

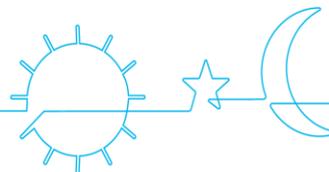
Sefam S.BOX

BY
STARCK®



OPTIONAL HEATED HUMIDIFIER

Service Manual



How to set the device

1. Setting menu

The adjustment of the treatment parameters is accessible by the touch keys displayed on the screen. The access to some of them is restricted to the medical professional (in standby mode only). In this case, press and maintain the ramp button , then tap the touch key  for two seconds when it is shown on the display. In the settings sequence:

- tapping the touch key  or  permits to decrease or increase the value of the parameter, make changes, deactivate or activate the displayed function,
- tapping the touch key  permits to access the next display,
- maintain the ramp button  pressed, then tapping the touch key  permits to return to the previous display,

The standby screen is restored by tapping  or after two minutes without tapping a key.

Views of the display:

1
Press and hold the ramp button  then tap the touch key  for two seconds in standby mode.

Mode of operation
You can change the displayed mode by tapping the key  or .
Possible settings: CPAP or APAP (Auto-CPAP).

2
Tap the touch key 

Maximum pressure if the APAP (Auto-CPAP) mode was selected.
You can decrease or increase the displayed value by tapping repeatedly the key  or .
Possible settings: from the minimum pressure to 20 cm H₂O.

Tap the touch key 

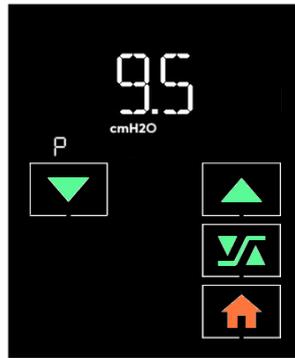
Minimum pressure if the APAP (Auto-CPAP) mode was selected.
You can decrease or increase the displayed value by tapping repeatedly the key  or .
Possible settings: from 4 cm H₂O to the maximum Pressure.

or

2
Tap the touch key



Views of the display:

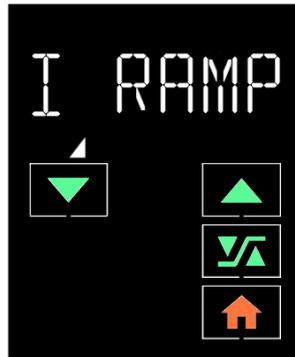


Pressure level if the CPAP mode was selected.

You can decrease or increase the displayed value by tapping repeatedly the key  or .

Possible settings: from 4 cm H₂O to 20 cm H₂O.

3
Tap the touch key

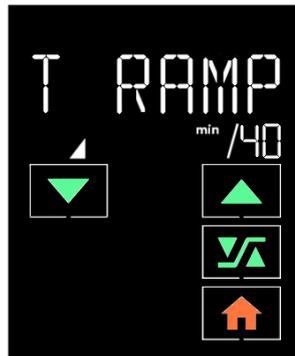


Ramp selection

You can change or deactivate the selected ramp by tapping the key  or .

Possible settings: I RAMP, T RAMP and OFF.

or

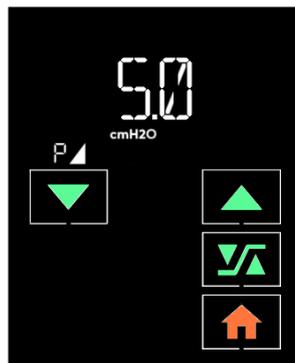


If you selected T RAMP Time ramp the displayed value on the right corresponds to the maximum ramp time.

You can decrease or increase the displayed value by tapping repeatedly the key  or .

Possible settings: from 5 to 45 minutes.

4
Tap the touch key



Ramp pressure (ramp start pressure)

In CPAP mode, this setting is displayed only if the ramp was selected (ramp ≠ OFF).

You can decrease or increase the displayed value by tapping repeatedly the key  or .

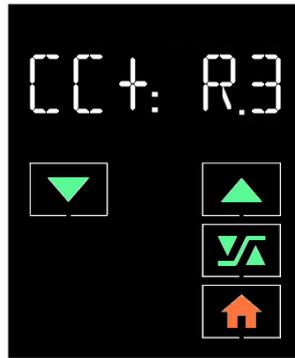
Possible settings:

- from 4 cm H₂O to the maximum pressure adjusted in APAP mode (Auto-CPAP).
- from 4 cm H₂O to the prescribed pressure in CPAP mode.

5 Tap the touch key



Views of the display:



CC+ (Comfort Control Plus)

You can change or deactivate the selected function by tapping the key  or  as many times as necessary.

Possible settings:

- during the ramp (R.1, R.2, R.3)
- during the entire treatment (1, 2, 3)
- deactivating: OFF.

6 Tap the touch key

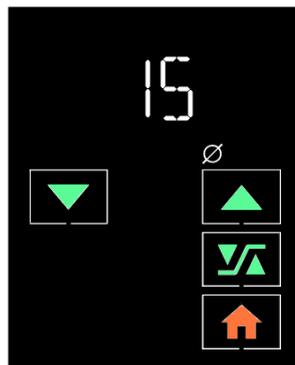


IS (Intelligent Start)

You can activate (ON) or deactivate (OFF) this function by tapping the key  or .

Possible settings: ON and OFF.

7 Tap the touch key



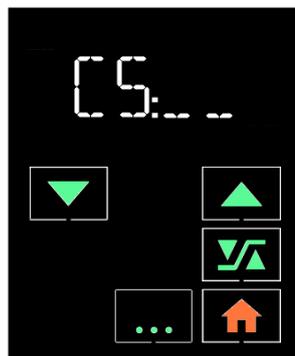
Circuit Select (pneumatic calibration)

Tapping repeatedly the touch key  or , you can choose the pneumatic calibration adapted to the pneumatic circuit (tube and mask) of the patient.

Possible settings:

- 15 (tube 15 mm in diameter)
- 22 (tube 22 mm in diameter)
- CS (Circuit Select).

or



If you select Circuit Select CS, the touch key  is displayed on the screen. Tap it to run the specific calibration.

Tap the touch key



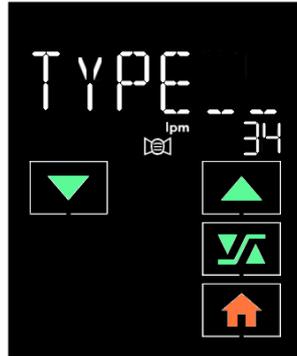
Views of the display:



A progress bar indicates the status of the calibration until the specific calibration is effective and confirmed on the display.

Refer to paragraph "5. Circuit Select: specific calibration of the pneumatic configuration" page 22.

8 Tap the touch key



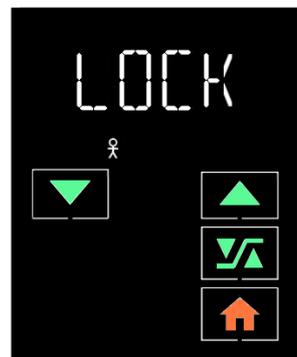
Mask select: theoretical leak in the mask

You can enter the value of the theoretical leak in the mask at 12 cm H₂O (given in the corresponding instructions for use of the mask) by tapping the touch key  or  as many times as necessary.

Possible settings: from 20 to 60 lpm by steps of 2 lpm.

Three possible types of masks: A, B and C (refer to the corresponding list).

9 Tap the touch key



Locking access to the group of three following settings by the patient:

- Ramp pressure
- CC + Comfort Control Plus
- IS Intelligent Start.

You can lock (or unlock) access by patient to these three settings in selecting LOCK (or UNLOCK) by tapping the touch key  or .

Possible settings: LOCK and UNLOCK.

10 Tap the touch key



Choosing the format of time display

The time display is set to 24 hours by default.

You can select another format by tapping the key  or .

Possible Settings: 24H and 12H.

Views of the display:

11
Tap the touch key



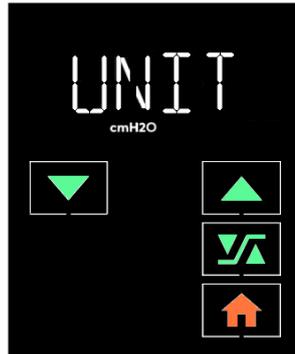
Clock

The hour blinks on the display. You can set it by tapping the touch key  or  as many times as necessary.

Tap .

The minutes blink. Adjust the minutes the same way as the hour.

12
Tap the touch key



Pressure unit

You can change the unit of the displayed pressure by tapping the touch key  or .

Possible settings: cm H₂O and hPa.

13
Tap the touch key



Offset of the pressure and flow sensor

The touch key  visible on the screen permits to run an automatic calculation of the offsets of the sensors. It is also possible to read the offset values of the pressure and flow sensor.

Tap the touch key



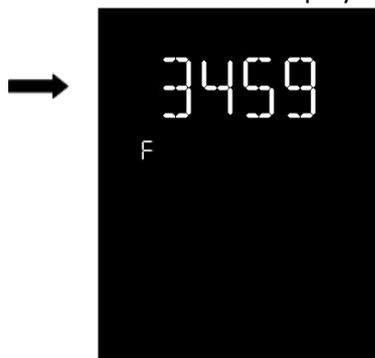
The offset value of the **pressure sensor** is displayed approximately two seconds later.

Unchangeable value: from 1500 to 2500 (default value 2000).

If a offset problem occurs on the pressure sensor, the value is no longer displayed :



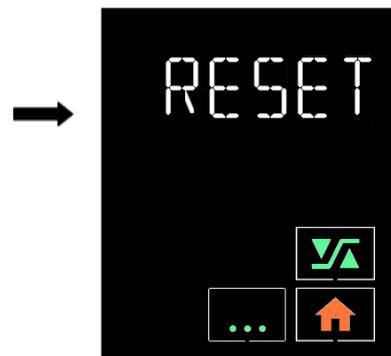
Views of the display:



The offset of the flow sensor comes after. Unchangeable value: from 1450 to 5450 (default value 3450). If a offset problem occurs on the flow sensor, the value is no longer displayed :



14 Tap the touch key



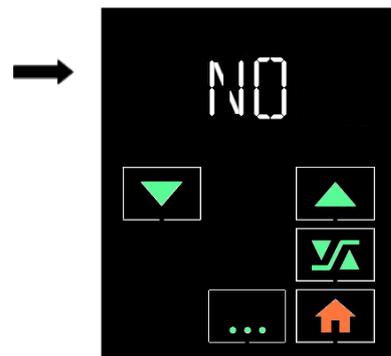
Delete of data

The touch key visible on the screen permits, if you wish, to restore the FACTORY configuration of the device.

CAUTION:

Restoring the FACTORY configuration erases all of the data recorded in the device and on the SD card, as well as the pairing with the installed communicating accessory.

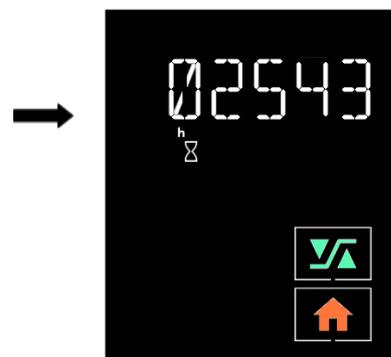
Tap the touch key



Tapping the touch screen or , you can choose:

- YES to go back to the factory configuration
- NO if you wish to keep all data and the pairing of accessories.

15 Tap the touch key



Total machine hour counter

This counter calculates the operating time of the device.

16 Tap the touch key



Views of the displays:



Total usage hour counter

This counter calculates the time during which the patient has breathed into the mask.

17 Tap the touch key



Software version

This is the version of the embedded software of the device. It can be read but not written.

Tap  to exit the menu.

2. Settings accessible to the patient

The patient can access a settings menu of the device in standby mode (see patient manual). He/she can also make the following adjustments using the touch keys displayed:

Tap	Displayed parameter:	Adjusted by	Available displays:
 in standby or operating mode	 Heating power of the heated tube (when S.Box heated tube with ATC installed)	 or 	OFF, 01 to 05 and AUTO (if humidifier installed)
 in standby or operating mode	 Humidification level (when humidifier installed)	 or 	OFF, 01 to 10
 in standby mode	 Mask Fit & Go: controls air tightness of the mask	Readjustment of the mask	LK: OK, LK: NOK
 in operating mode	 Display of the clock during the treatment		Return to the delivered pressure

Tap  to exit the display.

Cleaning and maintenance

Make sure that the patient follows carefully the instructions given in this chapter.

The patient should refer to the user guide for instructions on maintenance for the mask, the breathing tube, the S.Box heated tube with ATC and the communicating accessory.

WARNING:

Unplug the device from the power supply. Always remove the breathing tube and the humidifier chamber from the device before cleaning.

CAUTION:

- For cleaning, only use materials suited for this purpose.
- Do not use aggressive detergent, scouring sponge or hard bristle brush.

Daily

Humidifier chamber (if humidifier is installed):

- Remove the humidifier chamber:
 - To remove the humidifier chamber from the device, press the button to unlock the humidifier chamber and at the same time, pull the humidifier chamber using the integrated handle.
 - Put the humidifier chamber away from the device and pull the opening clip upwards to release the upper part of the chamber. Empty the water if any.
- Rinse with clean water.
- Allow to dry by draining, away from the sun.
- Re-install the humidifier chamber, once it is dry.
 - Fill the bottom part of the humidifier chamber, then press down on the upper part to close the chamber and lock it.
 - Place the humidifier chamber back on the heater plate, hinge side towards the inside of the machine, and push it against the device until you hear a "click".

Weekly

Humidifier chamber (if humidifier is installed):

- Remove the humidifier chamber:
 - To remove the humidifier chamber from the device, press the button to unlock the humidifier chamber and at the same time, pull the humidifier chamber using the integrated handle.
 - Put the humidifier chamber away from the device and pull the opening clip upwards to release the upper part of the chamber. Empty the water if any.
- Clean the different parts of the chamber with warm water and a mild detergent (e.g. using 3 drops of dishwashing liquid diluted in water).
- Rinse thoroughly with water to remove any trace of detergent.
- Allow to dry by draining, away from the sun.
- Re-install the humidifier chamber, once it is dry.
 - Fill the bottom part of the humidifier chamber, then press down on the upper part to close the chamber and lock it.
 - Place the humidifier chamber back on the heater plate, hinge side towards the inside of the machine, and push it against the device until you hear a "click".

Notes:

- The different parts of the humidifier chamber can also be cleaned in a dishwasher (maximum 70 ° C).
- Do not leave stagnant water in the chamber in order to prevent the development of micro-organisms.

Washable filter:

- Remove the air intake grid.
- Pull the filter towards you to remove it.
- Wash the filter with lukewarm water and a mild detergent (e.g. using a drop of dishwashing liquid diluted in water).
- Rinse thoroughly to remove any trace of detergent.
- Drying the filter: press the filter in a clean absorbent cloth, then, let it dry totally away from the sun.
- Once dried, place the filter at the back of the device and put back the air intake grid. Do not use a partially dry filter.

Monthly

Device:

- Clean the outside of the device with a damp cloth (rag, paper towel) sprinkled with a little water and a drop of mild detergent.
- Remove traces of detergent by repeating this procedure with a new cloth, (rag, paper towel) slightly moistened with only water.
- Wipe the device completely dry with a dry cloth (rag, paper towel).

Air inlet filters:

- The optional fine filter cannot be washed. It must be changed once a month or more, if it is visibly dirty.
- Change filters as soon as they are torn or stained.
- It is recommended to change the washable filter every 6 months.

Humidifier (if installed):

- Once the humidifier chamber has been cleaned, the patient can let it soak for 15 minutes in a solution of 9 volumes of water and one volume of white vinegar.
- Rinse thoroughly with water to remove any trace of vinegar.
- Allow to dry by draining, away from the sun.
- When the humidifier chamber has been removed and emptied, the heated plate can be cleaned by following same cleaning procedure as the device. Reinstall it once it is dry.
- Put the humidifier chamber back in place.
 - Fill the humidifier chamber, then press down on the upper part to close the chamber and lock it.
 - Place the humidifier chamber back on the heater plate, hinge side towards the inside of the machine, and push it against the device until you hear a "click".

WARNINGS:

- Check if the heater plate is properly dried before plugging the device.
- Never use the device without making sure that the air inlet filter is present.
- Do not use spray detergent. Harmful residues could enter and remain in the air outlet, the air inlet filter or inside of the device, which could cause air way irritation.
- Never use concentrated bleach higher than 0.1%. For example: pour 200 ml of bleach to 2.6% in 5 liters of cold water.

Spare parts

Reference	Description
M-416410-00	S.Box power supply
M-316430-03	Side cover S.Box (Ext)
M-316420-01	S.Box heated element
M-216430-06	S.Box heated humidifier
M-216430-15	S.Box Humidifier chamber
M-216430-16	S.Box Humidifier chamber base part
M-316470-01	Display S.Box (Ext)
M-316490-01	Main board S.Box (Ext)
M-316450-01	Internal frame ASSY S.Box (Ext)
M-316490-03	Flow sensor S.Box (Ext)
M-315940-01	Inlet air filters (50 pcs)
M-316400-02	Air inlet filter grid S.Box (Ext)
M-316400-01	Rear cover S.Box (Ext)
M-316430-01	Bottom cover S.Box (Ext)
M-316440-01	Top cover S.Box (Ext)
M-216430-09	S.Box USB cable
M-216430-05	S.Box SD card

Using the SD card

The SD card permits to store the most recent compliance data or to update the device settings.

Saving data

Each time the treatment is stopped, the most recent compliance data memorized by the device are automatically saved on the SD card.

The memory card can also store the signals acquired in real time for about 3 months. For this purpose, a memory card has to be inserted in the device while using it.

Once the data is saved, the patient can send the memory card to you and you will retrieve the compliance data and analyze it using the SEFAM Analyze software.

Then, insert the SD card in the memory card reader of your computer. To retrieve the compliance data, refer to the user manual of the SEFAM Analyze software.

CAUTION:

Use only authorized SD cards.

Settings update

You can adjust the settings of a device by following the instructions given by the SEFAM Analyze software, and save them on the SD card. An update of the device settings starts automatically when the patient inserts the card for the first time.

Service card

A SD card can be configured as a "service card" using the SEFAM Analyze software, in order to set up a collection of devices with the same default parameters. This allows adjusting only the parameters specific to the patient. To configure a "service card", refer to the user manual of the SEFAM Analyze software.

To use the service card with the device, hold down the button  while inserting the card.



Manufacturer:

SEFAM
144 AV CHARLES DE GAULLE
92200 NEUILLY SUR SEINE
FRANCE

Manufacturing plant:

SEFAM
10 ALLÉE PELLETIER DOISY
54600 VILLERS-LES-NANCY
FRANCE

REF : M-164MAT00-10-Version 1
2018-01