

## AQALux

### FDG Systems

FDG Systems specializes in automation and water treatment equipment for horticulture. More than 30 years of experience and involvement in pioneering innovations in the field of control technology, irrigation, fertilizer dosing and water disinfection.



### Disinfect water

To save water and fertilizers, drain water is reused. To do this in a safe way, it is necessary to disinfect the drain water. The most efficient and used method is low pressure UV disinfection. The AQALux has been specially developed for the disinfection of drain water in horticulture. Rain and surface water can also be treated with an AQALux.

### AQALux

The AQALux is a low-pressure UV unit which, is equipped with the latest 800 Watt UV-C lamps that, in combination with the power controller, offers the highest efficiency. These newest techniques, in combination with the smart flow control, based on the measured UV dose, guarantee a highly efficient disinfection process. The AQALux, in combination with the filtration guarantees a 1000-fold reduction (99.99% killing) of any plant pathogenic germs present in the water to be treated. The irradiation rooms have been specially developed for water types used in horticulture. Thanks to the unique concept of the unit, the supplied automation and the various measurement sensors, the entire process has been checked, so that you are assured of correct disinfection.

### Specifications:

- 800 Watt UV-C lamps.
- UV dosing 80 to 250 millijoule/cm<sup>2</sup>.
- Max. capacity, 30 UV lamps after 12.000 burning hours:
  - o T10 of 20%, 250 millijoule/cm<sup>2</sup>, 33 m<sup>3</sup>/hour.
  - o T10 of 50%, 250 millijoule/cm<sup>2</sup>, 43 m<sup>3</sup>/hour.
- Measuring of the UV-intensity.
- Flow control depending on the desired UV dose.
- Integrated 25 micron filter.
- Automatic cleaning of the Quartz tubes and filter.

The AQALux units are built on a stainless steel frame using high-quality components.



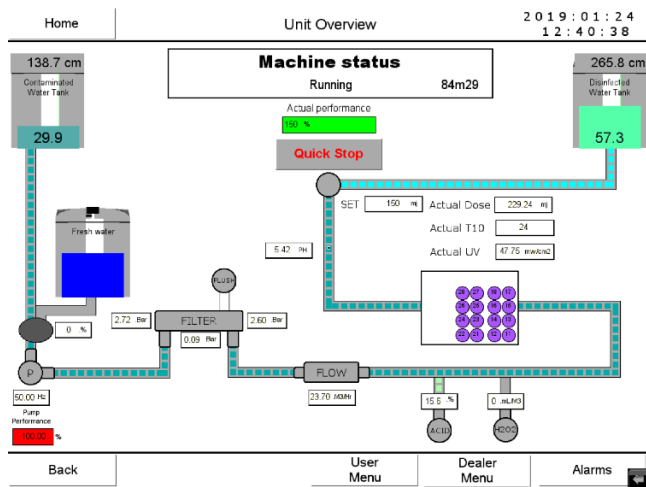
### Options:

- UV oxidation by means of hydrogen peroxide dosage.
- Mixing control where clean and drain water are mixed so that the T-10 of the incoming water is improved.
- Start and stop depending on tank levels.
- External start option.
- Multiple tank selections.
- Operation with smartphone, tablet or PC.

## Controls and software options

Controls:

- Adjustable desired dose in millijoule/cm<sup>2</sup>.
- Monitored process based on UV intensity measurement and flow.
- Continuous pH control.
- Automatic filter cleaning.
- Automatic cleaning of the Quartz tubes (lamps).
- Level monitoring on the acid tank.
- Hydrogen peroxide regulation (option).
- Level monitoring on hydrogen peroxide tank (option).
- Clean water admission control dependent on T10 (option)



Software:

- Standalone controller with touchscreen and graphical user interface.
- Secured use by adjustable user password.
- Continuous measurement of:
  - o UV-intensity.
  - o Lamp functions of all lamps.
  - o Flow.
  - o pH value of the disinfected water.
  - o Pressure difference over the filter.
  - o Amount of disinfected water per day, week and year.
- Most relevant measurements in graphs.
- Touchscreen with process overview.
- Show burning hours.

## Design and advice

FDG Systems can advise you in choosing the right solution and fitting it into new or existing technical installations. This guarantees correct operation and prevents unpleasant surprises.



## Benefits:

- Highest efficiency due to flow-regulated UV dose.
- Independent (stand-alone) unit with its own controller.
- Independent of any existing automation.
- Can be used in any situation.
- Easy installation.
- User-friendly operation with touchscreen.
- Continuous process overview and overviews via touchscreen.
- The lowest costs per m<sup>3</sup> of disinfected water.
- There is virtually no change in the composition of the water.
- The water is conditioned by continuously keeping the pH value of the disinfected water between 5.2 and 5.5.
- The temperature of the water does not change.
- Very low maintenance costs. Maintenance and replacement of lamps can be carried out by your technical department.
- Lamps have a lifespan of 16,000 hours and an economic lifespan of 12,000 burning hours.
- No use is made of maintenance-sensitive wipers for cleaning the quartz tubes.
- Operation via internet with smartphone, tablet or PC (option)