Operating instructions

TAUCH-UV-C

Long Life Amalgam Technology

Smartpond®

Operating instructions

Long Life

Amalgam Technology

Table of contents

1 Read first

Use of these operating instructions These operating instructions provide the installer of the immersion UV-C, the owner and qualified persons with important information on installation and maintenance as well as general information on the safe use of the appliance.

Use The unit described may only be operated for its intended use within the defined area of application.

Intended use Use The Smartpond® immersion UV-C is basically designed to reduce germs in liquids.
Areas of application are industry, fish farming, sewage treatment plants and fish and swimming ponds.

Liability If the unit is operated outside the described area of application or if the unit is modified, the unit is no longer used for its intended purpose. In such cases, the manufacturer accepts no liability whatsoever.

Dismantling or disassembly The disassembly or removal of a Smartpond® Submersible UV-C may only be carried out by an authorized Smartpond® dealer, specialist personnel or under their approval/instruction.

Safety The electronic component (ballast) of the UV-C lamp must not be opened (immediate invalidation of the guarantee).

1.1 Symbols and terms used

	**Warning**	This symbol indicates a warning which, if ignored, will result in injuries or considerable damage to property. These warnings must be observed at all times!

	**Note**	This symbol draws attention to important information. With Failure to observe this may result in damage to the appliance or faults.

Device	Complete Smartpond® submersible UV-C unit as described in these operating instructions.
Warranty	For warranty claims, it is imperative that the device is left in its original condition. Any modification, adaptation, conversion, etc. of the appliance will invalidate all warranty claims.
Owner of the Device	The person or company that has power of disposal over the device and is responsible for the operation and maintenance of the device.
Competent persons	Persons who are trained to carry out the installation and maintenance work. Persons who are aware of the potential hazards and who have the necessary tools and equipment.
Installation work	All necessary work and measures required for safe and proper commissioning of the appliance.
Error	An operating status that restricts or prevents safe operation of the appliance.
Light source	The actual light tube inside the quartz glass.

1.2 Responsibilities

Obligations of the owner

The owner of the device must ensure that:

- the device is kept in a safe operating state,
- this BA is available to competent persons,
- the appliance is maintained at regular intervals.

Responsibility

Only qualified persons may carry out the following work:

- Installation
- Connecting the electrical components
- Setting the electrical components
- the entire maintenance work

Manufacturer

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Country	Germany
contact	www.smartpond-filter.com

Local dealer / subcontractor / Distributor

(Company sticker)

2 Product description

See also www.smartpond-filter.com

With the Smartpond® Submersible UV-C Amalgam Long Life high-performance immersion lamp, you have chosen a high-quality product. Thanks to the Long Life technology, the immersion lamps achieve a service life of up to 16,000 hours with only a 10% drop in output. The amalgam in our lamp types is located at the base (plug side) of the light source.

	**Attention**	When inserting the lamp, make sure that the spotlight is only in horizontal position, or with the screw connection facing downwards.

	**Note**	When the Smartpond® immersion UV-C lamps are placed in a large vessel the slowly passing water is irradiated for longer. This allows a significantly increased effect to be achieved.

2.1 General information on the mode of action

The ultraviolet light emitted in the wavelength range of 253.7 nm (nanometers) has a germ-reducing effect. The cell structure of bacteria, viruses, algae and other microorganisms is severely damaged by UV-C radiation in this range. The genetic material (DNA) is altered in such a way that the microorganisms can no longer reproduce and die. Only the algae and bacteria etc. that are moved past the UV-C light source can be damaged!

	**Note**	By positioning the immersion heater in a chrome steel container, up to 30% more power can be converted due to the beam reflection.

3 Security

3.1 UV-C Radiation

 **Warning**	**Ultraviolet light can** cause **damage to eyes and skin!** Therefore, UV-C devices must always be positioned and covered or enclosed in such a way that no one can come into unintentional contact with direct UV-C radiation.

3.2 Construction method

Earthing When developing the Smartpond® Immersion UV-C, we placed particular emphasis on safety. With the Smartpond® Immersion UV-C, the earthing cable is routed directly to the UV-C lamp. In conjunction with an RCD, we offer you the highest possible level of safety.

Plug The appliance is supplied with a Schuko plug.

3.3 General Security

 **Warning**	For maintenance work etc., the immersion UV-C device must be disconnected from the power supply. disconnected (pull out the mains plug).

Overheating The immersion UV-C device may only be put into operation when it is in the water. This prevents failure due to overheating.

Permanent installation If you intend to carry out a permanent installation, this should only be carried out by a qualified electrician and in accordance with local legal regulations.
Exposed cables must be laid securely.

Maintenance For maintenance work (e.g. cleaning the quartz glass tube or replacing the bulb), the power and water supply must be disconnected (pull out the mains plug or switch off the RCD).

Water pressure The UV-C device is designed for a maximum water pressure of 6 bar and must therefore not be operated at a higher pressure.

Use of chemical Medium Many fish medications and water treatment products are UV-sensitive and can lose their effectiveness on contact with UV light. These agents can also leave a film on the quartz glass that cannot be removed, which means that the UV light can no longer pass through the quartz glass. Therefore, switch off the appliance (pull out the mains plug) when treating with any type of water treatment agent.

 **Warning**	If parts of the device (in particular the quartz glass) are damaged, the UV-C unit must not be put into operation.

4 Installation

Attention	The ballast must be protected from direct sunlight. be protected.

Positioning

The Smartpond® immersion UV-C must be positioned so that no UV-C radiation is emitted into the biological working area.
Corresponding separation devices are already provided at the factory when the UV-C is used in the holders in a Smartpond® filter.

Warning	Only the immersion UV-C spotlight is placed in the water, the ballast with IP54 protection is installed dry and well protected from the sun.

Mounting

Two optional click brackets are available for attaching the Smartpond® immersion UV-C unit, which guarantee a minimum distance from the support surface.

Cover

Normal glass (not quartz glass) / artificial glass protects against UV-C radiation and can be used as a transparent cover.

Note	Careless handling of the UV-C unit can easily lead to glass breakage. lead.

4.1 Weather conditions

Attention	The UV-C device must be protected from frost. Temperatures below the freezing point can destroy the light source or the quartz glass.

Attention	The electronic ballast produces its own heat, which is dissipated via is dissipated through the housing. The maximum external and operating temperature should not exceed 50°C. Exceeding this temperature can greatly reduce the service life and invalidates the warranty in the event of a defect. **It is therefore essential that the ballast is protected from any sunlight and positioned in a well-ventilated location.**

5 Commissioning

	**Attention**	The Schuko plug may only be inserted into the socket if the protection against UV-C radiation is appropriate.

An LED display on the electronic ballast indicates the function of the light source.

Green LED	Normal operation
Red LED	Fault

If the red LED lights up, the light source may be defective and must be replaced.

	**Note**	If the red LED continues to burn after replacing the bulb, you should contact an electrician.

If the mains plug is disconnected or the power supply is interrupted, neither LED lights up.

6 Technical Data

See also www.smartpond-filter.com

Model	**SpT-UV-C 60 Watt**	**SpT-UV-C 80 Watt**	**SpT-UV-C 125 Watt**
Rated power	60 watts	80 watts	125 watts
Effective UV-C output*/253.7nm	15 watts	25 watts	41 watts
Installation length	460mm	660mm	950mm
Service life up to	16'000 hrs.	16'000 hrs.	16'000 hrs.
Protection class electrical box	IP 54	IP 54	IP 54
Immersion heater protection class	IP 68	IP 68	IP 68
Delivery form	Mounted ready for use	Mounted ready for use	Mounted ready for use

*As a rule of thumb, approx. 1 watt of UV-C power can be calculated per 1000 l pump capacity. By positioning the immersion lamp in a stainless steel container (e.g. filter tray from Smartpond®), up to 30% more power can be converted due to the reflection of the rays.

7 Maintenance

7.1 General information on Maintenance

	**Warning**	Always disconnect the mains plug before carrying out maintenance work. be made.

	**Attention**	Work on electrical parts may only be carried out by qualified personnel. be carried out.

Light source The light source must not be touched in the glass area.

Ballast If necessary, the ballast can be wiped with a soft, slightly damp cloth.

Limescale deposits Parts in contact with water, such as the quartz glass, can be descaled with a descaling agent.

7.2 Light source replacement

Removing the quartz glass To replace the bulb, remove the large knurled nut on the Fully unscrew the quartz glass and push it off the socket. The quartz glass is pulled straight out of the holder while turning it slightly. The UV-C can be placed on a lightly padded base to prevent it from tilting lengthways.

Replacing O-rings The first O-ring is located inside the bulb holder and can be removed from the groove with a pointed object.
When replacing, make absolutely sure that the new O-ring is correctly positioned in the groove, otherwise it will not seal.
The second O-ring is located on the quartz glass between the knurled nut and the socket.

Replacing light sources Pull the bulb off the white porcelain plug in a straight movement. The new bulb cannot be inserted incorrectly due to the unequal spacing of the four contact pins.

Attaching the quartz glass Apply a lubricant (e.g. soap, silicone spray) to the O-rings, Pipe lubricant etc. - **no grease!**). Carefully push the bulb holder onto the front part of the quartz glass, which has also been lightly lubricated, until the quartz glass reaches the stop inside the holder completely.

	**Attention**	It is important that the quartz glass is inserted through the rear O-ring of the socket. to guarantee the double seal.

	**Note**	We recommend that when replacing the light source, the quartz glass and **the two sealing rings must also** be replaced**.**

	**Attention**	As a safety measure when changing the light source Wear safety goggles and gloves.

8 Guarantee

Warranty

The warranty of your UV-C device is limited to the device itself.

Light sources and quartz glass are excluded. The

guarantee is not transferable.

Proof of purchase

Please keep the proof of purchase (receipt) and the original packaging. No warranty can be claimed without this proof.

Liability

The manufacturer is not liable for damage resulting from accidents or improper installation or use and consequential damage.

Liability is limited to the replacement of the defective device.