A Dutch, German, French, Polish and Russian version of this manual is also available on the website of www.StienenBE.com. Go to https://www.stienenbe.com/en/pig-farming/cb-2000-series/ to download the desired manual.

CE This device complies with the essential requirements and other applicable provisions of the guidelines from Directive 2014/30/EU, Low Voltage Directive 2014/35/EU and Machine Directive 2006/42/EC. Tests: EN 61000-3-2, EN 55014-1, EN 55014-2, EN 60355-1, EN 60204, EN 61010.

Installer settings **Factory settings**

TECHNICAL SPECIFICATIONS

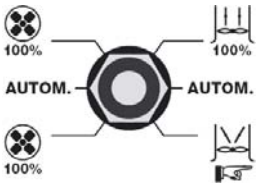
Supply voltage	: 230Vac 50/60Hz
Power consumption	: 25VA
Dimension (hxbxd)	: 215x225x120mm
IP class	: IP-54
Environment temperature	: -5°C up to +40°C
Environment conditions	: The CBA-2000 is only suitable for installation in dry, non-corrosive and non-condensing indoor areas. Do not expose the CBA-2000 to direct sunlight, solar radiation, heat, moisture or humidity.

ATTENTION!
THE SOFTWARE VERSION IN ALL THE CB-CONTROLLERS MUST BE 4.62 OR HIGHER.

Operation panel

When no lamps are lighting up on the operation panel, the temperature measured in the room is shown on the left display and the current ventilation of the room on the right display.

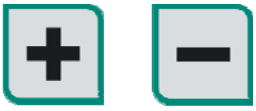
Manual control



During normal operation, the switch is on “AUTOM.” (automatic) position. By placing the switch in the “UPPER” position, the ventilator is fully actuated and, if a flap is connected to OUT3 it will open totally. If the switch is placed in the “LOWER” position, then the ventilator will also be totally actuated but then the tension of the flaps is switched off so that the flaps can be manually adjusted.

Checking / changing a value

If a key is pressed and the lamp lights up continuously, then a measuring value or a calculated setting is shown on the display. When the lamp is blinking a setting is shown on the display.



The value of the setting can be changed by means of the **+** and **–** (plus and minus) key.

Note! If the **CURVE** is **ON** you **CANNOT** change the setting.

Temperature

If you push this key the right-hand display will show the room temperature setting (the LED will be blinking). You can change the value using the plus and minus keys. If the control system has temperature compensation, the left-hand display will show the corrected room temperature.

The right-hand display will show the temperature difference compared to the room temperature prior to switching on the room heating. You can change the value using the plus and minus keys.

The measured temperature of the second sensor, if installed, can be claimed (lamp on).
If a second heater is installed (2nd heating, cooling, floor heating etc.), the temperature of the second heater can be set by pressing the key once again (blinking lamp).

2nd heating = Floor heat.: On a floor heating the compensated setting is visible first (the lamp is on); the setting is visible by pressing the key once again.

2nd heating = relative: The right-hand display will show the temperature difference on which the 2nd heating (cooling) is controlled (blinking lamp). The temperature setting of the 2nd heating is relative to the adjusted room temperature.

2nd heating = cooling: 2nd heating is cooling

If you push this key the left-hand display will show the temperature measured and the right-hand display will show the flap position calculated for the inlet flap.

Press the key again to set the temperature difference relative to the room temperature setting.

Room ventilation

You have to push a sequence of keys to set the minimum and maximum ventilation and the control bandwidth. You can change the value on the right-hand display using the plus and minus keys.

Push the [**1**] key followed by the [**5**] key to set the minimum room ventilation (the “1” LED will be lit and the “5” LED will be blinking).

Push the [**1**] key followed by the [**5**] key to set the maximum room ventilation (the “1” LED will be lit and the “6” LED will be blinking).

Push the [**1**] key followed by the [**7**] key to set the control bandwidth (the temperature range within which ventilation is controlled from minimum to maximum) for the room ventilation (the “1.” LED will be lit and the “7” LED will be blinking).

Inlet flap

You have to push a sequence of keys to set the minimum and maximum flap positions and the control bandwidth. You can change the value on the right-hand display using the plus and minus keys.

Push the [**4**] key followed by the [**5**] key to set the minimum flap position (the “4” LED will be lit and the “5” LED will be blinking).

Push the [**4**] key followed by the [**6**] key to set the maximum flap position (the “4” LED will be lit and the “6” LED will be blinking).

Push the [**4**] key followed by the [**7**] key to set the control bandwidth (the temperature range within which the flap is controlled from minimum to maximum position) for the inlet flap (the “4” LED will be lit and the “7” LED will be blinking).

Growth curves

The curves can be used to pre-program the climate control process on the basis of the animals' age.
You must press a sequence of keys to set a curve. A curve consists of a maximum of 4 breakpoints.

Note! If the **CURVE** of the setting you want to change is active, you can only change the relevant setting by changing the setting of the curve...
Do not switch from a relative to an absolute setting within the curve.

Room temperature curve

Push the **[1]** key. Then push the **[9]** key. The left-hand display will show the number of the breakpoint that was set the last (the “1” LED will be on and the BREAKP LED will be blinking). You can change the number using the plus and minus keys.

Then push the **[10]** key to set the day number for the selected breakpoint (the “1” LED will be lit and the DAY LED will be blinking). You can set the day number using the plus and minus keys (0 = curve off). If you set a lower day number than for the previous breakpoint, this breakpoint will not be available.

If you then push the **[11]** key, the day number will move to the left-hand display. The right-hand display will show the required room temperature. You can set the temperature using the plus and minus keys.

Replace  by:


[1] [5] To set the minimum ventilation curve.


[1] [6] To set the maximum ventilation curve.

[2] To set the differential temperature curve for the room heating.

[3] To set the temperature curve for the 2nd room heating (cooling) or to set the differential temperature curve for the 2nd heating.

[4] To set the curve for the inlet flap.


[4] [5] To set the curve of the minimum flap position.


[4] [6] To set the curve of the maximum flap position.

ALARMS

Room temperature alarm limits

1. Push the **[8]** key. The left-hand display will now show the current alarm code (F00 = no alarm). In the right-hand display you can set that the alarm should be passed on to an external device through the “ERROR” relay (1) or that it should not be passed on (0). If you set that the alarm should not be passed on (0), the  LED will blink. The alarm will only be passed on to the “ERROR” relay after an alarm delay time set by the installer has lapsed.

Room not in use

If you set the value to “2” instead of “0” or “1” the room is no longer in use. The right-hand display shows “**---**“.

2. Then push the **[5]** key; the left-hand display will show the lower limit calculated for the room temperature. The right-hand display will show the relative lower limit related to the room temperature setting. An alarm will be generated if the room temperature falls to below the calculated lower limit. You can set the difference using the plus and minus keys. While changing the setting, the calculated lower limit is shown on the left-hand display.

3. Then push the **[6]** key; the left-hand display will show the upper limit calculated for the room temperature. The right-hand display will show the relative upper limit related to the room temperature setting. An alarm will be generated if the room temperature rises to above the calculated upper limit. You can set the difference using the plus and minus keys. While changing the setting, the calculated upper limit is shown on the left-hand display.

4. Then push the **[7]** key; the left-hand display will show the current outdoor temperature. The right-hand display will show the absolute upper limit; an alarm will be generated if the room temperature rises to above the value that has been set. You can set the absolute limit using the plus and minus keys.

Alarm codes

Alarm code	Description
F00	No failure.
F01	Room temperature faulty or out of limits.
F02	Temperature 2 faulty or out of limits.
F04	Outside temperature sensor faulty.
F10	Measuring ventilator rotates too slowly or is still.
F40	Installation error (wrong dip-switch settings; check the positions of the dip-switches).

The ERROR relay is energized during normal operation. If an alarm occurs or the mains power is lost, the relay will be de-energized. Combinations of errors may be displayed too; e.g. F52 is a combination of the errors F02, F10 and F40.

Room temperature outer limits:	The difference between the room temperature setting and the room temperature measured exceeds the alarm limits.
Faulty sensor 2 *	The difference between the temperature setting and the temperature measured exceeds the alarm limits (2nd heating).
Measuring ventilator rotates too slowly	Measured value < 2% or deviation > 40%.

- The installer can set the alarm limits for temperature sensor 2.

Alarm in a room

If the alarm relay in a room is falling off and you press twice on the  key, the left display shows an “A” and the right display shows the corresponding room number (of course only if the room is part of the same communication-loop).