

WATER TREATMENT SYSTEM



INSTALLATION AND CIP MANUAL

IL9 FILTRATION & STERILIZING UNIT



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AFM Glass Media Pre-Filter

Positioning

1. Place the AFM Glass Media pre-filter vessel (Figure 1) on a level surface.
2. The pre-filter vessel should be in close proximity (2 meters maximum) to the filtrate tank, Sterilization skid and a 230V power supply.



Figure 1: AFM Glass Media Pre-Filter

Charging the Pre-Filter

1. Unscrew the unions connected to the automated filter valve, be careful not to lose the O-rings.
2. Unscrew the automated filter valve, and remove it from the filter vessel along with the top strainer.
3. Close off the top of the riser pipe inside the filter vessel with a piece of tape.
4. Decant 25 kg (1 bag) of AFM Glass Media, grade 2 into the filter vessel.
5. Decant 25 kg (1 bag) of AFM Glass Media, grade 1 into the filter vessel.
6. Place back the automated filter valve and top strainer onto the filter vessel and re-screw it tightly.

Connecting Hydraulic Pipework

1. Connect the feed water supply to the pre-filter inlet, see directional arrows on automated filter valve for guidance.
2. Connect the filtrate outlet from the pre-filter to the filtrate storage tank.
3. Connect the backwash outlet (back of the automated filter valve) to a suitable drain point.

Electrical

1. Connect the electrical power supply provided for the automated filter valve to a 230V/50Hz power supply (Figure 2).
2. The stainless steel solenoid valve power cable must be connected into the IL9 Filtration & Sterilization skid control panel (Figure 3).



Figure 2: AFM Pre-Filter electrical power supply

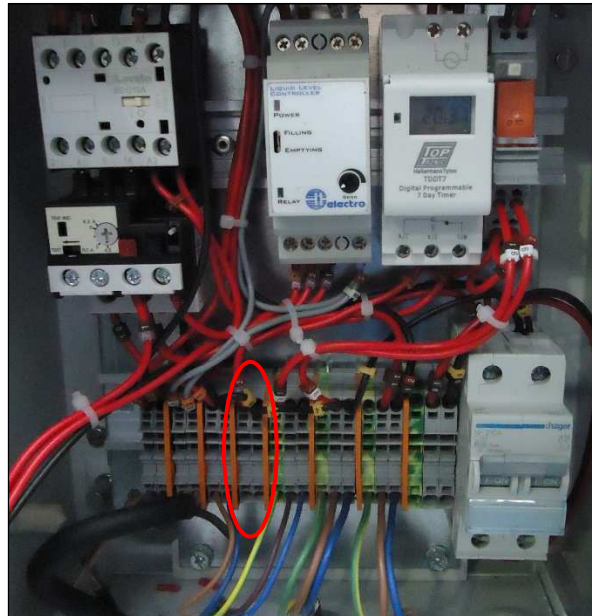


Figure 3: Solenoid Valve Connection Point

IL9 Filtration & Sterilization skid

Positioning

1. Place the IL9 Filtration & Sterilization skid (Figure 4) on a level surface.
2. The IL9 Filtration & Sterilization skid should be in close proximity to the filtrate tank, fresh water storage tank and a 230V power supply.



Figure 4: IL9 Filtration & Sterilization skid

Connecting Hydraulic Pipework

1. Connect the IL9 Filtration & Sterilization skid inlet socket (Figure 5) to the filtered water tank outlet.
2. Connect the IL9 Filtration & Sterilization skid outlet (Figure 6) to fresh water storage
3. Ensure that the ozone generator outlet (base of ozone generator) tube is connected to the black venturi.
4. Connect recirculating line outlet, with normally closed solenoid valve (Figure 7), from the IL9 Filtration & Sterilization skid back into the filtrate tank.



Figure 3: Skid Raw Water Inlet



Figure 6: Skid Fresh Water Outlet

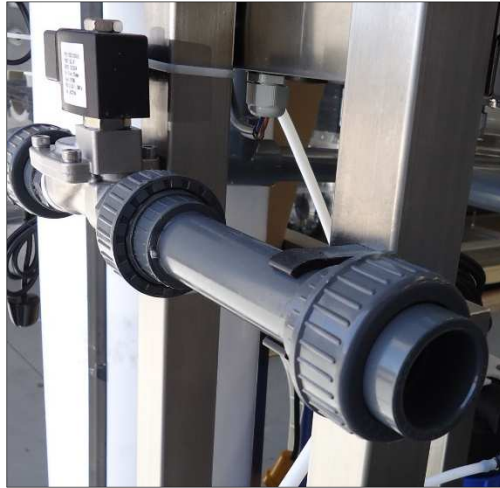


Figure 7: Skid Recirculating Outlet

Consumables Installation

1. Unscrew the Blue Cartridge housings, use white spanner as required.
2. If no cartridges are already installed, install new 20 & 5 Micron filter cartridges into the corresponding housings as indicated by labelling.
3. Re-screw the Blue Cartridge housings until secured tightly, use white spanner as required.
4. Install the UV O-ring (white), quartz sleeve and UV bulb into the UV sterilizer as per Figure 8 and steps that follow thereafter.

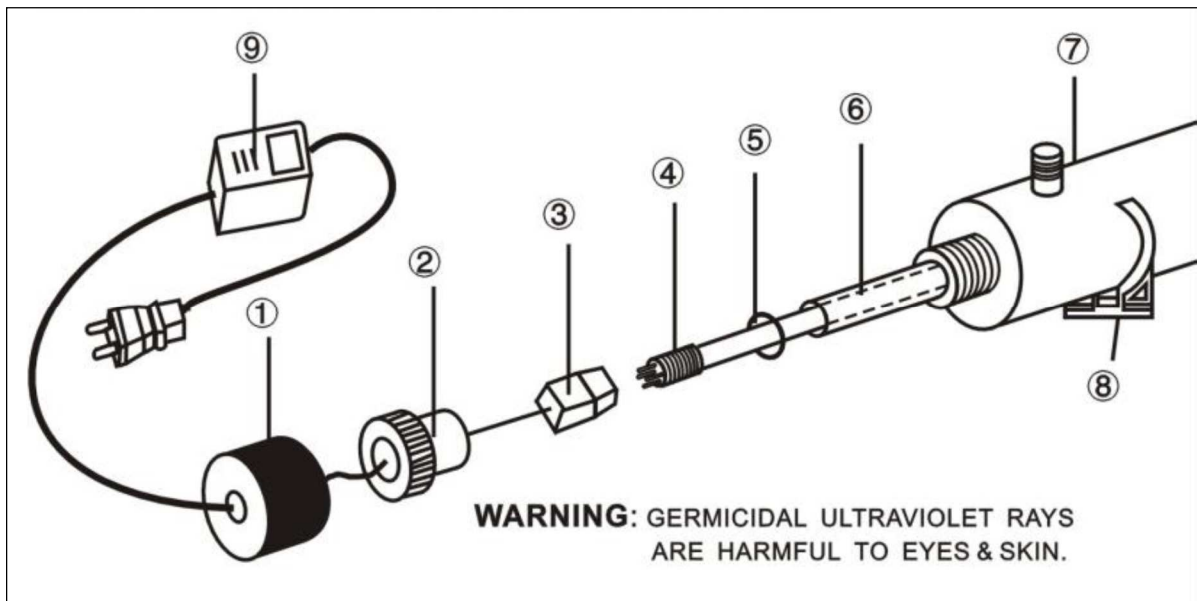


Figure 8: UV Installation Drawing

- 4.1 Carefully insert the quartz sleeve (6) into the stainless steel housing (7) until it reaches the support spring on the opposite end.
- 4.2 Slip the silicone O-ring (5) onto the outside of the quartz sleeve (6) until it makes contact with the stainless steel threaded nipple.
- 4.3 Screw the securing nut (2) onto the threaded nipple and tighten until the sealing face makes contact with the silicone O-ring (5). Take caution not to over tighten as this can crack the quartz crystal sleeve.

- 4.4 With the power disconnected carefully fit the lamp plug socket (3) onto the 4 pins located on the UV lamp (4) and insert the UV lamp (4) all the way into the stainless steel housing (7)
- 4.5 Slip the plastic sleeve (1) over the securing nut (2) to conceal the UV lamp (4) and plug end (3) and to insure there is no risk of exposure to the UV rays.
- 4.6 Once the UV lamp (4) has been concealed the power can be turned on and the unit put into operation. Always insure there is water flow or at least water in the stainless steel housing (7) before the power is switched on and put into operation.

Float switch Installation

1. Install the red level float switch into the fresh water storage area. Allow a minimum of 100mm between the red float and yellow cable weight. The cap on the yellow cable float can be turned to loosen the cable weight.

Electrical

1. Connect the 230V/50Hz electrical power supply into the IL9 Filtration & Sterilization skid main control panel. This should be done by a qualified electrician.
2. Ensure that no electrical wires have come loose during transportation.

CIP – Cleaning in Place (Recommended every 2 weeks)



1. Switch off complete system and release pressure via filling station taps.
2. Remove polyprop Sediment filters.
3. Fill the BB housings with 35% food grade hydrogen peroxide.

4. Switch on complete plant and run water through the filling station taps until one can smell the hydrogen coming through. (In some cases one will immediately notice the foaming on the stainless steel table.)
5. Once the hydrogen has reached the outlet/Filling station one need to close the taps and let the system sit under pressure with hydrogen for roughly 15mins then flush out through the taps.
6. Replace sediment filters with 5 and 1 mic and power back on.