■ Decorative radiators ■ Comfortable indoor ventilation ■ Heating and cooling ceiling ■ Clean air solutions

User manual

ComfoClime 24
ComfoClime 36

always the best climate

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This manual has been compiled with the utmost care. The publisher cannot be held liable for any damage caused as a result of missing or incorrect information in this manual.

IMPORTANT!

Carefully read this manual before use.

The ComfoClime is hereinafter referred to as "device".

This manual explains how to install, configure and use the App in order to control the ComfoClime.

Since that application is continuously developed and improved, your actual release may differ a bit from the descriptions shown in this document.

Due to the automatic update procedure of mobile app stores (Google Play and Apple Store), the App will automatically upgrade as soon as an update is released.

NOTE : this manual has been compiled with the utmost care. However, no rights can be derived from it. In addition, we at all times reserve the right to change the contents of this manual, without prior notice.

The following pictograms are used in this document:

Symbol	Meaning
	Consult the manual before using/operate the equipment.
	Point of attention / important informations.
	Risk of compromised performance or damage to the ventilation system / risk of personal injury.
	Caution electrical hazard!

1 Installation

To configure and operate the ComfoClime the user must install the ComfoClime Control app by downloading it from Google Play or Apple Store.

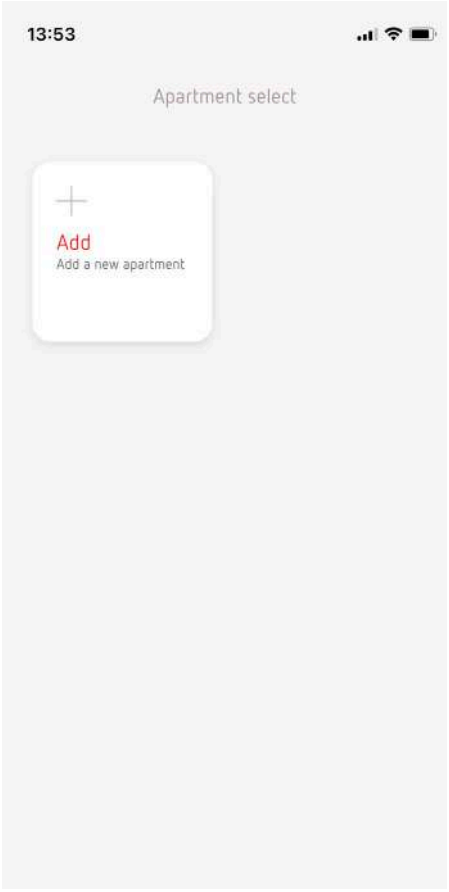
Once installed the app will appear among the phone apps with its icon:

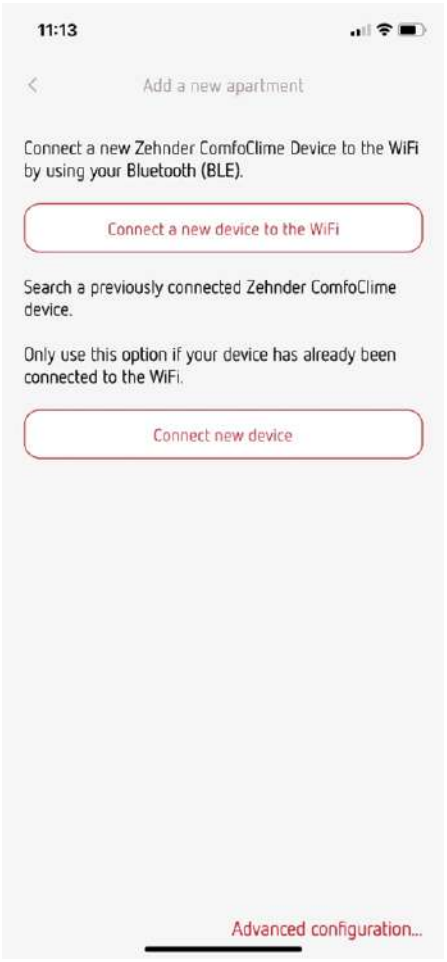
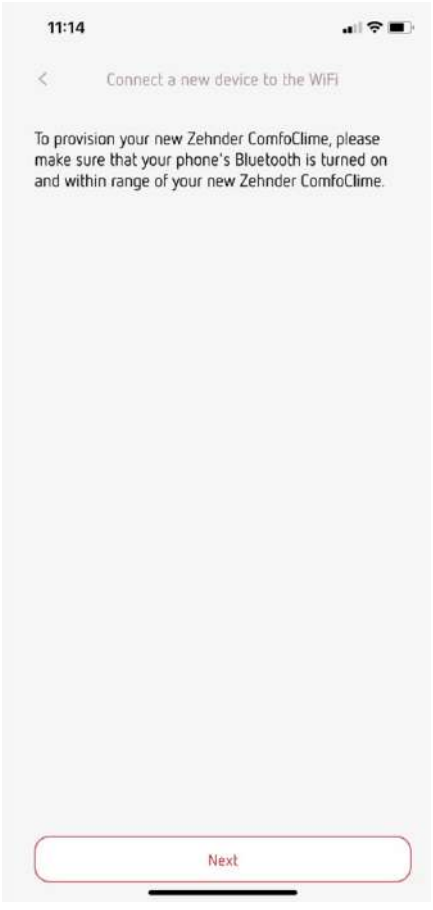
2 The provisioning

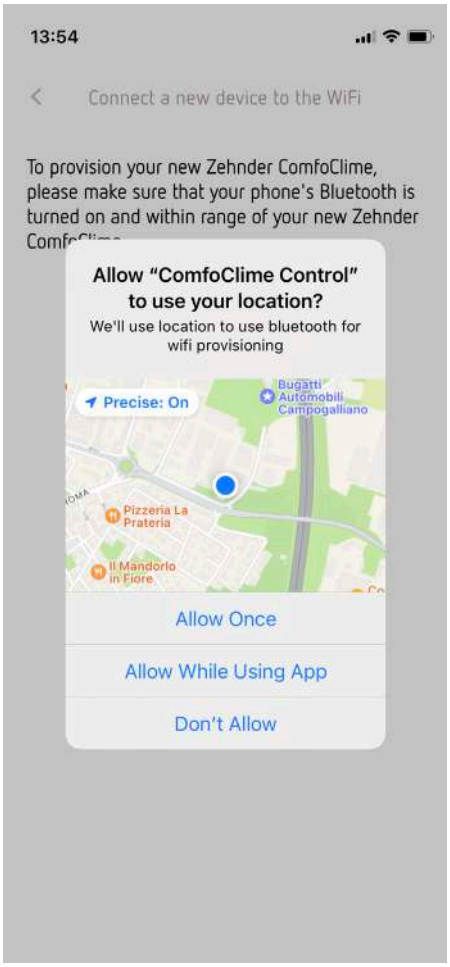
At the first launch of the app, the user will be prompted to detect the ComfoClime and connect it to his home WiFi network (if available).

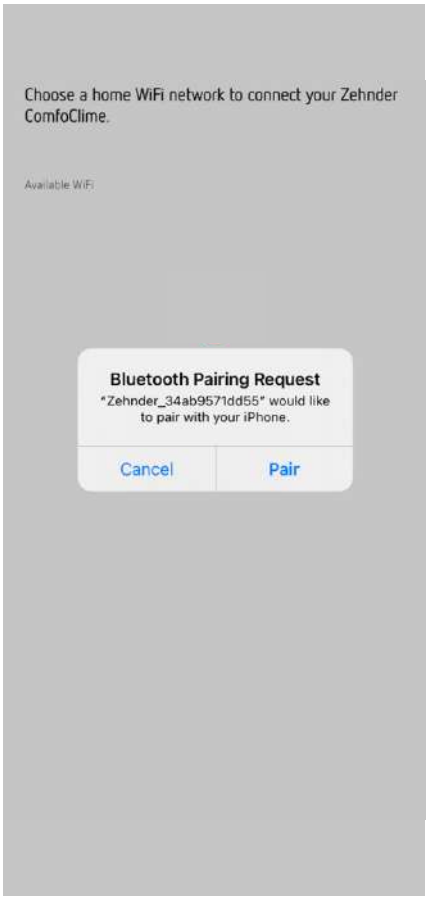
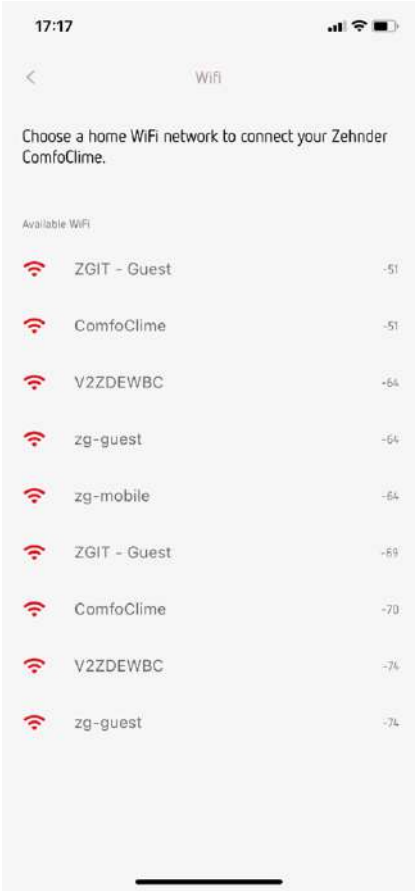
The ComfoClime can be controlled only through the ComfoClime Control app.

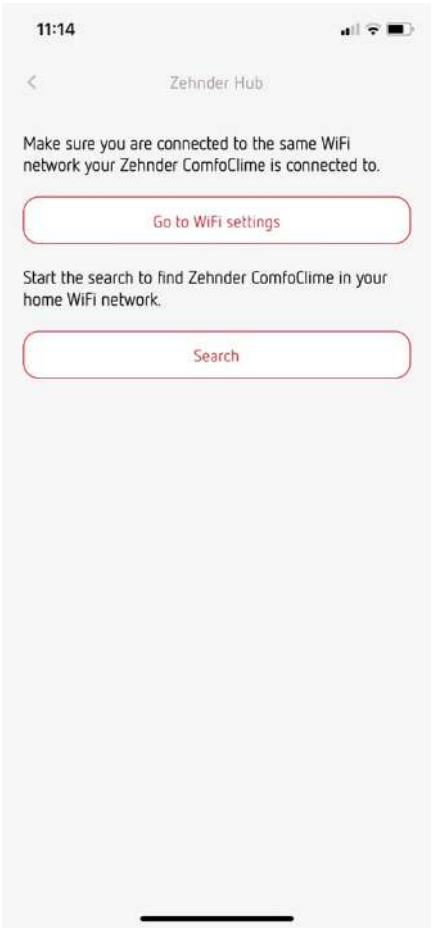
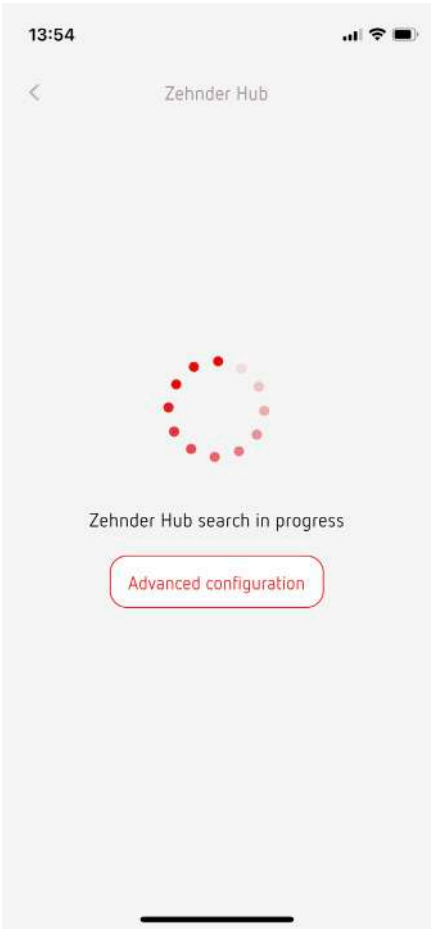
In case the user doesn't have a WiFi network running in the house there is the possibility to get connected to the ComfoClime anyway: through the Bluetooth connection or through a local WiFi network generated by the ComfoClime.

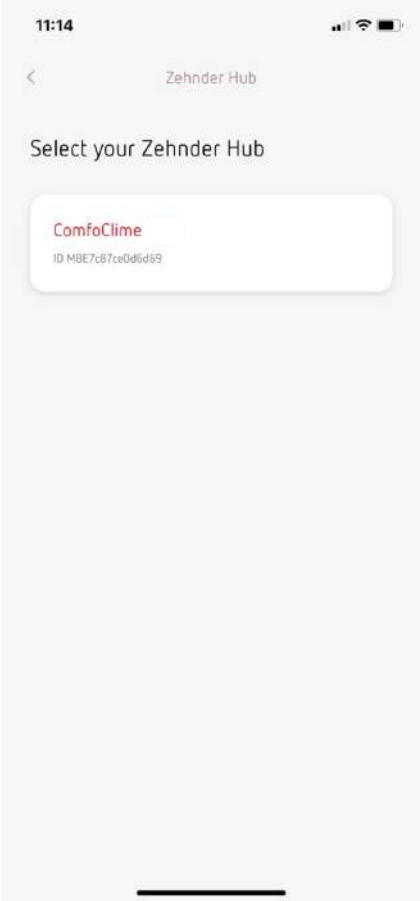
ACTION	IMAGE
Launching the APP the installation page, called Apartment select, will appear. **To begin detecting the ComfoClime, proceed by tapping the ADD button.**	

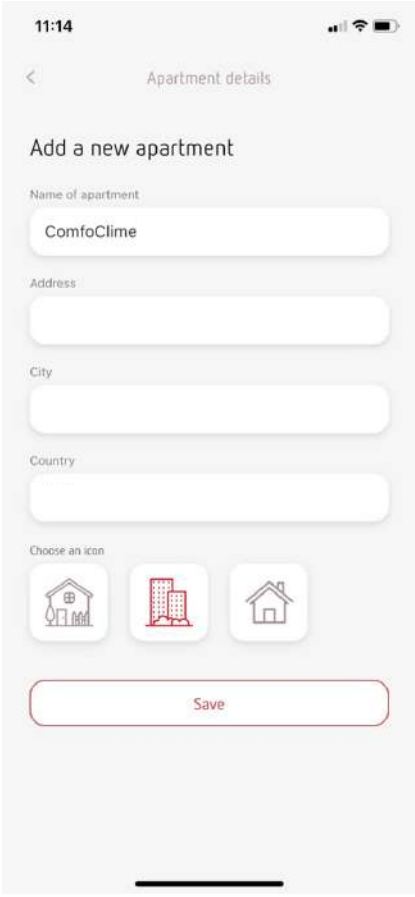
ACTION	IMAGE
In the next page the user can choose whether to go for a brand new installation or connect an already installed ComfoClime. If no ComfoClime device is listed, **the user must tap over Connect a new device to the WiFi .** **Advise:** please ensure in your mobile phone WiFi settings that your WiFi allows to add additional devices. **Note:** check also if the router allows to add other devices to the local network and in case, enable the feature. If a ComfoClime has already been detected previously and properly connected the user should tap on **Connect new device** than search for it. In case there is no WiFi present yet, the user must tap on the line at the bottom of the page **Advanced configuration** (see pag. 10)**.**	
Tapping on **Connect a new device to the WiFi** the page to the right will show up. Check if the smartphone has Bluetooth enabled; if it is enabled then continue tapping on **Next.**	

ACTION	IMAGE
In this page, allow the ComfoClime Control app to use your location by pressing **Allow once or Allow while using app**.	
The app will find the Bluetooth signal emitted by the ComfoClime and will ask permission to do the pairing. **Note:** Choose the available Zehnder ComfoClime Bluetooth signal ("Zehnder_34ab9571dd55" in this case) by tapping on it.	

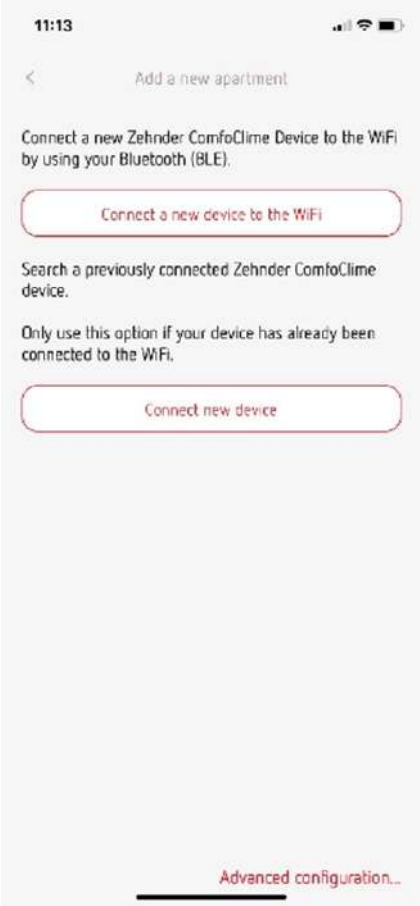
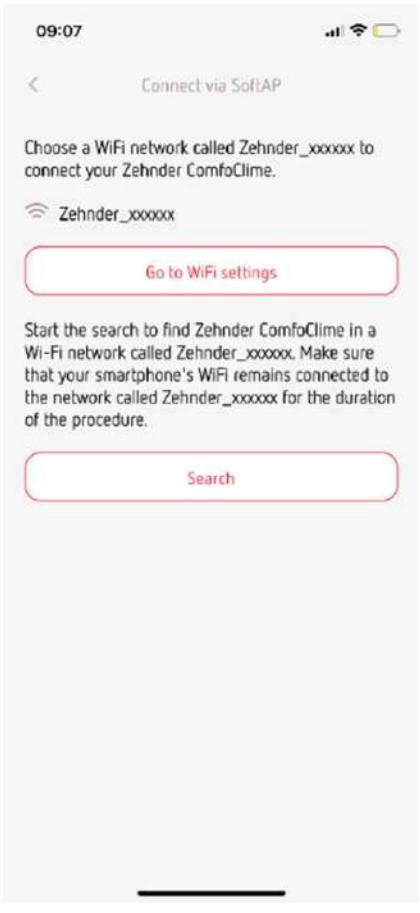
ACTION	IMAGE
Tap on **Pair** to connect ComfoClime and smartphone via the Bluetooth. From now on the ComfoClime and the app are connected through the Bluetooth. As long as the WiFi connection is not triggered, the two remain linked via Bluetooth.	
Here the user can choose the preferred WiFi network simply tapping on it and then typing its password.	

ACTION	IMAGE
Go to WiFi settings can be used to check if the smartphone is connected to the same WiFi as will be by the ComfoClime. Otherwise just tap on **Search** to list all the ComfoClime already properly connected to the selected WiFi.	 

ACTION	IMAGE
Once the device appears in the field "Select your Zehnder hub", tap on it to establish the connection between it and the WiFi network. By default the device is named "ComfoClime".	
Tapping on the unit's name the user will enter the actual home page. A green dot in the right corner indicates the unit si properly connected and working. A red dot means the unit is not connected to the app. In case the user has configured several ComfoClimes in the same app (usually corresponding to different installations in different houses), only one device per time is detected and connected with a green dot beside its icon.	

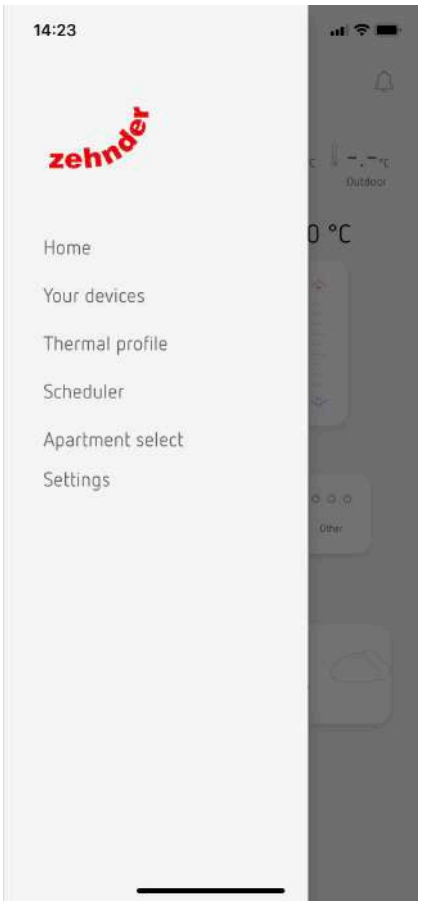
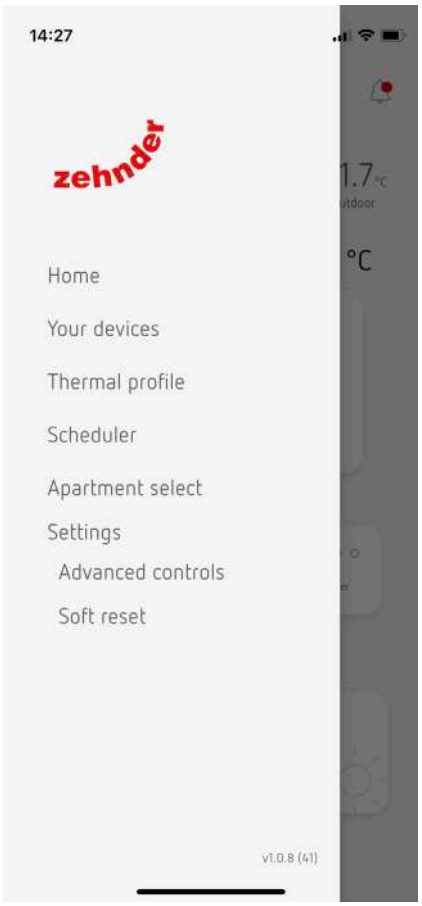
ACTION	IMAGE
Now the app has found and recorded the device in it and it is possible to finalise the naming procedure reassigning a new name if desired and including (not mandatory) an address, city, country and a customised icon. Finish tapping on the Save button.	

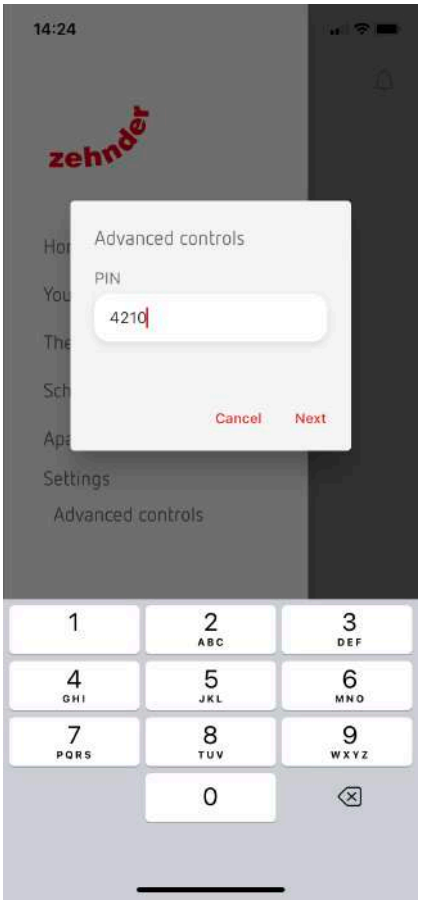
2.1 Special circumstances

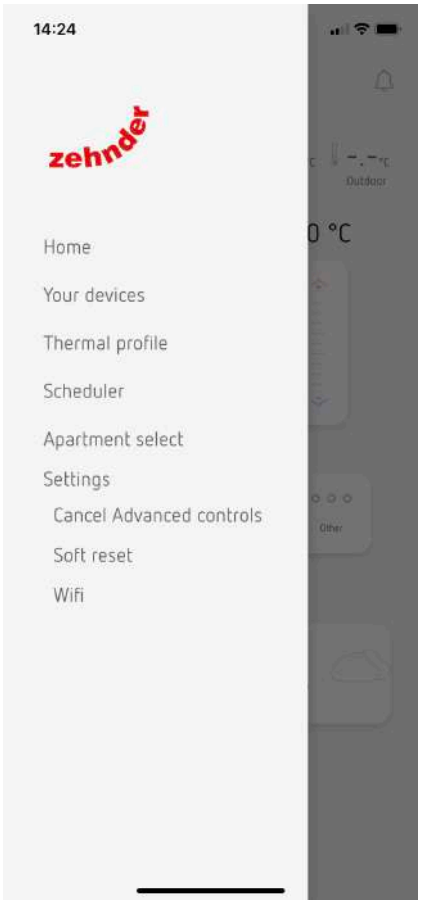
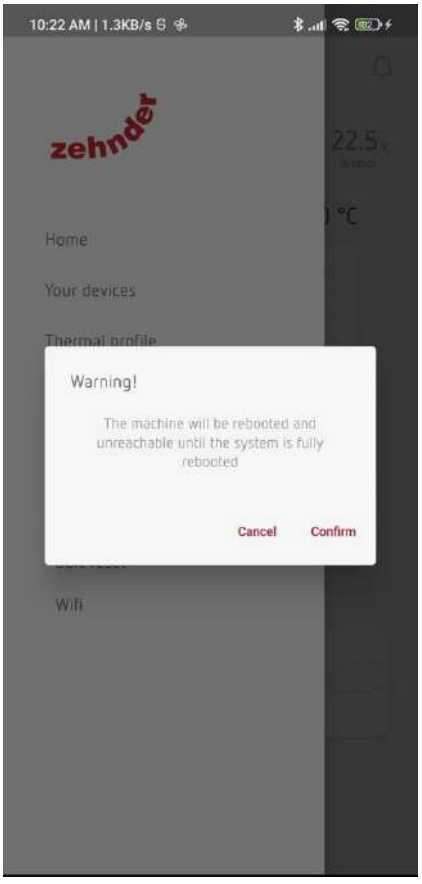
ACTION	IMAGE
If a connection is not possible through WiFi or Bluetooth, there is a further way to establish the connection between the app and the unit. With regard to the initial page (recalled on the right), at the bottom there is the **Advanced configuration** button which allows, if tapped, to enter in the local “private” WiFi network generated by the ComfoClime. By selecting this option, the mobile device will be able to connect directly to the ComfoClime's private network. Please bear in mind that in order to make this connection, the mobile device won't not be connected to any other WiFi network.	
The next page will show the name of the local WiFi network created by the ComfoClime called Zehnder_xxxxxxxxxxxxxxxx where xxxxxxxxxxxxxxxx stands for its serial number. Before proceeding further with the **Search** button the user must check and set the mobile device on the same WiFi network by tapping on the **Go to WiFi settings** and setting the phone up (see picture beside).	

ACTION	IMAGE
IMPORTANT: the password to gain access to the local network is **Zehnder1** Once the mobile device is connected to the same local network it is possible to continue like in the procedure for normal WiFi networks choosing the one called Zehnder_xxxxxxxxxxxxxxx among the ones found then confirm the choice as it is explained at page 7.	

2.2 Settings

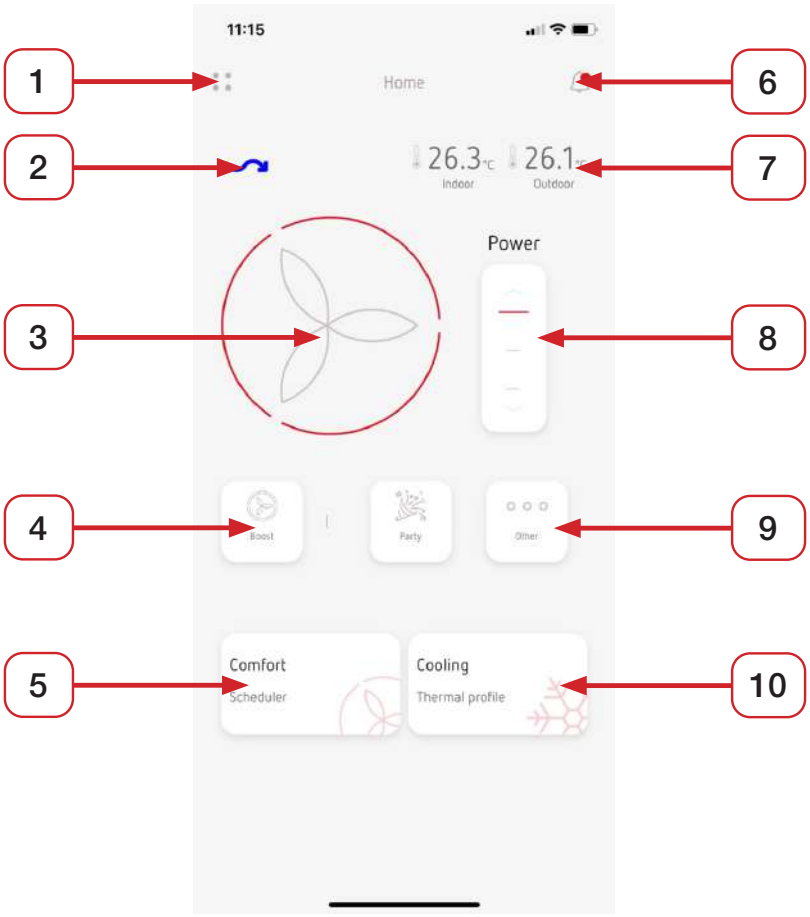
ACTION	IMAGE
When a reset is necessary, it is possible to proceed entering the **Settings** page from the main menu.	
This way a “soft” reset is possible, equivalent to unplugging the unit. Tapping on **Settings** two new voices will appear: • Advanced controls; • Soft reset. **Advanced controls** allows the user to have access to advanced parameters in the thermal profile in order to customize it according to his needs (if not strictly necessary it is strongly suggested not to play or change them). **Soft reset** performs a light reset of the device corresponding to unplugging e re-plugging it.	

ACTION	IMAGE
In order to enable the access to the Advanced controls, it is necessary to enter the **PIN 4210** then tap on **Next**. The app automatically return to the Apartment select page and the result will be visible in the Thermal profile page.	

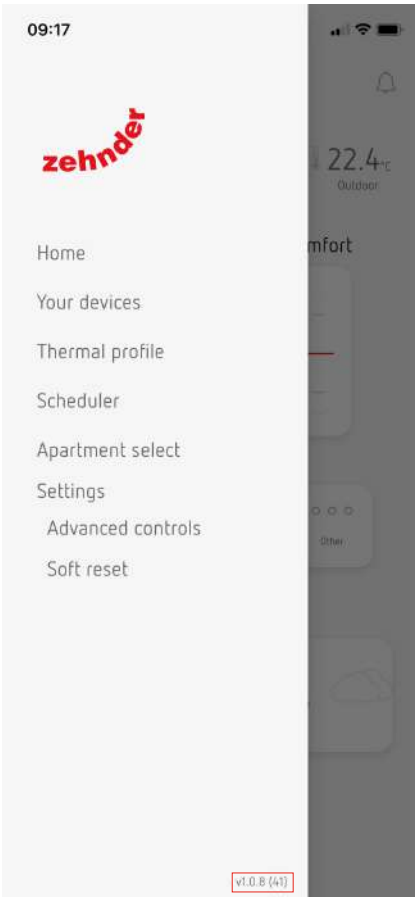
ACTION	IMAGE
When selecting the Soft Reset option a warning message will appear recommending the user to wait until the unit is rebooted completely. Tap on Confirm to proceed A new menu item will appear called **Soft reset**. When selecting this option a warning message will appear recommending the user to wait until the unit is rebooted completely. Proceed tapping on **Confirm** then wait until the end of the reboot process. A new voice called **WiFi** appears when the Advanced Controls are enabled. I allows the user to switch the WiFi network to which the ComfoClime has to be connected to, on the fly.	 

3 The home page

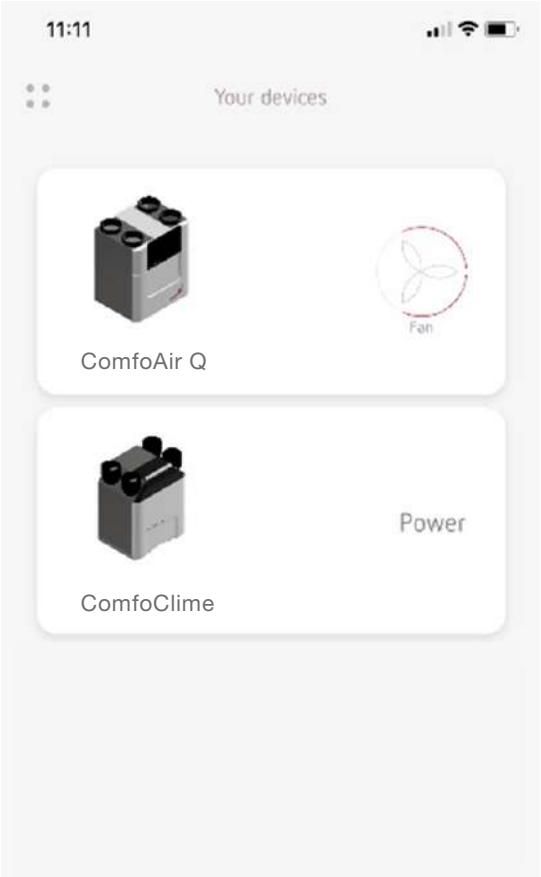
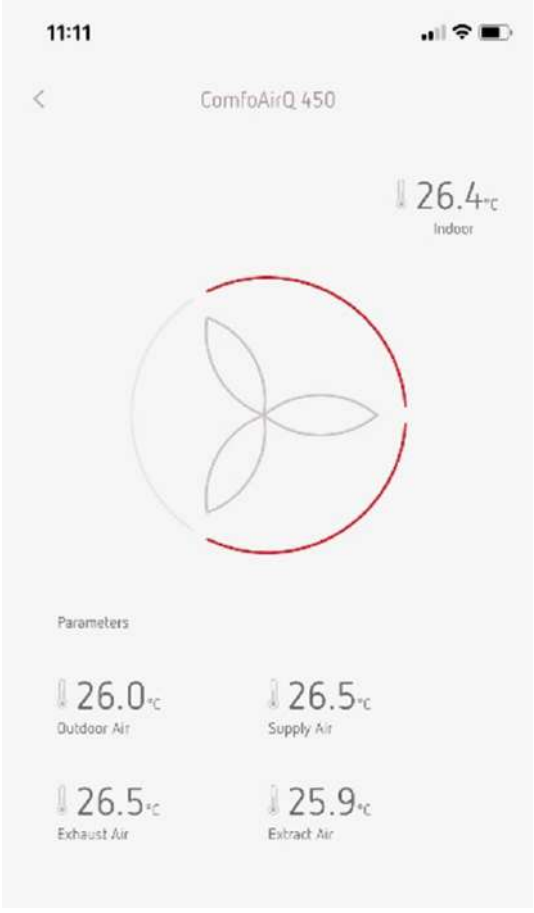
POS.	DESCRIPTION
1	Main menu
2	ComfoClime mode: Blue wave=COOLING; Red Wave=HEATING; NONE= the device is not working.
3	ComfoAir Q airflow preset: It is possible to select all three ComfoAir Q speeds by tapping on the circular icon. When the preset is changed the unit will switch to manual mode.
4	BOOST ventilation mode. Always visible. Red if enabled.
5	Shortcut to the SCHEDULER.
6	Notification bell: if a red dot appears, check the message in the notifications page tapping on the bell.
7	INDOOR and OUTDOOR temperature.
8	Mode selector: POWER; COMFORT; ECO. Slection through scrolling, in a loop
9	SCENARIOs selector.
10	Shortcut to the THERMAL PROFILER.



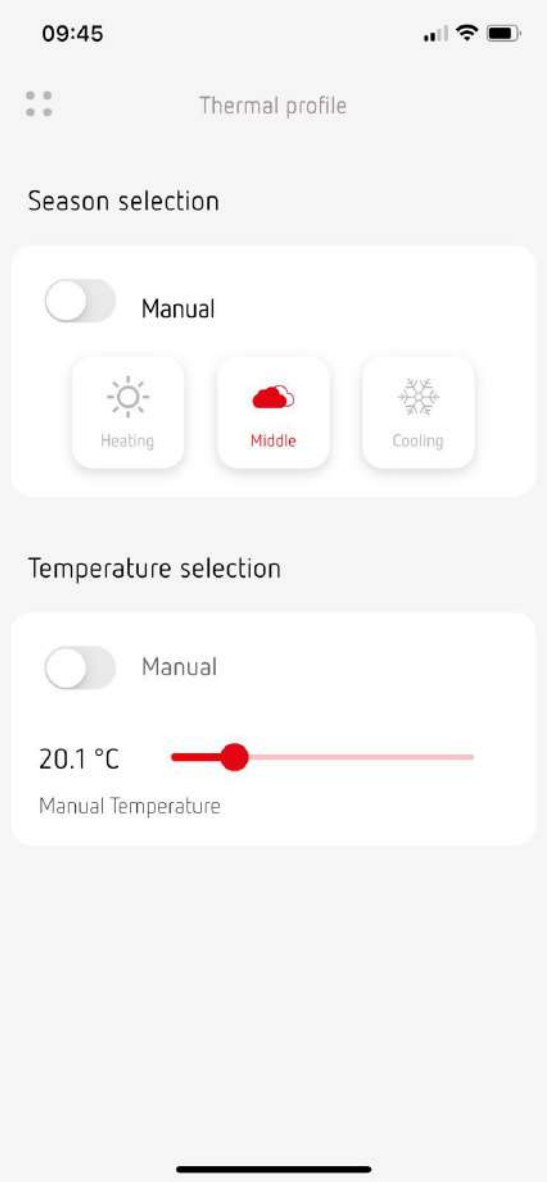
4 The main menu

ACTION	IMAGE
Tapping the 4 dots icon on the top left corner of the app, the main menu will appear. It is possible to browse through all the pages of the app simply tapping on their names. In the lower right corner of the main menu it is possible to check the installed version of the app. NB: the **Apartment select** as well as the WiFi are actually not useful anymore in case the commissioning has been successfully done and, especially, if the user doesn't have other ComfoClime to configure/add to his personal list.	

5 Your devices

ACTION	IMAGE
The **"Your Devices"** page lists all the devices connected to the ComfoNet system. The ComfoAir Q and the ComfoClime must be present all the times; other devices are accessories so they can appear only when installed. Tapping on each image a sub page will be opened showing details of the specific unit (model and size).	
The sub-page of the ComfoAir Q unit shows the 4 working temperatures of the ComfoAir Q and the indoor temperature. The fan speed of the unit is adjustable tapping on the big central wheel. The red sectors indicate the actual speed	

ACTION	IMAGE
The sub-page of the ComfoClime unit shows: • the working mode (Auto or Manual touching the button on the left upper corner); • the indoor temperature; • the working mode switch (Power, Comfort, Eco); • the Supply Air Temperature. **ComfoClime working modes** ComfoClime automatic modes: • Power: the unit works at full power with a default setpoint of 23°C in heating and cooling; • Comfort: the unit works at a balanced mode with a heating setpoint of 21°C and a cooling setpoint of 25°C; • Eco: the unit works at a reduced power with a heating setpoint of 19°C and a cooling setpoint of 27°C.	

ACTION	IMAGE
The Thermal profiler page is composed of two pages in which it is possible to see and/or set several parameters, accordingly to the access level and the model of ComfoClime installed. **Season selection** In **Auto** mode the season is automatically detected by the ComfoClime accordingly to the external temperature and the season settings. The system calculates by itself the season which it belongs to, considering an average outdoor temperature called Tpma. The Tpma keeps into consideration the temperature of the past days in order to determine a “predicted” and consistents current temperature so not to be misled by sudden change of the weather. Seasons are defined by temperature limits (thresholds). The heating season threshold determines the outdoor Tpma temperature below which the active heating is enabled; the cooling season thershold determines, on the contrary, when the active cooling is enabled (Tpma above the cooling threshold). In between there is the middle season during which the device is disabled so only the ComfoAir Q provides passive energy recovery. The user can manage the season in **Auto** or **Manual** mode: in manual, tapping the icons, he can force the season according to his needs. The thresholds can be adjusted only by Zehnder Service personnel during a setup configuration. The adjustments can be done in the advanced settings. **Temperature selection** This value represents the setpoint for each working mode. In Auto mode the default values are: MODE / VALUE POWER: 23° heating/23° cooling COMFORT: 21° heating/25° cooling ECO: 19° heating/27° cooling See the table in the next page for all the default values. The **manual** adjustment is possible enabling the advanced settings in the main menu and the range is from 18°C to 28°C in both heating and cooling mode.	

ACTION	IMAGE

The **comfort temperature** is the setpoint value corresponding to the selected profile:

MODE	VALUE
POWER	23° heating/23° cooling
COMFORT	21° heating/25° cooling
ECO	19° heating/27° cooling

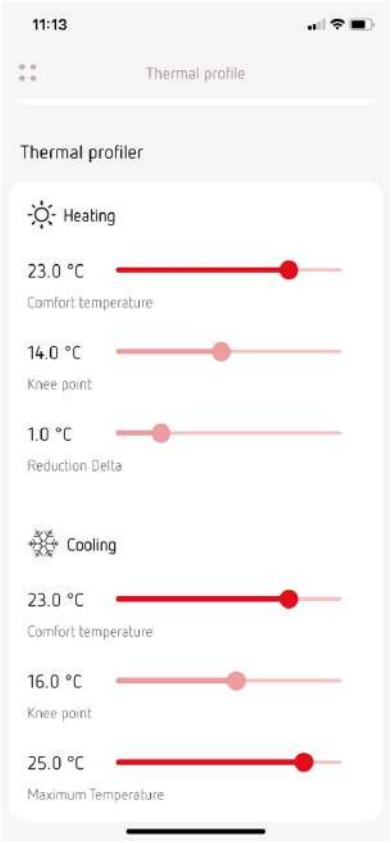
The **knee point** is the Tpma value from which the setpoint curve starts changing linearly from the heating setpoint to the cooling setpoint (or viceversa).

The **reduction delta** is the offset value, in degrees, from the comfort line to the reduced line (used in night mode). It correspond to a decrease in heating and to an increase in cooling mode.

The user, setting the reduction to zero, keeps the same setpoint 24/24.

The **maximum temperature** in cooling mode, for each profile, is the upper limit for the setpoint: for example in POWER cooling mode the default value is 23° but it is not increasable beyond 25°.

The default values for each profile are listed in the following table.



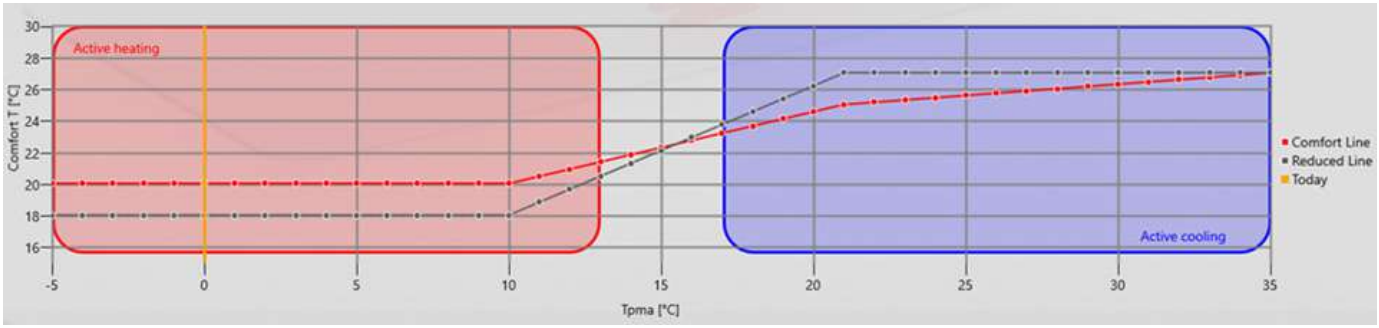
During the intermediate season, the comfort temperature setpoint is calculated as interpolation between summer and winter points. The same for cooling season, if maximum summer comfort T is different than comfort temperature summer.

Thermal Profile			
	Power [°C]	Comfort [°C]	Eco [°C]
Comfort temperature winter	23	21	19
Comfort temperature summer	23	25	27
Heating season limit	15	14	13
Cooling season limit	16	17	18
Winter knee point	14	12	10
Summer knee point	16	18	20
Reduction delta	1	1,5	2
Maximum Tpma	35	35	35
Maximum summer comfort T	25	26	27

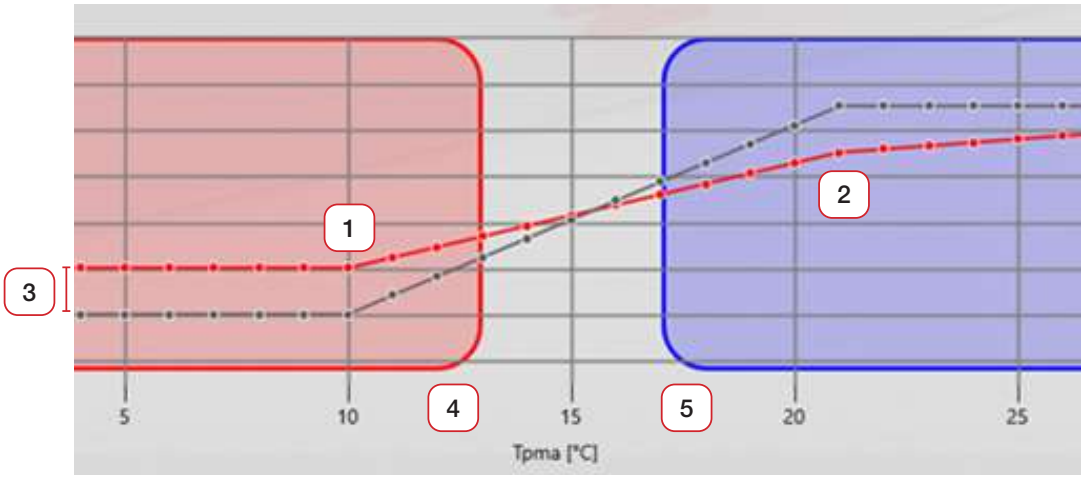
This graph helps in understanding the different values above listed:

In red the heating season, in blue the cooling and in between the intermediate season (when the ComfoClime will not operate).

Remember to refer the setpoint values to the Y axis and the thresholds and knee points to the X axis.



POS.	DESCRIPTION
1	Heating knee point
2	Cooling knee point
3	Reduction delta
4	Heating threshold
5	Cooling thershold



7 Scenarios

The user can choose among different scenarios to plan the weekly scheduler.

The choice is among

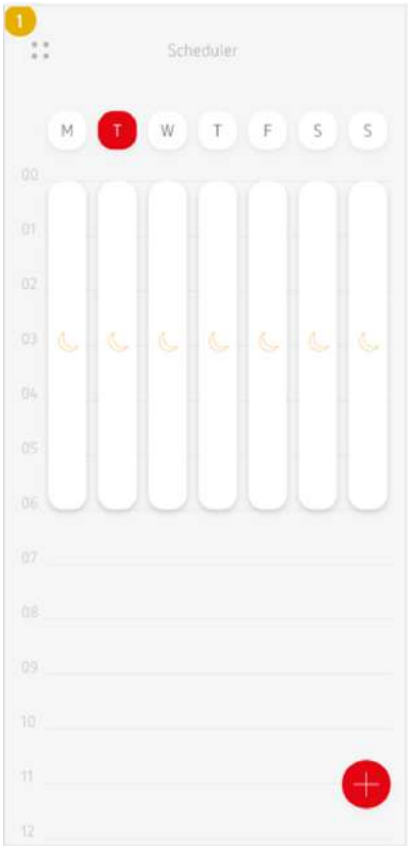
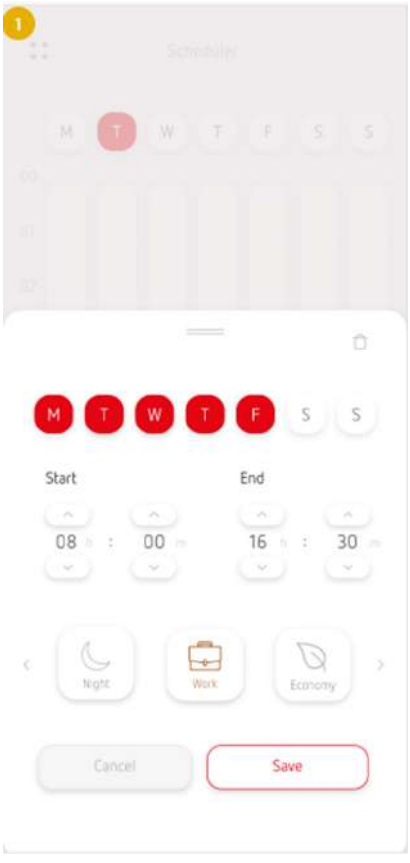
NORMAL/DAY	This is the standard behaviour when no other scenario is active. The devices maximum thermal power is 100%.	
SILENT/NIGHT	When the inhabitants are sleeping, the focus is on low noise level and air renovation to keep low CO2 levels. The devices maximum thermal power is limited to 50%. ComfoAir Q fan speed is 2. The ComfoClime is not allowed to demand more air flow.	
AT WORK	When there's nobody at home, thermal comfort could result in a unnecessary condition. No CO2 production is happening but air renovation must still meet local regulations regarding the minimum flow. The room temperature must not fall too far away from the comfort, otherwise when it's time to get out of the work scenario, it will take too long to reach the comfort temperature again	
BOOST	It is possible at anytime to force the ventilation to the highest speed by tapping this button, for a duration of max 24h. A duration time must be entered in hours and minutes.	
PARTY	The devices maximum thermal power is 100%. ComfoAir Q preset is on 3.	
HOLIDAY	The device is OFF . ComfoAir Q preset is on AWAY. An ending date must be entered and confirmed.	
COOKING	The devices maximum thermal power is 70%. ComfoAir Q preset is on 3	

On HOLIDAY mode the user is requested to input an end date. In all other scenarios, the user is invited to input a duration in hours and minutes, in steps of 5 minutes each and for a maximum duration of 23 hours 55 minutes.

8 The scheduler

In this page the user can program the system across the whole week, from Monday to Sunday, for each hour. The user can choose between three groups of days for scheduling: 5 working days (Monday to Friday); weekend (Saturday and Sunday); the whole week.

The scheduling is done in four steps:

STEP	ACTION	IMAGE
1	Tap on + icon to add a new scheduling.	
2	Choose among the three available group of days: working days, weekend, whole week.	
3	Define the scenario to be applied to the desired part of the day/night selecting the desired icon (Night, Work) then defining a start and an end time; it is possible to set a maximum of 9 time slots in the whole week. When nothing is selected the device works in the default profile (Power, Comfort or Eco).	
4	Tap on SAVE button.	

9 Notification

In this page it is possible to read the messages coming from the unit: errors, alarms, alert, advice.

The following table lists the error codes that could appear:

CODE	COMPONENT	DESCRIPTION	SOLUTION
1	Airduino	The rotary encoder is set to a forbidden value.	Call Zehnder Service
21	ComfoAir Q	ComfoAirQ communication error. ComfoAir Q not visible on ComfoNet.	Check that the green LED on ComfoAir Q and Clime is fixed lit. Try rebooting all the system. Check that all the firmwares are up to date. If not fixed call Zehnder Service
22	ComfoAir Q	Failed to synchronize ComfoAir Q comfort temperature profile	Same as 21
23	ComfoAir Q	Failed to synchronize ComfoAir Q comfort temperature value	Same as 21
24	ComfoAir Q	Failed to set ComfoAir Q comfort temperature mode	Same as 21
25	ComfoAir Q	Failed to synchronize ComfoAir Q cooling limit	Same as 21
26	ComfoAir Q	Failed to synchronize ComfoAir Q heating limit	Same as 21
27	ComfoAir Q	Failed to get ComfoAirQ orientation	Same as 21
28	ComfoAir Q	ComfoAirQ not commissioned	Do the commissioning procedure on the ComfoAir Q
31	HP board	Heatpump board communication error	Tryt rebooting the system or, if not sorted out, Call Zehnder Service
32	HP board	Clime supply temperature probe failed	Call Zehnder Service
33	HP board	Clime incoil temperature probe failed	Call Zehnder Service
34	HP board	Clime mixed air temperature probe failed	In ComfoClime36 this could be due to error 38
35	HP board	Clime outcoil temperature probe failed	Call Zehnder Service
36	HP board	Clime fan error	Call Zehnder Service
37	HP board	Clime Compressor driver communication error	Call Zehnder Service
38	HP board	Clime HP data timeout	Call Zehnder Service
39 - 47	HP board	Reserved for future use	
48	Inverter	Inverter phase current limit error	Call Zehnder Service
49	Inverter	Inverter current limit error	Call Zehnder Service
50	Inverter	Inverter power limit error	Call Zehnder Service
51	Inverter	gas discharge temperature probe failed	Call Zehnder Service
52	Inverter	compressor case temperature sensor error	Call Zehnder Service
53	Inverter	compressor driver PFC error	Call Zehnder Service
54-63	Inverter	Reserved for future use	-
81	Power Monitor*	Power monitor communication error	Call Zehnder Service

* *only for ComfoClime Q*

10 Firmware updates

Through the page **Your devices** it's possible to check if the units are updated to the latest firmware version.

If a new firmware is available for the ComfoAir Q or the ComfoClime, a note appears below the related icon.

Procedure to perform a firmware update:

STEP	ACTION	IMAGE
1	A long tap on the icon showing that an update is available to your unit; a new page will appear allowing it to be downloaded and installed.	
2	Tap the button “**Download firmware**” to start downloading the firmware.	

STEP	ACTION	IMAGE
3	The download will take no more than a couple of seconds, depending on the internet connection speed. Once completed the page shows 100% and “download firmware completed” and a new button at the bottom of the screen saying “**Upload firmware**”.	
4	Tapping on “upload firmware” the firmware itself will be transferred to the unit in a matter of seconds. At the end of the process it appears “Upload firmware completed”. It is suggested to do a restart of the unit. Tapping the **Home** button the app goes back to the home page.	

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