

MECHANIC GUIDE

Aquazone UV equipments

Aquaz-S6

Aquaz-S25

Aquaz-S55

Aquaz-S165

Aquaz-S165-B

Aquaz-S275-B

Aquaz-S660-B

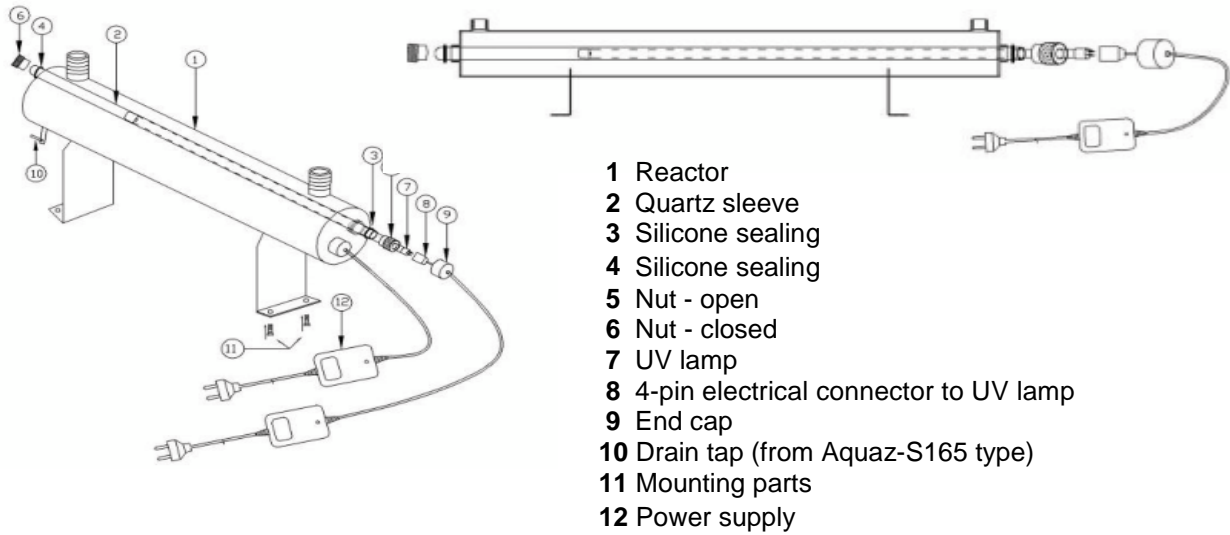
Before using the equipment, please read the guide carefully!

TABLE OF CONTENTS

1. UV equipments
2. UV equipment's main appurtenances
3. Required UV dose for inactivity
4. Assembly
5. Operation
6. Important safety regulations
7. The system's maintenance
8. Typical wiring illustration
9. Electronic wiring illustration

1. UV equipments

Description:	Stainless steel UV sterilizer, for water treatment.
Application:	Drinking water, food production and handling, health care, industry, etc.
Usage:	Stops the reproduction of bacteria, viruses, mushrooms and algae in water.
Types:	Aquaz-S6, Aquaz-S25, Aquaz-S55, Aqua165S, Aquaz-S165-B, Aquaz -S275-B, Aquaz-S660-B;
Wattage:	6-660W
Power supply:	230V 50/60Hz



Part number	Products	Conn.	UV Lamp pcs x W	Sizes H x W x L (mm)	Flow rate 16 mJ/cm ² (m ³ /h)	Flow rate 30 mJ/cm ² (m ³ /h)	Flow rate 40 mJ/cm ² (m ³ /h)
Aquaz-S6	UV equipment, household sterilizing	1/4"	1 x 6W	63 x 50.8 x 270	0.4	0.2	0.2
Aquaz-S25	UV equipment, household sterilizing	1/2"	1 x 25W	82 x 63.5 x 595	3.1	1.7	1.3
Aquaz-S55	UV equipment, household sterilizing	3/4"	1 x 55W	85 x 63.5 x 950	6.9	3.7	2.8
Aquaz-S165	UV equipment, household sterilizing	1,5"	3 x 55W	283 x 133x 950	20.6	11	8.3
Aquaz-S165-B	UV equipment, household sterilizing with control box	1,5"	3 x 55W	283 x 133x 950 400 x 300 x 150	20.6	11	8.3
Aquaz-S275-B	UV equipment, household sterilizing with control box	2"	5 x 55W	283 x 133 x 950 400 x 400 x 150	34.4	18.3	13.8
Aquaz-S660-B	UV equipment, household sterilizing with control box	3"	12 x 55W	430 x 220 x 950 500 x 500 x 250	82.5	44	33

2. UV equipment's main appurtenances

Part number	Products
Aquaz-AD-S	Adapter 6W, 25W, 55W, 165W, 275W, 660W UV system
Aquaz-OR-S	O-ring 6W, 25W, 55W, 165W, 275W, 660W UV system

Part number	Products
QS-6W	Quartz sleeve S6 system.
QS-25W	Quartz sleeve S25 system
QS-55W	Quartz sleeve S55-S660 system

Part number	Products
S6WRL	UV lamp S6
S25WRL	UV lamp S25
S55WRL	UV lamp S55-S660

3. Required UV dose for inactivity

UV Dose required for Inactivation	
Patogen	Efficiency 4-Log (99.99%)
Giardia lamblia cysts	1.7 mJ/cm ²
Vibrio cholerae	2.9 mJ/cm ²
Shigella dysenteriae	3.0 mJ/cm ²
Escherichia coli O 157:H7	5.6 mJ/cm ²
Cryptosporidium parvum cysts	5.7 mJ/cm ²
Salmonella typhi	8.2 mJ/cm ²
Shigella sonnei	8.2 mJ/cm ²
Legionella pneumophila	9.3 mJ/cm ²
Salmonella enteritidis	10.0 mJ/cm ²
Hepatitis A virus	29.6 mJ/cm ²
Poliovirus Type 1	30.0 mJ/cm ²
Coxsackie B5 virus	30.0 mJ/cm ²
Rotavirus SA 11	36.0 mJ/cm ²
Adenovirus	186.0 mJ/cm ²

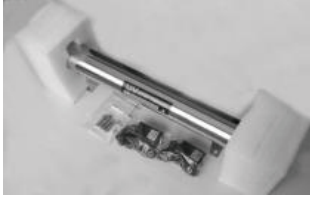
Euro-Clear Ltd.

Tel: +36 96 544-240 • E-mail: contact@euro-clear.eu • Web: www.euro-clear.eu

m ³ /h	UV Dose @ 95% UVT			UV Dose @ 85% UVT						
	16 mJ/cm ²	30 mJ/cm ²	40 mJ/cm ²	16 mJ/cm ²	30 mJ/cm ²	40 mJ/cm ²				
0	Aquaz-S6	Aquaz-S6	AquazS6	Aquaz-S6	Aquaz-S6	Aquaz-S6				
0.24		S5Q	S5Q	S5Q	S5Q	S5Q, S8Q				
0.48						S8Q, Aquaz-S25				
0.68	Aquaz-S25, S5Q				Aquaz-S25, S8Q	S8Q, Aquaz-S25	Aquaz-S25			
0.91							Aquaz-S55			
1.14							Aquaz-S55			
1.37	Aquaz-S25, S8Q	Aquaz-S55	S8Q, Aquaz-S25	Aquaz-S55						
1.82				Aquaz-S55						
2.28	Aquaz-S25, S8Q	Aquaz-S55	S8Q, Aquaz-S25	VH410/2						
2.73				VH410/2						
3.18	Aquaz-S25, S8Q	Aquaz-S55	S8Q	VH410/2	Aquaz-S165					
3.64	S8Q	Aquaz-S55	AquazS55	VH410/2						
4.09		VH410/2								
4.55	Aquaz-S55	Aquaz-S165	Aquaz-S165	Aquaz-S165						
5						VH410/2				
5.45						VH410/2				
5.91	Aquaz-S55	Aquaz-S165	Aquaz-S165	Aquaz-S165						
6.36						VH410/2				
6.82	Aquaz-S165	Aquaz-S165	Aquaz-S165	Aquaz-S165						
7.27						Aquaz-S275	Aquaz-S275	Aquaz-S275		
7.73					Aquaz-S275				Aquaz-S275	Aquaz-S275
8.63										
9.54					Aquaz-S275	Aquaz-S275	Aquaz-S275	Aquaz-S275		
10.5	Aquaz-S275									
11.4	Aquaz-S165	Aquaz-S275	Aquaz-S275	Aquaz-S275						
13.6					Aquaz-S660	Aquaz-S660	Aquaz-S660			
15.9								Aquaz-S660		
20.5	Aquaz-S275	Aquaz-S660	Aquaz-S275	Aquaz-S660						
24.9					Aquaz-S660					
29.5	Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660						
34.1					Aquaz-S660	Aquaz-S660	Aquaz-S660			
38.6								Aquaz-S660	Aquaz-S660	Aquaz-S660
43.2										
54.5					Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660		
72.7	Aquaz-S660									

m ³ /h	UV Dose @ 75% UVT			UV Dose @ 50% UVT		
	16 mJ/cm ²	30 mJ/cm ²	40 mJ/cm ²	16 mJ/cm ²	30 mJ/cm ²	40 mJ/cm ²
0	Aquaz-S6	S5Q, Aquaz-S25	S5Q, Aquaz-S25	S5Q	S5Q	S8Q, Aquaz-S25
0,24					S5Q, Aquaz-S25	
0,48	S5Q, Aquaz-S25		S8Q, Aquaz-S25	S5Q, Aquaz-S25	S8Q, Aquaz-S25	S8Q
0,68					S8Q	
0,91	S5Q, Aquaz-S25	S8Q, Aquaz-S25	S8Q	S8Q, Aquaz-S25	VH410/2, Aquaz-S55	
1,14		S8Q	Aquaz-S55	S8Q, Aquaz-S55		
1,37		Aquaz-S55	VH410/2	VH410/2, Aquaz-S55	VH410/2	
1,82	S8Q	VH410/2	Aquaz-S165	VH410/2, Aquaz-S55	VH410/2	Aquaz-S165
2,28	Aquaz-S55					
2,73	Aquaz-S55	Aquaz-S165	Aquaz-S165	Aquaz-S165	Aquaz-S165	Aquaz-S275
3,18						
3,64	VH410/2	Aquaz-S165	Aquaz-S165	Aquaz-S165	Aquaz-S275	Aquaz-S660
4,09						
4,55	Aquaz-S165	Aquaz-S275	Aquaz-S275	Aquaz-S275	Aquaz-S660	Aquaz-S660
5						
5,45		Aquaz-S275	Aquaz-S275	Aquaz-S275	Aquaz-S660	Aquaz-S660
5,91						
6,36		Aquaz-S275	Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660
6,82						
7,27		Aquaz-S275	Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660
7,73						
8,63		Aquaz-S275	Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660
9,54						
10,5	Aquaz-S275	Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660	
11,4						
13,6	Aquaz-S275	Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660	
15,9						
20,5	Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660	Aquaz-S660
24,9						
29,5						
34,1						
38,6						
43,2						
54,5						
72,7						

4. Assembly



1. Open and check the content of the packet: reactor, UV lamp, quartz sleeve, silicone sealing and power supply.
2. Before assembling check that the UV lamp and the quartz sleeve is clean and free of fingerprints. Remove the dirt with gentle alcohol.



- 3: Screw off the open and closed nut from the reactor



- 4: Put the silicone sealing on the open end of the quartz sleeve. Ideal distance is 12mm from the end of the sleeve. Depending on the type the sealing can be O-ring or split conical

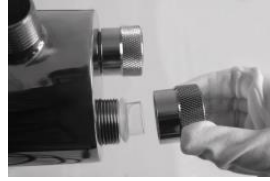


- 5: Put the quartz sleeve into the reactor with the closed end ahead

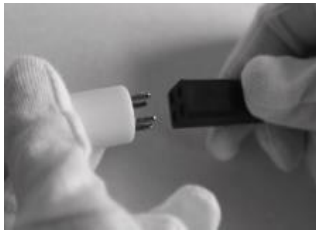


- 6: Put the silicone sealing on the other end of the quartz sleeve. Slide the conical sealing into the groove on both end of the reactor. Take care: the closed end of the quartz sleeve should not extend from the reactor more than 12mm. When screwing the nut forcing can cause the quartz sleeve to crack.

7: Carefully screw the closed nut.



8: Carefully screw the open nut. Take care not to crack the quartz sleeve.



9: Connect the 4-pin connector to the UV lamp tightly.



10: Carefully put the UV lamp into the quartz sleeve through the open nut.



11: Put the end cap on the open nut.

12: In case of two or more UV lamp type systems repeat the above procedure.

13. After mounting and connecting to the water system carefully open the tap and check whether there is leakage or not.

14. Choose an appropriate place for the disinfection system on the wall or on a solid flat surface. It is recommended to mount the UV system vertically because of the better ventilation. When mounting take into consideration the place requirement of the UV lamp replacement.

15. Let the water flow for a couple of minutes to deaerate the system and to remove dirt.

16. Connect the power supply to the power source.

5. Operation





Water quality

The most important operational requirement of the UV disinfection system is the optically clean, turbidity-free, colourless water.

- Water temperature: 2-45°C
- Fe content: <0.3ppm (0,3mg/l)
- Water hardness: <6,73°dH
- Turbidity: <1NTU
- Mn content: <0,05ppm (0,05mg/l)
- UV transmittance: > 75%
- Before turning on, please check the power plug.

- a) Do not use the UV disinfection system with damaged UV lamp or quartz sleeve.
- b) The UV disinfection system is planned for continuous operation. Repeated ON-Off switching considerably decreases the power (effectiveness) of UV radiation and shortens the service life of the equipment.
- c) Immediately turn off the main switch of the UV disinfection system in case of soaking and do not use it again.
- d) Do not operate the equipment if its power plug or cord is damaged, if it operates improperly or is damaged.
- e) A filter shall be installed upstream the UV.
- f) Under 2 °C temperature disconnect from the power source and drain the water from the reactor.

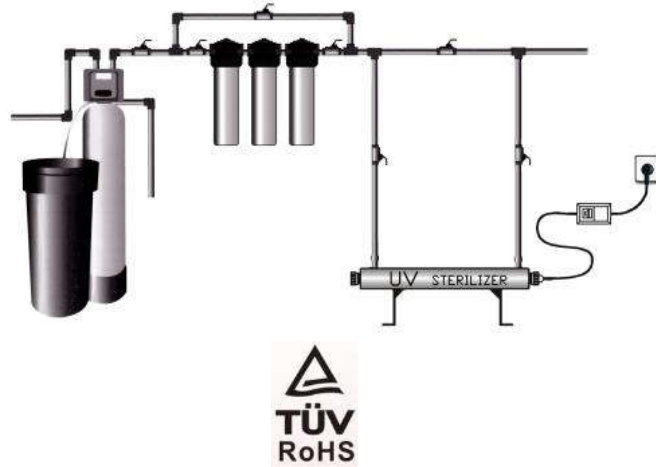
6. Important safety regulations

	Comply with the electrical regulations.
	The UV radiation is not visible for the naked eyes but it is harmful for the skin and eyes. Never look directly into the UV light during the operation of the equipment. Do not pull out the UV lamp before switching off the equipment. If it is unavoidable use safety glasses.
	Keep the basic safety rules in order to prevent fire and electrical shock. Makes sure that electric shock protection regulations are kept.
	Do not touch the UV lamp during operation or directly after operation in order to avoid burns. Use safety gloves.

7. The system's maintenance

- a) At least monthly ones check the signal light of the power supply. The red LED light indicates the proper operation. The green LED indicates the proper power connection. When the red LED light turns off replace the UV lamp immediately. When the green light turns off immediately replace the power supply.
- b) It is recommended to replace the UV lamp after 8000 working hour or after one year. After 8000 working hour the UV lamp may light but its performance might be significantly lower.
- c) Depending on the contamination of the water clean the quartz sleeve after 3-6 month of working. Use alcohol based detergents and gentle sponge.

8. Typical wiring illustration



9. Electronic wiring illustration

