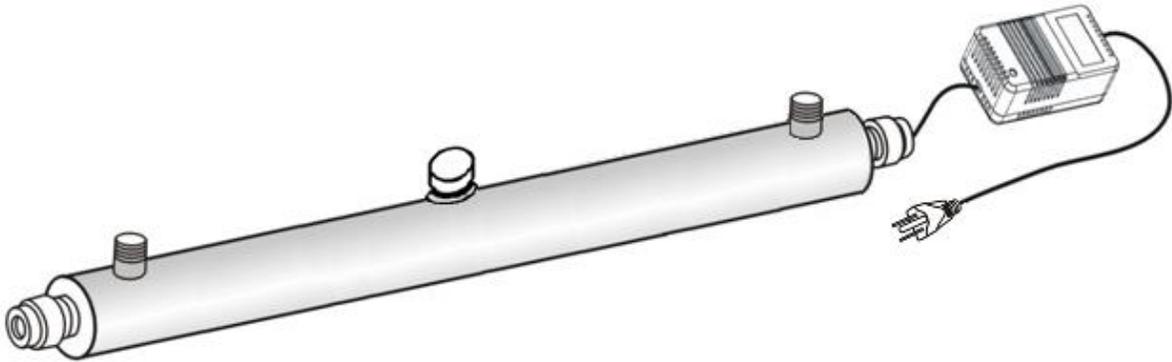


## UVPC-12 and UVPC-20



## ULTRA VIOLET LIGHT SYSTEM

Please read these instructions completely before installing this unit.

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**Franklin Water Treatment LLC**  
12630 US Highway 33 N  
Churubusco, IN 46723  
Phone (260) 693-1972 Fax (260) 693-0602

# Pre-installation Instructions

Never plug in UV lamp when it is outside the stainless steel chamber.

1. Water may need to be treated prior to entering the UV system. Water must be free of color and turbidity. Turbidity and color will shield bacteria from the UV rays. A 5 micron sediment cartridge filter is recommended to precede the UV. Water hardness should be 5 grains per gallon or less and the iron concentration below 0.3 ppm. Ideally, it should be soft and iron free.
2. All water treatment equipment (except reverse osmosis systems) should be installed before the UV System.
3. A non-switched, 115 volt GFI protected electrical outlet is needed near the unit.
4. It is recommended that the unit be installed horizontally with adequate room on one side to remove the quartz sleeve and bulb (approximately 37").
5. Install only in an area that will maintain an ambient temperature between 36°F and 104°F.
6. Maximum operating pressure is 100 psi.
7. Connect to plumbing system while complying to all state and local regulations.

## Components

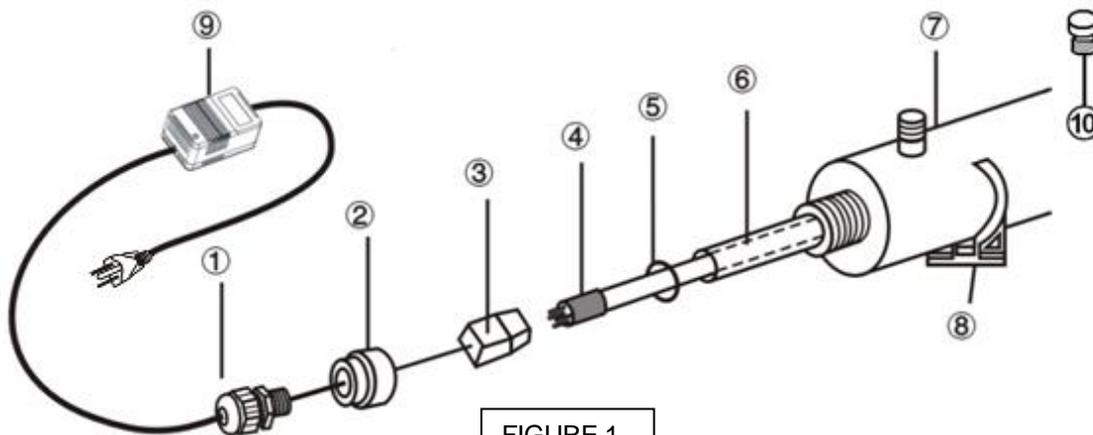


FIGURE 1

ITEM #	PART #	DESCRIPTION
1	UVPC-PG135	Water Proof Cord Strain Relief
2	UVPC-A02	Aluminum Nut
3	UVPC-4P80	Lamp Socket and Wire
4	UVPC-LAMP	Germicidal Lamp, 12 gpm, 9,000 hour
	UVPC-LAMP-20	Germicidal Lamp, 20 gpm, 9,000 hour
5	UVPC-OR	O-Ring
6	UVPC-QS	Quartz Sleeve
7	UVPC-ST635890	Stainless Steel Chamber, UVPC-12
	UVPC-B6	Stainless Steel Chamber, UVPC-20
8	UVPC-1002	Mounting Clip for UVPC-12
	UVPC-CLIP-20	Mounting Clip for UVPC-20
9	UVPC-BALL	Ballast, 115v, 12 gpm unit
	UVPC-BALL-20	Ballast, 115v, 20 gpm unit
	UVPC-GLO-PLUG	UV Lamp indicator (Glow Plug)
Not Shown	V7A106D-12	External Flow Control, UVPC-12
	V7A106D-20	External Flow Control, UVPC-20

# Installation

**WARNING: NEVER PLUG IN UV LAMP WHEN IT IS OUTSIDE THE STAINLESS STEEL CHAMBER. NEVER LOOK DIRECTLY AT ILLUMINATED UV LAMP.**

**CAUTION: QUARTZ SLEEVE AND LAMP ARE EXTREMELY FRAGILE AND EASILY DAMAGED...BE VERY CAREFUL WHEN HANDLING, INSTALLING AND REPLACING THE SLEEVE AND LAMP. ALWAYS REPLACE THE QUARTZ SLEEVE WHEN REPLACING THE LAMP.**

1. Using mounting clips provided, mount the stainless steel chamber (Item 7) in the desired location. It is recommended that the chamber be mounted horizontally to prevent dropping the quartz sleeve and UV lamp during assembly. Ensure there is a minimum of 37" on one side of the stainless steel chamber for installation and future replacement of the quartz sleeve and UV lamp.
2. Install the flow control (12 gpm, UVPC-12 or 20 gpm, UVPC-20) on the connection that you have designated as the inlet of the unit. The unit itself is not directional regarding flow.
3. Connect inlet (with flow control) and outlet of the stainless steel chamber to the plumbing.
  - a. Note: **DO NOT** directly connect pex tubing to the UV light. There must be a UV resistant material inline first.
4. Avoid touching the sides of the quartz sleeve and lamp. Handle only the ends. Gloves are recommended to prevent getting oil from your hands on the quartz sleeve and UV lamp.
5. Remove aluminum nuts from **both ends** of the stainless steel chamber (Item 2).
6. Carefully insert the quartz sleeve (Item 6) into one end of the stainless steel chamber (Item 7) so that it exits the other end. Make sure equal lengths of quartz sleeve protrude from each end.
7. Place an O-ring (item 5) on each end of the quartz sleeve where it enters the stainless steel chamber.
8. Replace the aluminum nuts (item 2) on each end of the chamber. The nut without the plastic end cover is for the end with the electrical cord. **The nuts should be only hand tight.**
9. Carefully slide the lamp through aluminum nut on one end of the chamber.
10. Ensure the power cord is NOT plugged in and connect the lamp to the lamp socket on the wiring harness.
11. Screw the water proof cord strain relief (Item 1) into the aluminum nut.
12. Turn on water supply and check for leaks. Repair if necessary.
13. Plug the ballast (Item 9) into GFI (ground fault interrupt) protected electrical outlet.
14. Run water through the unit for 5 minutes prior to use.
15. If your unit has a maintenance timing device, attach the timer to the chamber. Strap and screws are provided. **Push the reset button to start the timer.** The timer indicates when lamp and quartz sleeve replacement is required.

**If the plumbing system has been previously exposed to water that is known to have bacterial contamination, the entire plumbing system will require disinfection once the UV light is installed and in operation.**

# Maintenance

## Replace the quartz sleeve and germicidal lamp annually.

1. Disconnect electrical power.
2. Turn off water supply and relieve pressure from system.
3. Unscrew power cord strain relief and slide the lamp out to disconnect the wiring.
4. Carefully remove lamp from chamber.
5. Unscrew both aluminum nuts and carefully remove the quartz sleeve. Retain the existing O-rings for re-use or replace with new O-rings (item 5).
6. See installation procedure to install new quartz sleeve and lamp.
7. Reset timer on ballast. See below Digital Panel Display Instructions

## Digital Panel Display Instructions:

### A. Status display

Quickly Press  $\leftarrow$  to show the following screens:

1. Used time of the lamp:

USED TIME.  
1003H 22M30S

2. Remaining time of the lamp:

OPERATE TIME SET  
7000 Hours.

3. Lamp life time Setting:

OPERATE TIME SET  
7000 Hours.

- B. To reset the timer begin by pressing and holding  $\leftarrow$  button for 3 seconds. Using the  $\leftarrow$  button to move digit place and the  $\updownarrow$  button to modify numbers, enter the password show below. Hold  $\leftarrow$  button for 3 seconds to enter the password.

ENTER PASSWORD!!  
1234

- C. On the next screen use the  $\updownarrow$  button to confirm reset of time. Hold  $\leftarrow$  to complete reset and save or quick press the button to check Lamp Lifetime setting. Note factory default is 16,000 hrs. This is the recommended setting.

## Maintenance Cont.

1. Reset the used time of the lamp.

RESET USED TIME.  
ARE YOU SURE? **N**

2. Set the Lamp Lifetime

SET OPERATE TIME  
16000 Hours.

3. Following a successful reset the screen will return to say, “replace bulb” and the alarm will continue to sound. To complete the process, unplug the ballast for 10 seconds then plug it back in. The unit is now ready for normal operation.

### Troubleshooting Ballast:

- A. When the lamp lifetime has expired, the ballast sounds alarm, the LED turns red, the lamp is turned off and the LCD shows the following display:

REPLACE  
The UV Lamp.

Solution:

1. Replace lamp and reset timer.
2. If the lamp has been replaced and the ballast reset, but the alarm continues-check to make sure that all connections are secure and retest.
3. If problem persists then the ballast should be replaced.

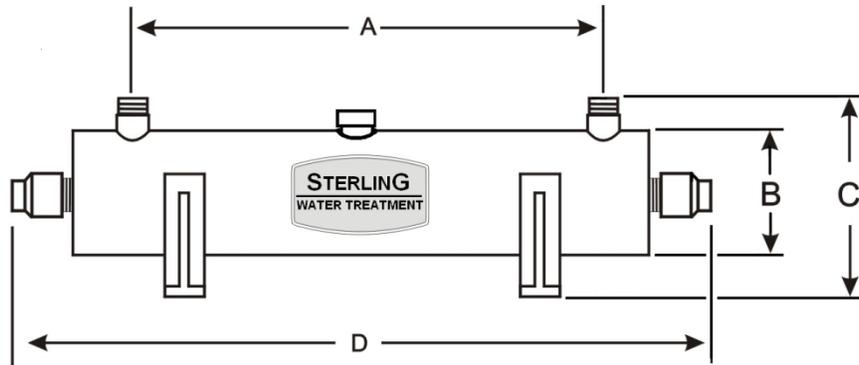
- B. When no lamp is connected, the ballast sounds alarm and LED turns red, and the LCD shows the following display:

LAMP ABSENCE!  
POWER LATCH OFF

Solution:

1. Check to make sure that all connections are secure.
2. Orient the plug connection to the lamp, 180 degrees from the current position.
3. If problem persists then replace the lamp.

## Specifications



<p>Dimensions</p> <p>(A) Distance Between Inlet and Outlet</p> <p>(B) Chamber Diameter</p> <p>(C) Total Height</p> <p>(D) Overall Length</p>	<table border="0"> <tr> <td>UVPC-12</td> <td>UVPC-20</td> </tr> <tr> <td>31.5"</td> <td>31.5"</td> </tr> <tr> <td>2.5"</td> <td>4.8"</td> </tr> <tr> <td>4.3"</td> <td>5.6"</td> </tr> <tr> <td>37"</td> <td>38"</td> </tr> </table>	UVPC-12	UVPC-20	31.5"	31.5"	2.5"	4.8"	4.3"	5.6"	37"	38"
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31.5"	31.5"										
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37"	38"										
<p>Maximum Flow Rate</p>	<table border="0"> <tr> <td>12 GPM</td> <td>20 GPM</td> </tr> </table>	12 GPM	20 GPM								
12 GPM	20 GPM										
<p>Minimum UV Dose @ maximum flow rate (at end of recommended bulb life)</p>	<table border="0"> <tr> <td>16+ mJ/cm<sup>2</sup></td> <td>30+ mJ/cm<sup>2</sup></td> </tr> </table>	16+ mJ/cm <sup>2</sup>	30+ mJ/cm <sup>2</sup>								
16+ mJ/cm <sup>2</sup>	30+ mJ/cm <sup>2</sup>										
<p>UV Wavelength</p> <p>UV Lamp Life</p>	<p>254 nanometers (nm)</p> <p>9,000 hours (1 year)</p>										
<p>Feed Water Quality</p> <p>Hardness</p> <p>Iron</p> <p>Manganese</p> <p>Turbidity</p> <p>Color</p>	<p>&lt;5 gpg</p> <p>&lt;0.3 ppm</p> <p>&lt;0.05 ppm</p> <p>&lt;5 NTU</p> <p>None</p>										

## Ballast Specs

Technical Specification	UVT-3	UVT-6	UVT-8
Operational Pressure	AC100V-240V $\pm$ 10%		
Input Hertz	50-60Hz		
Input Amp	0.27A	0.5A	0.8A
Power Factor	>0.9		
Output Wattage	10-21W	20-40W	65-85W
Output Current	425mA $\pm$ 15%	425mA $\pm$ 15%	800mA $\pm$ 15%
Output Frequency	45kHz		
Start Mode	Instant Start		
Efficiency	>83%		
Display & Operation Setting	Digital LCD, Setting program by 2 buttons		
Language	English		
Peak Coefficient	1.54		
Weight	0.25kg	0.35kg	0.35kg
Ballast Size	128*70*54mm	160*80*51mm	160*80*51mm
Operating Ambient Temperature	0-40°C		
IP Rating	IP55		
Certification	CE&UL		
Compatible UV Lamps	10W-21W	20W-40W	65W-85W

# Two Year Limited Warranty

This UV system is guaranteed against any manufacturing defects that are due to faulty material or workmanship during the warranty period. This warranty does not include damage to the product resulting from accident, neglect, misuse, misapplication, alteration, installation or operation contrary to printed instructions, or damage caused by freezing, fire, flood, or Acts of God. For a period of two years from the original date of installation, or 30 months from manufacture, whichever occurs first, we will repair or replace, at our discretion, any part found to be defective. Purchaser is responsible for any shipping cost to our facility and any local labor charges.

- Stainless Steel Chamber
- Aluminum Nuts
- Ballast
- Lamp Socket and Lead Wire
- Strain Relief Fitting

GENERAL CONDITIONS – Should a defect or malfunction occur, contact the dealer that you purchased the product from. If you are unable to contact the dealer, contact Franklin Water Treatment, LLC. @ (260)693-1972. We will require a full description of the problem, model number, date of purchase, and selling dealer’s business name and address.

We assume no warranty liability in connection with this UV system other than specified herein. This warranty is in lieu of all other warranties, expressed or implied, including warranties of fitness for a particular purpose. We do not authorize any person or representative to assume for us any other obligations on the sale of this UV system.

### FILL IN AND KEEP FOR YOUR RECORDS

<b>Original Purchaser</b>	<b>Date of Purchase</b>	<b>Model #</b>	
<b>Address of Original Installation</b>		<b>City</b>	<b>State</b>
<b>Dealer Purchased From</b>	<b>Dealer Address</b>	<b>City</b>	<b>State</b>