

Instruction manual

UV-discharge system

UVC-LPF 16 & 32



To ensure the proper use of this product, please read this instruction manual carefully and retain it for future reference.



Safety Instructions

ATTENTION! The lamp of this system emits UV-radiation during operation. UV-radiation damages eyes and skin. Never expose people to UV-radiation!



ATTENTION! Operate the UV-lamp within the system UVC-LPF 16 & 32 only! Do never operate the lamp outside the reactor!



ATTENTION! Do not operate the system if the lamp supply line is damaged or if the UV-lamp is in any respect

damaged! The unit lamp/lamp supply line has to be replaced completely if damaged.

ATTENTION! Switching on a damaged UV-lamp or a system with damaged lamp supply line might cause an electric shock! Operate the system protected with a fault current circuit breaker (30 mA).

The system has to be disconnected from the electrical power supply

- before each withdrawal of the lamp from the reactor
- at any cleaning and service procedures
- if the UV-lamp has to be substituted
- under error conditions

ATTENTION! The UV-lamp contains mercury! If the bulb of the lamp is damaged mercury might expire! In this case UV-lamp and reactor vessel (including content) have to be disposed professionally.

ATTENTION! When placing into operation check the impermeability of all screw connections. No liability for damages by water is assumed by the manufacturer.

ATTENTION! Never allow children to use the apparatus.



figure: Set-up of the UV-discharge system UVC-LPF 16 & 32

Assembly and Installation



The assembly and potentially upcoming repair as well as the exchange of the UV-lamp have to be carried out by authorized technicians only. The device may not be installed in wet zones. Please note the requirements of the VDE 0100 when assembling the system. Beyond it take customary norms and regulations into account when assembling and installing UVC-LPF 16 & 32. Operate the system only in network configurations containing a ground wire (PE). Work only on dead electrical systems. Before installing the system the following points have to be ensured:

- The operating pressure of maximum 0.6 MPa (6 bar) is not exceeded.
- The maximum ambient temperature amounts to 40°C.
- The maximum water temperature amounts to 65°C.
- The place of installation of reactor and control system is free of frost and dry.
- The maximum flow rate of up to 15000 l/h (UVC-LPF 16) and 30000 l/h (UVC-LPF 32) respectively is not allowed to be exceeded.

Shut-off devices before and behind the UV-discharge system can be recommended for maintenance. For the water connections UVC constant material has to be used. Before installation the pipeline has to be cleaned carefully. The reactor case can be fastened with pipe clips on the wall. With flow rates below 500 l/h, the reactor case must be perpendicularly fixed; otherwise the installation position is unimportant. The reactor is to be fastened in such a way that the inspection glass is well observable. For the connection of inflow and outflow, a 1 1/2"-screw thread is mounted at the reactor casing. When mounting the reactor please mind the direction of flow (label on the reactor casing). Adduction of the screw connections demands countering the threaded elements protruding out of the reactor casing (by gas pipe pliers for instance). UVC-LPF 16 & 32 are applicable for fighting germs in swimming pools, fountains and in industrial applications. The lamp supply line can not be exchanged. If the supply line is damaged, the UV-lamp has to be disposed. Reactor and ecg-box have the protection class IP 65 (dust- and hose-proof).

Operation and Service

The UV-lamp may be operated only in the UV-discharge system UVC-LPF 16 & 32. The UV-lamp is switched on by plugging it into a 120V-outlet. An insufficient disinfection can not be excluded in the case of water standing between the water extraction place and the reactor (e.g. by renewed soiling). For this reason it is recommended to mount the system as near as possible at the water extraction place. Ensure yourself whenever switching on that neither the connecting cable (8) nor the UV-lamp is damaged. Ensure yourself whensoever turning on that the lamp lights up (using the inspection glass). The medium to be disinfected flows through an inner quartz tube placed next to the UV-lamp. Facings on the quartz tube reduce the radiation output and hence the germicidal effect. The inner quartz tube has to be cleaned at regular intervals depending on the water composition. For this purpose disconnect the UV-lamp from the power supply and depressurise the device. Loose the screw connection between reactor casing and pipeline. Because of the residual water in the reactor it can be recommended to place a bowl under the system. Possible facings have to be removed from the inner quartz tube with a moist cloth or a bottle brush. Calcifications can be removed with vinegar water. If there are facings which cannot be removed, the inner quartz tube has to be exchanged. The water to be disinfected may not be clouded; possibly it has to be filtered before radiating it. Since the UVC-power and the efficiency of the disinfection respectively decreases with increasing operating life, the UV-lamp has to be exchanged after 8000 hours of operation (corresponds to continuous operation of eleven months).

Exchange of the UV-lamp

Damaged UV-lamps can be exchanged. For this purpose remove UV-lamp:

Open the box containing the control gear and loose the wires by pressing a screw driver against the connectors. Loose the screwed cable gland and pull out the wires. Now the lamps can be unscrewed using a 19mm wrench. (Be careful risk of breakage!) Screw in new lamps and thread the wires through the cable gland and tighten it. Make the connections in the following order: Start with the first lamp on the left side: brown, white, green, yellow. Start with the second lamp (only with UVC-LPF-32) on the right side: brown, white, green, yellow. At this the same connection for yellow is used by both lamps. Close the box containing the control gear.

When replaced and before placing into operation check the impermeability of all screw connections.