Heat Pumps

RDZ
invisible heating and cooling
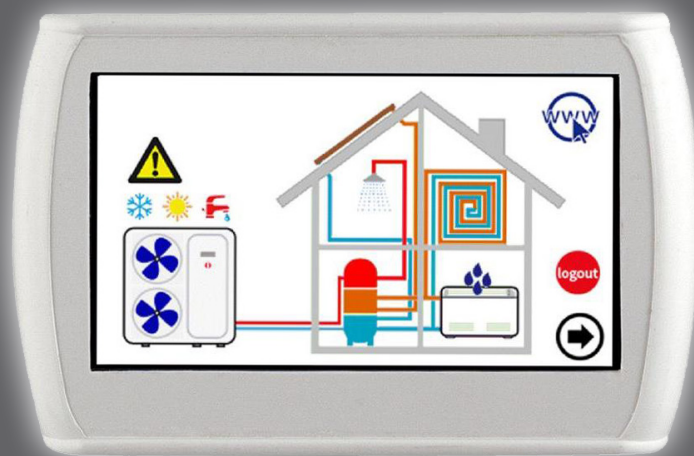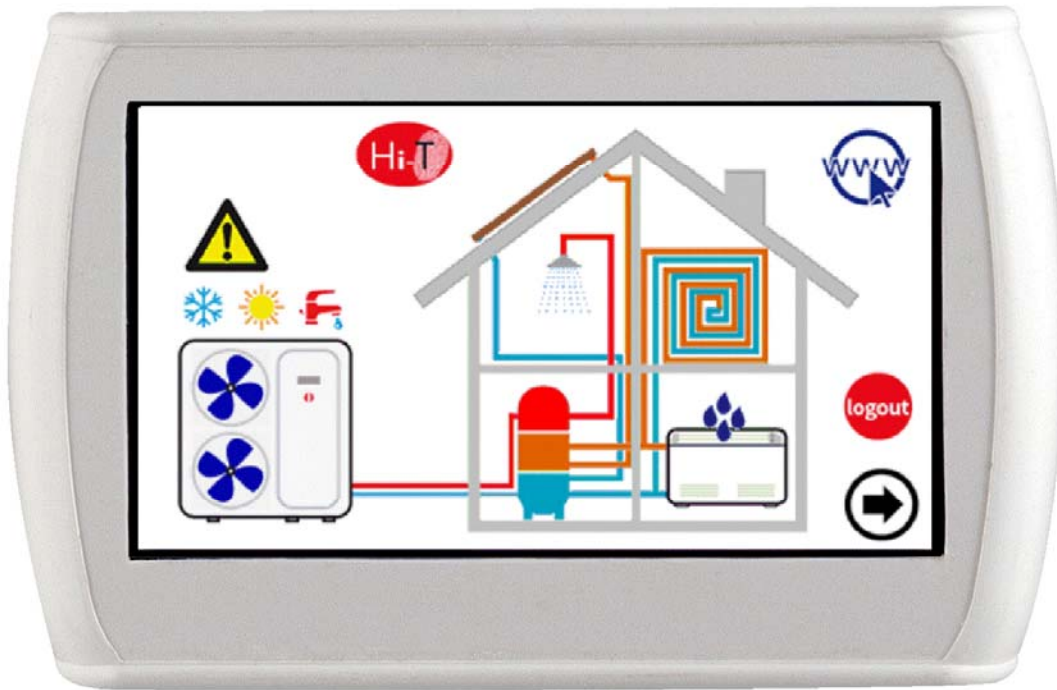
EVO TOUCH
Remote Control

Touch screen control panel, suitable for web server
Remote control for UMHPI

USER / INSTALLER MANUAL

LCD touch-screen centralized controller
for hydronic terminals coupled with UMHPI chiller

01	07-2017	Adapted to V323R014_rc1
Rev	**Date**	**Updates description**

Serie / Series / Serie / Serie / Série **LCD TOUCH-SCREEN CENTRALIZED CONTROLLER for CHILLERS HYDRONIC TERMINALS**

This manual has been created for informative purpose. The company declines any responsibility for the results of any projecting or any installation based on the explanations and/or on the technical specifications provided in this manual. It is besides forbidden the reproduction under any form of the texts and of the figures contained in this manual.

INDEX

1   GENERAL NOTES

1.1 PERMITTED USE

The Evo Touch is a touch screen remote control for centralized management of a network of chiller/heat pump system. It can also be used for partial functions (i.e. as a remote control panel of a single chiller/heat pump or amb. temperature thermostat).
It integrates humidity and temperature sensors for the thermo hygrometric analysis of the environment and for the management of the double set point for radiant floor heating systems that use a dehumidification system.
The intuitive interface simplifiers the use of the control; all the functions are easily set through the use of immediate understanding synoptic.
The remote control supervises and periodically examises the network, there is a cycle time that elapses between the signaling or command request and the activation of the function, the cycle time depends on the largeness of the heat pumps network.

1.2 USE NOT PERMITTED

Any use other than that permitted is PROHIBITED.

1.3 TECHNICAL DATA

	Nominal	Min.	Max.
Power supply voltage	12Vac	10Vac	14Vac
Power supply frequency	50 - 60Hz	Tip-5%	Tip+5%
Operating ambient temperature	25°C	0°C	50°C
Operating humidity (non-condensing)	30%	10%	90%
Ambient storage temperature	25°C	-20°C	70°C
Ambient storage humidity (non-condensing)	30%	10%	90%
Class of device (according to EU REG 2013-811)	4		
Contribution of temperature control to the seasonal energy efficiency of heating environment. (according to EU REG 2013-811)	2%		

1.4 ELECTROMECHANICS CHARACTERISTICS

Terminals and connectors	Screw terminals
Analogue inputs	1 NTC probe on board 1 humidity sensor on board
Serial	1 USB Host (for mass storage plug) 1 isolated RS485 network for chiller/heat pump 1 TTL serial port for future uses (optional plug-ins) 1 Ethernet port
Transformer	Device not included
Watch	RTC watch with backup condenser
Display	LCD TFT 4.3" 480x272 pixels
Keys	Resistive touch screen mounted on the LCD
Dimensions	128x81.2mm depth 35mm (box)
Case	Is made up of white plastic

2 I/O RESOURCES

2.1 TOUCH SCREEN PCB

2.1.1 LAYOUT
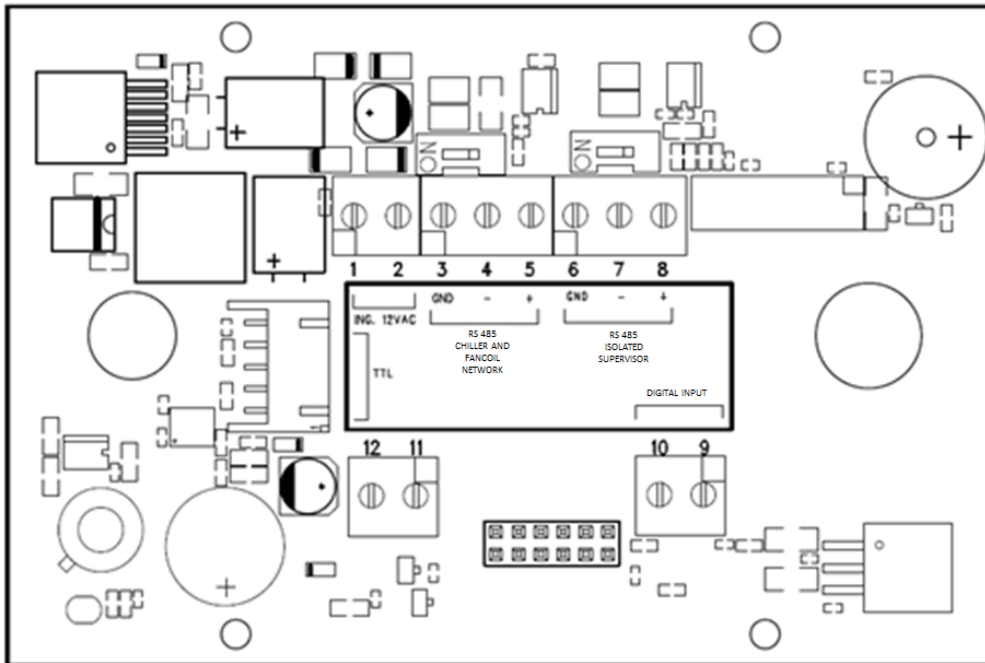
Figure 1. Layout.

2.1.2 TOUCH-SCREEN USE

The interface has a resistive touch-screen LCD with sensitive areas applied to the contextual content of the active screen.
It allows you to select items or perform functions with ease.
Do not exert too much pressure on the touch screen with your fingers and do not use a sharp object on the touch screen. Doing so may damage the touch screen or cause it to malfunction.
It is advisable to exert weaker pressure and not too fast on the screen and to become familiar with the use of the touch-screen itself, well calibrating the touch of your fingertip on the sensitive areas of the screens.
Do not put the touch-screen in contact with other electrical devices. Electrostatic discharge may cause a malfunction.

2.1.3 DISPLAY

The display is a TFT LCD 16/9 format with a diagonal 4.3". The resolution is 480 x 272 pixels. The LCD is handled with 16bit colour depth (65535 colours).

2.1.4 POWER SUPPLY

Description	Characteristics	ID
POWER SUPPLY 12VAC	12Vac (min. 10Vac – max. 14Vac)	

2.1.5 ANALOGUE INPUT

Description	Characteristics	ID
Room temperature	NTC probe, conversion range -20°C ÷ +100°C	
Relative humidity	0% - 90% at temperature between -20°C and 60°C	

2.1.6 SERIAL AND CONNECTIVITY

Description	Characteristics	ID
USB	USB Host (for mass storage plug) / connector type A	USB
RS485 isolate	Isolated RS485 to Modbus Serial chiller/heat pump	
TTL	Modbus serial TTL for future use	
ETH	Ethernet port 10/100 BASE T for minimal web-server	

2.2 CLOCK

It's present a clock with backup battery.

2.3 CONNECTIONS

Open the control applying a slight pressure in the lower and upper parts of the control, in order to separate the rear cover from the front one. Pass the cables through the hole in the rear panel and make connections according to the following guidelines.
Terminals 1 and 2: 12 V ac power connect supply (terminal on chiller 12V- e 12V+).
Terminals 3-4-5: connect the RS-485 bus: terminal 3 to terminal GNDR, terminal 4 to R- and terminal 5 to R+.
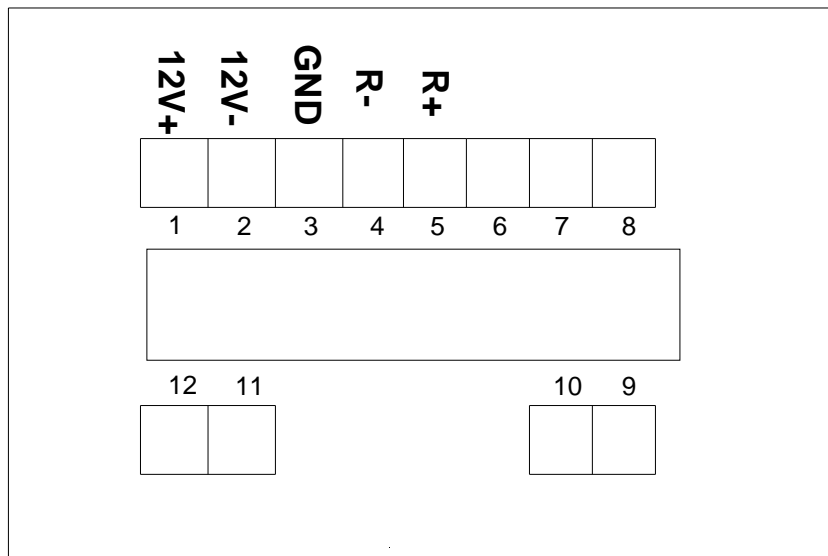
Figure 2. Connections.

2.4 INSTALLATION

The Evo Touch control is used for fixing to the wall according to DIN 503 standard.
In the rear part of the control some pre-drilled holes are present to be detached pursuing a pressure with a screwdriver, in such a way as to obtain the holes useful to the fixing. Of the 6 holes, use only the outer 2 holes of the horizontal series (see Figure 3).
Before you do this, open the control itself, applying a slight pressure in the lower and upper parts of the control, in order to separate the rear cover from the front one.
Use the rear panel and apply the holes in the two slots shown in the figure below.
Do not directly use the panel as a template to drill the holes on the wall; the electronics may be damaged during this operation.
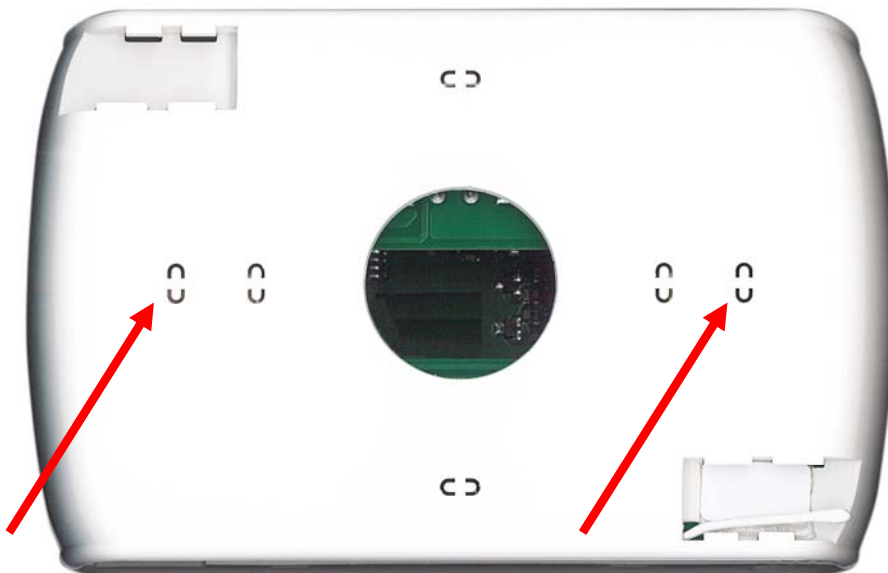
Figure 3. Holes for wall mounting.

3   USER INTERFACE

The touch-screen can be used in the following ways:

- Interface panel (unit interface) for a single heat pump
- Network controller for multi heat pump installation

To manage the system modularity, the interface foresees a home page which summarizes the whole plant, showing dynamically the enabled resources and hiding the ones not available in the current configuration. The interface also provides a second summary page including all the values of temperature and humidity detected in the system.

Through the menu it is possible to access to:

- Plant configuration
- Single units statuses
- Appliances and plant settings

As alternative it is possible to directly access from the home page to detailed information, pressing on the display where are located the summarized information. E.g., pressing where are located the main information of the heat pump, you can enter in the menu of the heat pump status.

## 3.1 ICONS DISPLAY

All icons on the different screens can be shown in full colours or de-saturated as in the following example:

The colour saturation indicates that icon is usable; when pressed the related function is performed.

The transparency (de-saturated) indicates that icon is not usable and any touch on it has no resulting action.

For what concerns the side sliding bar which appears on the left side of the screen related to the single units connected into a network (see Paragraphs 3.4.1.3), if an icon appears fully coloured the related function is enabled and, in that specific moment is also active (i.e. if the "*water anti-freeze*" icon of the heat pump is present and coloured, as shown below, the plate exchanger electrical heating elements are switched on).
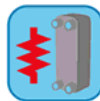
Instead, if the icon appears but is transparent (de-saturated), the related function is enabled but not that moment activated (i.e. if the "*water anti-freeze*" icon of the heat pump appears transparent, as shown below, the plate exchanger electrical heating elements are ready to work but currently switched off).

3.2 SCREENS AND ICONS

There might be some differences between screens and icons as they are currently shown. The Company reserves itself to modify and update them without prior notice and in relation to what shown in the present manual.

3.3 START PAGE
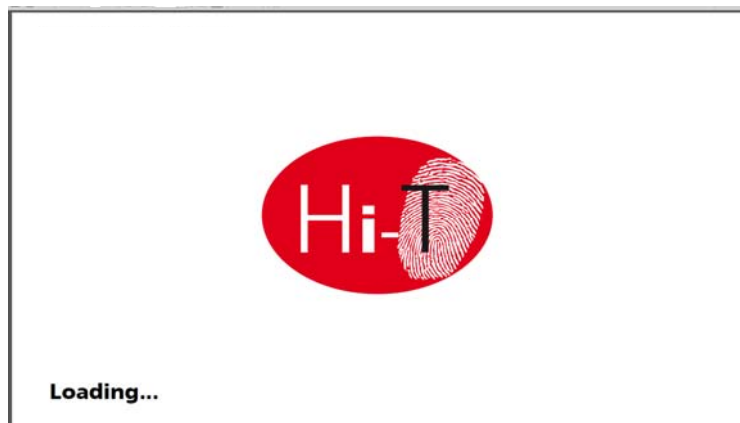
Figure 4. Start page.

On Evo Touch start, while system loading; a splash screen appears with a logo.

3.4 HOME PAGE

The home page has the following appearance:
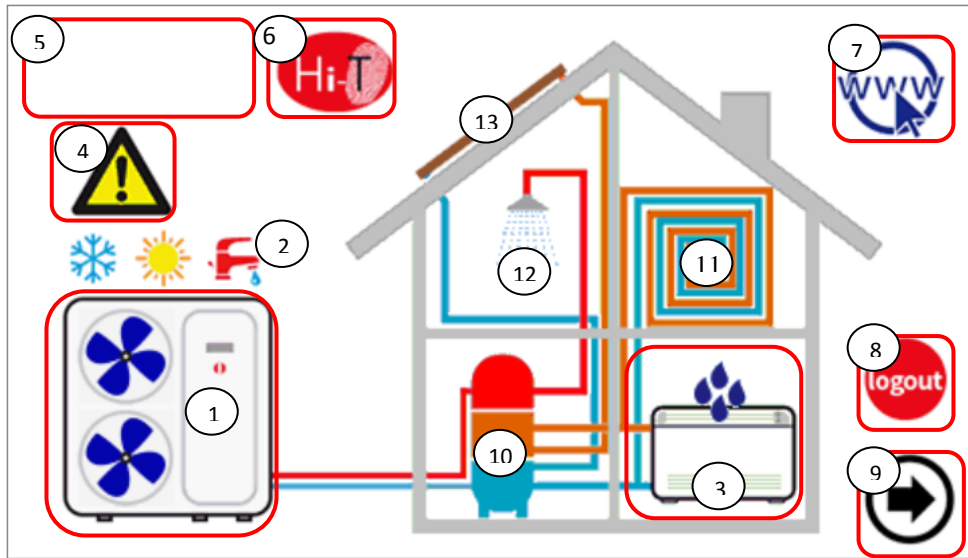
Figure 5. Home page – indication meanings.

From the home page it is possible to access to the different device's screens, simply touching the displayed resource.
The sensible areas (indicated in the image by red boxes) inside this page are:

1. Heat pump/chiller (showing the working mode)
2. Status system and mode system display
3. Fan coil (with a status message of dehumidification active mode)
4. Display of any active alarms in the system
5. Information and location of the company
6. Name of the keyboard (access to information on the firmware version)
7. Configuring the Ethernet network
8. Log-out (intermittent symbol if it's active)
9. Arrow navigation, next page.

Graphically, it also contains information on the presence or absence on the following utilities:

10. Storage tanks (plant or if solar storage tank is present)
11. Radiant panels
12. Sanitary
13. Solar.

On the main screen, in fact, it appears only utilities present and properly installed in the network or the active warnings at the time of viewing.
If, for example, the network consists only of one or more chiller/heat pumps, without production of sanitary water and without storage, the screen shows graphically the presence of the chiller, but inside the house do not appear other object; in this case the appearance is the following:
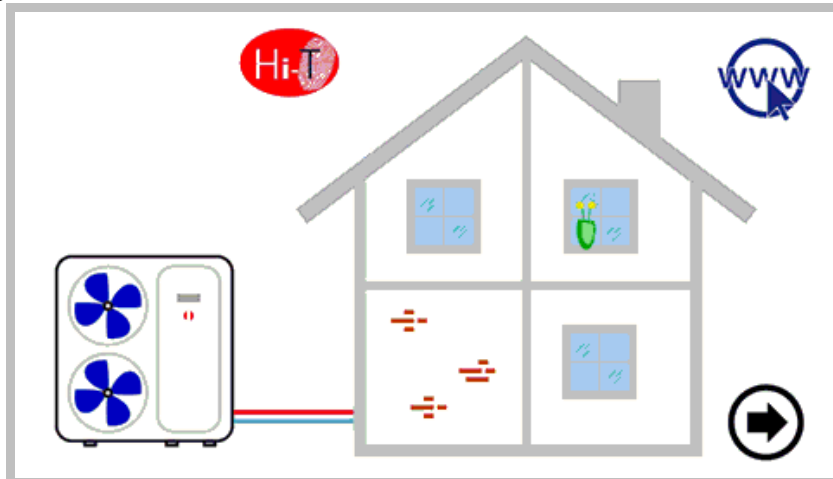
Figure 6. Home screen – only chiller is networked.

Figure 7. Chiller/Heat Pump.

Referring to the above figure is it possible to obtain the following information:

- presence of chillers connected in the network (the chiller is correctly accepted when touching its figure you can access to the pages dedicated to itself);
- operating mode of the chiller (winter ❄ summer ☀ sanitary 🚰, OFF if does not appear the previous three symbols);
- operating status of the chiller (compressor running): the operation of the chiller shows graphically by the rotation of the fans 🌀.

3.4.1 CHILLER SCREEN/HEAT PUMP

From the main page, by pressing on the symbol of the chiller (sensitive area number 1, Figure 5. Home page – indication meanings.), you can access to the chiller on network screen.

From here you can access to the information related to the operations of the chiller; then you can uniquely identify each chiller present, assigning each a name.
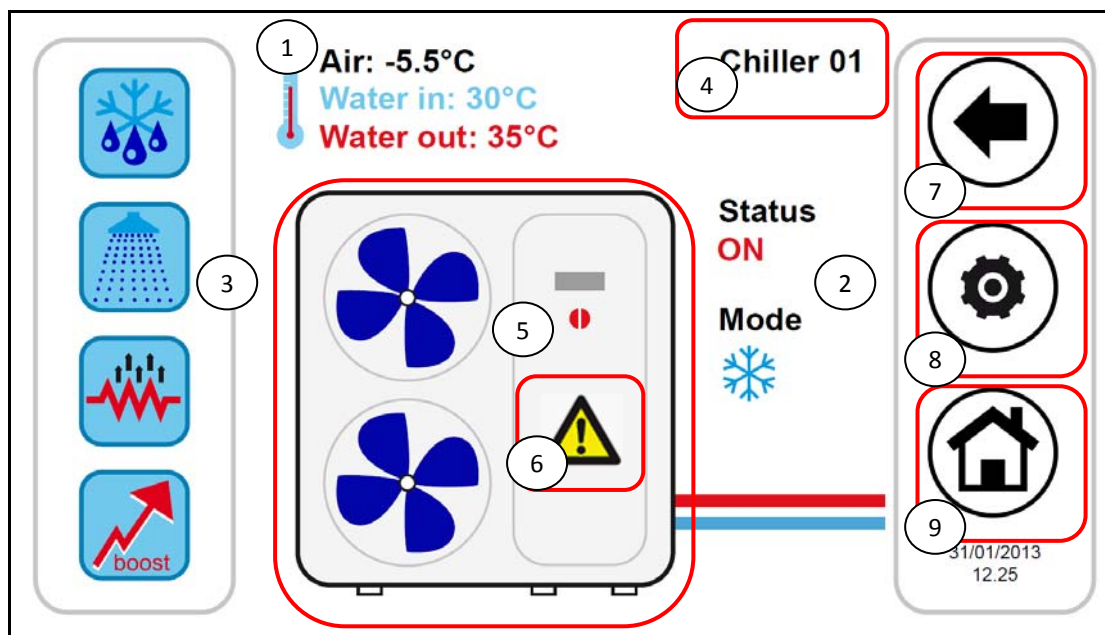
Figure 8. Chiller page – information and sensitive areas.

The information in the chiller's page are:
1. Temperature read in the chiller (about to a specific chiller):
   a. Air temperature (°C)
   b. Inlet water temperature (°C)
   c. Outlet water temperature (°C)
2. Status and operation mode about a specific chiller
3. Active/activable functions (in the scroll bar on the left)

Sensitive areas (indicated by red boxes in the figure) in this page are:
1. Chiller name (each time you press on it, you go to the next chiller unit in the network; otherwise, with prolonged pressure, you can rename the chiller)
2. Chiller/heat pump (with working signalling function given by the rotation of the fans); from here you access to an additional page of information about that specific chiller.
3. Active alarms in the unit displayed
7. Icons of the navigation sidebar
8. Icons of the navigation sidebar
9. Icons of the navigation sidebar

3.4.1.1   ASSIGNMENT OF NAMES TO THE CHILLERS

For the assignment of the name to a chiller, you must navigate between the pages of the chiller connected to the network until you get to the page of the chiller which you want to change the name: for apply this, you have to make single press into the pressure sensitive area **4**. Once you find the chiller, press and hold for a few seconds in the same area 4. Then compose with the keyboard that appears the desired name.
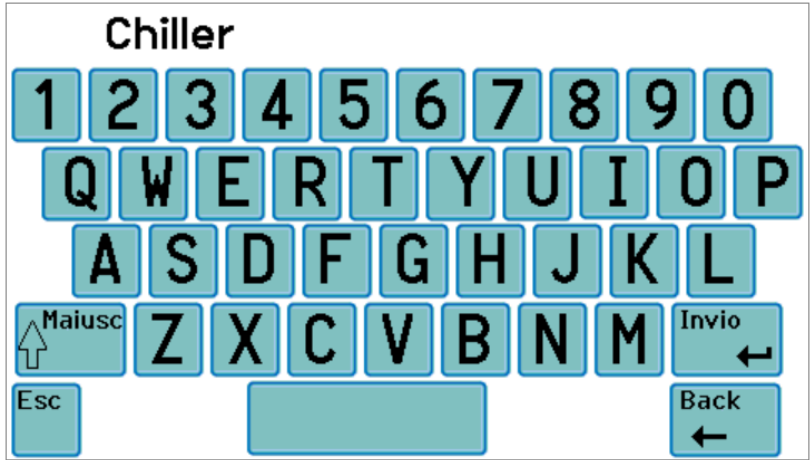
Figure 9. Insert chiller name.

The name of the chiller can have a maximum of 13 characters.

3.4.1.2   CHILLER AREA

The area **5** shown in Figure 8 gives indications about the operation (compressor running) of the chiller, graphically displaying the fan rotation

Pushing down on the area **5** you access to a further screen that shows a list of read data in real time related to the involved chiller:
- Inlet water temperature (°C)
- Outlet water temperature (°C)
- Sanitary probe temperature (if it's present and configured, °C).

Accessing the same page with service or manufacturer access right (to enable the access right, press on the "configurations" icon presents in the sensitive area **8** of Figure 8 and set the service/manufacturer password), the data displayed in real-time are:
- Inlet water temperature (°C)
- Outlet water temperature (°C)
- Sanitary probe temperature (if it's present and configured)
- High pressure (bar)
- Low pressure (bar)
- Compressor speed (Hz)
- Opening expansion valve (step)
- Fan speed (%)
- Pump speed (%)
- Overheating (°C)
- Compressor operating hours (Hr.)
- Pump operating hours (Hr.)

3.4.1.3   TOOLBAR CHILLER AREA

On the left scroll sidebar there are icons that symbolize the active/activable functions in the chiller taken into account. In particular:

Colourful icon = function enabled,

Lock icon = function configured on the machine but not currently active.

Below there is a table with icons that may appear in the scroll side bar.
The presence or absence of the icon in the sidebar will be determined by the enable or disable of the function on the chiller.

ORDER OF APPARANCE	ICON	FUNCTION
1		SANITARY HOT WATER
2		SANITARY INTEGRATION RESISTANCE
3		PLANT INTEGRATION RESISTANCE
4		BOILER ENABLING
5		DOUBLE SET-POINT
6		DEHUMIDIFYING
7		SLAB FEATURE
8		DEFROST
9		ANTIFREEZE WATER
10		ANTIFREEZE TRAY RESISTANCE

Table 1. Order of appearance of the icons in the toolbar on the chiller.

3.4.1.4 NAVIGATION AREA

In the toolbar which appears at the right side of the chillers' page, you have three icons for navigation between pages, as well as the date and time shown below:

The first icon on the top allows you to return to the previous screen, the second allows you to enable maintainer/manufacturer access rights through a password to further information in real-time, the last returns to the Home screen.
If an icon appears transparent, it means that is not accessible.

3.4.2 Evo Touch AREA

Pressing in the sensitive area **6** of Figure 5, you have access to a screen showing the version and the date of release of the firmware installed.

3.4.3 ETHERNET CONNECTION CONFIGURATION

Pressing in the sensitive area **7** of Figure 5, it appears the page:
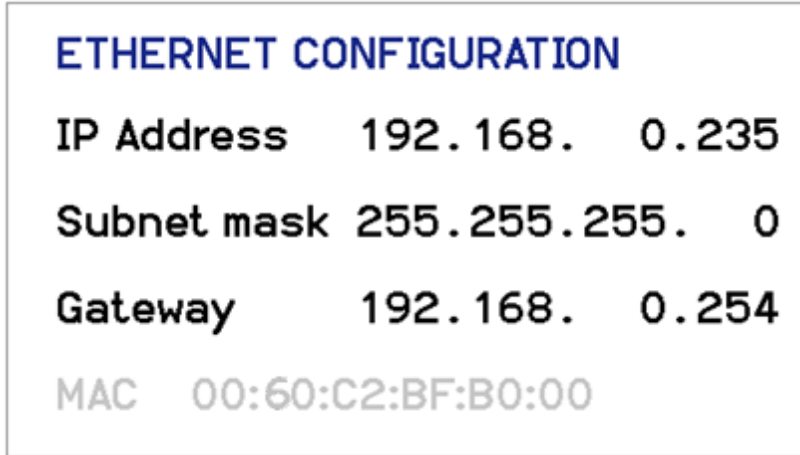
Figure 10. Ethernet network configuration page.

On this page there are the addresses for the configuration of an Ethernet connection.
Logging in with maintainer/manufacturer permission, you can change the default addresses.
It's implemented a local web server to access to the Evo Touch from local area network with a HTML 4.01 compatible browser (see Paragraph 5.2).

3.5 SECOND MAIN PAGE

From the home page, touching the arrow icon to navigate to the next screen, you go to a second screen showing all of the detections carried out by the temperature sensors and humidity sensors in the system.
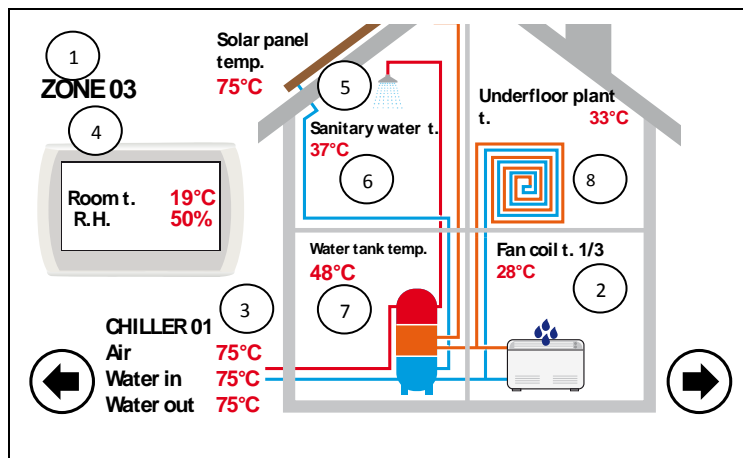
Figure 11. Second Main page.

Referring to the figure above:

- The field **1** indicates the zone to which you are referring. The current version covers only one zone where Evo Touch controller is mounted.
- The field **2** indicates the fan coil which is referenced within the zone selected from the field 1; pressing on it the index of the selected zone progresses in a cyclic manner, giving away all the fan coil units in the area. For each fan coil is shown the detected air temperature. These indications appear only if there are fan coils configured in the system.
  NOTE: Function not activable.
- The field **3** indicates the chiller which it refers; by pressing on it, you progress to the next chiller in the network. For each chiller shown, you see the readings on the temperature of the water inlet and outlet of the chiller and on the air temperature measured by the probes on board.
- The field **4** shows the ambient temperature and the relative humidity measured by the sensors integrated in the Evo Touch panel.
- The field **5** indicates the presence of the solar system; then the indication on the temperature of the solar panels is shown. These indications appear only if in the system is configured a solar panel.
- The field **6** shows the enabling of the production of domestic hot water related to the selected chiller. It indicates the temperature of the domestic hot water production.

- The field **7** indicates the presence of a storage tank connected to the selected chiller. The display will show the temperature of plant storage tank when enabling the water plant remote sensor. Whereas it will show the temperature of the DHW tank if the hot water production is avtivated.
- The field **8** indicates the presence of radiant floor; this field is connected to the enabling of the function of double set - point.

In the case of probes in error or not properly configured and connected, it appears the indication of error.

Note: The presence of DHW tank is referred to the fact that in the network is present a heat pump that is enabled in the DHW mode.

3.6 HOME SYSTEM

From the second page, touching the arrow icon to navigate to the next screen, you go to a third screen for general settings, the "system main page", showing the following functional icons:
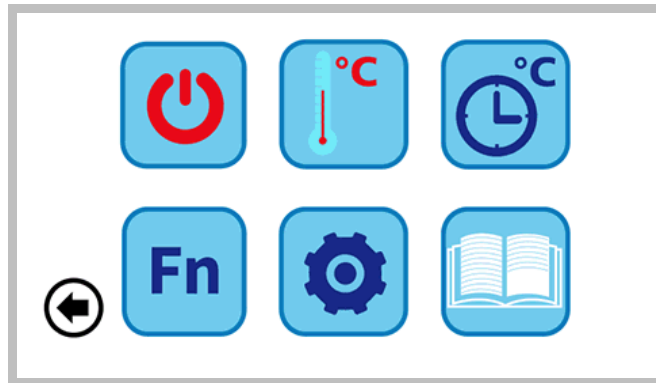
Figure 12. System main page.

Above, from the left to right:
1) STATUS SETUP;
2) SET-POINT SETUP;
3) PROGRAMS AND CHRONO-THERMOSTAT.

In the bottom, from the left to right:
4) SPECIAL FUNCTIONS;
5) CONFIGURATION;
6) HELP MENU.

3.6.1 STATUS SETUP PAGE

Press the button   to enter into "*Status setup*" page.
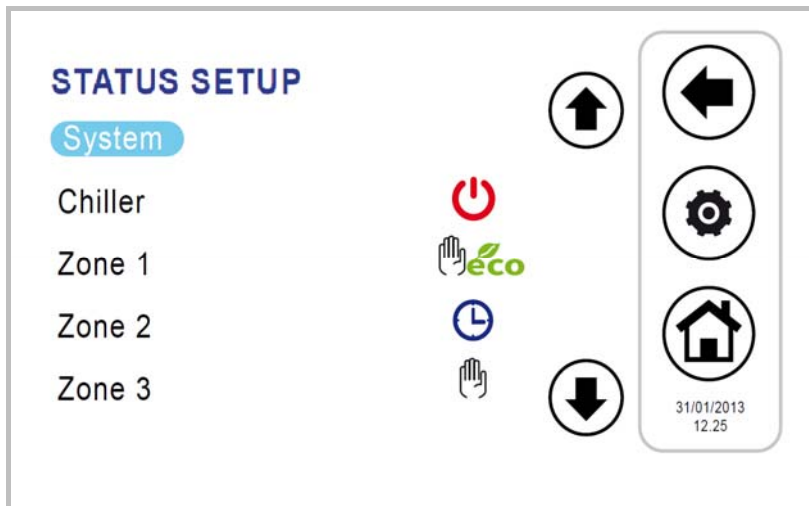
Figure 13. "Status setup" page.

Pushing on "*System*" you can set the status of the entire system, otherwise you can act on individual unit.

3.6.2 SET-POINT SETUP PAGE

Press the button [°C] to enter into "*Set-point setup*" page.
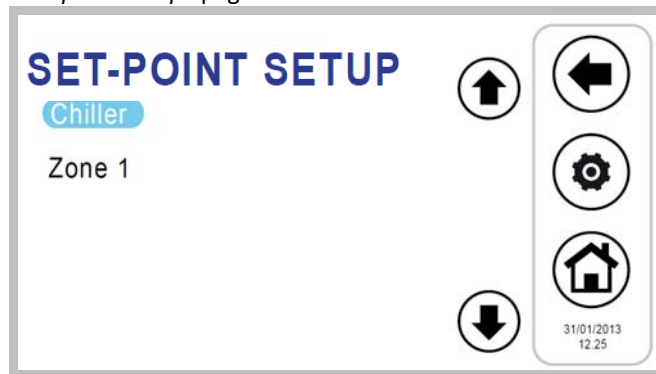
Figure 14. "Set-point setup" page.

From this screen you can set the chiller's parameters. If enabled, you can also set the sanitary hot water set (see Paragraph 4.5.2) and for rapid DHW preparator, the second set-point (see Paragraph 4.8) and the offset for the climatic compensation (see Paragraph 4.9).

3.6.3 PROGRAMS PAGE (CHRONOTHERMOSTAT)

Press the button [°C] to enter into "*Programs*" page.
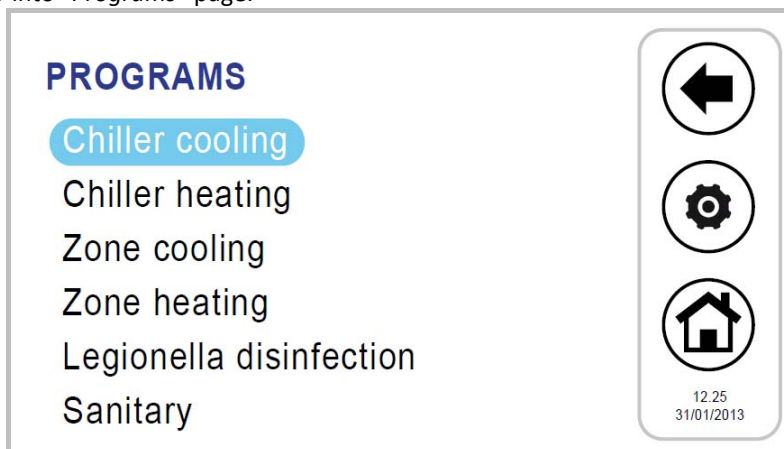
Figure 15. "Programs" page.

From this page you can set the weekly program of chillers separately. You can also program the legionella's cycle and the production of hot water, if enabled (see Paragraph 4.5.4).

3.6.4 SPECIAL FUNCTIONS PAGE

Press the button [Fn] to enter into "*Special Functions*" page (see Paragraph 4.13).

3.6.5 CONFIGURATION PAGE

Press the button [⚙] to enter into "*Configuration*" page.
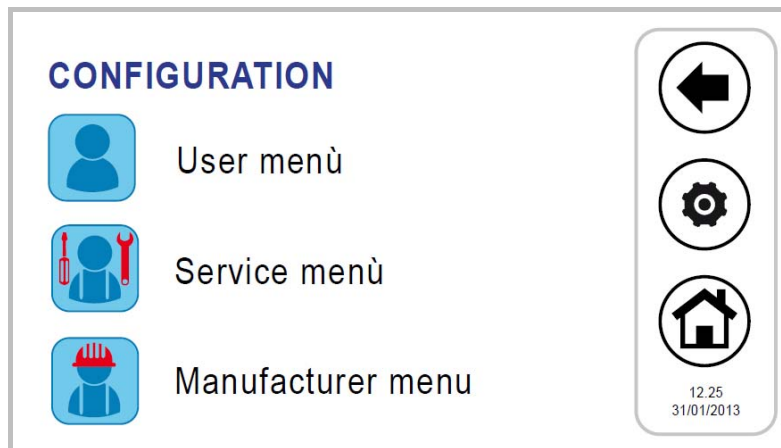
Figure 16. "Configuration" page.

From the configuration screen, you can access to the User-Setup menu, to the service menu and to the manufacturer menu. Pushing on each of these items, it appears a numeric keypad for entering a password.
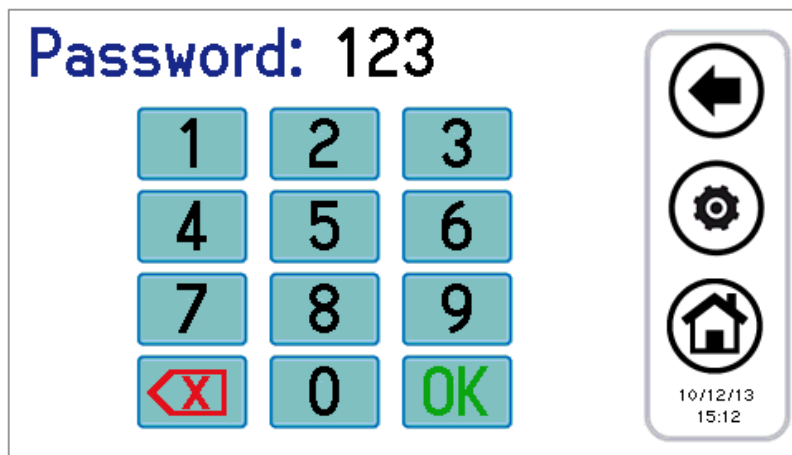
Figure 17. Password entry.

The user password is set by default to "0" (modifiable).

3.6.5.1 USER MENU – KEYBOARD SETUP

To access the user menu you have to set the user password (modifiable): **0.**

From here you can:

- Set the date and the time by pressing on "*Clock*" (it appears the screen shown in Figure 18);
- Set the language by pressing on "*Language*";
- Access to the setup of the keyboard, pressing on "*Parameters*".

Figure 18. Date and time page settings.

It is possible to change the setup of the keyboard according to the parameters shown in the following table:

N.	PARAMETERS NAME	UNIT	DEFAULT VALUE	MINIMUM VALUE	MAXIMUM VALUE
1/3	User password	Numb	0	0	999
2/3	Idle Backlight intensity	%	5	0	100
3/3	Screensaver unlock Psw	Numb	0	0	999

Table 2. User's parameters menu (keyboard setup).

To change the value of a parameter:
- entered in "*Parameters*", use the up and down arrows to scroll through the pages of the parameters, until you find the desired parameter;
- press on the currently set value;
- the present value turns red to indicate that it can be changed by using the up and down arrows;
- Select the desired value and press the confirmation tick ✓.

Note: If you press outside the confirmation area, it returns again the previously value.

3.6.5.2   SERVICE MENU

In order to access to the menu, you must set the service password.
From here you can:
- configure the network, by pushing on "*Address configuration*";
- configure zones, by pushing on "*Area Configuration*";
- access to service's parameters Chiller, Evo Touch, pressing on "*Parameters*";
- Access to the alarm history, by pushing on "*Alarm list*".

The screens shown are as follows:
1. Address configuration
    1.1. Addresses assigns
    1.2. Scan network
2. Zone 01 configuration
3. Maintenance parameters
    3.1. Chiller
        3.1.1. Chiller 01
        3.1.2. Chiller 02
        3.1.3. Chiller xx
    3.2. Keyboard
4. Alarm list

3.6.5.3   MANUFACTURER MENU

To access to the manufacturer menu you must set the manufacturer password.
From here you can:
- access to the manufacturer parameters of the chiller, by pushing on "Chiller";
- Access to the manufacturer parameters of the Evo Touch, by pushing on "Keyboard"

3.6.6 HELP PAGE

On the instructions are given guidance on the meaning of the buttons; in the list that appears, for each icon is indicated its function.

4   STATUS MACHINES AND FUNCTIONS

4.1 NEWTORK MANAGEMENT

The network which is headed by the remote control Evo Touch can be composed of a maximum of 7 chiller/heat pumps. For what concerns the configuration of the network, there are the following functions:

- automatic scanning of the network to discover devices;
- Radiant panel's management (according to the set-point).

4.2 REMOTE CONTROL CONNECTED WITH MORE CHILLER IN THE NETWORK
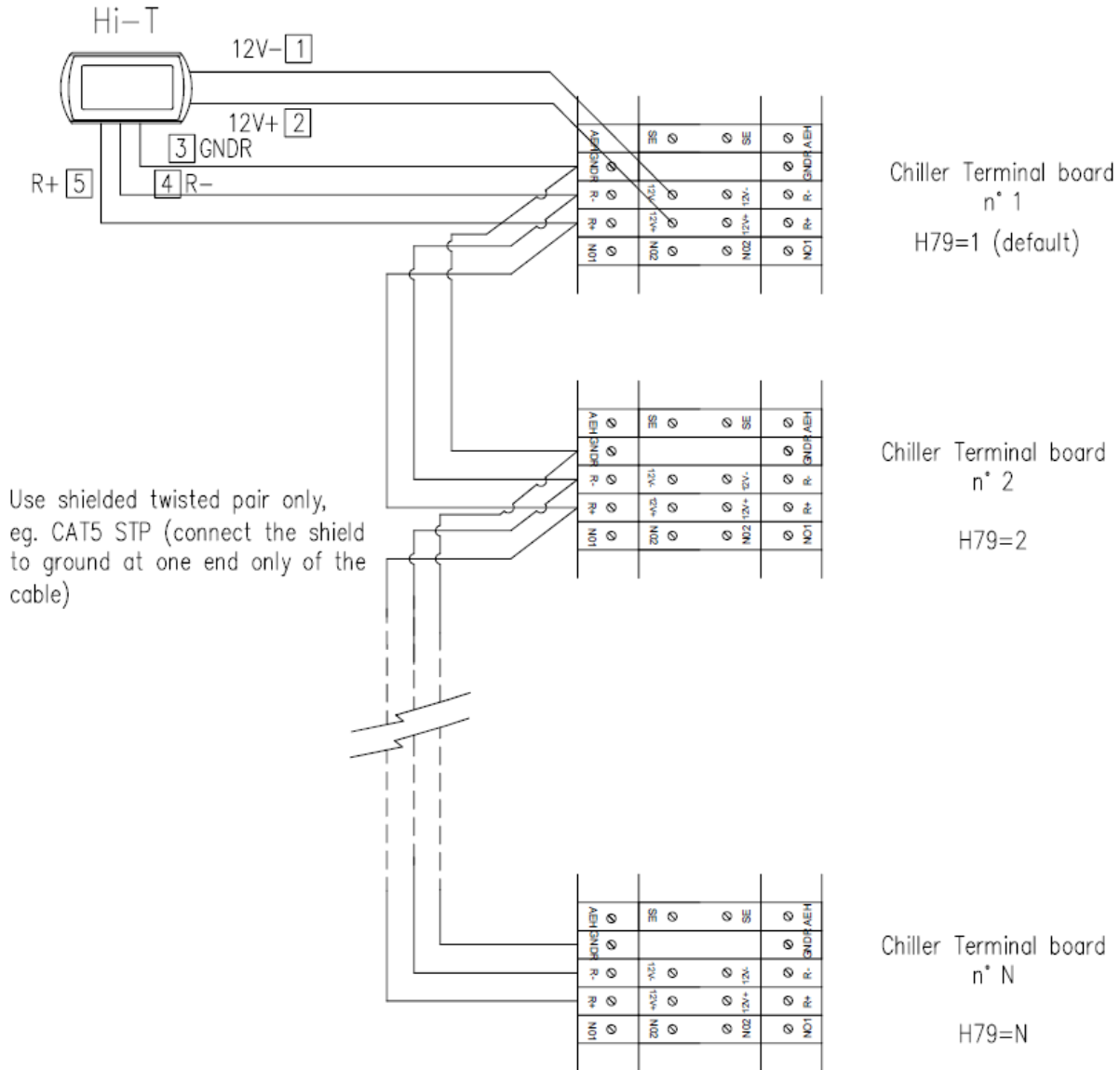
Max. 7 Chiller connected allowed (Nmax=7)

In the each on-board control panel, set the chiller (parameter **H79**) as described above.

Then connect the chiller and the remote control Hi -T as shown in the drawing.

In the remote control Hi- T, by setting the parameter **Par 8/44** (*Configuration- > Service Menu > Keyboard*) related to the number of chillers in the network, you can configure the network: with **Par 8/44 = 0** all the chiller in network feature a similar operation (parallel operation, according to a single set point), while whit **Par 8/44 ≠ 0** we have a decalibration on the steps of the chiller set point, allowing a cascade operation. In particular, the parameters to be set in a network of the chiller to be configured in a cascade are:

- **Par 8/44**: number of chillers in the network (for cascade operation);
- **Par 9/44:** Rotation period (for cascade operation);
- **Par 10/44**: (default 2.0°C): differential chiller (for cascade operation).

In the case of cascade configuration (**Par 8/44 ≠ 0**), the set point of each chiller is changed by a multiple value of the parameter **Par 10/44** (°C) (differential chiller), according to a step-decalibration. After each period equal to **Par 9/44** minutes, the priorities for the

intervention of the chillers change, by rotating the decalibration of the set point of the chillers, in order to balance the load on the various machines. If a chiller is in alarm, it is excluded from the regulation. By default **Par 8/44=0**.

4.3 CHILLER/HEAT PUMPS MANAGMENT

Up to 7 chiller (i-HWAK V2/V2+/V3/V4, i-SHWAK V4 series and i-HP series) can operate by mean of the Evo Touch remote control panel. The main functions that can be regulated are:

- ON/OFF controlling;
- Change of season (summer, winter, summer with sanitary mode, winter with sanitary mode, sanitary mode);
- Set-point setting;
- Display current alarms;
- Alarm history residing in the keyboard with the date and the time of the event;
- Access to the parameters of the chiller (password protected);
- Display of the main statuses of the chiller;
- Weekly programming in summer, winter, sanitary mode and of the legionella disinfection cycle.

4.3.1 ENABLING THE INDIVIDUAL CHILLER FOR THE PRODUCTION OF SANITARY WATER

Among the chillers (in the network) that are enabled to produce DHW water, you can choose using the appropriate sub-menu in "*Status setup*", which of these may participate in the sanitary production (see Paragraph 4.5.2). Only those selected will be enabled to the production of sanitary water, all the others are used exclusively for the plant.

4.4 SOLAR MANAGEMENT

This function is not totally configurable by Evo Touch controller. It is necessary to act directly on the chiller/heat pump on-board controller by setting the parameters **H85** to be **39**, **H86** to be **38** and **H103** to be **30**. The final enablement becomes by configuring the parameter **S01** to be 1 and configuring the relative **S** parameters also by mean of the Evo Touch remote controller.

4.5 ASSOCIATES UNIT OPERATION

4.5.1 ON/OFF

Once executed configuration, you can proceed to the "first start" of the connected units. You can turn on or off with a single tap the whole system headed by a single keyboard Evo Touch; otherwise you can individually turn on the chiller.
For operate the entire system:

1. from the main page of the system, go to "Status setup ⏻";
2. in the menu that appears are listed: SYSTEM, CHILLER.
3. Push on "System" and with a single operation you can turn on or off all the chillers that are part of the same system:
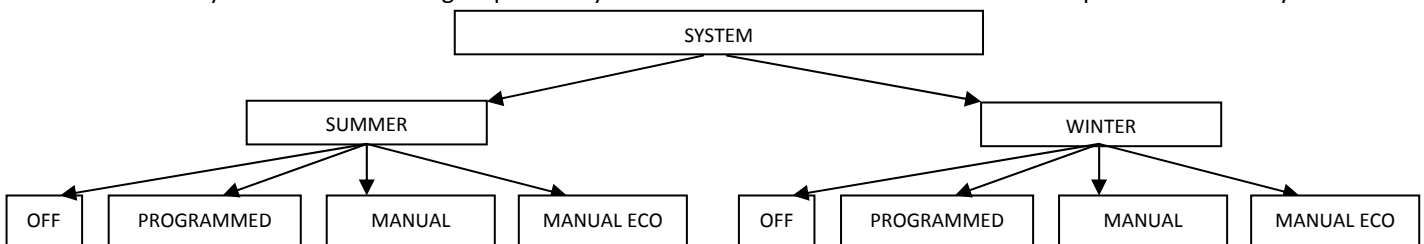
With "*Manual*" and "*Manual eco*" the set-point temperature set in the menu "*Set water*" and "*Set water eco*" is activated; they respectively correspond to the temperature of "normal" operation (1st set-point) and to the working temperature during the energy-saving operation (set-point economy).

By accessing "*Set Status*" and press on "*Chiller*" you can only manage the chiller interested in:
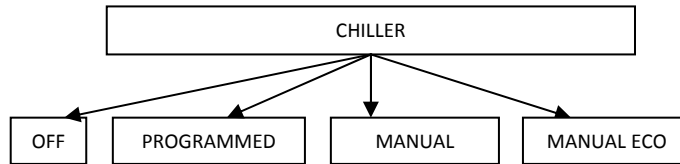
```
                    ┌─────────────────────┐
                    │       CHILLER       │
                    └─────────────────────┘
        ┌───────────┬───────────┴───────────┬────────────┐
        ▼           ▼                       ▼            ▼
   ┌─────────┐ ┌─────────────┐       ┌──────────┐ ┌─────────────┐
   │   OFF   │ │ PROGRAMMED  │       │  MANUAL  │ │ MANUAL ECO  │
   └─────────┘ └─────────────┘       └──────────┘ └─────────────┘
```

With "*Manual*" and "*Manual eco*", the set-point temperature set in the menu "*Set water*" and "*Set water eco*" is activated; they correspond respectively to the temperature of the outlet water during normal operation and during the energy-saving operation (Ex: in summer mode "*Set water*" might be 7°C, while "*Set water eco*" could be 10°C).

With "*Manual*" and "*Manual eco*" the set-point temperature set in the menu "*Set water*" and "*Set water eco*" is activated; they respectively correspond to the temperature of "normal" operation (1st set-point) and to the working temperature during the energy-saving operation (set-point economy).
Once you have set the status, in the "*Set Status*" the following icons may appear in the coincidence of the unit/zone set:

⏻	OFF	✋	MANUAL	✋eco	MANUAL ECO	🕐	PROGRAMMED	⏻	AMBIENT THERMOSTAT

Another way to set only certain units in a given status can be as follows:
1. set "*System*" in the manual, manual eco or programmed mode;
2. put off units that you do not want to activate.

The icon of "inactive thermostat" indicates the status of the ambient thermostat function of the Evo Touch control panel. To enable the thermostat function, press the corresponding icon. For the settings related to the function please refer to paragraph **"AMBIENT THERMOSTAT"**.
Note: Once the status is set, you must wait a minute to ensure that communication with the on-board control of the units in the network is going and the units themselves are activated in the set status.

4.5.2 ON/OFF SANITARY MODE

If the DHW mode is enabled (from *Home -> Configuration -> Service Menu -> Parameters -> Chiller -> Chiller name -> **H10**: sanitary presence = 1*), in "*Status setup*" also appears the word "*Sanitary mode*". From here you can decide which chiller to enables to produce the domestic hot water:
1. Enter the "Settings status", then in "Sanitary mode";
2. On the next screen select "All" to enable all the chiller to the production of sanitary water, or select only the chiller interested in this production (the other will be used exclusively for the plant);
3. Confirm by pressing the tick confirmation in the upper right area;
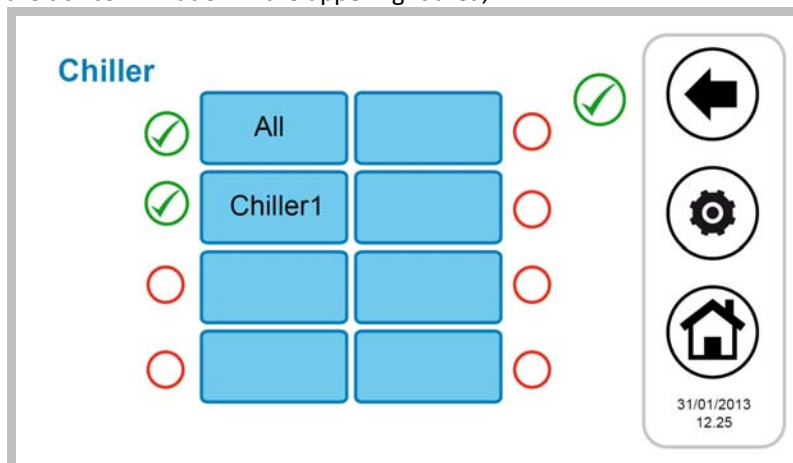
Figure 19. Chiller choice for sanitary water.

4. In the "*System*" menu (system main page -> "*Status setup*" -> "*System*"), with the sanitary mode enabled by the parameter **H10**, it appears also the words "*Winter and san*", "*Summer and san*", "*Sanitary*" .

```
                              ┌─────────────────────────┐
                              │          SYSTEM         │
                              └─────────────────────────┘
```

SUMMER	SUMMER AND SAN.	WINTER	WINTER AND SAN.	SANITARY(*)

OFF	PROGRAMMED	MANUAL	MANUAL ECO	OFF	PROGRAMMED	MANUAL	MANUAL ECO
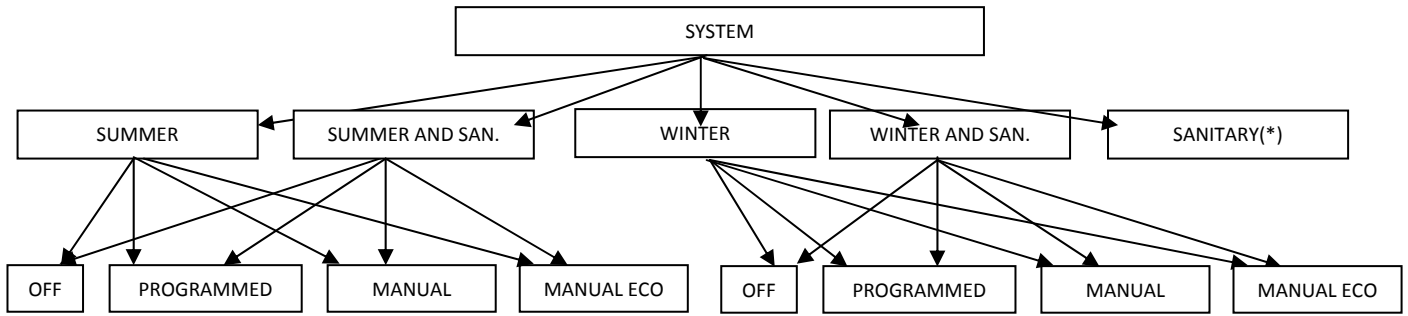
5. If the status of the system is set to "Summer and san" or "Winter and san", the priority is given on the production of domestic hot water; therefore the system goes first in domestic hot water production, when the sanitary is satisfied, the system switches the mode to summer or winter operation.

(*) If from: System main page -> "*Status setup*" -> "*System*" you select only the "*Sanitary*":

to put the sanitary in "*OFF*" or "*Programmed*" or "*Manual*" mode, then go to "*Status setup*", enter to "*Chiller*" and from there select the status (in this case both "*Manua*l" and "*Manual eco*" set the chiller in the sanitary manual mode).
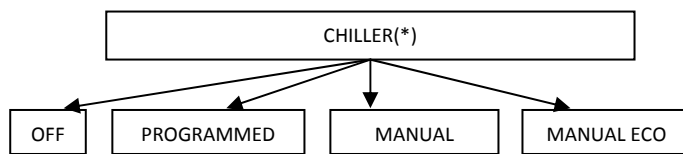
```
              ┌─────────────────────────┐
              │        CHILLER(*)        │
              └─────────────────────────┘
```

OFF	PROGRAMMED	MANUAL	MANUAL ECO

Note: Once the status is set, you must wait a minute to ensure that communication with the on-board control of the units in the network is going and the units themselves are activated in the set status.

4.5.3 SETTING OF THE SET-POINT

Management procedure of the set point of the different zones and chillers:

1. from the system main page, go to "*Set-point setup*" ；
2. here you will find a list of the chillers and the areas previously assigned:
- CHILLER
- ZONE1
3. Select chiller or zone of consideration;
4. possible settings are "Winter", "Summer", "Sanitary" for the chiller, "Winter" and "Summer" for the fan coil zones:

CHILLER

```
                        ┌─────────────────┐
                        │     CHILLER     │
                        └─────────────────┘
```

WINTER	SUMMER	SANITARY

Water set	Water set eco	Water set	Water set eco	Sanitary set	DHW preparator set

Change the value of the set with the up and down arrows within the maximum and minimum limits indicated and confirm
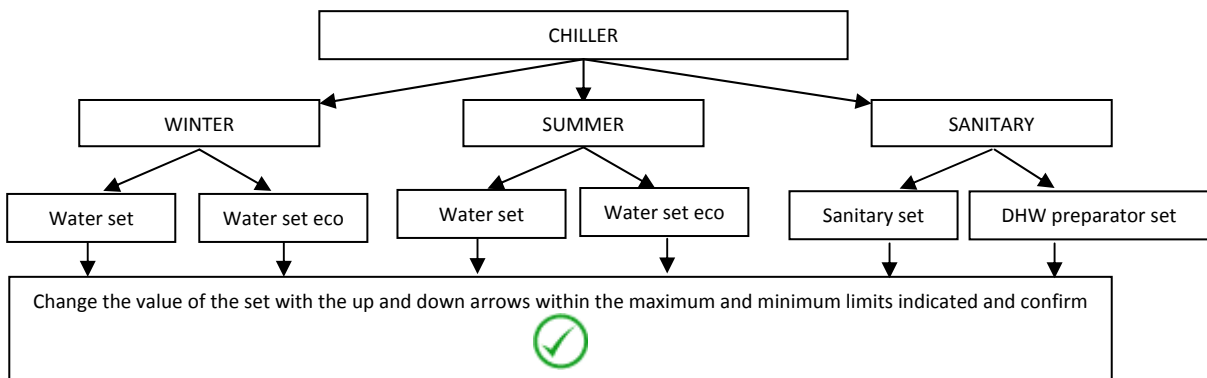
ZONE n
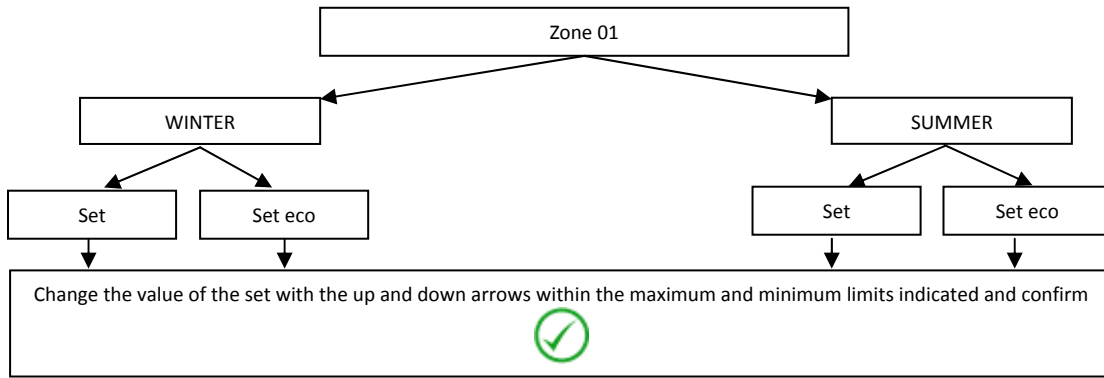
If the double set-point is enabled (from Home System -> *Configuration* -> *Service Menu* -> *Parameters* -> Chiller -> *Chiller name* -> **H82**: Enable second setpoint **= 2, 3, or 4**), (see Paragraph 4.9), the possible settings for the chiller are:

DOUBLE SET-POINT
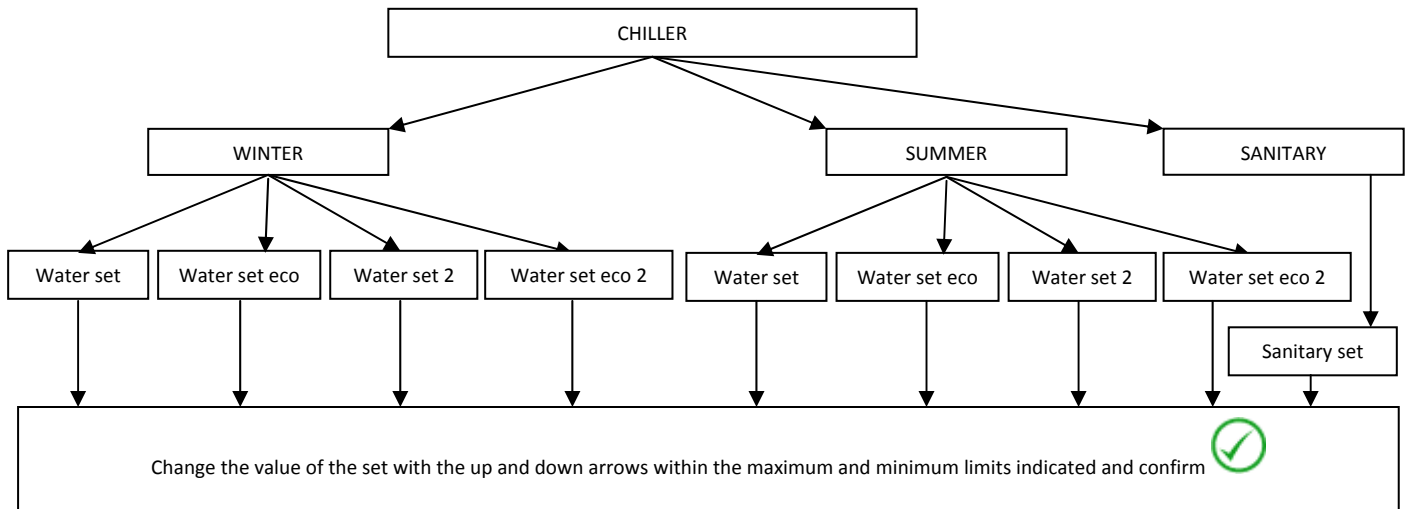
4.5.4 PROGRAMS SETUP (CHRONOTHERMOSTAT)

The programming of the chronothermostat is done on the chiller

From the main page of the system, go to "*Programs*" 🕐 ;
Now you can choose between 5 programs:

- "*Summer Chiller*", to set the weekly time programming of chillers in cooling mode;
- *"Winter Chiller"*, to set the weekly time programming of chillers in winter mode;

In addition, if is enabled the sanitary mode (from System main page-> *Configuration* -> *Service menu* -> *Parameters* -> *Chiller* -> *Chiller name* -> **H10**: sanitary **presence = 1**), you can access to two other programs:

- "*Sanitary mode*" to set the weekly time programming mode of the chiller in sanitary mode.
- *"Legionella disinfections"* to set the weekly time programming of the legionella disinfection cycle.

4.5.4.1 WEEKLY CHILLER PROGRAMMING

For the chiller can be defined on the seven days, independently and with minimum steps of 15 minutes, the status of operations:

- Off
- Normal operation (use of normal water control set)
- Economical operation (use of the set of economic regulation of water)

The weekly programming in summer operation is distinct from that one in winter mode.
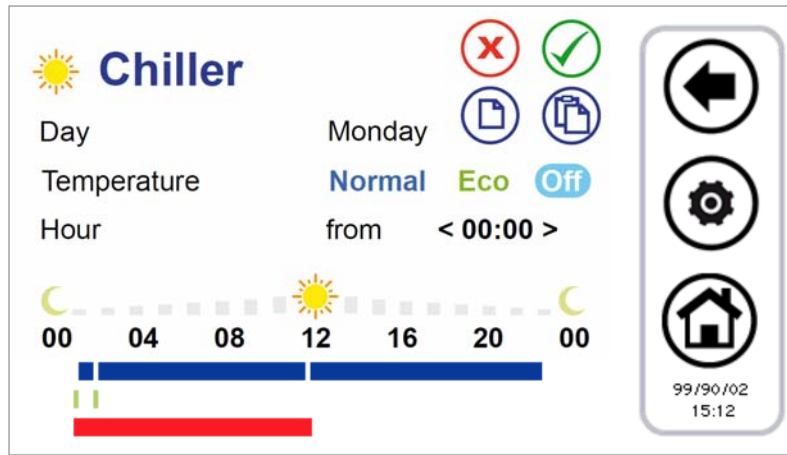
Figure 20. Chronothermostat, "Summer Chiller" page.

1. Scheduling of a day time-line:
- press on the day currently displayed to move to the next days and select a day;
- choose if you want to set the way of operation in normal mode (press "*Normal*"), or Economy (press *"Eco"*), or if you want to set to Off (press "*Off*");
- check that after "*Hour*" appears the word "*From*" (if appears instead the word "*To*", you need to press it once to display the word "*From*") and select the hour and minute (the minimum allowable variation is 15 minutes)for the beginning of the time period;
- press once on the *"From*" in a manner that appears the word "*To*" and select the hour and minute (the minimum variation permitted is 15 minutes) for the end of the time period;
- confirm the single time period pressing the green symbol of confirmation ✓;
- afterwards you can observe that, correspondingly to the selected time period, you will see a time-line bar of the colour of the type of the selected set (if normal blue, green when in economy mode, no bar in "Off");
- repeat the above steps for all the time slots that you want to set on that particular day.
- To exit and save changes you have made (on the whole program, for all week), press the <ESC> ⬅ button, while if you press the <Home> 🏠 button, you will exit without saving the changes.
2. It is possible to copy the programming for a particular day in another day; to do this:
- select the day you want to copy the scheduling;
- press the copy icon 🗋;
- select the day on which you want to copy the scheduling;
- press the paste icon 🗏.
3. It is possible to erase the programming of certain day or of all days, to do this:
- press the delete icon ⊗;
- at this point a screen will appear where you can select individual days to delete or select all the days;
- to confirm your selections, press the icon ✓ on the top right side.

Figure 21. Chronothermostat, erase programming page.

The chronothermostat (configuration page) colourful time-lines shows: the blue time-line indicating normal operation, the green time-line indicating the economical operation, the red time-line indicating the time in which the legionella cycle is programmed (thus the machine in that condition may be active even if the scheduler is set to Off).

4.5.4.2 WEEKLY PROGRAMMING SANITARY WATER PRODUCTION

In a similar way to what is reported for the settings on the chronothermostat of chillers and fan coils, you can define when to enable the production of sanitary hot water (by setting the individual days of the week, with a minimum step of 15 minutes). The settings that you can do are:

- Normal: Enable function;
- Off: Disabled function.

To set the programming, go to "*Programs*" -> "*Sanitary*" (the word "*Sanitary*" appears only if you have enabled the sanitary mode: System Main -> *Configuration* -> *Service menu* -> *Parameters* -> *Chiller* -> *Chiller name* -> **H10: Sanitary presence = 1**).

The procedure for configuring the programmable chronothermostat is therefore similar to those described above, with the only difference that the choice of the operation is only between "*Normal*" and "*Off*" (see figure below).
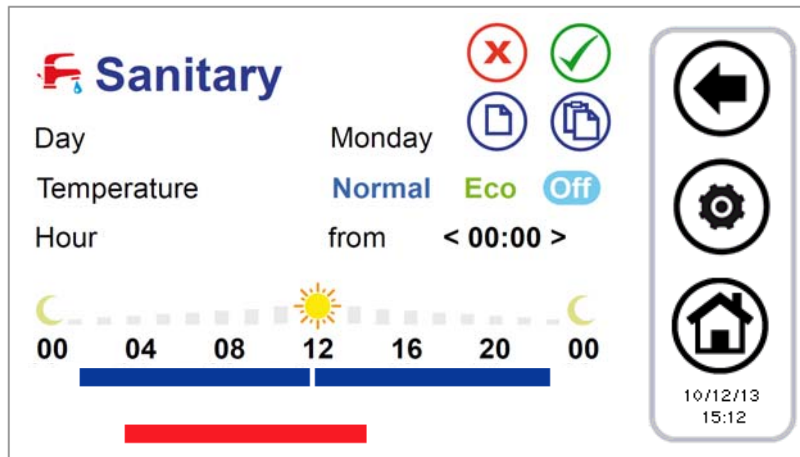
Figure 22. Chronothermostat, "Sanitary" page.

In the period when the function is active, the machines enabled to produce sanitary water are placed in the seasonal operation of the plant scheduled by the plant scheduler with the addition of the sanitary mode, that is, respectively:

- Summer + sanitary
- Winter + sanitary
- Only sanitary

4.5.4.3 LEGIONELLA DISINFECTION WEEKLY PROGRAM FUNCTION

If the sanitary function is enabled (from system main page -> *Configuration* -> *Service menu* -> *Parameters* -> *Chiller* -> *Chiller name* -> **H10: Sanitary presence = 1**), you can program the hours of the individual days of the week for activating the cycle of anti-legionella disinfection.

You select only the starting time (with 15 minutes steps), since the duration of the cycle is defined by a parameter with maintainer access rights (System main page --> *Configuration* -> *Service menu* -> *Parameters* -> *Keyboard* **-> Par 31/44: Legionella disinfection enable time**).

To carry out the programming you must enter into "*Programs*" -> "Legionella disinfection"; the procedure is simple because you have to select only the starting day and hour for the cycle (see the below figure).
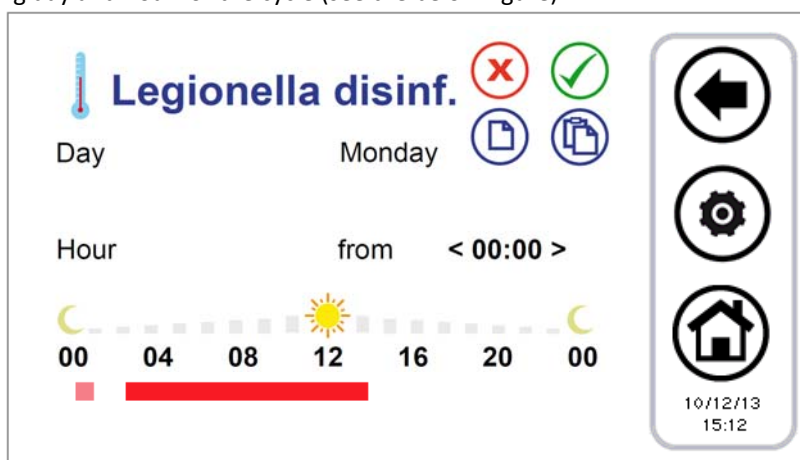
Figure 23. Chronothermostat, "Legionella disinfection" page.

The set timeline appears red-colored.

The pink line shows the eventual setting of the previous day that overruns in current day because the duration exceeds the midnight.

OPERATION:

- When anti-legionella cycle is expected, the heat pump unit changes automatically into sanitary mode in order to reach the setting values of the parameter **R27** (50°C.)
- When the DHW temperature sensor meets the value of **R27**, the compressor will stop operation and the DHW electric heater (DO = 26) will start after **R16** (1min).
- The DHW electric heater turns off if one of the following conditions is fulfiled:
  - The DHW temperature sensor detects a temperature = **R25** (80°C), hysteresis 'cut-on' of 1 ° C.
  - The finishing of the programmed cycle.

4.5.5 AMBIENT THERMOSTAT

The Evo Touch control panel can operate as a typical ambient thermostat.
The ambient thermostat function will be enabled/disabled, using the corresponding button at the bottom of the screen of the zone status setting.
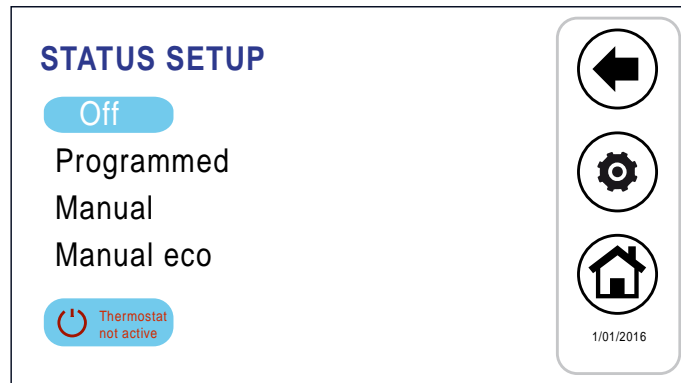
Figure 1. Status of settings

The thermostat activation key has two states depending on if the function is enabled or disabled.

Figure 2. Activation icon

When the icon displays the message "**thermostat off**" (default) this means that the thermoregulation where current Evo Touch controller is not active.
To activate the ambient thermostat function in the zone:
1) Press the activation icon, displaying "**Thermostat on**".
2) Select the mode in which the thermoregulation shall be carried out of the refrence zone, by setting the parameters from **P48** to **P56** for the winter and from **P57** to **P65** for the summer. See Chapter 7.

The call of the ambient thermostat shall be active when the setpoint of the zone is not fulfilled, the heat pump is enabled for operation.
The call of the ambient thermostat is disabled when the temperature detected by the **Evo Touch** thermostat is greater than the zone setpoint, and the heat pump is in standby mode.

4.6 KEYBOARD SETTINGS PROCEDURE

4.6.1 SETTING OF LANGUAGE AND DATE/TIME

To set the keyboard language:
1. from the system main page, go to "*Configuration*" ;
2. then, go to "User menu" ;
3. enter the user password and press the confirmation tick ⊘ (The default password is 0);
4. go to "*Language*";
5. Select the desired language.

To set the date and the time of the keyboard:
1. from the system main page, go to "*Configuration*" - > "User m*enu*";
2. enter the user's password and press the tick key to confirm;
3. go to "Clock";
4. set date and time using the arrows (the values to adjust will be red-colored);
5. when all values have been set, press the icon with the tick to confirm.
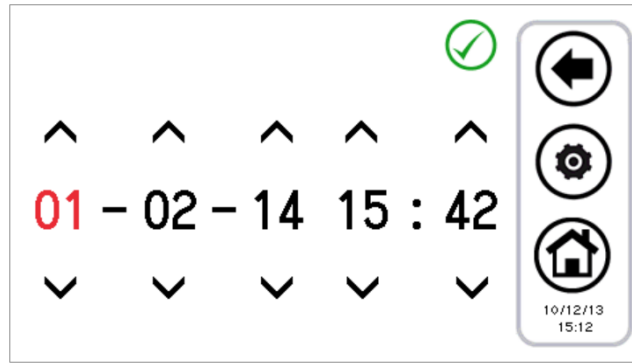
Figure 24. Page "Clock".

4.7 DIAGNOSTIC ERRORS

4.7.1 ACTIVE ALARMS

You can display the current alarms of the connected units. To do this, from the home page, press the triangle icon of danger, if present; from here you can access to the list of all active alarms in the system.

Also, when you are in an unit page (i.e. Chiller page, see Paragraph 3.4.1), by pressing the triangle that appears on the machine, you go to a menu where you can see current alarms of the selected machine.

4.7.2 ALARM HISTORY

The keyboard manages a detected alarms list for all the plant that shows the date and time of the alarm, the affected machine and alarm type. In the historic are stored up to 100 alarms, once exceeded the limit, it automatically deletes the older alarms.

To go to the alarm history: from the system main page, go into "*Configuration*" -> "*Service menu*" -> "*Alarm list*".

Having maintainer password, you can set that the alarm history is also accessible from the user menu; to do this go into "C*onfiguration*" -> "*Service menu*" -> "*Parameters*" -> "K*eyboar*d" -> **Par 33/44: Enable user alarm log = 1**.

4.8 DOUBLE SET-POINT

The double set-point function introduces a second plant side set-point (both in cooling mode and in heating mode).
The application field is primarily that of the floor cooling.
The purpose of the application is to prevent in any condition the formation of condensation on the floor, and in any case to ensure the welfare thermo hygrometric.

The activation of the double set-point is by means of maintainer parameters (from System main page -> *Configuration* -> *Service menu* -> *Parameters* -> *Chiller* -> *Chiller name* -> **H82: Enable second setpoint ≥ 2**, ref. the control manuals of the chiller unit for allowable values). It is required also to set a digital output for controlling the three-way valve used to divert the flow of water between the floor and fan coils. The function of humidistat is instead carried out directly by the Evo Touchremote control panel, by means of its integrated sensors and the logic internally implemented related to the control of dew point and dehumidification.

Please refer to the manual of the chiller for the correct setting of parameters related to the double set-point, as well as for the electrical connections to be done in the terminal board of the chiller.
The set-points can be set with double set-point function enabled are:

| Setpoint	Setpoint on Evo Touch	Setpoint onboard control panel	Summer	Winter
First setpoint (°C)	T water	Coo/Hea	7 (5÷18)	45 (35÷57)
First setpoint eco (°C)	T Water ECO		12 (5÷18)	40 (35÷57)
Second setpoint (°C)	T2 water	Co2/He2	18 (7÷23)	35 (25÷45)
Second setpoint eco (°C)	T2 water ECO		23 (7÷23)	30 (25÷45)

Table 3. Set point settings with enable double set point.

To manage the setpoint:
- from the Evo Touch controller →"*Set-point setup*" menu -> "*Chiller*" ->"*Summer*" o "*Winter*" (see Paragraph 0).
- from the on-bard control panel → SET button.

The second setpoint is greater than the first set point in summer and lower in winter:
- in summer: $T_2 \geq T$
- in winter: $T_2 \leq T$

The parameters to be set for the management of dehumidification are accessible from the maintenance menu (*Configuration* -> *Service menu* -> *Parameters* -> K*eyboard*):

Parameter	Name	Unit	Default	Min.	Max.
Par 42/44	Dew-point temp. margin	°C	5.0	0.0	50.0
Par 43/44	Min. staying time in dehumidification	Seconds	300	0	600
Par 44/44	Max. staying time in dehumidification	Seconds	600	0	1200

Table 4. Service keyboard parameters for dehumidification.

Note: If in the chiller is configured the presence of a digital input to the management of the second set point (chiller parameter **H44=26,** terminals SE-SE, ref. Chiller manual), the management of the humidity control is not done from the remote control.
The digital input is also possibly used for switch between the first and second set point during operation in winter mode.

With double set-point function enabled, if the chiller works on the second set-point (radiant panels side), the double set-point icon appears in the toolbar of the functions in the pages of chillers and fan coils and it remains transparent.

If, however, the chiller switch to thermoregulate on the first set-point (fan coil side), the double set-point icon appears colourful.

Similarly, the entry into dehumidification is marked in the function bar of chillers and fan coils by the transition from transparent icon to colourful icon.

With parameters **H82>1**:

	FLOOR SIDE FUNCTION (2° SET-POINT)	FAN COIL SIDE FUNCTION (1° SET-POINT)
DOUBLE SET-POINT ICON		
ICON DEHUMIDIFICATION		 if dehumidification is active

Table 5. Double set-point/dehumidification icon.

4.8.1 DEW POINT TEMPERATURE AND DEHUMIDIFICATION CONTROL

The dew point temperature will be calculated by reading the internal temperature and humidity sensors.
Meaning of parameters:
- Tint: ambient temperature dtected by the indoor temperature sensor (°C)
- Tr: calculated temperature of the dew point (°C)
- odr: adjustment offset (°C)
- Hy: adjustment hysteresis (°C)
- tAr: adjustment time (min.)
- Activation time relay: 0÷100% of tAr
- The temperature that is measured from the sensor inside the controller will be compared with the dew point (evaluated at the last moment of tAr) added to the parameters odr and Hy:
- If Tr <Tint < Tr + odr → the relay is activated for all next tAr time.
- If Tr + odr < Tint < Tr + odr + Hy → the relay is activated for the percentage value of tAr that is detected on the pump.
- If Tint > Tr + odr + Hy → the relay is activated for all the next tAr time.

The parameters tAr, odr and Hy are set in the factory and can be changed.
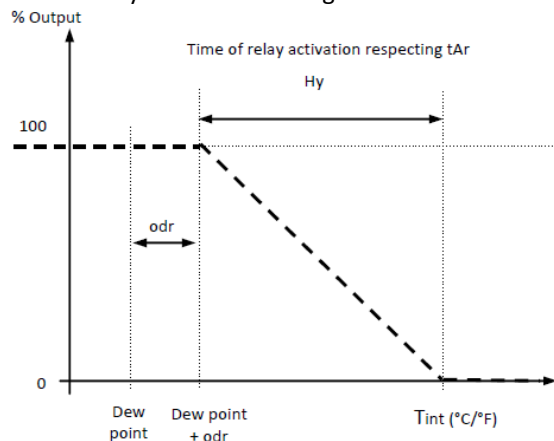
Figura 3: Dew point temperature - Humidostat

4.8.2 MEASUREMENT OF TEMPERATURE AND HUMIDITY

The ambient temperature and the relative humidity measured by the sensors built into the Evo Touch remote control, are available to the chiller, which can then use these values measured for their regulators, where required.

4.8.3 DEW POINT AND DEHUMIDUFUCATION CONTROL

Given the environmental temperature and the humidity, the Evo Touch remote control calculates the dew point.
In operation of the plant in summer mode, with the double set-point function active on chillers and thermoregulation normally made with the radiant panels (second set of work), it activates a control to keep the dew point of at least a quantity defined by the

keyboard maintainer parameter *Par42/44:* *"Dew-point temp. margin* " °C below the ambient temperature detected by the control itself.

Instead, when *ambient temperature < Dew Point + Margin temp. Point*:

- The fan coils for dehumidification turn on.

- The chiller start working with the set-point for the fan coils.

The permanence remains in this status until the temperature returns to:

Ambient temperature ≥ Dew point + Dew temp. margin + 1°C.

Even in the case where the above condition is verified, it remains in the status of dehumidification for at least the time set by maintainer parameter *Par43/44: "Min. staying time in dehumidification",* in order to avoid annoying oscillations.

If the above condition is not satisfied after a maximum time given by the maintainer parameter **Par44/44**: "*Max Dehumidification time*", the machine comes out from dehumidification. To avoid returning immediately, in this case it requires a minimum staying in adjustment to the radiant panels, still given by *Par43/44: "Max. staying time in dehumidification".*

4.9 CLIMATIC COMPENSATION

It is possible to compensate the set-point according to outdoor temperature, in a different way between heating and cooling modes, first and second set-point.

In such a case be sure that the *b08* parameter *(System main page -> Configuration -> Service menu -> Parameters -> Chiller -> Chiller name -> b08: Enab. dynamic set point)* is disabled (=0) on the chiller.
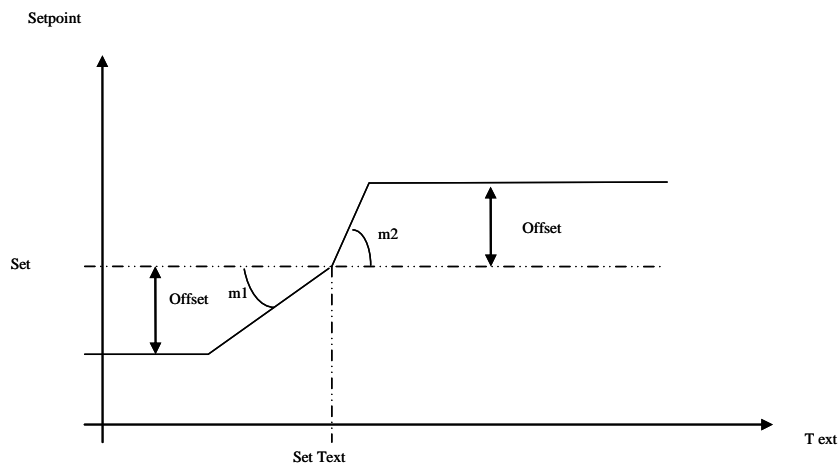
Figure 25. Climatic compensation.

- Set = T water, T water ECO o T_2 water, T_2 water ECO, settable from the page: "*Set-point setup*" -> *"Chiller".*
- *Offset* = offset settable from the page: "*Set-point setup*" -> *"Chiller"* (the variable "*Offset*" appears only if the *"m" coefficients have been configured*).
- *Set Text, m1, m2* = parameters which can be set from: *"Configuration" -> "Service menu" -> "Parameters" -> "Keyboard"* (see paragraph Evo Touch control panel configuration parameters).

To exclude the climatic compensation from the user, you have to set to zero all the offsets in the menu "*Set-point setup*" -> *"Chiller".*

To exclude the climatic compensation from the service, you have to set to zero the "*m*" coefficients in the service menu, keyboard parameters.

The outdoor temperature is detected by a dedicated sensor already wired to the heat pump.

4.10 UNIQUE-PUMP FUNCTION IN NETWORK

It allows managing a network of up to 7 i-HP chiller/heat pumps with mod.Gi accessory where the water outlet circuits connected in parallel, and a solenoid valve in series which excludes individually their connection.

The network includes a unique pump, a common storage tank and a Evo Touch remote control panel.

The hydraulic balance of the system is delegated to the installer who must take into account the dislocation of the machines and their capacity.

The network (if configured) can menage the summer, winter and DHW modes. The Evo Touch remote control panel manages the operation mode of the network, unique pump function according to the thermoregulation of the network, and also transmits the temperature of the tank and possible alarms.

To enable the function, please enter the manitener password from the controller on-board unit of each heat pump in the network:

Settings of i-HP n°1 configured with Evo Touch:

Par.	Unit	Value	Description	Function	Reference terminals	Notes
*H10	Num	1 / 2	Enabling of DHW	Enabling the DHW =1 the remote on-off function does not disenable the DHW production. =2 the remote on-off function disenables the DHW production.		
*H19	Num	6	Analog input	DHW sensor	ADI2 ADI2	
H24	Num	41	Analog input	Plant remote sensor	AI1E AI1E	Sensor characteristics: NTC-10kΩ a 25°C β 343
*H44	Num	0 (default)	Digital input	Disenabled		
H49	Num	0 (default)	Digital input	Disenabled		
*H61	Num	6 (default)	Output under voltage	DHW valve	NO1 (phase) N (neutral)	Output under voltage 230V ac, 50Hz, 5° resistive, 1 A inductive.
H68	Num	7	Uscita in tensione	Solenoid valve	NO1E (phase) N1E (neutral)	
H69	Num	42	Output under voltage	Unique pump in network	NO2E (phase) N2E (neutral)	
H79	Num	1 (default)	Serial address			
P18	Num	1	Enabling the unique pump function in network			

Settings of i-HP n°2÷7

Parameter	Unit	Value	Description	Function	Reference terminals	Notes
*H10	Num	1 / 2	Enabling of DHW	Enabling the DHW =1 the remote on-off function does not disenable the DHW production. =2 the remote on-off function disenables the DHW production.		
H68	Num	7	Output under voltage	Solenoid valve	NO1E(phase) N1E(neutral)	
H79	Num	2÷7	Serial address			
P18	Num	1	Enabling the unique pump function in network			

(*) Necessary to enable the domestic hot water (DHW) function.

4.10.1 ALARMS

The communication alarms of the system can all automatically reset theirselves.

After the reset of the communication alarm, the normal operation will resume

Configuration parameter	Level	Communication error between Evo Touch and i-HP1	Communication error between Evo Touch and one or more i-HP 2÷7
P19=0	i-HP 1	i-HP 1 turns off. Unique pump in network turns off Solenoid valve closed.	i-HP 1 turns off.
	i-HP 2÷7	Evo Touch turns off all the heat pumps of the network	Evo Touch turns off all the heat pumps of the network
P19=1	i-HP 1	The i-HP 1 chiller continues to operate with local parameters Unique pump in network is active	Manages the unique pump in the network with the values received from the heat pumps remained in the network
	i-HP 2÷7	The i-HP 2÷7 chillers continue to operate with local parameters	The heat pumps with communication error operate with the locale parameters, while the remaining heat pumps keep regular operation on the network.

4.11 SECONDARY CIRCULATOR

It allows the management of a secondar or re-launching circulator to serve the plant. The following functions should be active:

- Secondary circulator management function, see the related paragraph in the user's-installer's manual of the unit;
- Ambient thermostat function, see paragraph 4.5.5.

The secondary pump will be activated if there is the thermostat call (zone of Evo Touch is fulfilled).

After the end of the plant call (zone of Evo Touch is fulfilled), the secondary pump will turn off after a delay of **P02** (post-pumping). The thermoregulation of the heat pump is independent of the thermostat call.

When the heat pump is off, the secondary (re-launching) circulator will be off regardless of the thermostat call.

4.12 OTHER FUNCTIONS

For any information related to other functions of the chillers that are shown in the display of Evo Touch control panel (e.g. enabling or activation of plant electrical heater, sanitary electrical heater, boiler integration, defrosting cycle, water-side or air-side anti-freeze heaters, etc…), please refer to chiller instructions manual.

4.13 SPECIAL FUNCTIONS

From the main menu, choosing the icon "additional functions", you go to the following menu:

Figure 26. Page of "Special functions".

The available functions are described in the following paragraphs.

4.13.1 SCREED FUNCTION

By pressing the icon related to the screed function you access to a new menu in which you can choose which units should be enabled to this function:
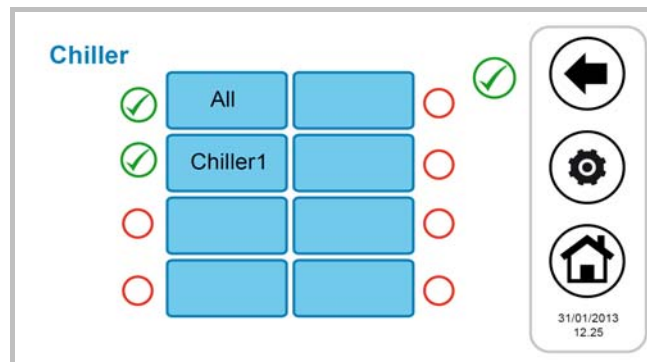
Figure 27. Chiller multiple choice, screed function.

Once you choose the chillers which participate to this regulation, the system has the following behaviour:

- All the heat pumps enabled in the screed function are forced to heat mode.

- All the heat pumps not enabled in the screed function are forced to off mode.

- The heat pumps set-point is given by the parameter "Screed function set", which can be set among the service parameters (*Configuration -> Service menu -> Keyboard -> **Par 36/44**: " Screed function Set"*).

- The function has a duration given by the service parameter: *Configuration -> Service menu -> Keyboard -> **Par 37/44**: "Duration screed function"*. After such period the system returns to the previous settings.

4.14 PASSWORD AND PROTECTIONS

There are more protection and password levels.

An initial distinction includes the following three access levels:

- User's level
- Service level

- Manufacturer's level

To each of these three different levels you can access from the "Configuration" screen, previously inserting a dedicated password.

The user's password, default set to "0", can be modified by accessing to user's parameters (see Paragraph 3.6.5.1).

The service's password can be modified by accessing to service parameters (see Paragraph 3.6.5.2).

The manufacturer's password can be modified by accessing to manufacturer's parameters (see Paragraph 3.6.5.3).

Once the password has been inserted, is allowed the full navigation in all the pages in which the access has been granted.

Once the navigation has terminated, log-out should be done by a touch on the related symbol which is flashing in the low-right side of the home page.

The log-out happens automatically after 5 minutes of touch-screen inactivity or after 20 minutes from the access to the current level of protection. These timing values can be modified from service or manufacturer's parameter.

There is a password to unlock the screensaver, set by default to "0" and modifiable by accessing to user's parameters (see Paragraph 3.6.5.1).

5   REMOTE ACCESS

The device can interact with the local network by an Ethernet port access.

The access must be enabled through a manual installation in the local network (no DHCP services are forecasted).

The device can communicate through browsers compatible with HTML 4.01 and/or TPFT services RFC 1350 compliant.

The web-server interface is a textual type and is below described.

5.1   SECURITY

The insertion of the touch screen in a LAN network must guarantee a higher level security, which must be ensured by the installer, against undesired attacks from outside agents (hacker).

The device will not enforce security systems and will assume that anyone who interacts from the network is enabled to do so.

5.2   LOCAL WEB SERVER

A local web-server has been implemented to access to Evo Touch from the local network with a browser HTML 4.01 compatible.

To access check on page "*Ethernet Configuration*" accessible from the home page by pushing on the following icon:

Accessing by service/manufacturer's allowances, it is possible to modify the default values of each address. After having modified the addresses, please shut down and restart the Evo Touch in order to validate the modifications.

After carrying out the connection, you can display the following pages:

Figure 28. Evo Touch Ethernet main page.

The indications on Status, Season and Alarms are those of the entire system.

The room temperature and the relative humidity are the ones measured from the sensors integrated inside the current Evo Touch.
To shift to next available pages, click on the links at the page bottom.
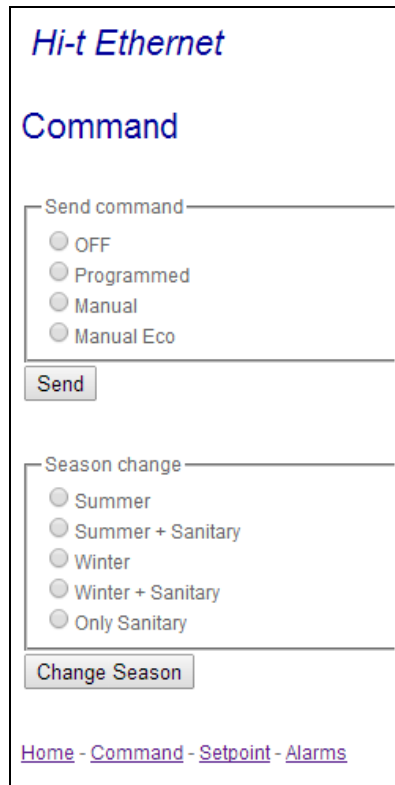
Figure 29. Evo Touch Ethernet "Command" page.

The commands present in the "Command" page are referred to the entire system.
Once sent the commands, a confirmation page will be displayed.

Figure 30. Command sent confirmation page.

Figure 31. Evo Touch Ethernet "Set-point" page.

In the "Set-point" page are available, in read only mode, the set-point set by Evo Touch.

Figure 32. Evo Touch Ethernet "Alarms" page.

The "Alarms" page is related to all the active alarms inside the system at the moment when the page is shown.

6   FIRMWARE UPDATE

In the home page, by pressing on the symbol in the left-high side, showing Evo Touch, it is possible to see the current firmware version installed in the touch-screen.

In case of firmware update, it is possible to make the upgrade by means of an USB key, using the on-board USB port.

For the upgrade:

-   copy the upgrade file in the main root of a USB pen-drive;
-   insert the pen-drive into the Evo Touch USB port;
-   enter into "Configurations -> "User's menu" (see Paragraph 3.6.5.1);
-   after having inserted the user's password and entered into "User's menu", select the string which appears "*Firmware update*";
-   the controller automatically recognizes the firmware presence inside the USB pen-drive and starts the updating procedure;
-   follow the instructions shown in the display and extract the pen-drive only when requested by the message "*Remove the USB pen. The panel will reboot to finish the update*";
-   wait until the update has completed.

7 <Evo Touch> CONTROL PANEL CONFIGURATION PARAMETERS

The maintainer parameters of the chillers are reported in the user's-installer's manual of "i-HWAK(/WP) V2/V2+/V3/V4, iSHWAK V4" Minichiller/Heat pump units and of the "i-HP" Chiller/Heat pump units.
The maintainer parameters of the remote control panel are listed below:

N°	PARAMETER	MINIMUM VALUE	MAXIMUM VALUE	DEFAULT VALUE	MEASUREMENT UNIT
1	Communication Timeout	1	255	120	Seconds
2	Maintenance PSW	0	999	/	---
3	Min FC cooling setpoint	1.0	60.0	15.0	°C
4	Max FC cooling setpoint	1.0	60.0	45.0	°C
5	Min FC heating setpoint	1.0	60.0	5.0	°C
6	Max FC heating setpoint	1.0	60.0	45.0	°C
7	Keypad address	100	130	100	---
8	Number of chiller in network	0	7	0	---
9	Rotation time	0	800	30	Minutes
10	Diff. between units	1.0	60.0	2.0	°C
11	Set Text comp CHIL Cool	0.0	50.0	20.0	°C
12	Set Text comp CHIL Heat	-20.0	35.0	10.0	°C
13	m1 comp Text CHIL	-10.0	10.0	0.0	---
14	m2 comp Text CHIL	-10.0	10.0	0.0	---
15	m3 comp Text CHIL	-10.0	10.0	0.0	---
16	m4 comp Text CHIL	-10.0	10.0	0.0	---
17	Set Text comp FC Cool	0.0	50.0	25.0	°C
18	Set Text comp FC Heat	-20.0	35.0	15.0	°C
19	m5 comp Text FC	-10.0	10.0	0.0	---
20	m6 comp Text FC	-10.0	10.0	0.0	---
21	Set2 Text comp CHIL Cool	0.0	50.0	20.0	°C
22	Set2 Text comp CHIL Heat	-20.0	35.0	10.0	°C
23	Second m1 comp Text CHIL	-10.0	10.0	0.0	---
24	Second m2 comp Text CHIL	-10.0	10.0	0.0	---
25	Second m3 comp Text CHIL	-10.0	10.0	0.0	---
26	Second m4 comp Text CHIL	-10.0	10.0	0.0	---
27	ID on 15-16	0	1	0	---
28	Enable Beep	0	1	1	---
29	Installer Psw Timeout	0	120	5	Minutes
30	Installer Psw exit time	0	120	20	Minutes
31	Legionella disinf. time	10	600	60	Minutes
32	User Password	0	999	0	---
33	Enable user alarm log	0	1	0	---
34	Idle Backlight intensity	0	100	5	%
35	Screensaver unlock Psw	0	999	0	---
36	Screed function set	0.0	55.0	35.0	°C
37	Duration screed function	0	100	10	Ore
38	Timeout LCD navigation	30	300	60	Seconds
39	Thermostat temp. decalibration	-10.0	10.0	0.0	°C
40	Thermostat humidity decalibration	-10.0	10.0	0.0	%
41	Bitmap forcing icons	0	4095	0	---
42	Dew-point temp. margin	0.0	50.0	5.0	°C
43	Min. staying time dehumidification	0	600	300	Seconds
44	Max. staying time dehumidification	0	1200	600	Seconds
45	Behavior offline chiller system for adjusment of unique pump in network	0	1	0	Flag

46	Temperature regulation in zone 1 "Winter" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
47	Temperature regulation in zone 2 "Winter" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
48	Temperature regulation in zone 3 "Winter" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
49	Temperature regulation in zone 4 "Winter" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
50	Temperature regulation in zone 5 "Winter" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
51	Temperature regulation in zone 6 "Winter" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
52	Temperature regulation in zone 7 "Winter" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
53	Temperature regulation in zone 8 "Winter" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---

54	Temperature regulation in zone 9 "Winter" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
55	Temperature regulation in zone 1 "Summer" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
56	Temperature regulation in zone 2 "Summer" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
57	Temperature regulation in zone 3 "Summer" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
58	Temperature regulation in zone 8 "Summer" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---
59	Temperature regulation in zone 9 "Summer" 0 = Average temp. of the fancoils of the zone 1 = Minimum temp. of the fancoils of the zone 2 = Maximum temp. of the fancoils of the zone 3 = Temperature measured by the "Evo Touch" control panel	0	3	1	---

RDZ

invisible heating and cooling

RDZ S.p.A.
⌂ V.le Trento, 101 (S.S. 13 Km 64.5) 33077 SACILE (PN) - Italy
☏ Tel. +39 0434.787511   ☏ Fax + 39 0434.787522
⊕ www.rdz.it   ✉ rdzcentrale@rdz.it

COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =