

UV disinfection

Pahlén UV Viodes is designed to disinfect water in swimming pools. The use of chlorine as a disinfection agent leads to negative effects on health and high costs. By using Pahlén UV Viodes, the chlorine content can be reduced by up to 70%. The UV lamp produces UVC radiation with a wavelength of 254nm, which is optimal for neutralizing bacteria, viruses and algae. UVC radiation with reduced chlorine content lowers the amount of combined chlorine, providing a more pleasant environment for the bathers, no red eyes, reduced allergy problems and less chlorine odour.

Installation

Note: The electrical installation of Pahlén UV Viodes must be undertaken by an authorized installer. A multiple switch must be provided.

Pahlén UV Viodes must be interlocked over the circulation pump.

Transparent pipe connections must not be used.

The UV lamp and quartz glass are sensitive to impacts and shocks.

Always wear gloves when handling the lamp and the quartz glass.

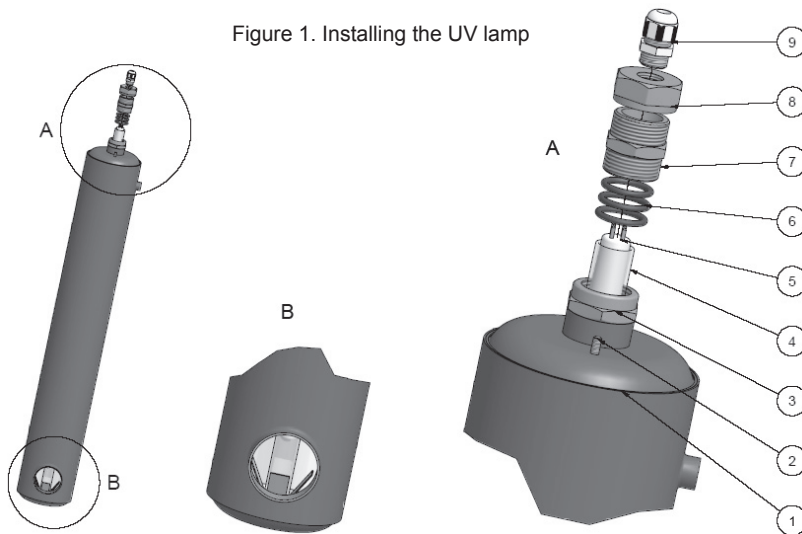
Note: Check that the UV lamp and the quartz glass are undamaged. Use the cotton gloves supplied.

Pahlén UV Viodes must be installed upright, after the filter and before the heater. There must be a clear space of 1 m above the jacket to allow replacement of the UV lamp. See Figure 2.

Wiring diagram for the fixed installation. See Figure 3.

1. Carefully place the quartz glass in the jacket, making sure that it fits into the clip at the bottom. See Figure 1. Wear gloves.
2. Screw the intermediate nipple fully home so that the o-rings seal.
3. Fix the UV lamp into the lamp base. Carefully position the UV lamp in the quartz glass. Wear gloves.
4. Screw in the top cap.
5. Fix the earth wire to the earth screw of the jacket.
6. Apply suitable sealant to the pipe couplings and screw them tight.
7. Connect a supply voltage to the terminal block.
8. Tighten all cable glands.
9. Divert the water flow to the jacket.
10. Switch on the power.

Figure 1. Installing the UV lamp



1. Jacket
2. Earth screw
3. Bottom nipple
4. Quartz glass
5. UV lamp
6. O-ring
7. Intermediate nipple
8. Top cap
9. Cable gland

Operating instructions

Never use Pahlén UV Viodes when no water is flowing.

Never use Pahlén UV Viodes in conjunction with bromine cleaning.

Never light the UV lamp outside the jacket.

A sight glass is provided on the side of the jacket to check that the UV lamp is lit.

A running time meter is provided on the control panel.

The outside of the quartz glass may mist over, reducing the radiation of the UV lamp. The quartz glass must therefore be regularly cleaned.

If there is a risk of freezing, and if the pool has been shut down for the winter or for longer than one month, the jacket must be fully drained.

Guideline figures for free chlorine:

Flow rate 200 l/min 0.3-0.4 ppm

Flow rate 250 l/min 0.4-0.5 ppm



Warning!
Risk of UVC radiation.
UVC radiation is harmful
to the eyes and skin.

Cleaning the quartz glass

The iron, calcium and magnesium that are always present in the water are deposited as a brownish film on the quartz glass, reducing the amount of UVC radiation that reaches the water. The quartz glass must therefore be regularly cleaned. How often this needs doing depends on the quality of the water. A suggested interval is 1000 hours' service.

Instructions for cleaning the glass:

1. Switch off the power to the UV lamp.
2. Shut off the flow of water through the jacket.
3. Open the drain plug and drain off all the water from the jacket.
4. Unscrew the cable gland on the top cap.
5. Unscrew the top cap.
6. Carefully release and lift out the UV lamp. Wear gloves.
7. Unscrew the intermediate nipple to release the o-rings from the quartz glass.
8. Carefully lift out the quartz glass. Wear gloves.
9. Check that the quartz glass is undamaged. If it is cracked it must be replaced.
10. Clean the quartz glass with a lint-free cloth moistened with cleaning fluid.
11. Re-assemble in reverse order. Make sure that the quartz glass fits into the clip at the bottom. See Figure 1.

Changing the lamp

The UV lamp must be replaced after 9000 hours, even if it is still working.

This is done to ensure that the radiation intensity is maintained.

Instructions for changing the lamp:

1. Switch off the power to the UV lamp.
2. Shut off the flow of water through the jacket.
3. Open the drain plug and drain off all the water from the jacket.
4. Unscrew the cable gland on the top cap.
5. Unscrew the top cap.
6. Carefully replace the UV lamp. Wear gloves.
7. Re-assemble in reverse order.

Pipe connections

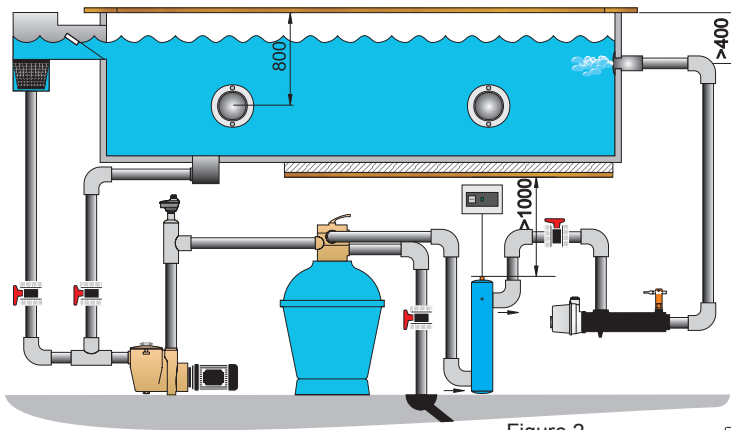


Figure 2.

Technical specification

Item no.	417750
Max pressure	4 bar
Max flow rate	250 l/min
Lamp	75 W
UVC radiation	25 W
Operating hours, lamp	9000 h
Volts	220-240 V
Rated current I	0.3 Amps
IP	45
Pipe diameter	0.129 m
Total length	0.95 m
Volume	9.3 liter
Connection	2"
Max water temp	40°C

Spare parts

	Item no.
Jacket	16086030
Sight glass	16087050
O-ring	19970223
UV lamp	16088020
Quartz glass	16088010
Base	16088080
Operating device	16088084
Switch	19989260
Casing	19989610
Operating meter	19989810
Cleaning agent	41465

Circuit diagram

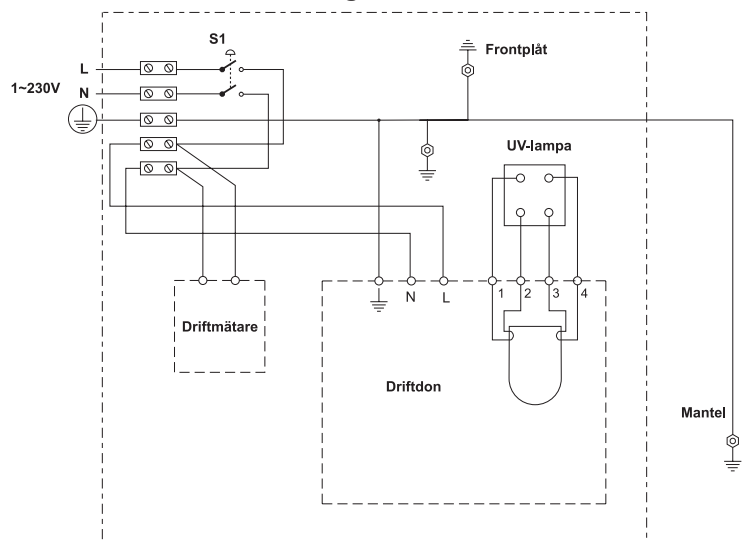


Figure 3.