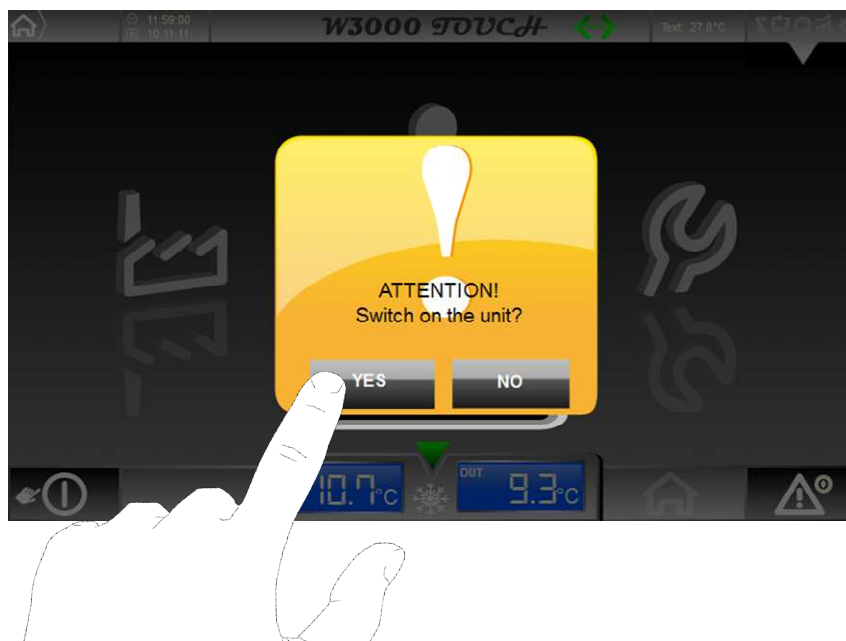
8 SWITCHING THE UNIT ON AND OFF

To switch the unit on or off

- Press the ON/OFF button on the far left of the lower bar on any screen



If the button is pressed from the home page a screen will appear where you can confirm that you want to switch on the unit by pressing “yes”, or cancel by pressing “no”. The same procedure is required for switching off.



When starting the unit, pump time bar is displayed (if the pump is enabled).

When switching off, it establishes the delay between switching off the pump (if enabled) after the compressors are switched off.

















As well as switching the unit on and off, the ON/OFF button indicates the state of the machine according to the following icons:

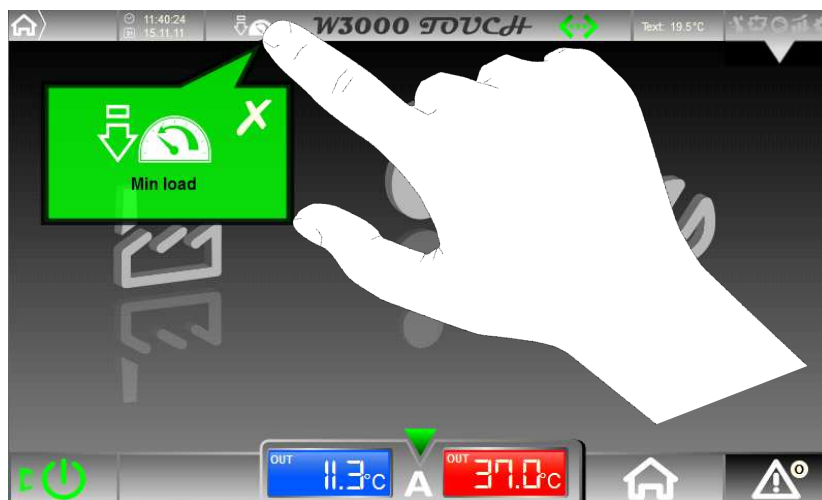
	The entire unit is (OFF) following alarms.
	The unit is on (ON) from the Touch Screen.
	The unit is off (OFF) from the Touch Screen.
	The unit is on (ON) following time band programming.
	The unit is off (OFF) following time band programming.
	The unit is on (ON) from the digital input.
	The unit is off (OFF) from the digital input.
	The unit is on (ON) from supervision.
	The unit is off (OFF) from supervision.


9 FLASHING

Flashing icons will appear on the bar at the top of the screen when one or more functions are active on the control. They may be the ones indicated in the table below.

Icon	Function	Description
	Time bands active	Time bands active
	Free cooling active	Unit in free-cooling mode
	Demand limit active	Power limit active (demand limit)
	Antifreeze limit active	Outlet temperature approaching anti-freeze setpoint
	Full load	Maximum override of at least one circuit is active
	Unit alone	The unit works independently after disconnecting the Manager3000 or Sequencer.
	HPTC active	Circuit limitation enabled due to elevated condensation pressures
	Defrost active	Defrosting is active on one or more circuits of the unit
	Drip active	Dripping is active on one or more circuits of the unit
	Energy storage active	The energy storage function is active
	Min Load	Minimum override of at least one circuit is active
	DHW active	The unit is producing domestic hot water (DHW)
	Antilegionella cycle active	The antilegionella function is active
	Sniffer OFF	Primary pump off, or recovery pump off for sniffer function enable

When the flashing icon is pressed a caption appears, explaining it. If several functions are active, the corresponding icons will flash alternately.

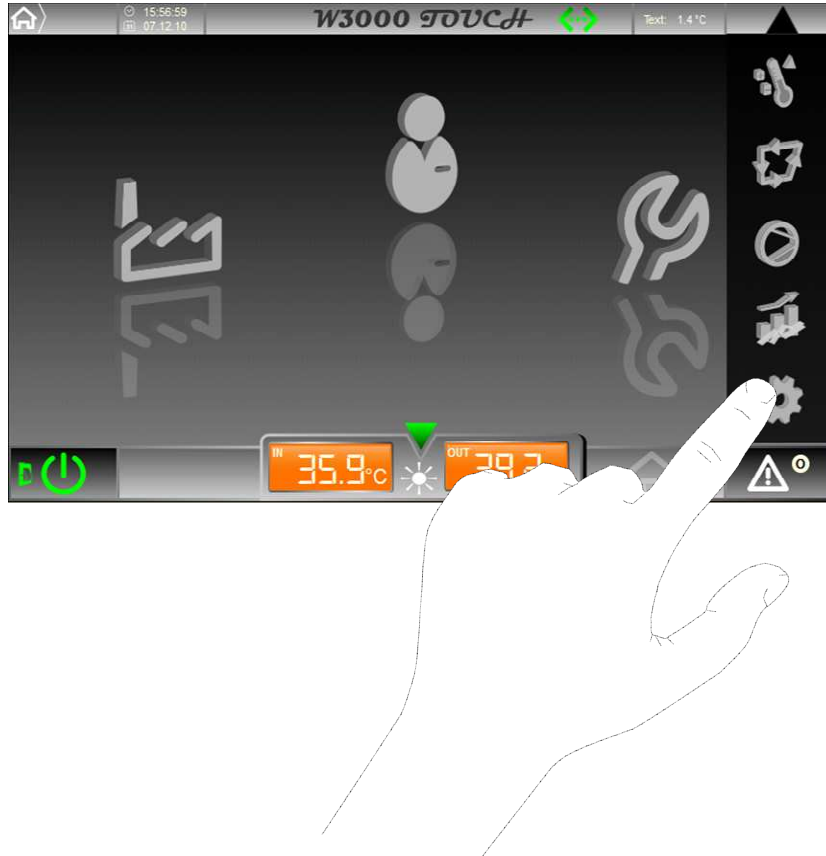



To quit the page press .

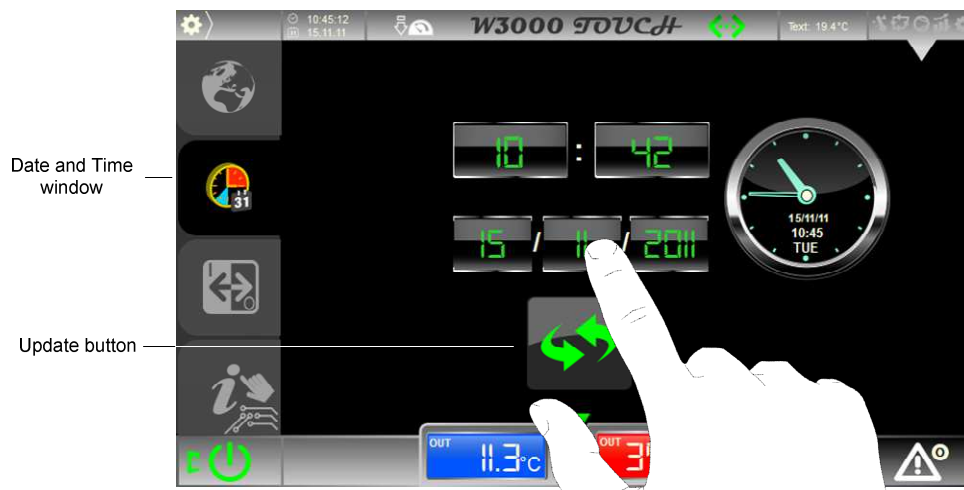
10 SETTING THE DATE AND TIME

To change the date and time, perform the following operations:

- Select the Setup submenu from the “Rapid menu”



- On the “Date and Time” window set the desired date and time. To implement the modifications, press the “update” button .



11 SOFTWARE INFORMATION AND PANEL SETUP

To view the information about the software, the network parameters, and other information concerning the panel setup, perform the following operations:

- Select the Setup submenu from the “Rapid menu”



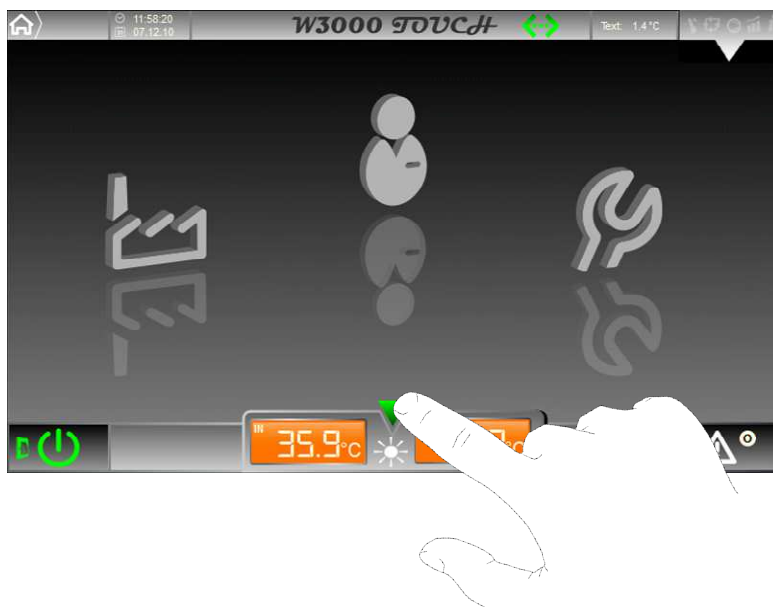
- Go to the “Info” window, from the panel on the left



12 DISPLAYING UNIT TEMPERATURES AND ADJUSTMENTS

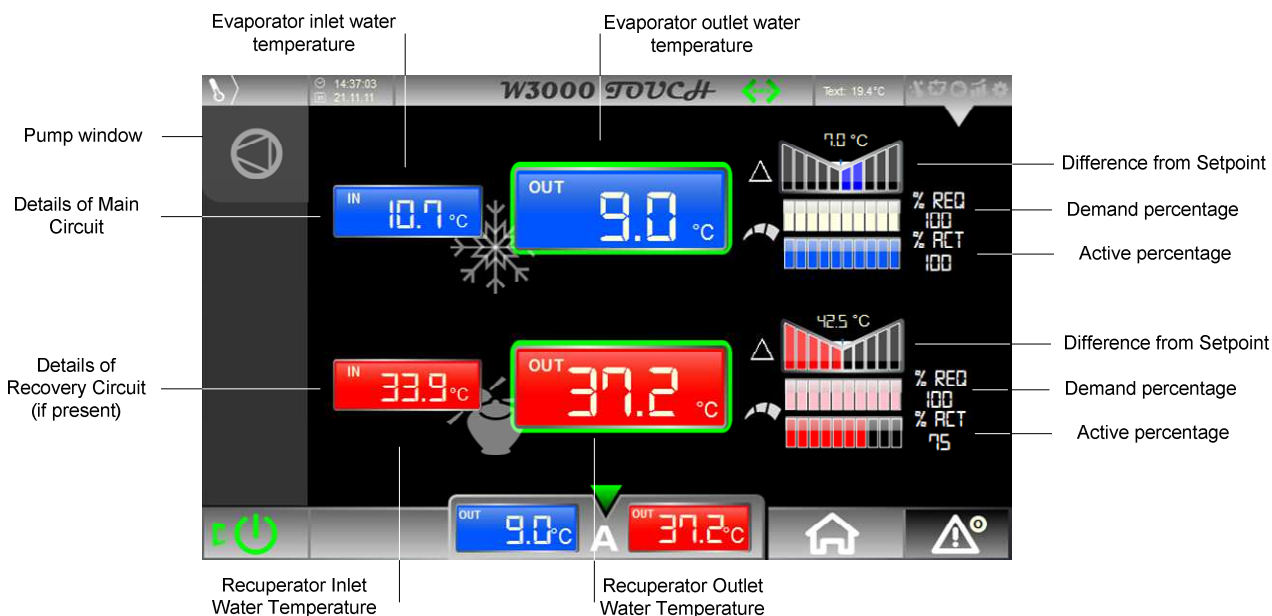
To view details of the operating temperature:

- From any screen, press the green triangular button in the lower bar



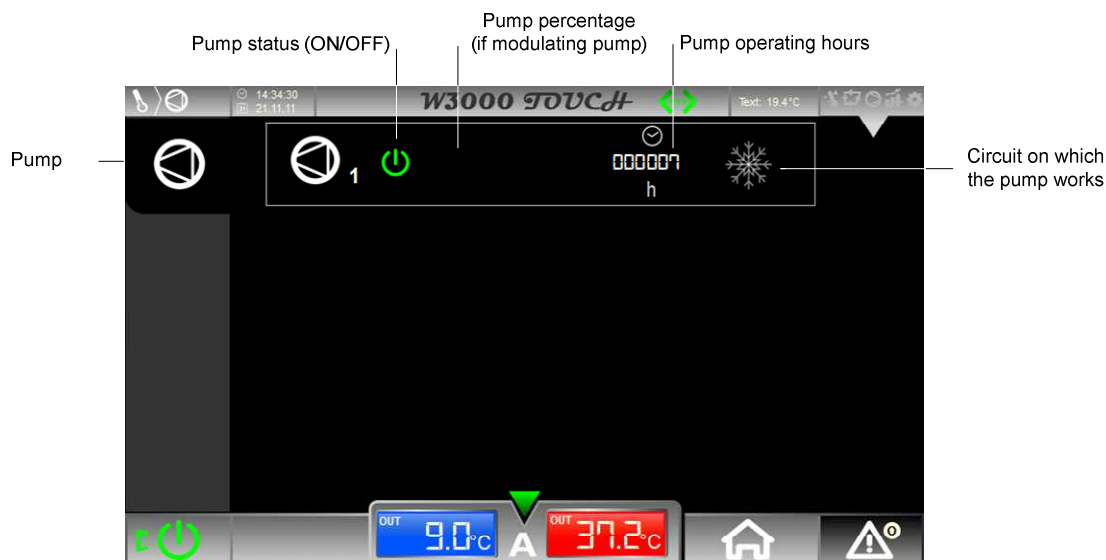
This opens a read-only screen showing details for every available operating mode. You can:

- View the temperature of the water entering the exchanger
- View the temperature of the water leaving the exchanger
- View the indication of the distance of the temperature leaving the exchanger from the active setpoint ($\Delta = T_{\text{out}} - T_{\text{Setpoint}}$).
Each coloured notch represents a difference of 1°C with respect to the adjustment setpoint. The difference is positive if there are one or more notches to the right of the setpoint, and negative if there are one or more notches to the left of the setpoint.
- View the indication of the required and active operating percentage
- Access detailed information about freecooling (if set) through the window on the left of the screen
- Access detailed information about the pump through the window on the left of the screen



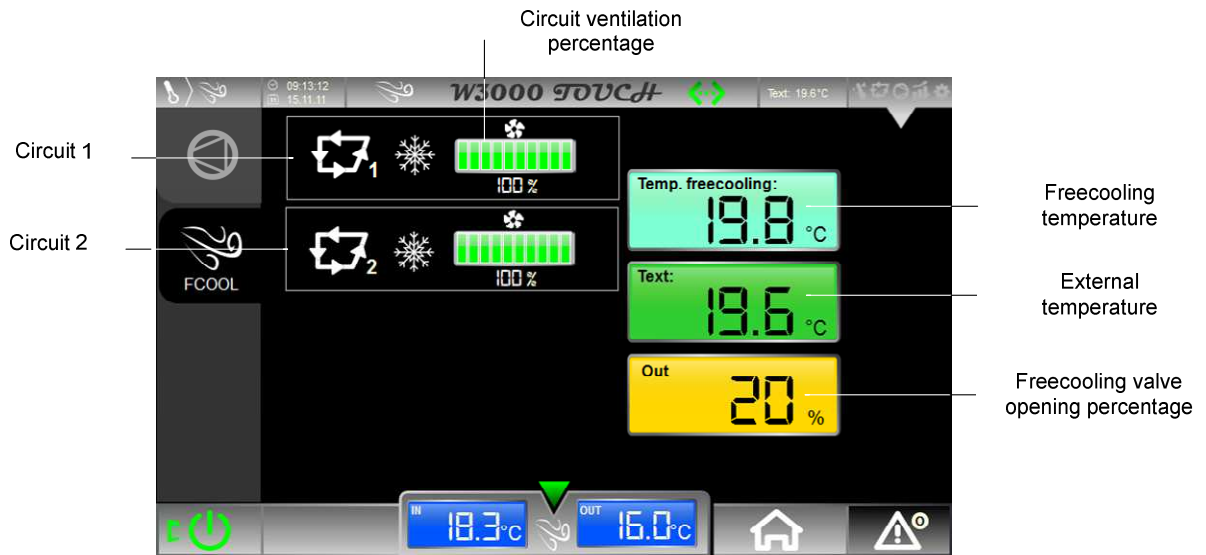
On the screen referring to the pump you can:

- View the pump status (OFF)
- View the active percentage by using a digital indicator (only for modulating pumps)
- View the total number of pump working hours
- View the circuit on which the pump works



On the screen referring to the Freecooling you can:

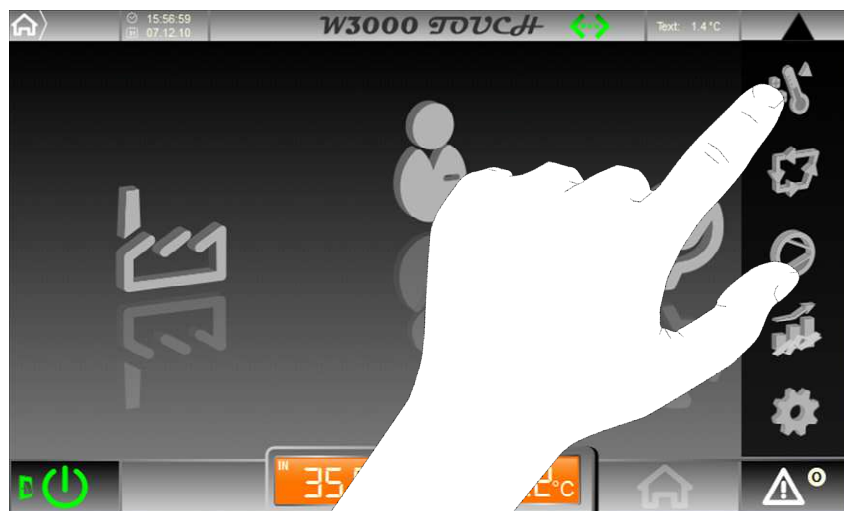
- View the state of the freecooling circuits
- View the active percentage using a digital indicator
- View the external and freecooling temperature
- View the opening percentage of the freecooling valve



13 SETTING THE UNIT OPERATING MODE

To set the unit operating mode perform the following operations:

- Select the Setpoint & Operating Mode submenu from the “Rapid menu”



- Set the required operating mode from among those available for the unit in use. The mode must be changed when the unit is switched off; if the unit is switched on, remember to switch it off first.

Operating mode page



The icons relative to the operating modes are listed below:



Chiller mode



Heat pump mode



Heat recovery mode



Chiller + Heat recovery mode



Automatic Mode



Freecooling mode

For heat pumps with total heat recovery, the operating modes are divided into winter and summer:



Summer mode



Winter mode

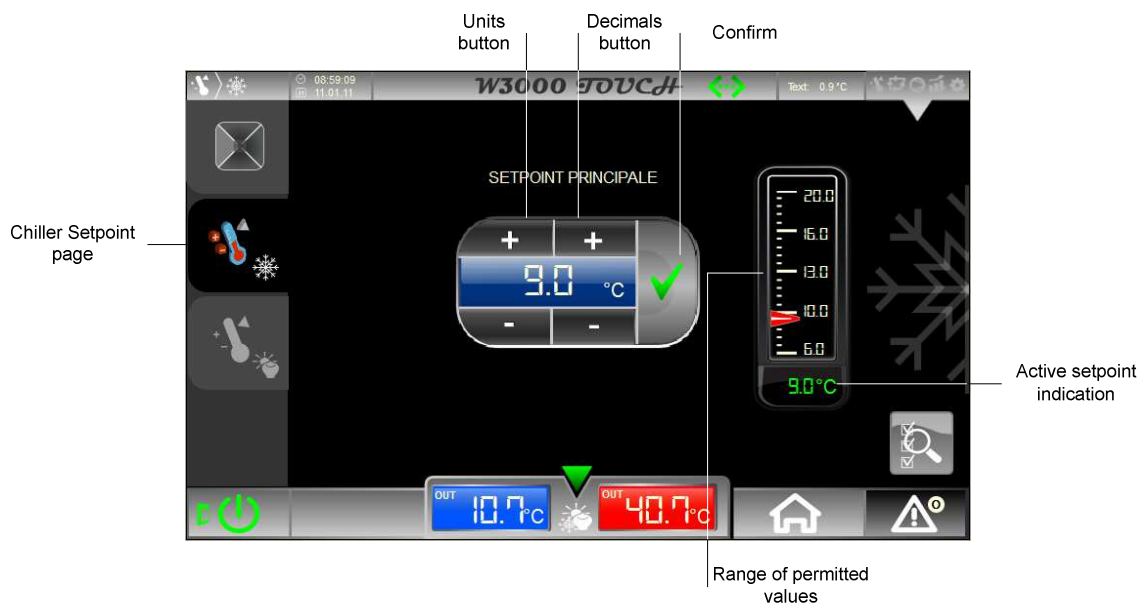
14 SETTING THE UNIT SETPOINTS

To set the unit operating mode perform the following operations:

- Select the Setpoint & Operating Mode submenu from the “Rapid menu”



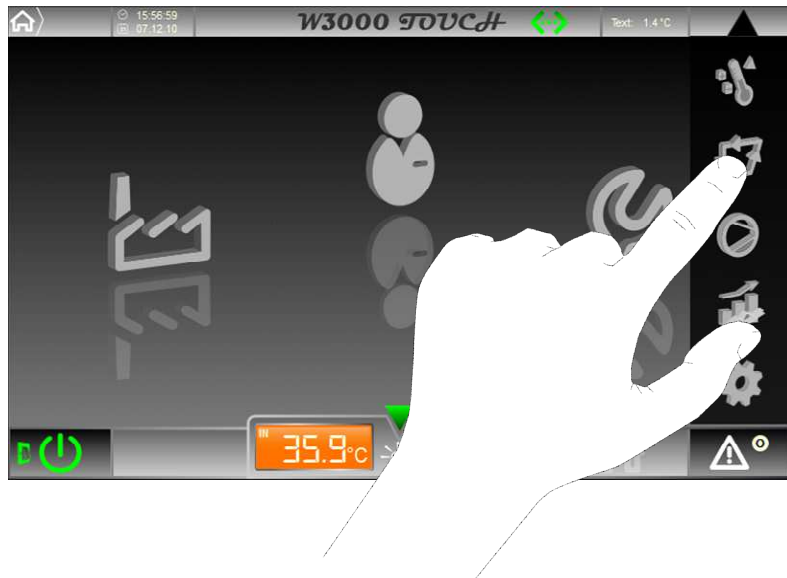
- Select the page on the left relative to the operating mode for which the setpoint must be set.
Press the units and decimals buttons to set the required value.
Then press the relative button to confirm.



15 VIEWING THE STATE OF THE COOLING CIRCUITS

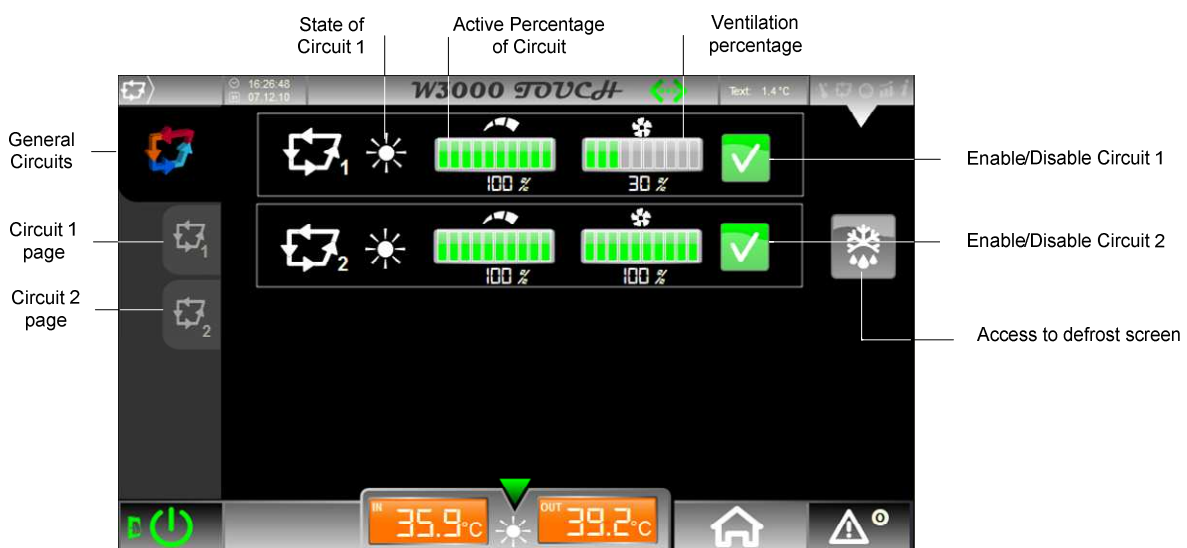
To view detailed information relative to the cooling circuits of the unit:

- Select the Circuits submenu from the “Rapid menu”



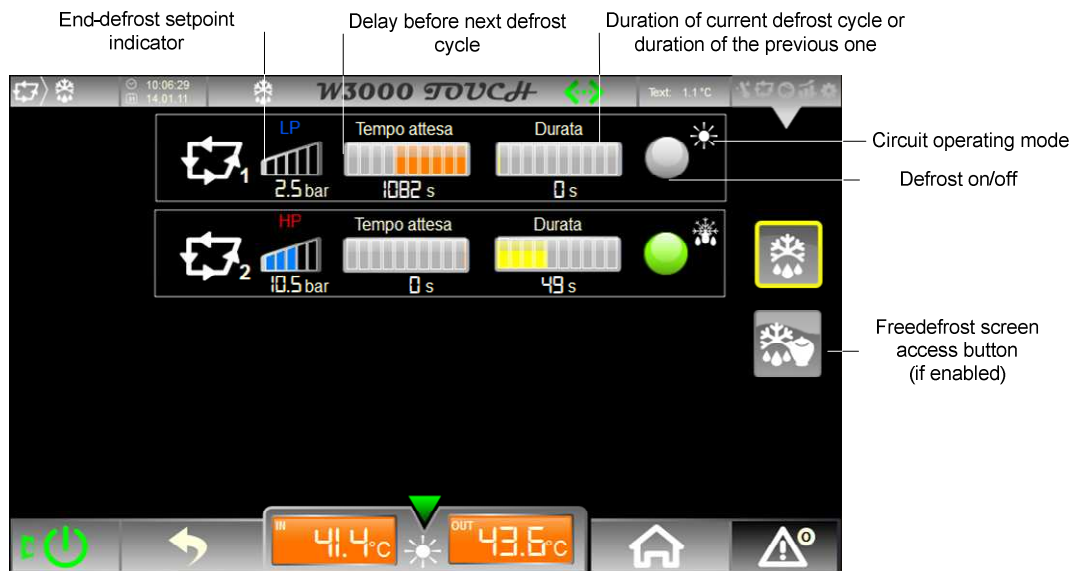
By default, this accesses the general cooling circuit visualisation page. Here, one can:

- Visualise the active percentage of the circuits and the ventilation percentage
- Press the Enable/Disable buttons to enable or disable the circuits
- Access detailed information on individual circuits using the relative pages to the left of the screen
- Access, if the unit so allows, the defrost screen



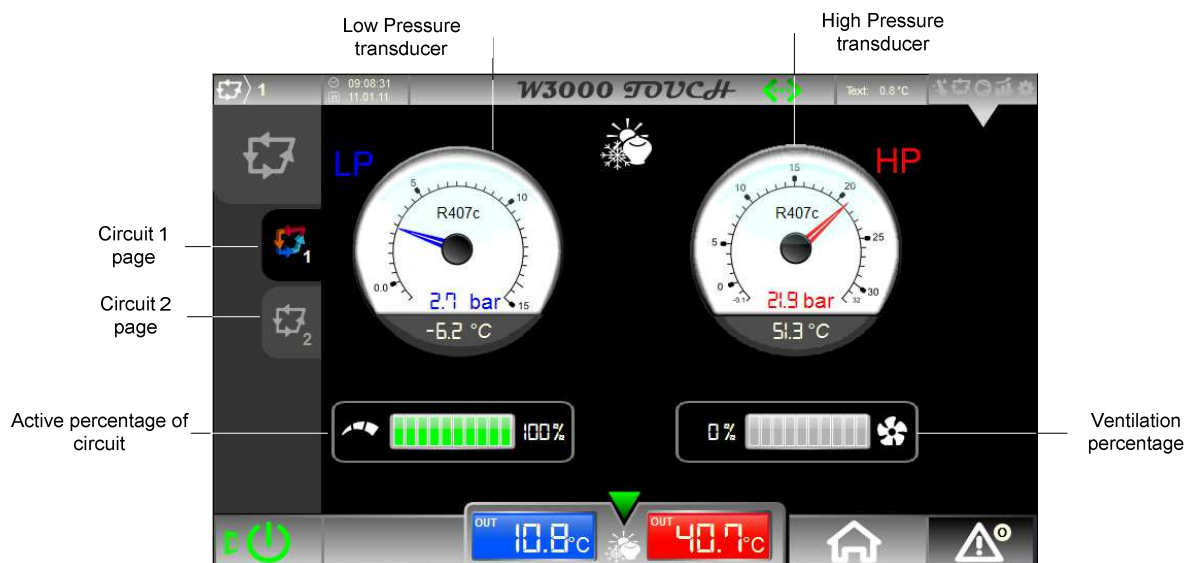
In the screen relative to defrosting the various circuits, one can:

- Visualise the end-defrost setpoint indicator
- Visualise the delay prior to the next defrost cycle and its decrease if the countdown has already begun.
- Visualise the duration of the current defrost cycle or the duration of the previous cycle.
- Visualise the state of the circuit.
- Visualise whether the defrost function is active on the circuit



In the screens referring to the various circuits, one can:

- Visualise the two analogue indicators connected to the high and low pressure transducers (if one or more transducers are not connected, the indicators do not appear on the screen).
- Visualise the condensation and evaporation temperatures converted by the measured pressure.
- Visualise the active power percentage of the cooling circuit.
- Visualise the state of the circuit.
- Visualise the ventilation percentage.

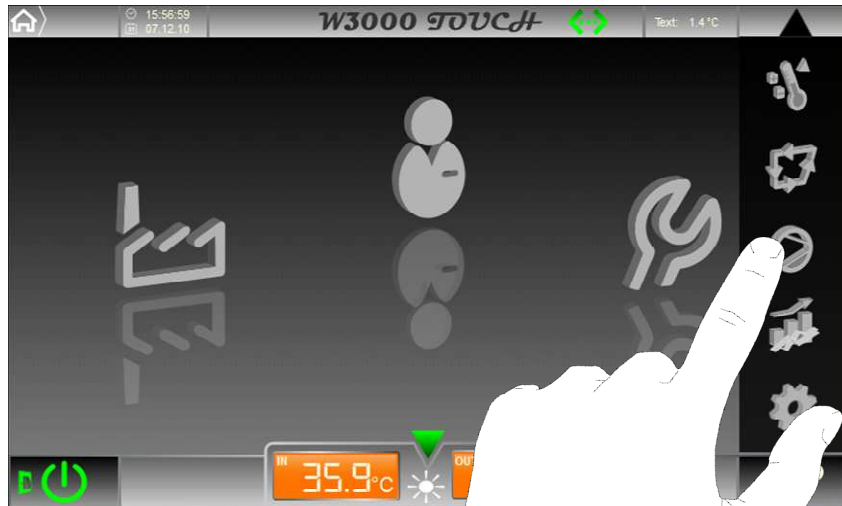


16 VIEWING THE STATE OF THE COMPRESSORS

To view detailed information relative to the compressors of the unit:

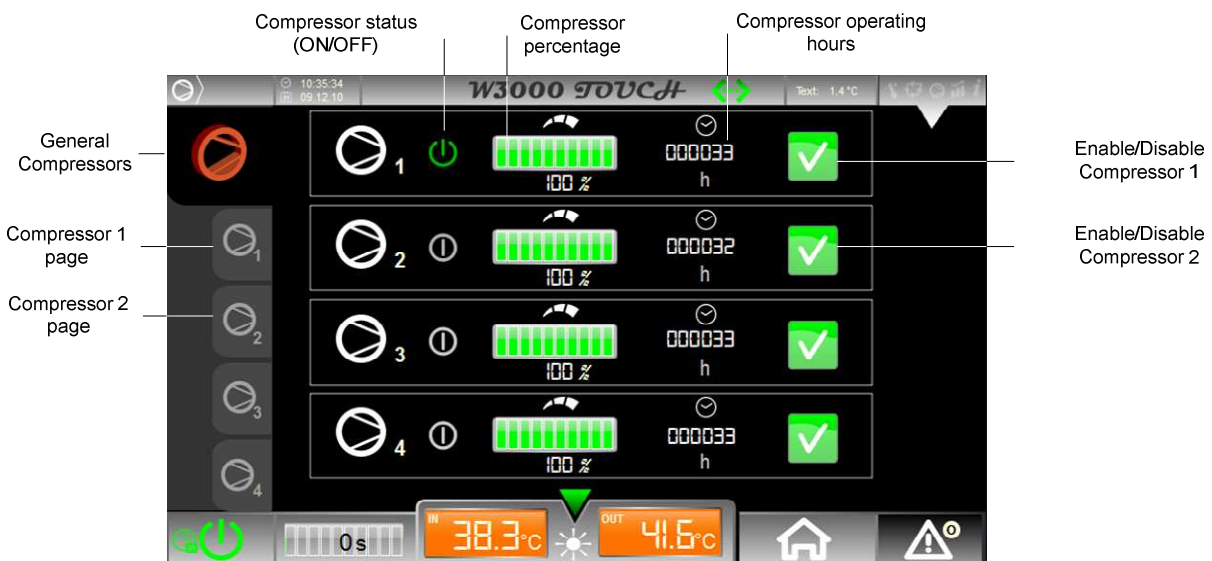


- Select the Compressors submenu from the “Rapid menu”



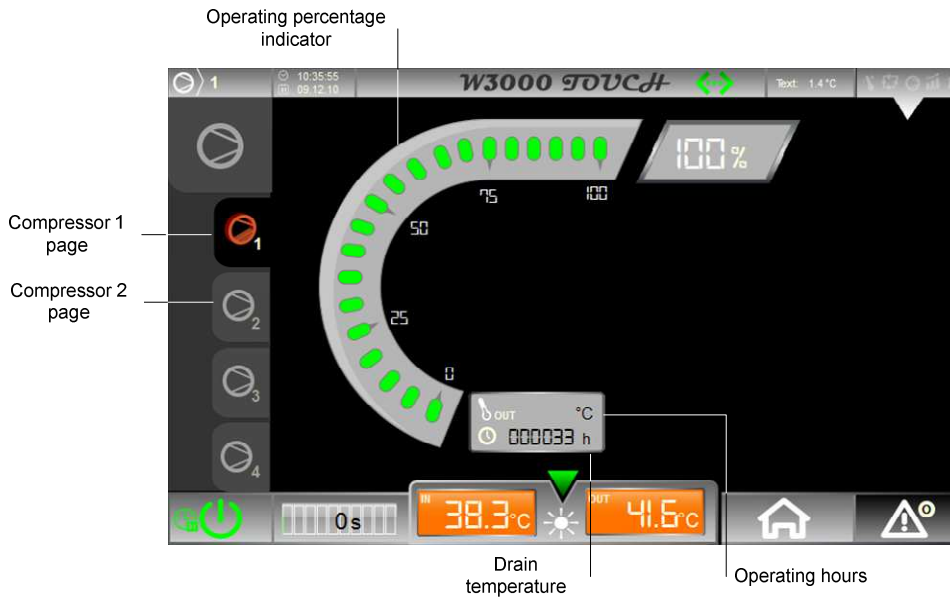
By default, this accesses the general compressor visualisation page. Here, one can:

- Visualise the operating percentage of the compressors
- Visualise the state of the compressors (on, off or alarm)
- Press the Enable/Disable buttons to enable or disable the compressors
- View the total number of working hours of the compressors
- Access detailed information on individual compressors using the relative pages to the left of the screen



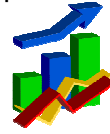
In the screens referring to the various compressors, one can:

- Visualise the active percentage using a digital indicator
- Visualise the total number of compressor operating hours
- Visualise the outlet temperature of the compressor (if temperature probes are present).



17 VISUALISING CHARTS

To visualise the charts of measurements concerning unit operation:



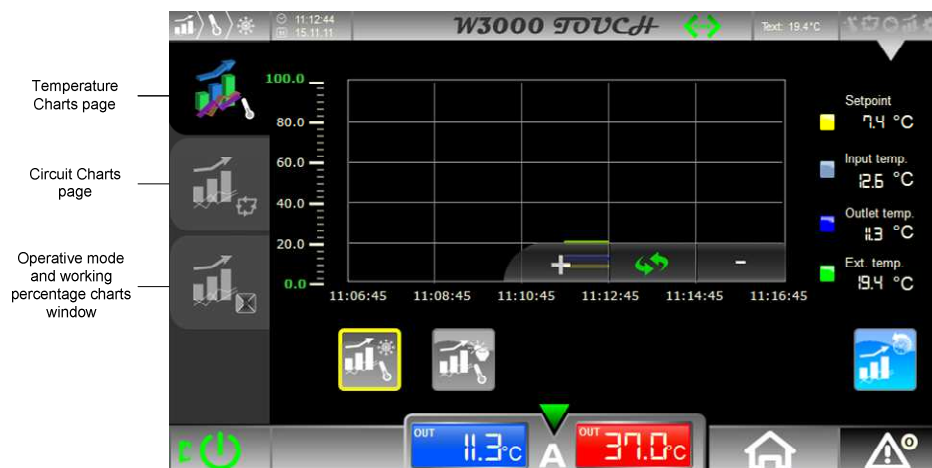
- Select the Charts submenu from the “Rapid menu”



By default, the temperature chart screen is displayed.

Select the relative pages to the left of the chart selection area to:

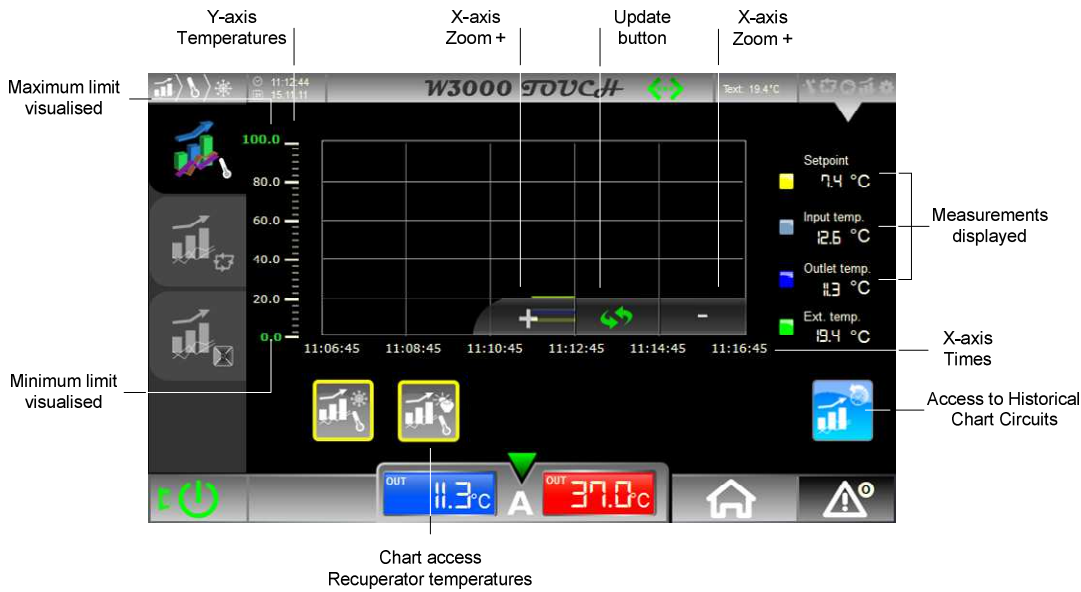
- Visualise real-time and historical charts relative to temperature variables
- Visualise real-time and historical charts relative to circuit variables
- View real-time charts and logs concerning the operating mode and percentage



17.1 Real-time temperature charts

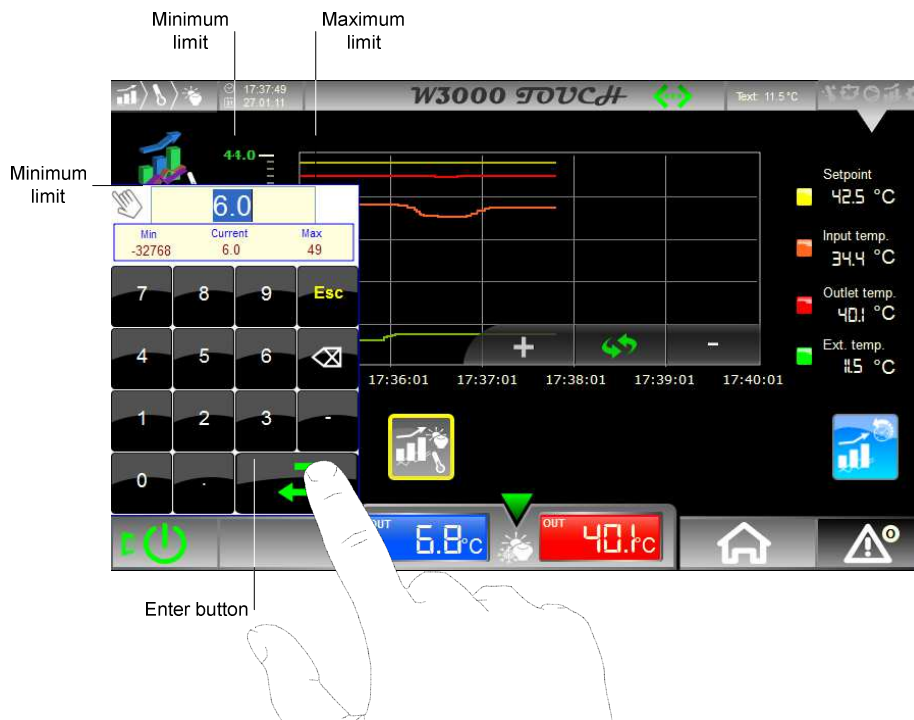
The screen displays the real-time temperature performance listed in the column to the right of the chart.

The x-axis represents the time (HH:MM:SS) while the y-axis shows the temperature (in centigrade).



The chart features the following customisable functions:

- Zoom + and – on the x-axis to decrease or increase the time scale
- Button for resetting the x-axis zoom to its default value
- Maximum and minimum limit of the customisable temperature scale



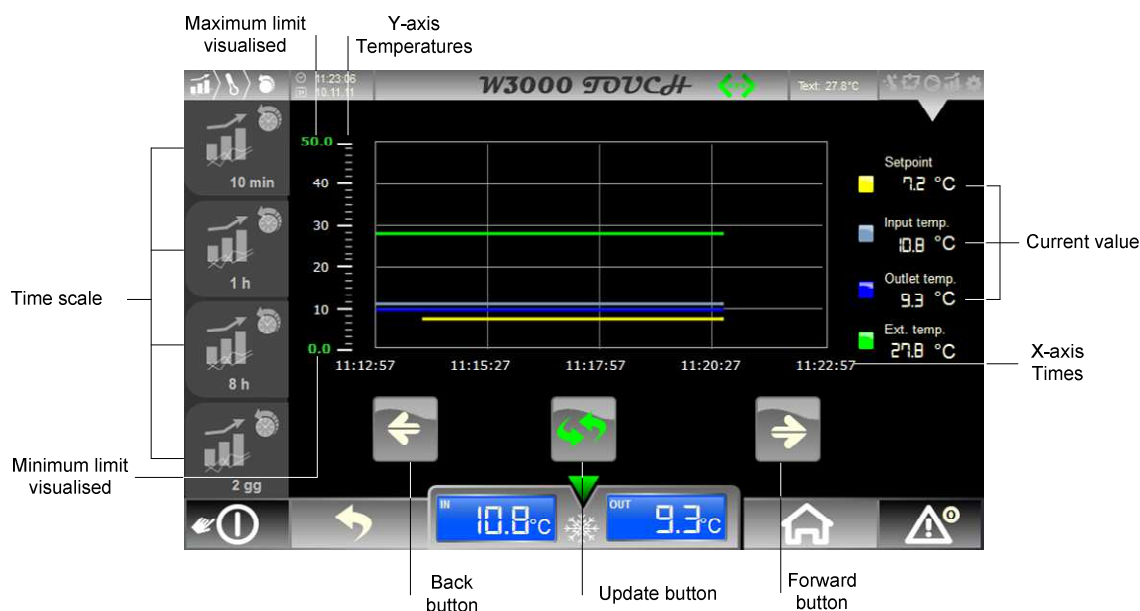
It is also possible to:

- Access the relative historical chart section
- Access, using the lower buttons, the recuperator temperature charts (if the recuperator is present)
- Access, using the labels to the left, the circuit charts page

17.2 Historical temperature charts

The screen shows the historical charts of the measurements listed in the column to the right of the chart.

The x-axis indicates the reference date and time (Day/Month-HH:MM), while the y-axis shows the temperature (in centigrade).

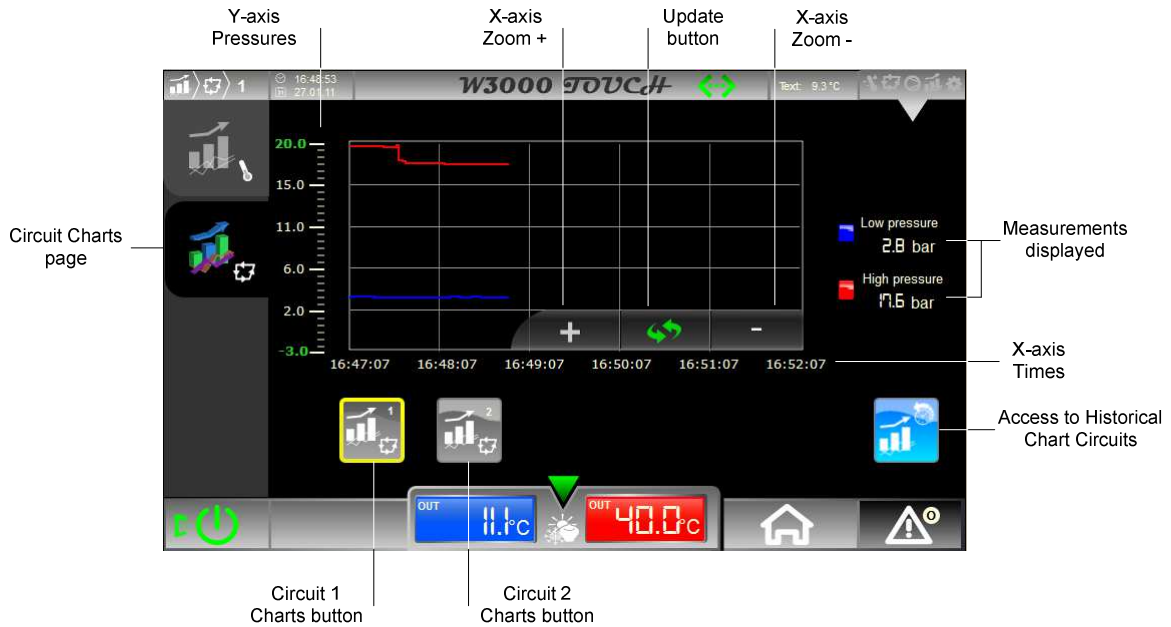


You can:

- Set the required time scale using the labels to the left of the screen
- Move “Back” and “Forwards” in the time window multiplying the chosen scale
- Set the maximum and minimum limits of the y-axis by pressing the current limit values

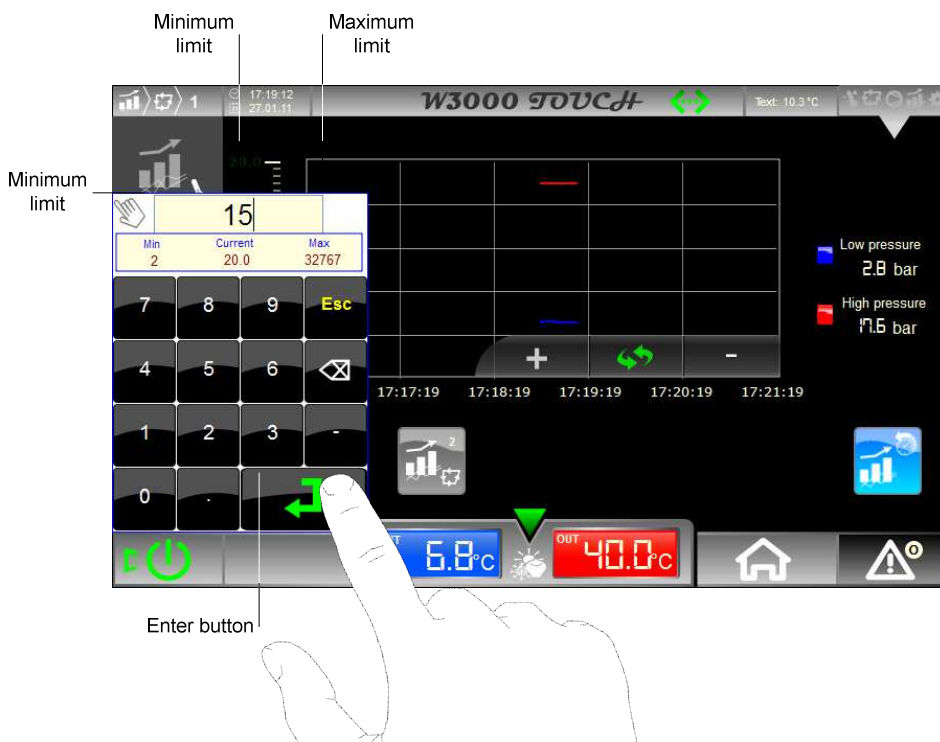
17.3 Real-time cooling circuit charts

Select the circuit page to access the charts indicating the real-time performance of the measurements listed in the column to the right of the chart.
 The x-axis represents the time (HH:MM:SS) while the y-axis shows the pressure (expressed in bar).



The chart features the following customisable functions:

- Zoom + and – on the x-axis to decrease or increase the time scale
- Button for resetting the x-axis zoom to its default value
- Maximum and minimum limit of the customisable pressure scale



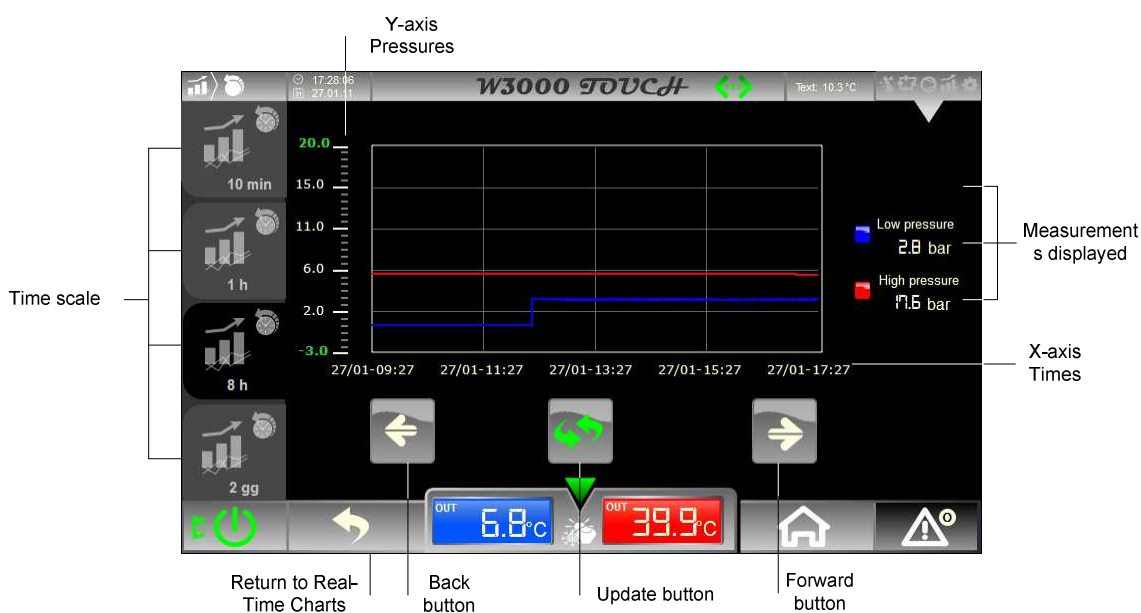
It is also possible to:

- access the relative historical chart section
- access, using the lower buttons, the charts of other circuits (if present)
- access, using the labels to the left, the temperature charts page

17.4 Historical cooling circuit charts

The screen shows the historical charts of the measurements listed in the column to the right of the chart.

The x-axis indicates the reference date and time (Day/Month-HH:MM), while the y-axis shows the pressure (in bar).

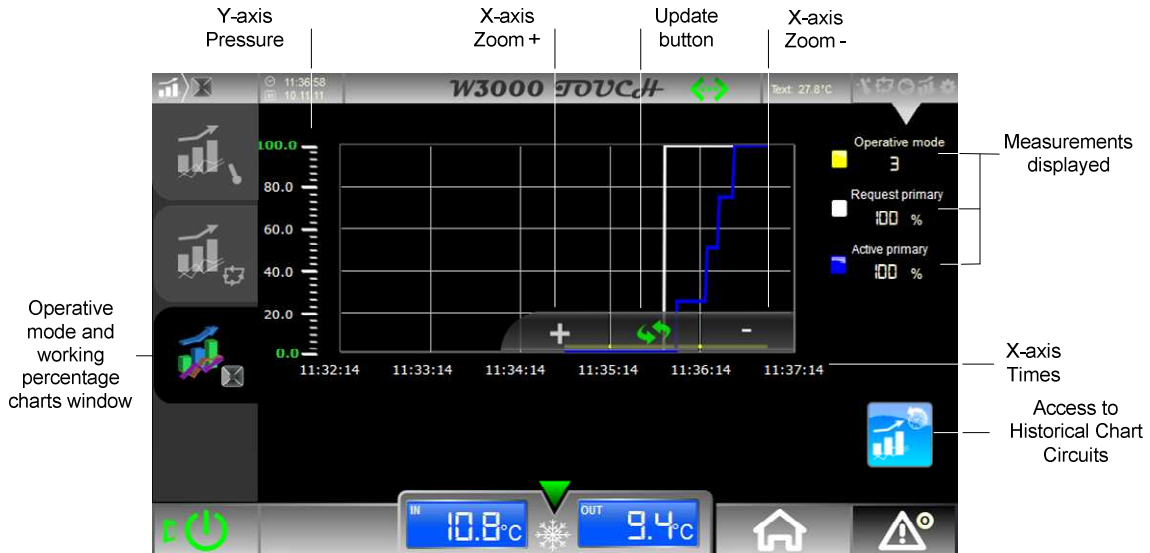


You can:

- Set the required time scale using the labels to the left of the screen
- Move "Back" and "Forwards" in the time window multiplying the chosen scale
- Set the maximum and minimum limits of the y-axis by pressing the current limit values

17.5 Operative mode and working percentage charts

Select the operation page to access the screen indicating the real-time performance of the measurements listed in the column to the right of the chart.
 The x-axis represents the time (HH:MM:SS) while the y-axis shows the pressure (expressed in bar).



The chart features the following customisable functions:

- Zoom + and – on the x-axis to decrease or increase the time scale
- Button for resetting the x-axis zoom to its default value
- Maximum and minimum limit of the requested power scale



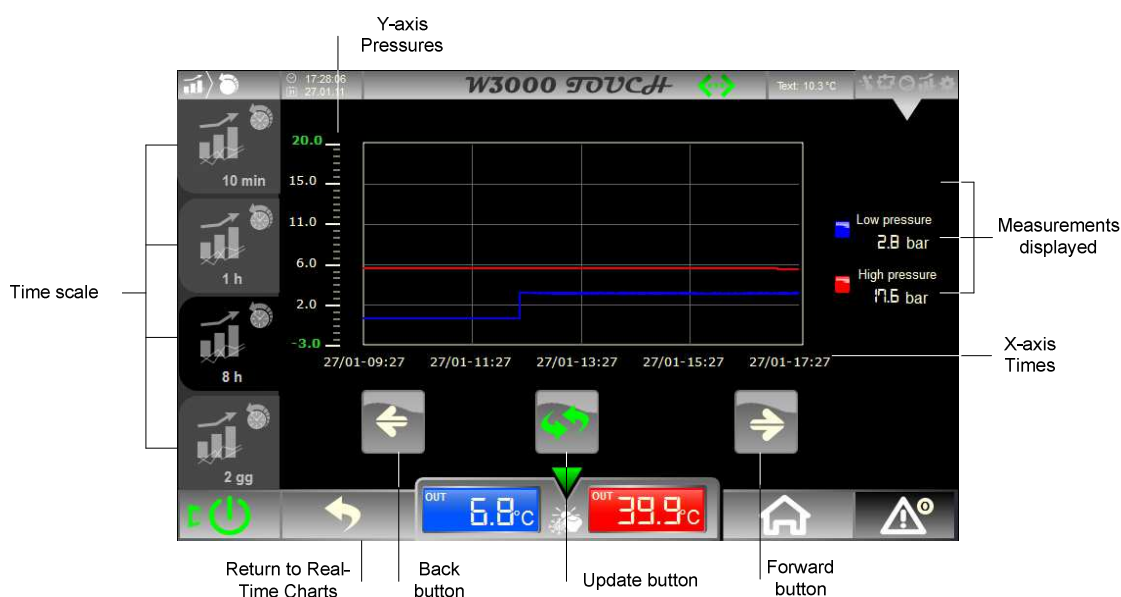
You can also:

- access the relative historical chart section
- access, using the lower buttons, the charts of other circuits (if present)
- access, using the labels to the left, the temperature charts page

17.6 Operative mode and working percentage historical charts

The screen shows the historical charts of the measurements listed in the column to the right of the chart.

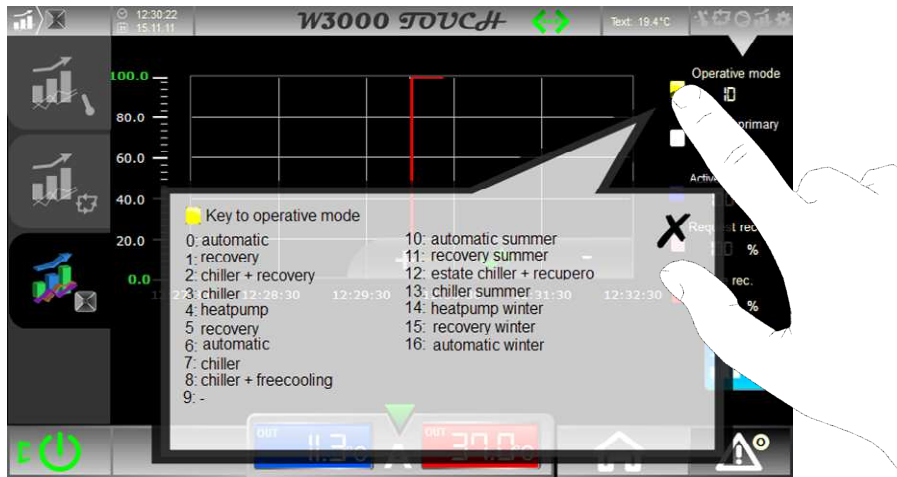
The x-axis indicates the reference date and time (Day/Month-HH:MM), while the y-axis shows the pressure (in bar).



You can:

- Set the required time scale using the labels to the left of the screen
- Move “Back” and “Forwards” in the time window multiplying the chosen scale
- Set the maximum and minimum limits of the y-axis by pressing the current limit values

When the “Operative mode” parameter is pressed, the key will appear indicating the operative mode corresponding to the number displayed. To quit the key press **X**.



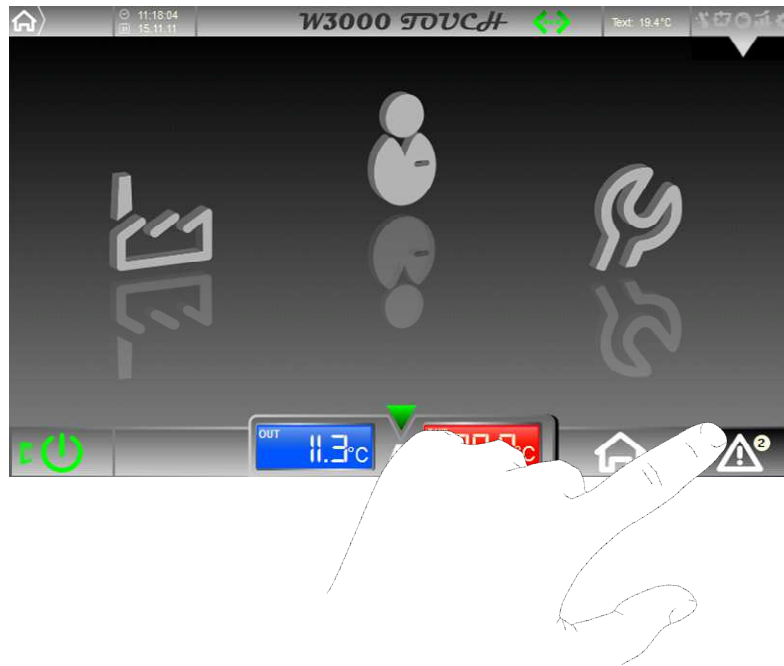
18 ALARMS AND EVENTS MANAGEMENT

The Alarms Button, on the far right of the lower bar of each screen, indicates whether any alarms are present: the white icon represents the normal situation in which no alarms are present; the red flashing icon indicates the presence of alarms.

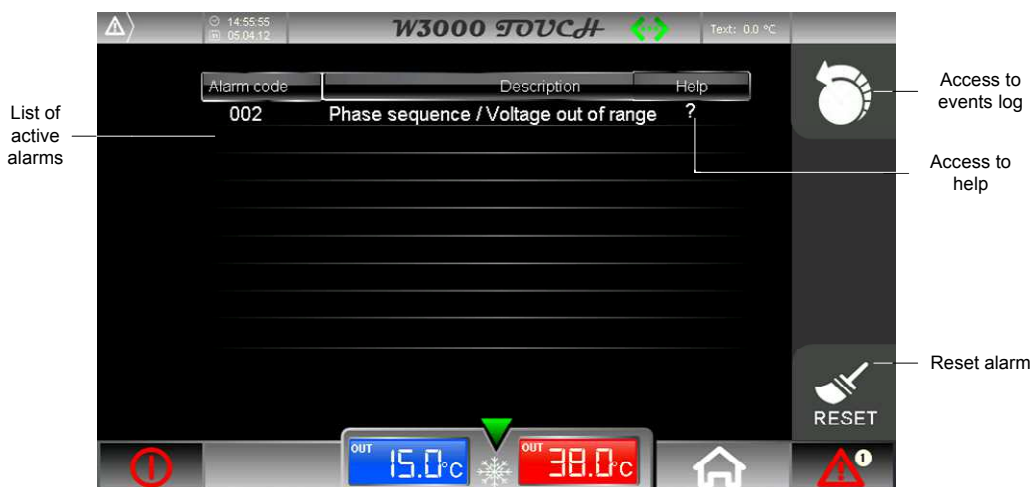
If alarms are present, their number is also visualised.

18.1 Accessing the active alarms page

- To access all the alarm management functions, press the Alarms Button



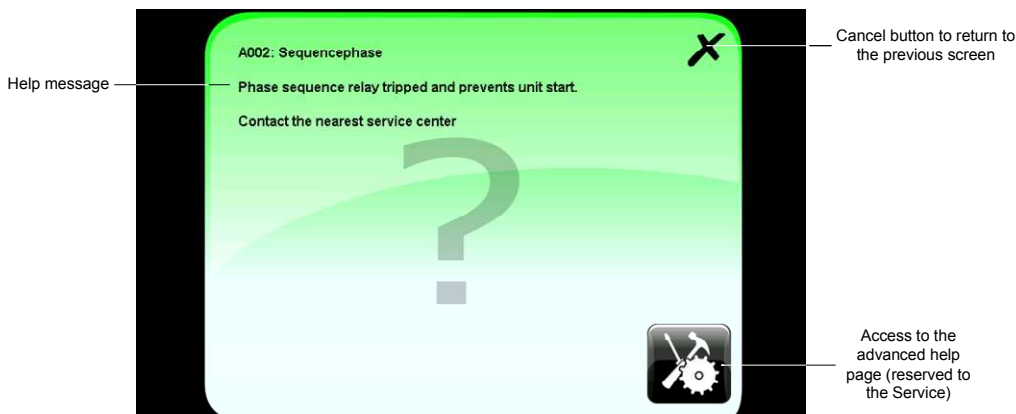
This accesses a screen containing a table in which it is possible to:



- Visualise the active alarms
- Reset the manually resettable alarms
- Access the events log page
- Access the help pages

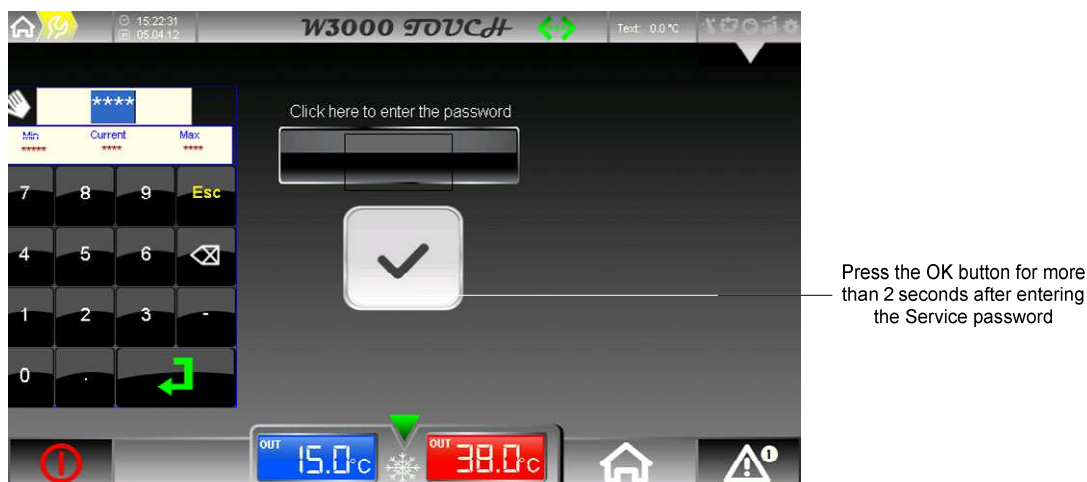
18.2 Accessing the help pages

To help users and the service to understand and possibly solve an alarm event, a basic help page and an advanced help page (reserved to the enabled Service) can be viewed for each event. On the help screen, accessed by pressing ? it is possible to:



- Visualise an extended description of the event
- Visualise an initial help message for the relative event
- Return to the active events page
- Access the advanced help page (only visible if the Service password is entered)


The advanced help screen can only be visualised if the Service password is correctly entered and if the OK button is pressed for more than 2 seconds



On this screen it is possible to:

- Visualise an extended description of the event
- Visualise a number of possible reasons
- Visualise a number of recommended actions for solving the fault
- Visualise the reset mode: manual or automatic
- Return to the active events page

18.3 Viewing the events log

In the events log screen, accessed by pressing , it is possible to:



Events log

Date	Time	Alarm ID	Description	Status
09-11-2011	07:13:22 am	AL001	Power ON	Triggered
09-11-2011	09:02:27 am	Offline	Offline W3000 touch	Triggered
09-11-2011	09:58:05 am	Offline	Offline W3000 touch	Not Triggered
09-11-2011	10:00:47 am	AL001	Power ON	Triggered
09-11-2011	11:47:34 am	AL006	High inlet/ambient temperature	Triggered
09-11-2011	11:54:43 am	AL006	High inlet/ambient temperature	Not Triggered
09-11-2011	12:30:48 pm	AL002	Phase sequence / Voltage out of range	Triggered
09-11-2011	01:55:52 pm	AL002	Phase sequence / Voltage out of range	Triggered
09-11-2011	02:27:58 pm	AL002	Phase sequence / Voltage out of range	Not Triggered

List of alarm filter times

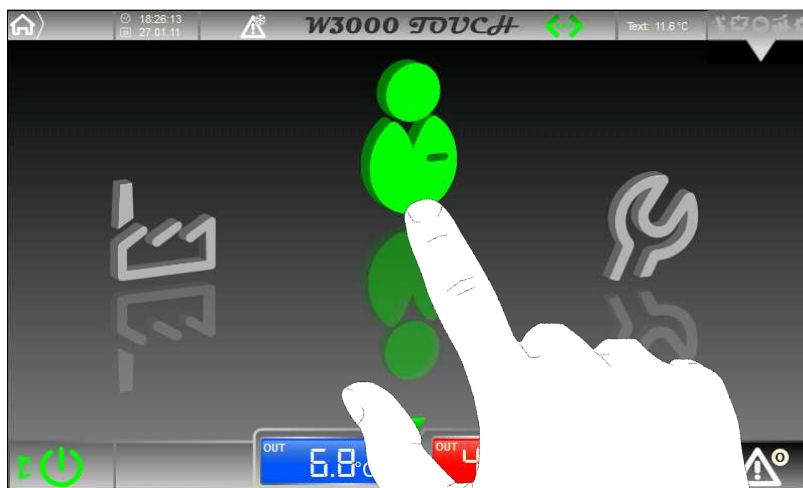
Update events log

- Visualise the historical list of triggered or untriggered events
- Filter from the drop-down list the events within a certain time scale (e.g. events in the last 2 days)
- Update the list after filtering.

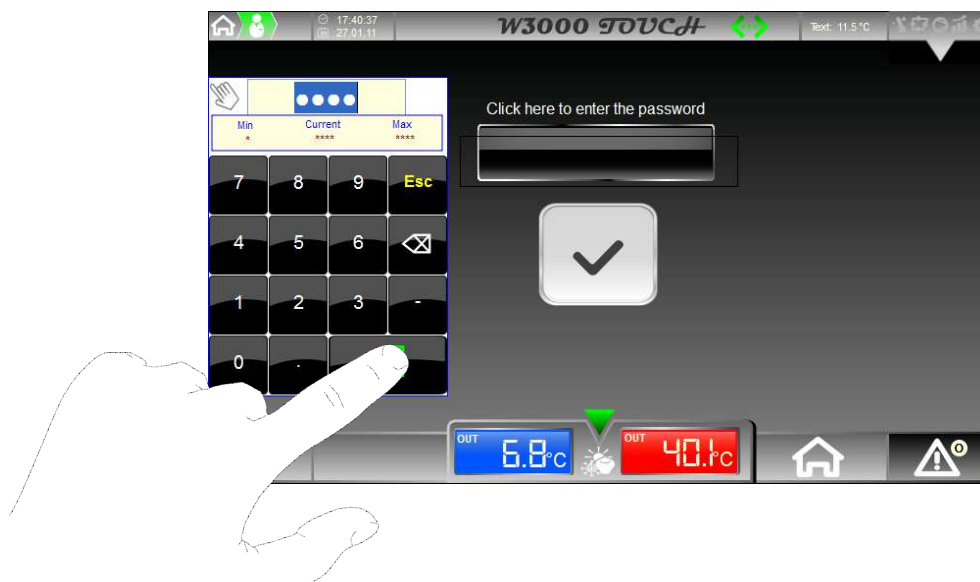
19 USER MENU PARAMETERS

To view the parameters and manually change the value of one or more of them:

- From the Homepage press the central button to access the User Menu



- Enter the User Password in the keypad and press Enter
- Press the Enter button in the centre of the screen



This accesses a screen containing a table showing the list of parameters. For each of these it is possible to visualise:

- The progressive number of the parameter in the entire list of parameters (ID)
- Number of the parameter identifying the submenu and progressive code in the submenu
- Description of parameter
- Unit of Measurement
- Minimum and maximum value (if the limits are textual it means that the limit depends on another parameter)
- Current value of parameter

It is possible to manually set these parameters by pressing on the current value in green.

ID (progressive number)	Parameter number	Description	Unit of Measurement	Parameter Min and Max		Current value of parameter
ID	N° par.	Descrizione	U.M.	Min	Max	Valore
0495	41.01	Configurazione delle fasce orarie (0:disattivate - 1:attivate)	-	0	1	1
0496	41.02	#Configurazione della linea seriale (0:Disabilitata - 1:Supervisione - 2:Sequenziatore - 3:Manager 3000)	-	0	3	0
0497	41.03	Configurazione on/off da supervisore (0:no - 1:s)	-	0	1	0
0498	41.04	Configurazione modifica modo funzionamento da supervisore (0:no - 1:s)	-	0	1	0
0499	41.05	#Impostazione protocollo di comunicazione con il supervisore (1:Standard - 2:ModBus - 3:LonWorks - 5:Baonet)	-	1	5	2
0500	41.06	#Impostazione velocità di comunicazione con il supervisore (0:1200 - baud 1:2400 - 2:4800 - 3:9600 - 4:19200)	baud	0	4	3
0501	41.07	#Impostazione numero d'identificazione dell'unità di comunicazione con il supervisore	-	1	200	11
0502	41.08	Configurazione on/off da ingresso digitale (0:n)	-	-	-	1

20 Technical data

Display

Type	TFT
Resolution	800x480 WVGA
Active display area	7" diagonal
Colours	64 K
Backlighting	LED
Brightness adjustment	160 Cd/m ² typ.

System requirements

User memory	128 MB Flash
RAM CPU MIPS	256 MB DDR

Operator interface

Touchscreen	Analog resistive
System LED indicators	4

Interfaces

Ethernet port	10/100 Mbit
USB port	Host interface, vers. 2.0
Serial Port 1: Com1	RS232, RS485, RS422, software configurable

Functions

Vectorial graphics	Yes, including SVG 1.0 support
Dynamic objects	Yes. Visibility, position, rotation
Historical and trend	Yes. Limited to Flash memory
Multi-language	Yes, with runtime language setting and only limited by the available memory
Recipes	Yes. Limited to Flash memory
Alarms	Yes
Events log	Yes
Hardware Real Time Clock	Yes, with buffer battery

Ratings

Power input	24Vdc (18 to 30 Vdc)
Input current	0.7 at 24 Vdc (max.)
Fuse	Automatic
Weight	Approx 1.0 kg
Battery	Rechargeable lithium, cannot be replaced by user

Environmental conditions

Operating temperature	-12 to 50 °C N.B.: Use at temperatures lower than 0 °C may slow down the response speed of the display.
Storage temperature	-20 to 70°C
Operating and storage humidity	5-85% relative humidity, non-condensing
Protection class	IP65 (front panel) – IP20 (rear)

Dimensions

Front panel lxH	187x147 mm (7.36x5.79")
Holes AxB	176x136 mm (6.93x5.35")
Depth D+T	45+4 mm (1.77+0.16")

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