Change history GrowControl GrowBase Pro "Stable version"

There are usually two firmware versions for a controller.

Beta version: New features - New bugs

Here the newest features are included. The probability for bugs is higher in this version.

The file name or version number of a beta version ends with the letter "b". (e.g. fw504500000b.bin)

Stable version:

This version has been extensively tested. The individual functions have usually passed through the beta version before.

The file name or version number of a stable version ends with the letter "s". (e.g. fw504500000s.bin)

Feedback:

Please give us feedback about your experience with this version or about our products in general.

Both positive and negative feedback is very important for us to become even better.

Please also feel free to give us feedback on how interesting or important a newly added feature or change is to you, or what you would like to see in the future.

If your feedback relates to a specific product or version, please include the firmware version number, product name and, if possible, the serial number found on the bottom of the unit.

If it is an error description, please describe the error and the circumstances under which it occurs as precisely as possible.

This document lists chronologically the changes that have a particular impact on users.

16.09.2022 – 5045.0.00.14s (file name: fw504500014s.bin)

- **Separate settings AC/EC fans**
  The minimum & maximum settings for AC and EC fans are now completely independent of each other for all phases (day, night, CO2). For each fan (EC exhaust, EC intake, AC exhaust and AC intake), a minimum and a maximum value can now be set for each phase.
  In the menu area "System" it can be selected whether the settings for EC, AC or AC&EC fans are displayed.
  This makes the settings more flexible and easier to understand. In addition, we can avoid the display of some warnings.
  Please check the fan settings after the update!

- **Heater: added to ramp**
  When switching between day/CO2/night, the setpoint for the room temperature has already been changed slowly along a ramp.
  The same now applies to the heating temperature. This makes the changes between night and day/CO2 more harmonious.
  The setpoint temperature for the heater with which the controller is currently working is now displayed in the info level.

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- **Ramp day/CO2/night setting**
  The duration of the ramp is now entered in minutes. Previously, a more difficult to understand interval duration was entered.
- **Heater: setting for CO2 added**
  Separate setting of the heating temperature for the CO2 phase inserted
- **CO2: regulation type P and PD removed**
  The regulation types P and PD are not suitable for almost all setups. To avoid irritation and to keep the menu clean, we have removed these options and related settings.
- **CO2 sensor: calibration, filter setting**
  Although the calibration was actually successful, an error was displayed often during sensor calibration. This has been fixed. In addition, the routines for calibration and filter setting have been optimised, making them much faster now.
  The calibration routine was adapted so that the success message is also displayed correctly for the CO2 sensor from version 3.0.0.
- **CO2: small failure correction in CO2 control when switching a CO2 generator**
- **CO2: added minimum time for CO2 dosing to "Advanced Settings"**

28.10.2021 – 5045.0.00.10s (File name: fw504500010s.bin)

- **VPD control added**
  VPD stands for Vapour Pressure Deficit.
  This value is calculated from the leaf temperature and the air humidity. For an optimal metabolism of the plant, VPD has an even greater influence than temperature or humidity alone.
  The unit for VPD is Pa (Pascal). We use hPa (hectopascal) [hPa x 100 = Pa] for setting and display. The usually desired value is approx. 4.0 to 16.0 hPa.
  If VPD control is active, the current humidity setpoint is adjusted internally so that the VPD value corresponds to the set VPD setpoint.
  The current VPD value is now displayed in the info level. In addition, the current internally used air humidity setpoint is displayed.
  When VPD control is active, the air humidity setpoint cannot be changed and the menu shows "VPD" instead of the air humidity value.
  The leaf temperature is usually approx. 0.5 to 3°C below the ambient temperature. To enable VPD control even without a leaf temperature sensor, a leaf temperature difference can now be entered in the "Advanced settings" area. For precise VPD control/calculation you should use our leaf temperature sensor IRCube.
- **Regulation type "PID" added for humidifier control**
  With the PID control algorithm, more accurate humidity control is possible. Accordingly, when VPD control is active, the VPD value is achieved more accurately. The control type can be set in the "Advanced settings" area. In "PID" mode, a humidifier is switched on and off frequently.
- **Regulation parameter Kd for humidifier control added** in the "Advanced settings" section. (differential proportion/factor of the humidifier PD or PID control).
  With a higher value, the control reacts more strongly to changes in the currently measured air humidity value.

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- **Lights MIN added**
  The minimum dimming value of the connected lighting 0-10/1-10V can be set here. A sunrise starts at this value. A sunset ends at this value before the lights are switched off.

- **Lights MAX supported up to 115% (boost)**
  Some luminaires support boost control above 100%. This is now also possible with the controller. With older controllers, the maximum possible value may be limited to 100% by the hardware. The 0-10/1-10V output is designed for 20mA. However, the boost does not work up to 115% at full load:
  5 mA --> approx. 115% max.
  10 mA --> approx. 112% max.
  20 mA --> approx. 100% max.
  Typically, a luminaire requires much less than 1mA.

- **Setting of the set temperature for the heating mat has changed**
  Previously, the heating mat temperature could already be set either to a fixed value or relative to the ambient temperature. This was done via a single value and was somewhat cumbersome/confusing. Now it is determined on a separate menu screen in the "Climate settings" area whether the heating mat temperature is to be regulated to a fixed value (absolute/fixed) or to a temperature relative to the ambient temperature.
  CAUTION: After the update, check whether the settings for the heating mat control (day/night) in the "Climate settings" section are correct!

- **Dehumidification via exhaust air**
  The tuning for the "Dehumidify via extract air" function was changed so that the ventilation reacts stronger to high humidity.

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