COVIDAIR S/T EASY

QuickStartGuide

WARNING ⚠

The COVIDAIR device must always be used under the supervision of a doctor or a member of the medical profession trained in ventilation.

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DC:A6:32:17:A9:4E
Démarrer
Fr
0.0 c/min
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0.0 l/min
I/E
1:0.0
AI
6
EPAP
3.0
IPAP
9.0
Fc
0 p/m
SpO2
0
Vte
0.00 l
Vm
0.0 l/min


6
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REF 20200401
S/N DC:A6:32:17:AA:67

1 Description

The following images describe the components of the COVIDAIR S/T device.

1 Handle
2 Patient Inspiratory port.
3 On / off button.
4 Touchscreen.
5 Humidification system (Option not deliverable)
6 Humidification output port.
7 Humidification input port.
8 SpO2 sensor connector.
9 USB connectors (maintenance service only).
10 Ground connector.
11 Power connector.
12 Low flow oxygen inlet and inlet filter.
13 Nameplate.

1. Easy using Covidair S/T

Switching the device ON

The COVIDAIR device starts up as soon as the external power supply is connected. The push button flashes slowly (1 Hz) to signify that the device has started.

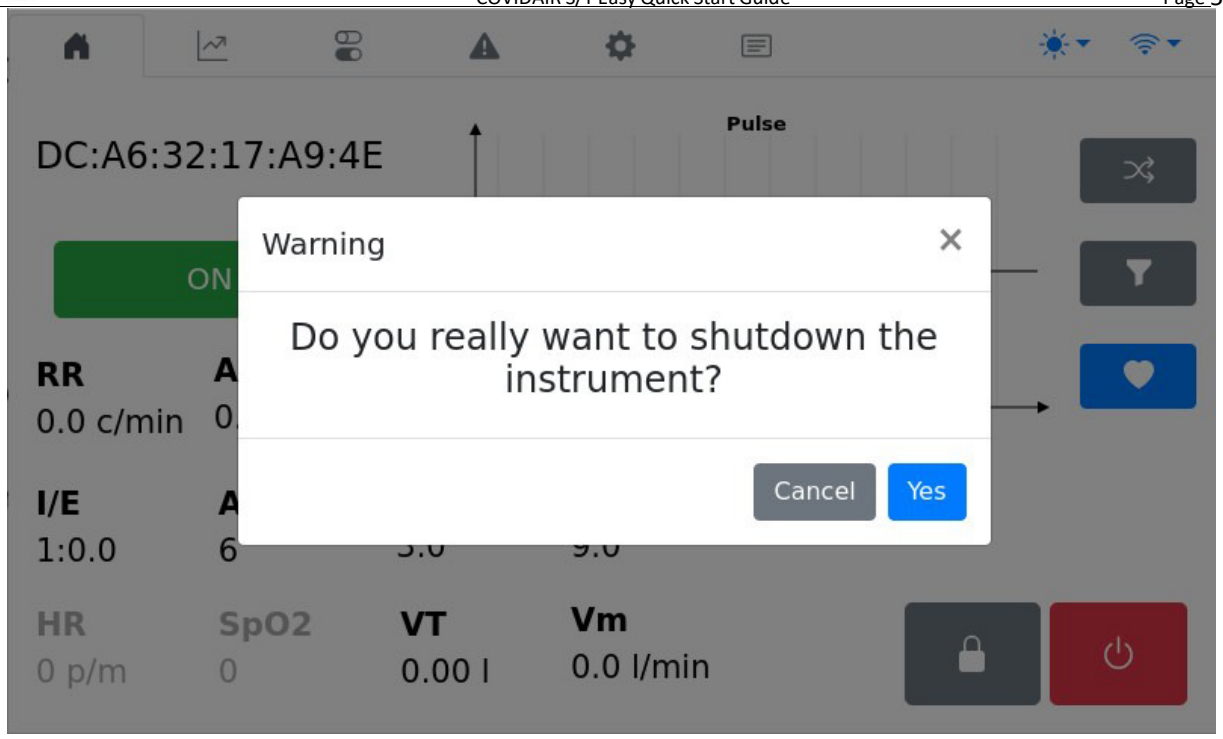
If the device has been switched off displaying the graphical interface and the mains supply has not been disconnected, press the push button to start it again

The device is ready to use when the touch screen displays the main screen. The turbine blows at idle (0.5l/s) to indicate that it is working properly.

NOTE:
The display needs about 30 seconds to turn itself on.

2.2. Switching the device OFF

To switch off the COVIDAIR device, press the button on the main screen. A message will ask for confirmation of the action. The push button flashes quickly (5 Hz) to indicate that the device has switched off.



WARNING ⚠

• Always switch off the COVIDAIR device via the interface before disconnecting the external power supply.

2.3. Start and Stop ventilation

Start and stop via the Touchscreen:

Press the button ON to start ventilation.

➔ The ventilation starts with the parameters saved in the "Parameters" and "Alarms" tabs.

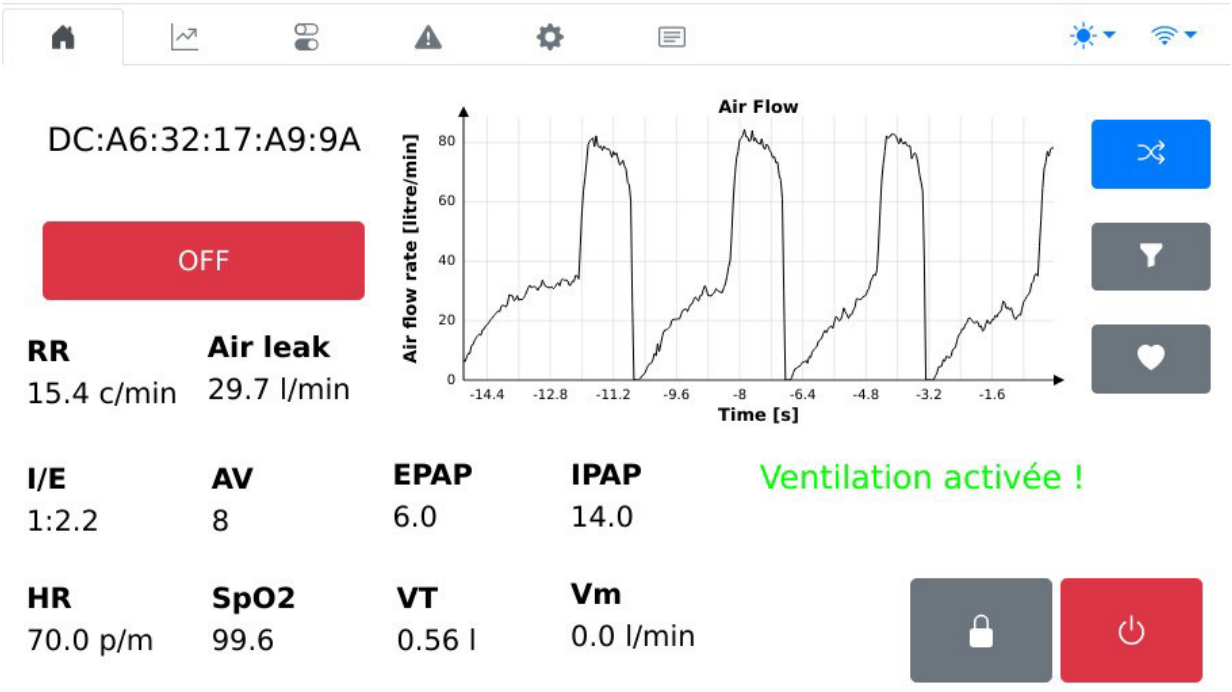
➔ The message "Ventilation activated" is displayed and the main button flashes each time the patient breathes.

Press the button OFF to stop the ventilation, a message then asks for confirmation of the stop and the message "Ventilation stopped" is displayed.

Start via the main push button:

Press the main push button to start ventilation.
The ventilation starts with the parameters saved in the "Parameters" and "Alarms" tabs.
The message "Ventilation activated" is displayed and the main button flashes each time the patient breathes.
Press the main push button again to stop the ventilation, a message then asks for confirmation of the stop. The message "Ventilation stopped" is displayed.

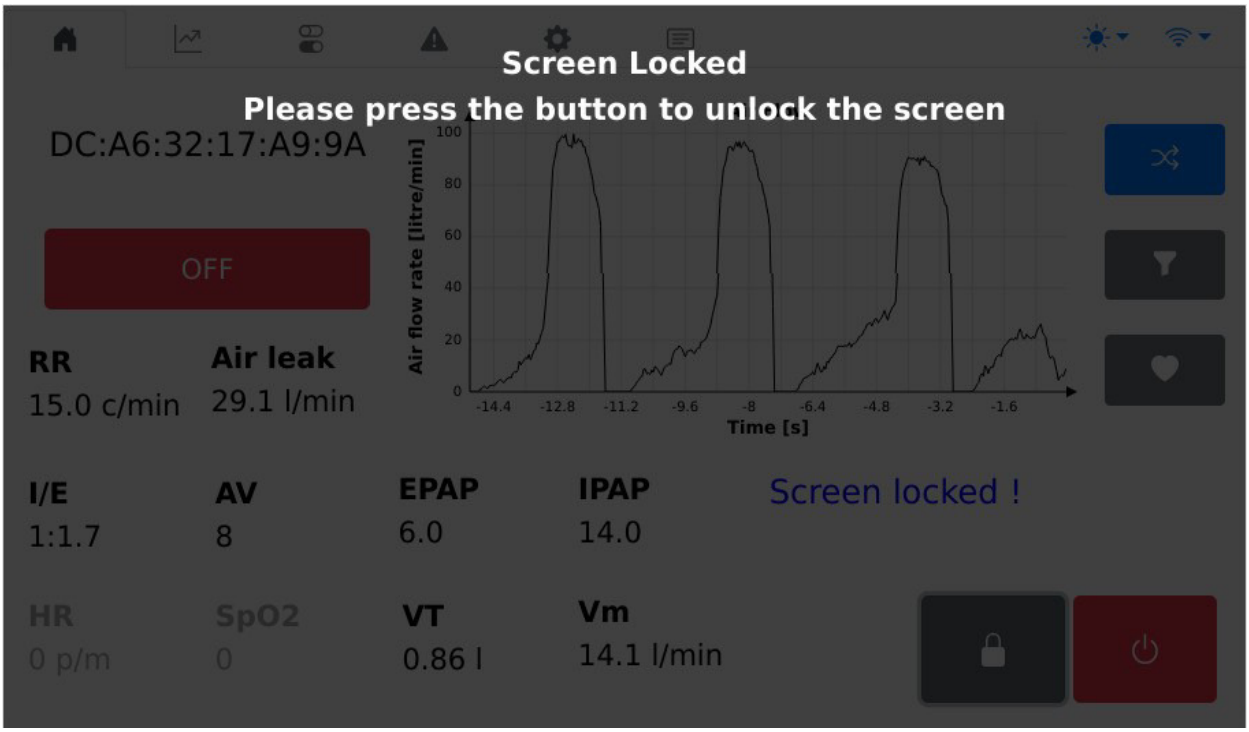
NOTE:
The ventilation start function using the main button works even if the device screen has not yet started. It is therefore possible to start ventilation quickly with the last parameters saved!



2.4. Locking and unlocking the touch screen

It is possible to lock the touch screen to avoid unwanted manipulation. This function is only available from the main screen.

To lock the touch screen, press the padlock button  on the main screen. Once the screen is locked, the following message is displayed:



To unlock the screen, press the main push button.

NOTE:
Alarms have priority over screen locking. If one of them sounds while the screen is locked, it will unlock and show the alarm in a visible way.

2.5. Navigation in menus and settings

Navigation in the page and settings is carried out using the tabs at the top of the display. The tabs are visible in each menu.

 : Main page

(Cockpit)

 : Graphic Display

page

 : Ventilation parameter page

 : Alarms page

 : Advance parameter page

 : History page

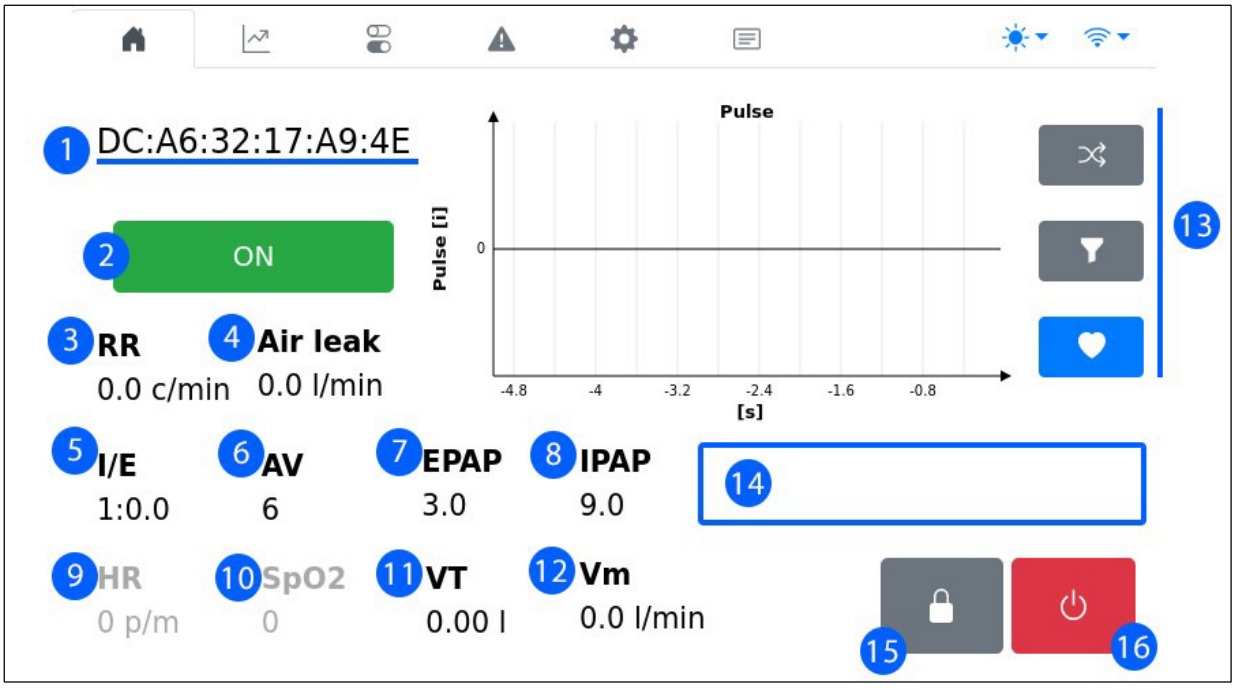
 : Maintenance (Trained user

only)

 :"Brightness" setting

 : Network Settings

2.5.1. Cockpit Page

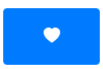


1. Unique identification number of the COVIDAIR device.
2. Ventilation start and stop button.
3. **RR:** Respiratory Rate in cycles per minute
4. **Leak: E**stimated leak in liters per minute.
5. **I/E:** Inspiratory /Expiratory time ratio.
6. **AV:** Inspiration Assist (IPAP-EPAP).
7. **EPAP** or **PEP**: Expiratory Positive Airway Pressure in cmH2O.
8. **IPAP:** Inspiratory Positive Airway Pressure in cmH2O.
9. **HR:** Heart rate indicator in beats per minute (only if the pulse oximeter is used).
10. **SpO_2**: Oxygen saturation indicator in % (only if the pulse oximeter is used). Validity from 90 to 100%
11. **VTt**. Expiratory tidal volume, with leakage correction.
12. **MV:** Current Patient Volume in liters per minute.
13. Graphic area with multiple displays:

The selection of the type of graph is done by a simple press of the buttons listed below:

Display the flow curve (last 15 seconds)

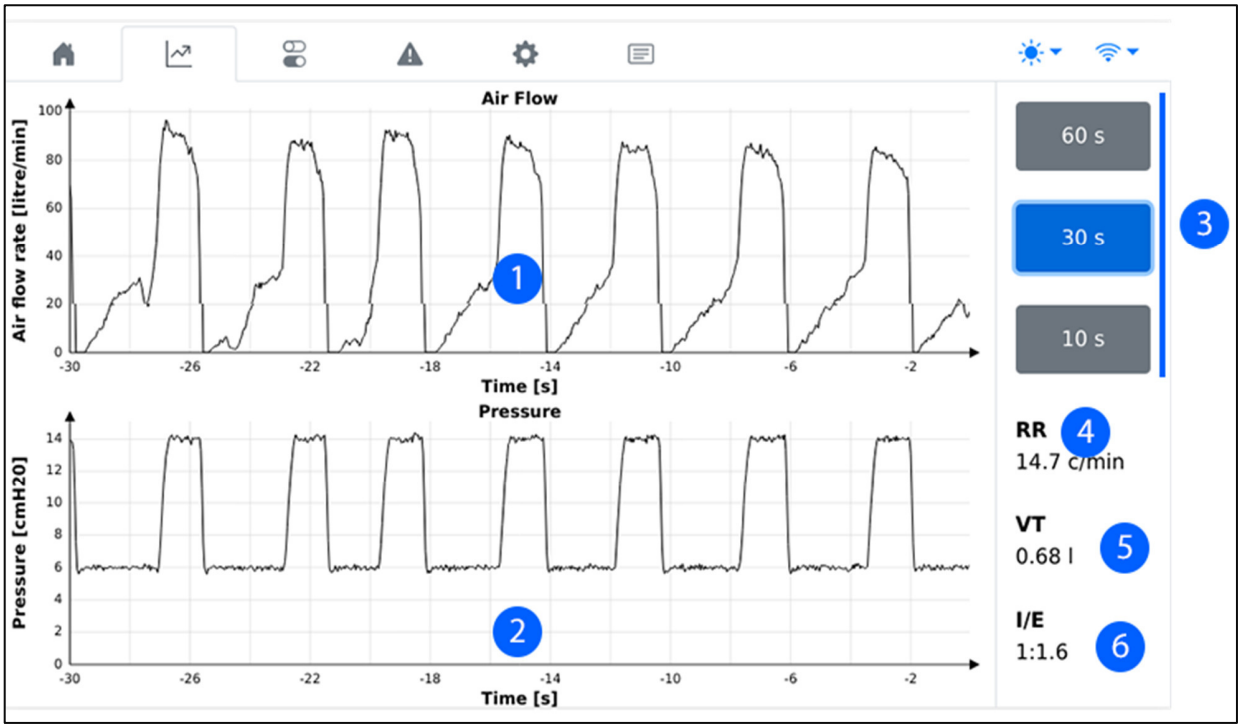
Display the pressure curve (last 15 seconds)



Display the heart rate curve, if the pulse oximeter is used (last 5 seconds)

14 Display area for various devices messages.
15 Screen lock button.
16 Device shutdown button.

2.5.2. Graphic Page



1. Flow rate in liters per minute.
2. Pressure (Paw) in cmH_2O
3. Time scale. It is also possible to zoom directly on the graphics with two fingers

Displays the 60 last seconds

Displays the last 30 seconds

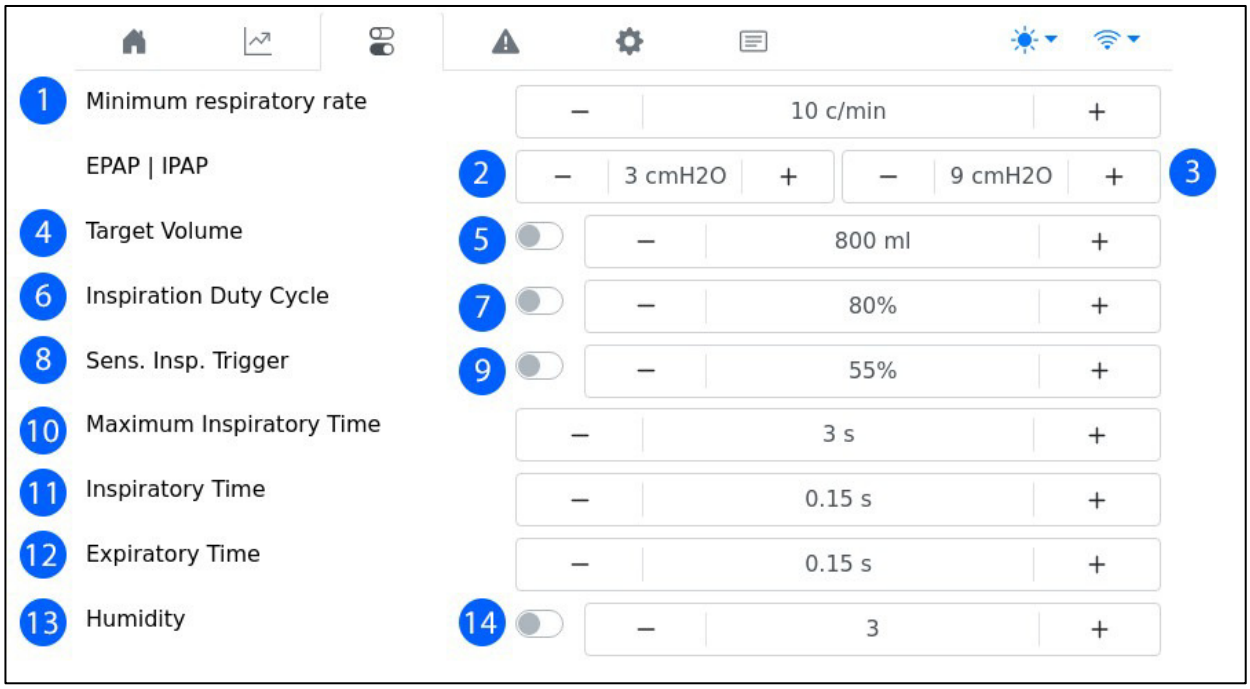
Displays the last 10 seconds

4. **RR:** Respiratory Rate per minute
5. **VTe**: Expiratory tidal volume, with leakage correction.
6. **I/E**: Inspiratory /Expiratory time ratio.

2.5.3. Ventilation Parameter Page

The parameters menu will determine the COVIDAIR ventilation parameters. All parameters can be changed during ventilation. This menu is only accessible with a password. The default password 0000

⚠ WARNING
The adjustment and modification of the parameters must be carried out under the supervision of a doctor or a member of the medical profession trained in ventilation.



1. Setting the minimum respiratory rate per minute imposed on the patient. The value of the respiratory rate is between 3 and 30 with steps of 1 breath per minute.
2. Adjustment of the EPAP expiratory pressure in cmH_2O. The value of the expiratory pressure is between 2 and 40 cmH_2O it 1 cmH_2O increments, but it cannot be greater than the IPAP value. If IPAP and EPAP are equal the device functions as CPAP.
3. Adjustment of the IPAP inspiratory pressure in cmH_2O.
4. Tidal volume adjustment. WARNING: This value did not take care of leaks. It is not recommended to use this value for ventilation system with leak.
   The tidal volume value is between 200 and 4000 milliliters with 50ml increments.
5. Tidal volume activation slider (see its meaning and use at the end of the chapter)
6. Respiratory Rate adjustment in %. The end of the inspiratory cycle is reached when the flow rate drops to X % of the peak flow rate. This value can be set between 15% and 99% in 1% increments.
7. Respiratory Rate cycling activation slider (see its meaning and use at the end of the chapter)

8. Adjustment of the sensitivity of the inspiratory trigger in%. The higher the %, the more sensitive the trigger. If the trigger is too sensitive (too high) there is a risk of self-trigger.
9. Inspiratory trigger sensitivity activation slider (see its meaning and use at the end of the chapter)
10. Setting the maximum inspiration time in seconds. The value of the inspiration time is between 0.1 and 3 by 0.1s increments

11. Setting the rise time in seconds. The value of the rise time is between 0.1 and 1 in 0.05s increments. A short rise time (< 0.3 seconds) can lead to an overshoot).
12. Setting the drop time in seconds. The value of the descent time is between 0.1 and 1.45 in 0.05s increments.
13. Setting the humidity. The humidity value is between 1 and 5 in 1 increment. Do not use this setting if the humidifier is not used.
14. Humidity activation slider (see its meaning and use at the end of the chapter)

For each setting instruction, the "-" button allows you to decrease the value while the "+" button allows you to increase the value by the indicated steps. It is also possible to let your finger pressed in order to reach the settings faster.

The sliders in front of certain parameters allow you to activate or not the taking into account of the adjusted parameter. A simple press on the cursor changes its value.

When the cursor is ON, the parameter is active

When the cursor is OFF, the parameter is not active.

WARNING ⚠

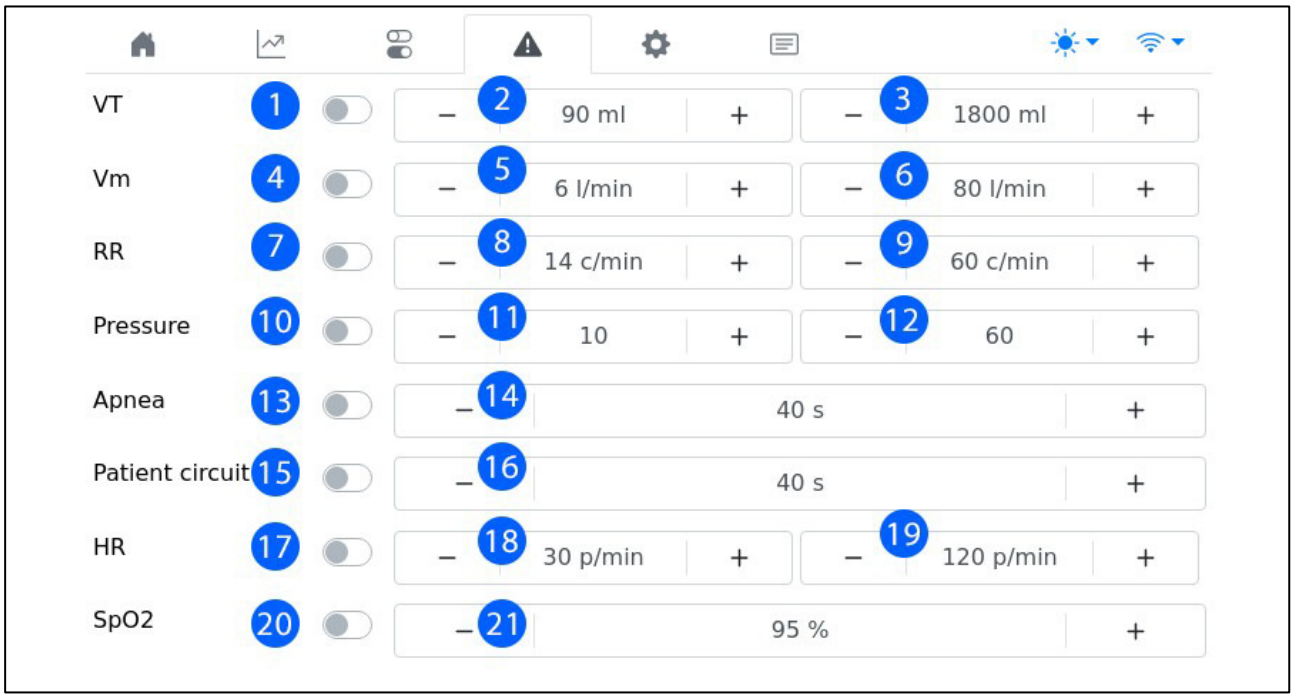
If the parameter cursor is OFF, changing the parameter has no influence on the actual ventilation.

2.5.4. Alarm-Page

The "Alarms" page is used to activate or deactivate the alarms, as well as to set the alarm limits. This menu is only accessible with a password. The default password is 0000.

WARNING ⚠

The adjustment and modification of alarm parameters must be carried out under the supervision of a doctor or a member of the medical profession trained in ventilation.



1. Activation slider for the "Total expired volume" (VTe) alarm (see its meaning and use at the end of the chapter).
2. Setting the lower limit for the alarm "Total expired volume" (VTe) in milliliters. The value of the lower limit for "Total expired volume" is between 40 and 1300 by 5ml. increments.
3. Setting the upper limit for the alarm "Total expired volume" (VTe) in milliliters.
4. Activation slider for the "Volume per minute" (MV) alarm (see its meaning and use at the end of the chapter).
5. Setting the low limit for the "Volume per minute" (MV) alarm in liters per minute. The value of the lower limit for the "Volume per minute" is between 0.2 and 25 by 0.1 l. increments.
6. Setting the upper limit for the "Gaz volume per minute" (MV) alarm in liters. The upper limit value for "Volume per minute" is between 1 and 99 by 0.1 l/min. increments.
7. Activation slider for the "Respiratory Rate" alarm (RR) (see its meaning and use at the end of the chapter).

8. Setting the lower limit for the " Respiratory Rate " (RR) alarm in cycles per minute.
   The value of the lower limit for the " Respiratory Rate " (RR) is between 4 and 52 by 1 cycle/min. increments.
9. Setting the upper limit for the " Respiratory Rate " (RR) alarm in cycles per minute.
   The value of the upper limit for the " Respiratory Rate " (RR) is between 40 and 80 by 1 cycle/min. increments.
10. Activation slider for the "Pressure" alarm (Pressure Paw) (see its meaning and use at the end of the chapter).
11. Adjustment of the low limit for the "Pressure". alarm (Pressure Paw) in cmH2O.
    Setting the low limit for the "Pressure" alarm (Pressure Paw) in cmH_2O.
    The value of the low limit for the "Pressure" alarm (Pressure Paw) in cmH_2O. The value of the low limit for the " Pressure " alarm is between 0 and 20 by 1 cmH_2O increments.
12. Adjustment of the upper limit for the "Pressure". alarm (Pressure Paw) in cmH_2O.
    The value of the upper limit for the " Pressure alarm " is between 40 and 80 by 1 cmH_2O increments.
13. Activation slider for the "Apnea Time" alarm (Apnea) (see its meaning and use at the end of the chapter)
14. Setting the time limit for the "Apnea time" (Apnea) alarm in seconds. The countdown begins after 3 missed respiratory cycles. The limit value for " Apnea time" is between 10 and 60 by 5s increments.
15. Activation slider for the "Allowable leak time" (Leak) alarm (see its meaning and use at the end of the chapter)
16. Setting the time limit for the "Allowable leak time" (Leak) alarm in seconds. The count begins at the start of the leak. The limit value for the "Allowable leakage time" is between 5 and 60 by 5.s increments.
17. Setting the low limit for the "Heart rate" (Fc) in beats per minute alarm, can only be changed if the pulse oximeter is used.
18. The value of the low limit for the "Heart rate" (Fc) is between 40 and 80 by 1 pulse per minute increments.
    Setting of the upper limit for the "Heart rate" (Fc) in pulses per minute alarm, which can only be modified if tthe pulse oximeter is used.
    The value of the upper limit for the "Heart rate" (Fc) is between 50 and 200 in 1 pulse per minute increments.
19. Activation slider for the "Oxygen saturation" (SpO2) alarm, which can only be modified if the pulse oximeter is used. (see its meaning and use at the end of the chapter)
20. Setting the time limit for the "Oxygen saturation" (SpO2) alarm in percent, only modifiable if the pulse oximeter is used.
    The limit value for "Oxygen saturation" is between 80 and 99 in 1% increments.

For each setting instruction, the "-" button allows you to decrease the value and the "+" button allows you to increase the value by the indicated steps.

For each setting instruction, the "-" button allows you to decrease the value while the "+" key button allows you to increase the value by the indicated steps. It is also possible to let your finger pressed in order to reach the settings faster.

When the cursor is ON, the parameter is active

When the cursor is OFF, the parameter is not active.

NOTE:

• Alarms take precedence over the screen lock or-any other displayed menus. If one alarm activates, it is displayed in priority.

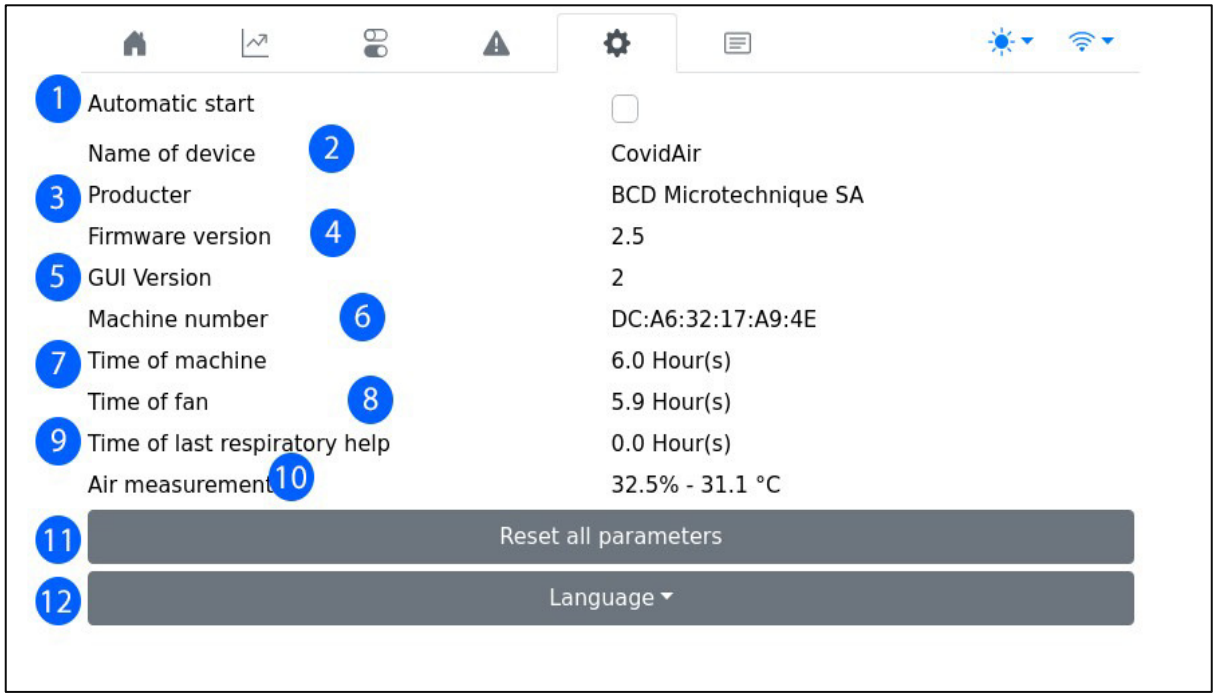
See also the "Alarms" chapter earlier in this document for details on viewing and managing current alarms.

2.5.5. Advanced Parameter Page

The menu "Advanced settings" is accessible by password. It contains technical information about the device as well as general configuration parameters. The default password is 0000.

WARNING ⚠

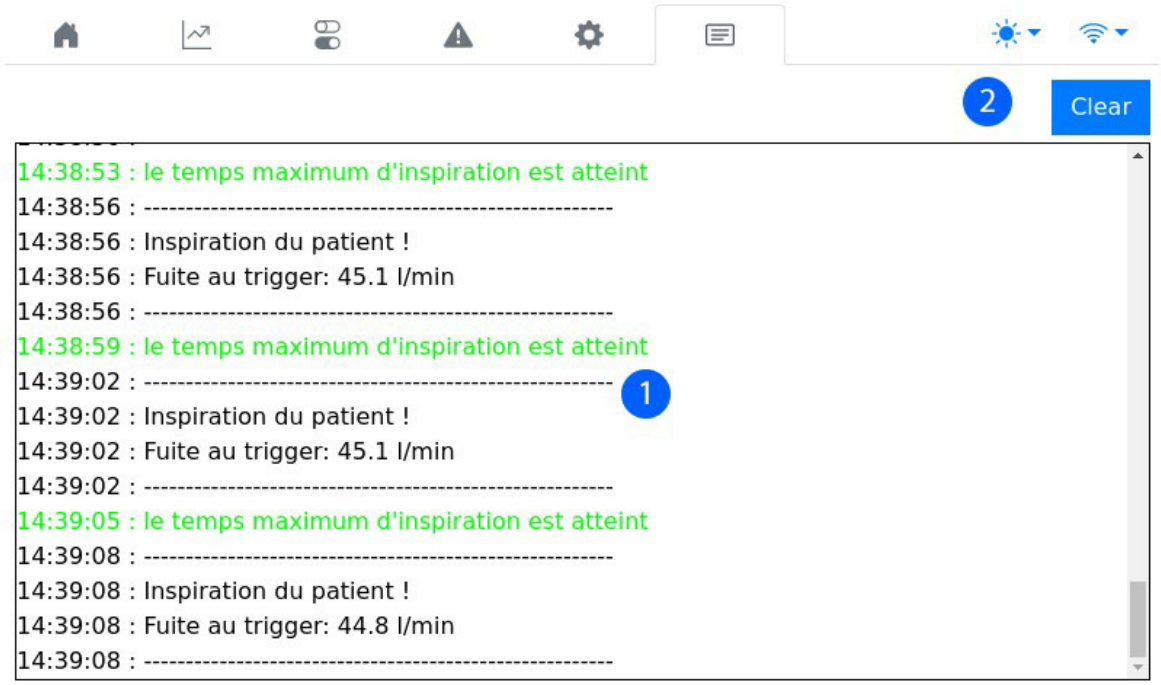
Adjustment and modification of the parameters in this menu must only be carried out under the supervision of an authorized technician.



1. Option to automatically start ventilation at power on.
2. Name of the device
3. Manufacturer
4. Firmware revision
5. Graphic user interface revision
6. Device MAC address
7. Total operating time
8. Total turbine time
9. Last ventilation operating time-or time since the last ventilation operating time
10. Air humidity and temperature indicator supplied by the device. The humidity is in% and the temperature is in ° C
11. Button for resetting the operating and alarms parameters to the default values. (Confirmed action with a nodal box)
12. Language selection.

2.5.6. History Page

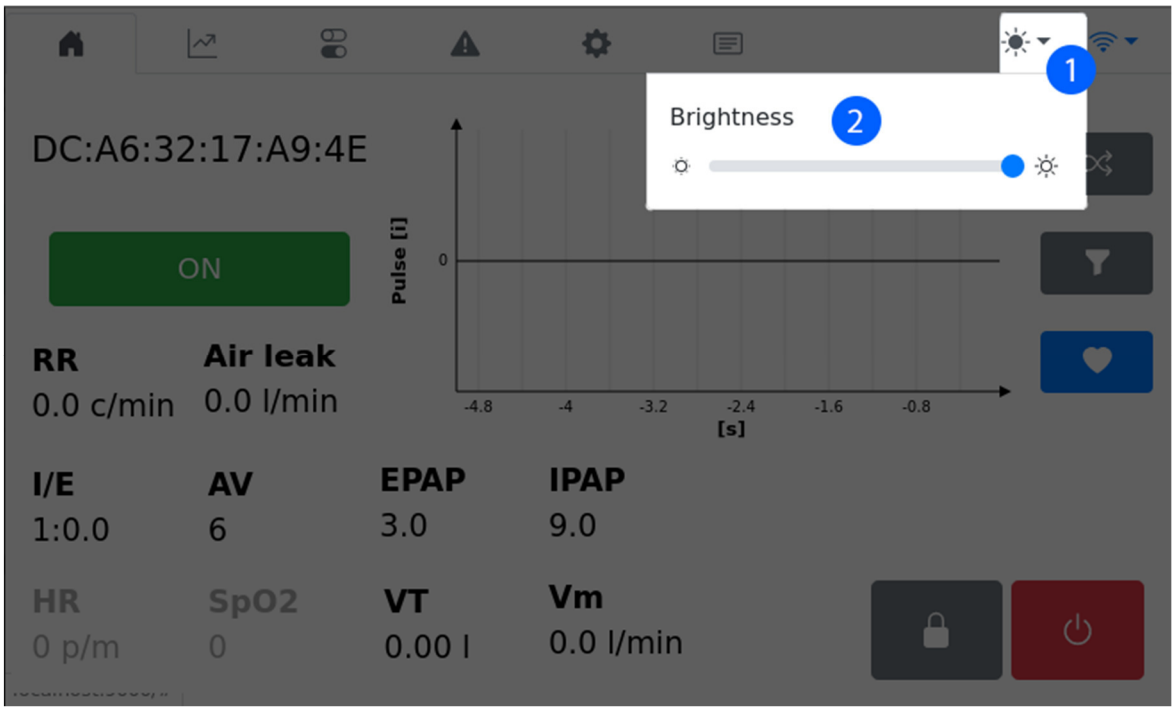
The 'History' menu displays the history of events that occurred during each ventilation cycle.



1. History of all events since the device was switched on.
2. Clear history button

2.5.7. Display Brightness

The display brightness is adjustable at all times via the button .

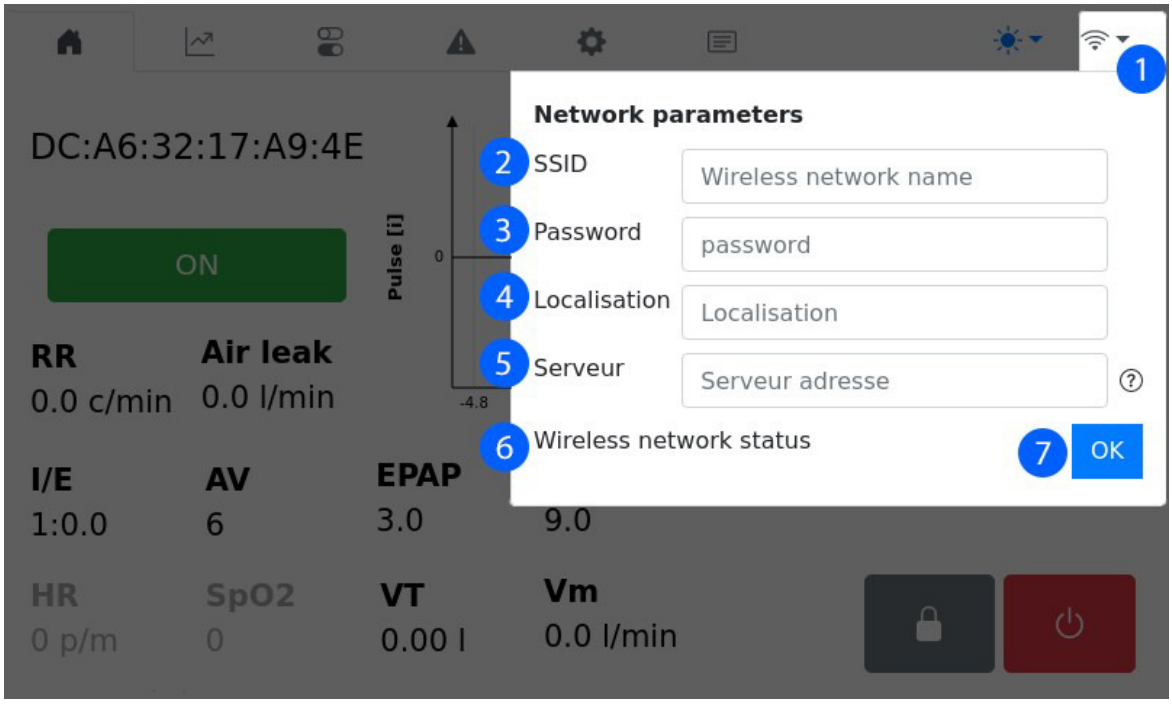


1. The menu opens when the button is pressed.
2. Slide from left to right in order to adjust the brightness for visual comfort.

2.5.8. WiFi Parameters

If connection to the local network is required, the configuration of the WiFi network is done via the button

In order to be able to fill in the parameter's fields, it is necessary to connect a USB keyboard+mouse to the dedicated connector on the back of the device.



1. The menu opens when the button is pressed.
2. SSID: Wireless network name
3. Wireless network Password
4. Location: Location of the COVIDAIR device (useful during operation with supervision). (Example: HUG GENEVA room 1822/P1)
5. Server address: Dedicated server for remote supervision (IP or domain name)
6. Status of the network (Connected / not connected)
7. Button for validating and saving the network parameters.