



## Algaemaster 10 control

The Algaemaster 10 is a photo bioreactor - the perfect equipment for scientists to re-create the ideal conditions for growing phototrophic organisms such as microalgae. These are increasingly of interest for translational science; e.g. drug discovery in the pharmaceutical industry.

### Key features

- Ocean water resistant and completely autoclavable lid and vessel
- Metal-free components for metal-sensitive organisms
- Material touching the product: borosilicate glass, PTFE, Ultem®
- Computerized control of lighting, temperature, stirring, pH and dosing of liquid or gas
- Customizable lid with nine receptacles
- Effortless data collection via USB drive

### Key components

10 L jacketed reactor vessel

Quick fit connectors enable simple use of an IKA chiller with the system. When using a temperature sensor or pH sensor a minimum working volume of six liters is required.

### Controller

The controller provides all features necessary for the growing process of the organisms. Two large displays allow simple monitoring of all software settings during trial run period. Nutrients and other liquids can be added by using two peristaltic pumps. Gas is supplied by two gas flow meters. The top and rear controllers provide different interfaces such as RS232 and USB to download data by connecting the device to a PC. With its slim design, it can sit right next to the reactor on the bench.

### LED light panels

Two panels for individual and variable lighting conditions are included in the delivery. A total of four panels can be connected at once.

### Lid

The customizable lid can be autoclaved. It is made of Ultem® thermoplastic that has been tested for durability. Sensors such as pH or PT 100 for temperature are inserted through the lid using receptacles (6, 8, 12 mm openings; 1/2" NPT threaded).

### Stirrer

The speed range of the stirrer is 10 - 100 rpm. The agitator itself is PTFE-coated. The propeller elements are height-adjustable, making it versatile to recreate different wave movement, depending on the species/sample.

### Scope of delivery

- 10 l jacketed reactor vessel with quick fit connectors

### Technical Data

|   |                      |
|---|----------------------|
| Useable volume [ml]                             | 6000 - 10000         |
| Useable volume with temperature probe min. [ml] | 6000                 |
| Viscosity max. [mPas]                           | 100                  |
| Speed range [rpm]                               | 10 - 100             |
| Permissible ON time [%]                         | 100                  |
| Temperature measurement resolution [K]          | 0.1                  |
| pH measuring range [pH]                         | 0 - 13               |
| Accuracy of pH measurement [pH]                 | 0.1                  |
| pH measurement resolution [pH]                  | 0.01                 |
| Cooling medium temperature [°C]                 | 4 - 60               |
| Speed deviation [±rpm]                          | 5                    |
| Speed display                                   | TFT                  |
| Heat control                                    | TFT                  |
| Connection for ext. temperature sensor          | PT 100               |
| Stirring element fastening                      | special output shaft |
| Timer   | yes                  |
| Timer display                                   | TFT                  |
| Speed control                                   | 1 RPM steps          |
| Type of cooling                                 | flow                 |
| Temperature display                             | yes                  |
| Temperature control                             | PT 100               |
| Working temperature sensor                      | PT 100               |
| Working temperature display                     | TFT                  |
| Display for operation with ext. sensor          | yes                  |
| Reversible direction of rotation                | yes                  |
| pH meter interface                              | yes                  |
| pH value display                                | TFT                  |
| Dimensions (W x H x D) [mm]                     | 800 x 1000 x 600     |
| Weight [kg]                                     | 38                   |
| Permissible ambient temperature [°C]            | 5 - 40               |
| Permissible relative humidity [%]               | 80                   |
| Protection class according to DIN EN 60529      | IP 21                |
| RS 232 interface                                | yes                  |
| USB interface                                   | yes                  |
| Voltage [V]                                     | 100 - 240            |
| Frequency [Hz]                                  | 50/60                |
| Power input [W]                                 | 375                  |
| <b>Ident. No.</b>                               | <b>0020009577</b>    |

- Lid made of Ultem®
- Controller unit
- 2 LED light panels
- PT 100 temperature sensor
- pH sensor
- Sparger
- Base plate
- Stirrer motor and stirring element with two height adjustable propellers

Accessories: RC 2 basic, RC 2 control