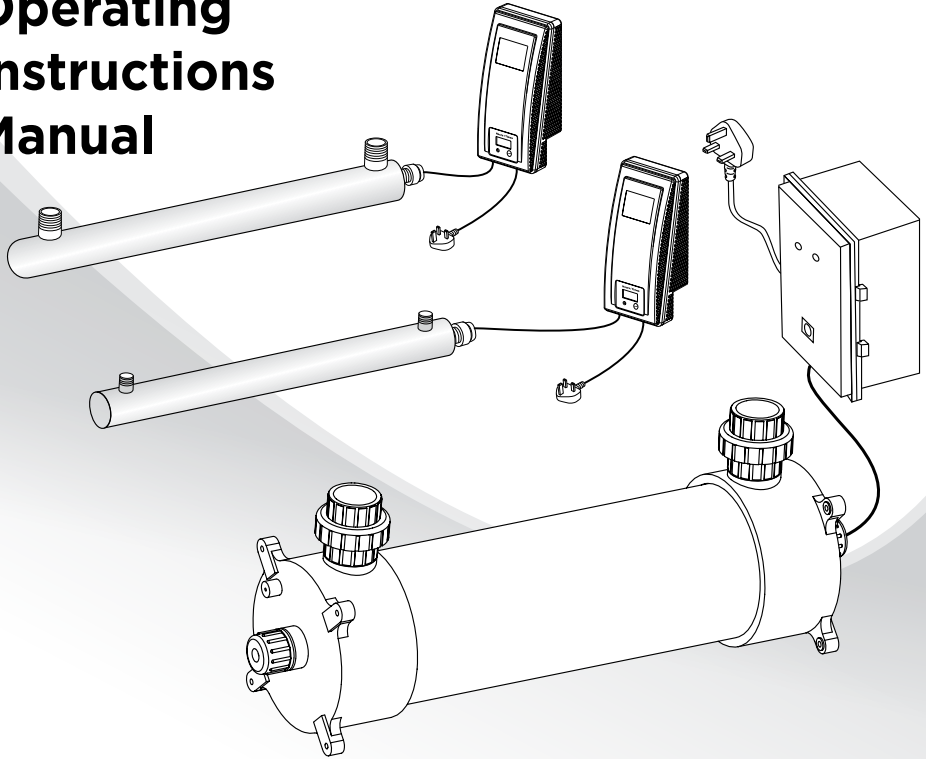


SOLCLEAR UV STERILIZER

Operating Instructions Manual



⚠ WARNING

This equipment must be installed and serviced by a qualified technician. Improper installation may result in property damage, serious injury or death. Improper installation and/or operation will void the warranty.



Notice to Installer

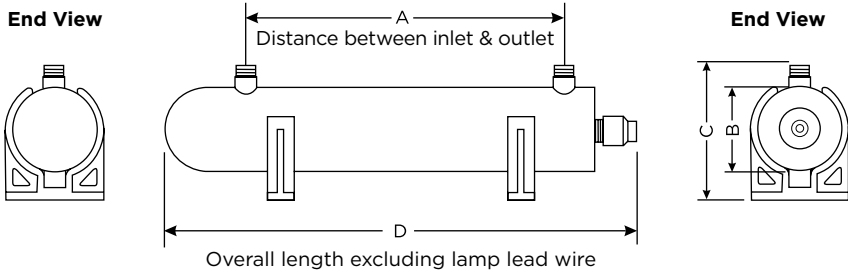
This manual contains important information about the installation, operation and safe use of this product. Once the product has been installed **this manual must be given to the owner/operator of this equipment.**

SOLCLEAR 90 & 150

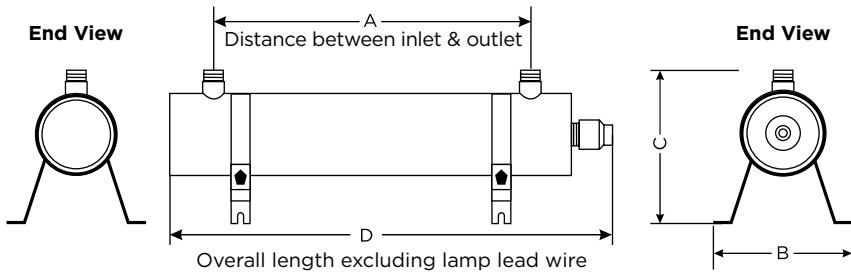
Model	Flow Rate		Quartz Thimble Size mm	UV Lamp	Lamp Wattage W	Standard Ballast	Ballast Size mm	Operating Pressure (6.9bar)	Lamp Life hour
	gpm	lpm							
Solclear 90	24	90.85	D24.5 x 910	T540	40W	UVC-2040T	238 x 113 x 77	100psi (6.9bar)	9000
Solclear 150	40	150							

Input Voltage: 230 VAC (190-260VAC) / 50-60Hz

General View of Solclear 90



General View of Solclear 150

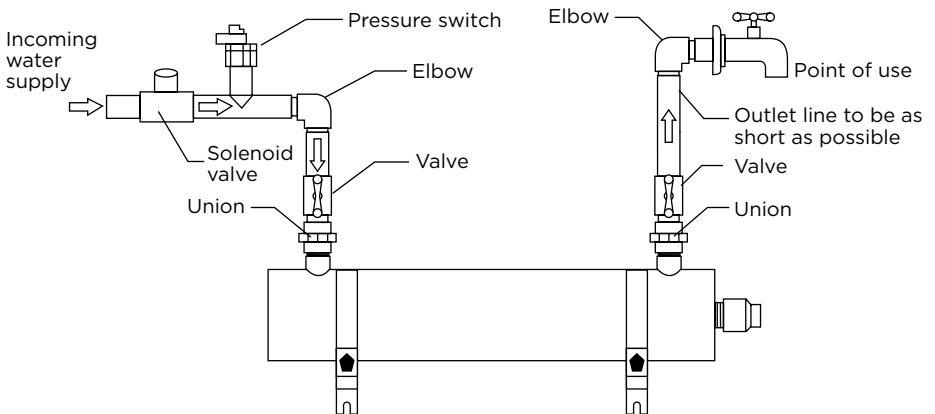


Model	A	B	C	D	Inlet & Outlet Size
Solclear 90	780mm	63.5mm	115mm	925mm	1 1/2" BSP
Solclear 150	786mm	175mm	165mm	926mm	1 1/2" BSP

NOTE: Line cord and lamp lead wire omitted for clarity. All figure tolerance 1%.

NOTES:

1. Do not allow Solclear UV sterilizer to freeze.
2. Recommended ambient temperature: 2°C-40°C (36°F-104°F).
3. Input voltage is 230VAC (190-260VAC) / 50-60Hz.
4. Maximum recommended operating pressure is 100psi (6.9bar).
5. The system and installation shall comply with applicable state and local regulations.

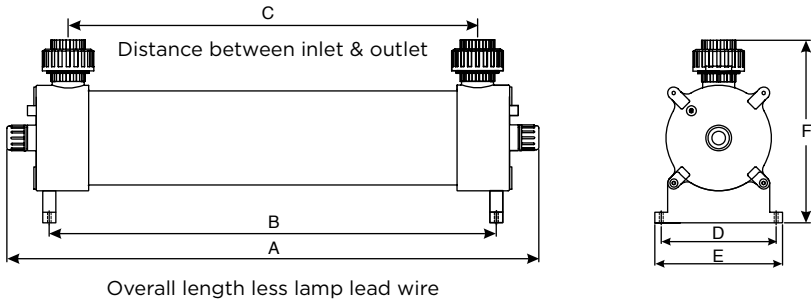
INSTALLATION DIAGRAM

SOLCLEAR 300

Model	Flow Rate		Quartz Thimble Size	UV Lamp	Lamp Wattage	Standard Ballast	Ballast Size	Operating Pressure	Lamp Life
	gpm	lpm	mm		W		mm		hour
Solclear 300	80	300	D30 x 910	T6125 (212564)	125W	UV-24	450 x 350 x 205	88.5psi (6.1bar)	13,000

Input Voltage: 230VAC / 50-60Hz

General View of Solclear 300

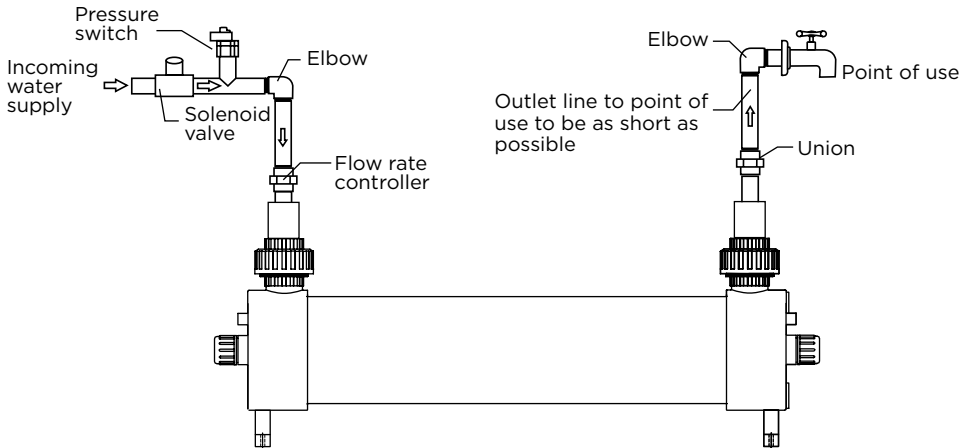


Model	A	B	C	D	E	F	Inlet & Outlet Size
Solclear 300	946mm	748mm	660mm	268mm	298mm	426mm	2" Union

NOTE: Line cord and lamp lead wire omitted for clarity. All figure tolerance 1%.

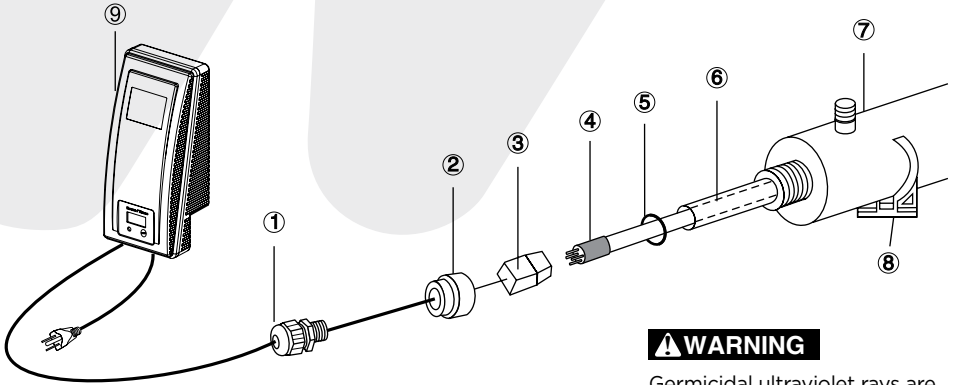
NOTES:

1. Do not allow Solclear UV sterilizer to freeze.
2. Recommended ambient temperature: 2°C-40°C.
3. Input voltage is 230VAC / 50-60Hz.
4. Maximum recommended operating pressure is 88.5psi (6.1bar).
5. The system and installation shall comply with applicable state and local regulations.

INSTALLATION DIAGRAM

ASSEMBLY

Solclear 90 & 150



⚠ WARNING

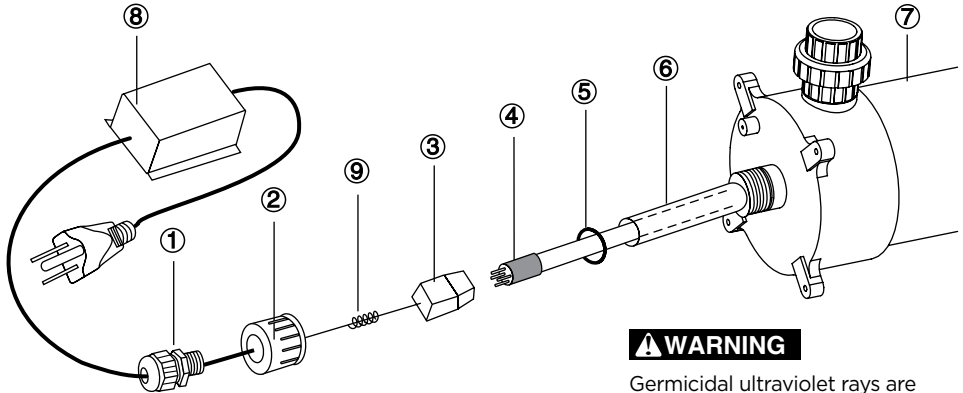
Germicidal ultraviolet rays are harmful to eyes & skin.

CAUTION: Ultraviolet lamp and quartz sleeve are easily damaged. Pay attention when removing or replacing lamp and quartz sleeve.

ITEM	DESCRIPTION	Solclear 90 (Part No.)	Solclear 150 (Part No.)
1	Water Proof Strainer	64489	64489
2	Aluminium Nut	725110641	725110641
3	Lamp Socket & Lead Wire	725110514	725110514
4	Germicidal Ultravoilet Lamp	725110423	725110423
5	O-ring BS212 Silicone	725912120	725912120
6	Quartz Sleeve	725110413	725110413
7	Stainless Steel Chamber	-	-
8-a	Metal Clip	-	725120042
8-b	Plastic Clip	725120041	-
9	Ballast	725120054	725120054

ASSEMBLY

Solclear 300



⚠ WARNING

Germicidal ultraviolet rays are harmful to eyes & skin.

CAUTION: Ultraviolet lamp and quartz sleeve are easily damaged. Pay attention when removing or replacing lamp and quartz sleeve.

ITEM	DESCRIPTION	Solclear 300 (Part No.)
1	Water Proof Strainer	725110456
2	PVC Nut	725110646
3	Lamp Socket & Lead Wire	725110516
4	Germicidal Ultraviolet Lamp	725110426
5	Rubber O-ring	725110376
6	Quartz Sleeve	725110416
7	PVC Chamber	-
8	Ballast	725110546
9	Spring	-

INSTALLATION:

1. Install Solclear UV sterilizer in a readily accessible and well-lit location to facilitate inspection and maintenance.
2. Inspect for hidden electrical wiring or plumbing prior to drilling holes.
3. Attach mounting clips to the wall.
4. Insert chamber through mounting clips.
5. Connect to plumbing.
6. Install quartz sleeve and lamp.

Note: Avoid touching the sides of the quartz sleeve and lamp, handle by the ends only. Ultraviolet lamp and quartz sleeve are easily damaged. Pay attention when removing or replacing lamp and quartz sleeve.

- a. Remove the aluminium / PVC nut (2).
 - b. Slide carefully the quartz sleeve (6) from one end to another end of the chamber.
 - c. Slide the O-ring (5) at the open end of quartz sleeve for Soclear 90 & 150. For Solclear 300, please put O-ring (5) at the both end of quartz sleeve.
 - d. Tighten the aluminium / PVC nut (2) hand tight.
 - e. Slide the lamp (4) into the quartz sleeve.
 - f. Connect the lamp to the lamp socket.
 - g. Tighten the water proof strainer (1) into the aluminium / PVC nut (2).
7. Turn on the water and inspect for leakages. Rectify as necessary.
 8. Plug the ballast into an electrical outlet. An electrical outlet protected by a Ground Fault Interrupt (GFI) circuit is recommended.
 9. Run water through the chamber for 5-10 minutes prior to use.

REPLACING UV LAMP AND SERVICING UV SYSTEM:

NOTE : Avoid touching the sides of the quartz sleeve and lamp, handle by the ends only.

1. Disconnect power.
2. Turn water off and open down stream of system to relieve pressure.
3. Remove the water proof strainer (1) and unscrew the aluminium / PVC nut (2).
4. Carefully withdraw lamp (4) approximately 2 inches from chamber (7).
5. While holding lamp end carefully, remove lamp socket (3).
6. Carefully withdraw lamp from chamber (7).
7. Carefully remove O-ring (5) from the end of the quartz sleeve (6).
8. Carefully remove the quartz sleeve (6).
9. To reinstall, follow step 8 through 1 in reverse.

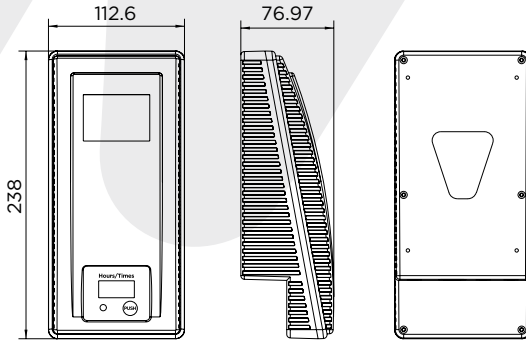
MAINTENANCE

To operate the Solclear UV sterilizer properly and attain its maximum efficiency, appropriate maintenance is to be performed as follows:

- I. Quartz sleeve cleaning or replacement:
 - Quartz sleeve is to be cleaned every 6-12 months with glass cleaner.
 - Quartz sleeve is to be replaced every 24 months.
- II. UV lamp replacement is recommended every 8,000-9,000 hours (approximately 12 months for continuous service) for Solclear 90 & 150, or 13,000 hours (approximately 1.5 years of continuous service) for Solclear 300 of operation.

Electronic Ballast (for Solclear 90 & 150 only)

General View of Ballast UVC-2040T

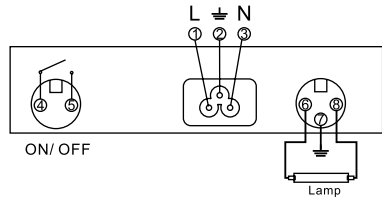
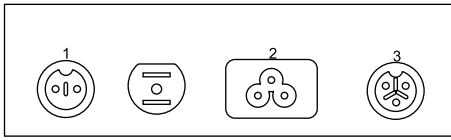


Features & Functions

1. Auto Timer Function
2. Constant Current Limited Power Output
3. Output Open Circuit Protection
4. Display for UV Lamp Status
5. Status Signal Output

Specification:	
Model:	UVC-2040T
Operation Voltage:	AC230V (190V - 260V)
Input Frequency:	50-60Hz
Input Amp:	0.3A
Power Factor:	> 0.9
Output Power:	20-40W
Output Frequency:	45kHz
Start Mode:	Instant Start
Efficiency:	> 83%
Display Operation Setting:	Digital LCD, setting program by 1 button
Peak Coefficient:	1.6
Weight:	0.6kg
Ballast Size:	238mm x 113mm x 77mm
Operating Ambient Temperature:	0-40°C
IP Rating:	IP 55
Certification:	CE
Compatible UV Lamps:	20-40W

Installation Instruction



The ballast has 3 ports:

1. Dry contact signal output port
2. Power input port
3. Lamp output port

1. The no. 1 port is a relay dry contact output. When the ballast is working normally, the dry contact is shorted, otherwise the dry contact is open. The withstand voltage is 250V, ampere rating is 5A. It can be connected to PLC, solenoid valve and others. If it is not used, please put the threaded cap on to avoid humidity and dust.
2. The no. 2 port is power input port: standard power input port with 3pins. When plug the power cable into the input port, please push the plug into deep bottom of the port to have good contact.
3. The no. 3 port is the power output for UV lamp

Note: please disconnect power before unplug all connectors.

There are two ways to mount the ballast: (1) with hanging plate and (2) double sided tape.

Digital panel display operation instruction

1. Press the button and hold it for 5 seconds, the timer will reset to the factory defaults.
2. Quick press the button, the LED shows the used time of the lamp, then quick press the button again it shows the start-up times. If left idle for 2 seconds, the LED will return to show the remaining time.
3. When the remaining time is less than 300 hours, the ballast will sound alarm, and the LED will blink. Quick press the button, the ballast will stop sounding.
4. When the lamp life expired, the ballast sounds alarm, LED turns red, the lamp is turned off.
5. When no lamp is connected or the lamp is damaged, the ballast sounds alarm and LED turn red.
6. When situation as item 4 or item 5 happens, please turn to a new lamp and reset according to step 1 as above.

Toubleshooting for Electronic Ballast

No	Problem	Solution
1	When the ballast is connected to power, there is no display on LCD.	Please check the power is connected properly.
2	When the ballast is connected to power, the lamp is not lighted up, but the ballast alarm sounds.	Please turn off power, check the connections between the ballast and the lamp separately, and tighten them again.

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