

# ASTRALPOOL



## INSTALLATION MANUAL



11405 110W



11404 55W

# ASTRALPOOL UV DISINFECTION SYSTEM

## WARNING

**FOR YOUR SAFETY** - This product must be installed and serviced by a licensed electrician in accordance with the latest, enforced version of AS/NZS 3000 and any other applicable local installation codes. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation will void the warranty.

Improper installation and/or operation can create unwanted electrical hazard which can cause serious injury, property damage, or death.

**EQUIPMENT INFORMATION RECORD**

DATE OF INSTALLATION	_____
INSTALLER INFORMATION	_____
INITIAL PRESSURE GAUGE READING (WITH CLEAN FILTER)	_____
PUMP MODEL	_____
HORSEPOWER	_____
FILTER MODEL	_____
CONTROL PANEL MODEL	_____
SERIAL NUMBER	_____

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## Section 1. Important Safety Instructions

### READ AND FOLLOW ALL INSTRUCTIONS

All electrical work must be performed by a licensed electrician and conform to all national, state, and local codes. When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

#### **⚠ DANGER**

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

#### **⚠ WARNING**

To reduce the risk of severe injury or death, do not operate the UV-C emitter when it is removed from the appliance enclosure. Unintended use of the appliance or damage to the housing may result in the escape of dangerous UV-C radiation. UV-C radiation may, even in little doses, cause harm to the eyes and skin. Never look directly at an illuminated UV bulb.

#### **CAUTION**

Power must be supplied through a Residual Current Device (RCD) with a residual operating current not exceeding 30mA.

**SAVE THESE INSTRUCTIONS**

## Section 2. Product Information

### 2.1 Energy Consumption

	11404 UV 55 Watt Clarifier	11405 UV 110 Watt Clarifier
Energy Consumption:	45W	89W
Power:	220-240V, 50Hz.	
SPEC	Class 1, IPX5	
Operating Pressure:	Max 2.5 Bar	

Table 1. The energy consumption of the unit is lower than the wattage of the bulb due to the high efficiency of the ballast.

### 2.2 Disposal Of Your Old Product

Please act according to your local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.

### 3.2 Unboxing the UV

The UV bulb and quartz sleeve are packed separately. Refer to pages 7 and 8 of this manual for instructions on how to install the bulb and quartz sleeve. Quartz Sleeve O-Rings are packed in a small bag inside the box.

On the 11404 the stainless steel mounting brackets are pre-fitted. The 11405 mounting brackets can be found in the cardboard end fitments. Please remove these to fit the 11405.

Please take time to familiarise with the AstralPool UV Disinfection System and its components.

## Section 3. Introduction

### 3.1 The AstralPool UV Disinfection System

The AstralPool UV Disinfection System has been manufactured using the latest technology and design techniques. The AstralPool UV Disinfection System will work alongside many different filtration systems designed in combination with a residual sanitiser to disinfect pool water. Please read this manual carefully before attempting to install your AstralPool UV Disinfection System.

## Section 4. Components

### 4.1 11404 - 55 Watt Components

Description	Diagram Code	ASTRALPOOL Order Code
2" Glued Outlet	A	N/A
End Cap	B	SPCUVEC
UV Bulb	C	SPCUV55B
Quartz Sleeve	D	EVOQS
Bulb Socket	F	SPCUVLH
Quartz Sleeve O-Ring	*G	UVCORINGZ
Locking Nut	H	SPCUVLN
End Cap Sealing Ring	I	UVCOFLATWASHER

Table 2.



Figure 1. 11404 - 55 Watt

**NOTE:** For optimum performance, the electronic ballast has been configured for UV bulbs supplied by AstralPool. When sourcing replacement UV Bulbs or quartz sleeves always buy components supplied by AstralPool from your nearest AstralPool stockist.

### 4.2 11405 - 110 Watt Components

Description	Diagram Code	ASTRALPOOL Order Code
2" Glued Outlet	A	N/A
End Cap	B	SPCUVEC
UV Bulb	C	SPCUV55B
Quartz Sleeve	D	EVOQS
Bulb Socket	F	SPCUVLH
Quartz Sleeve O-Ring	*G	UVCORINGZ
Locking Nut	H	SPCUVLN
End Cap Sealing Ring	I	UVCOFLATWASHER

Table 3.

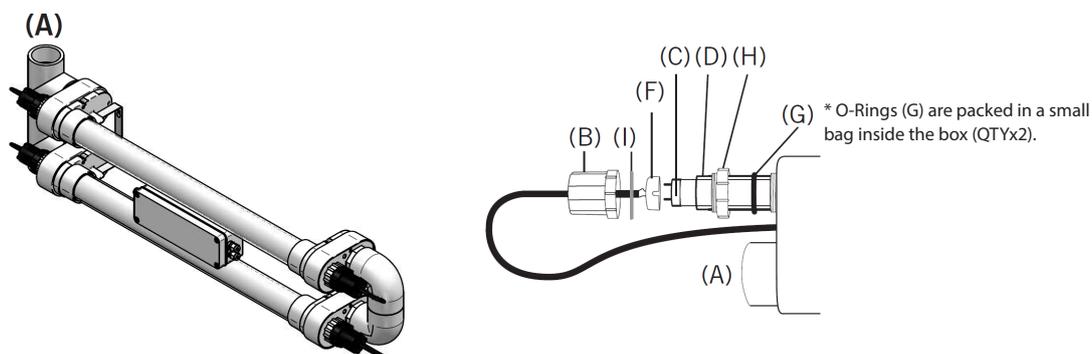


Figure 2. 11405-110 Watt

**NOTE:** For optimum performance, the electronic ballast has been configured for UV bulbs supplied by AstralPool. When sourcing replacement UV Bulbs or quartz sleeves always buy components supplied by AstralPool from your nearest AstralPool stockist.

### Section 5. Flow Rates

Model	Total No. of 55W Lamps	Max Flow Rate	Maximum System Volume (Litres)
11404 55 Watt	1	20,000	55,000
11405 11 Watt	2	25,000	75,000

Table 4.

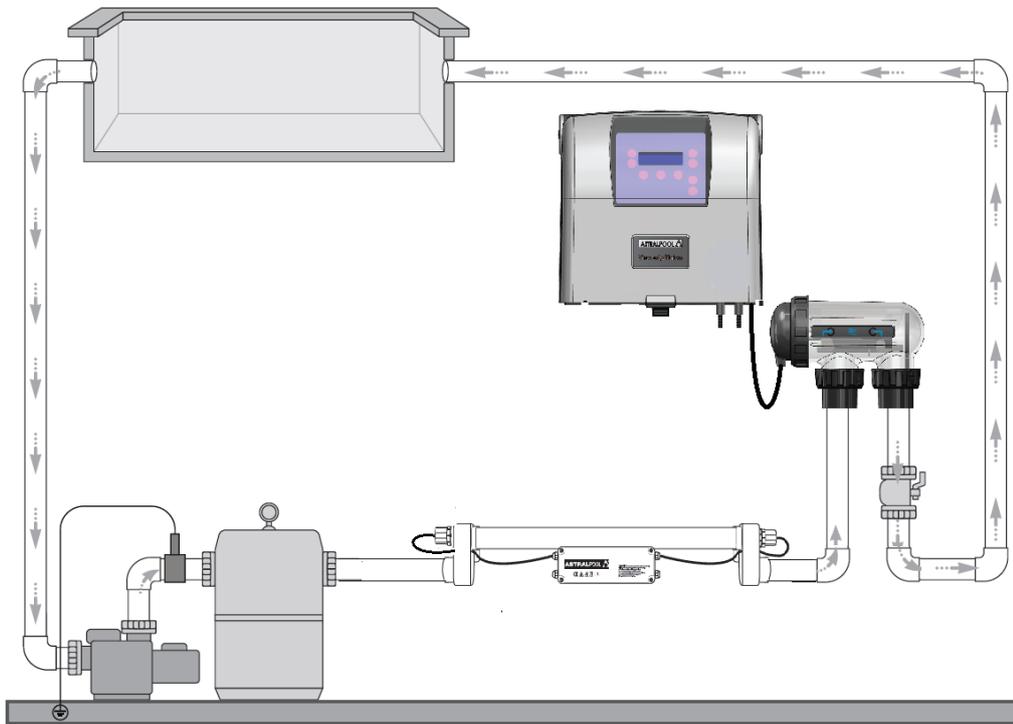


Figure 3. Installation Position

### Section 6. Installation

#### 6.1 Install the Quartz Sleeve

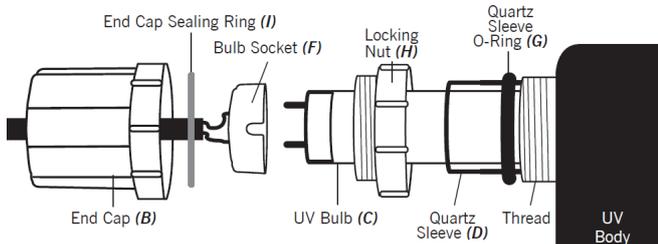
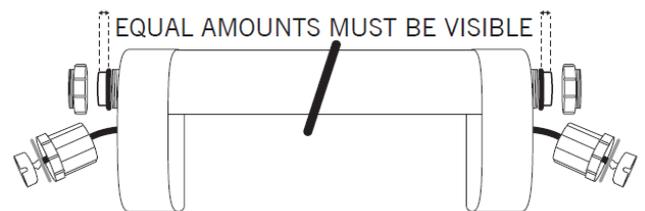


Figure 4. Quartz Sleeve

1. Starting at one end of the unit, unscrew the black end cap (B). This black end cap houses the bulb socket (F).
2. Unscrew the white locking nut (H) from the same end.
3. Repeat steps 1 and 2 at the other end of the unit.
4. Take the quartz sleeve (D) from the packaging box and slide it through the UV until it finds the hole at the far end of the unit.
5. Take the quartz sleeve O-Ring (G) and fit it around one end of the quartz sleeve.
6. Slide this quartz sleeve O-Ring (G) towards the thread on the UV body, ensuring that equal amounts of quartz sleeve are visible at each end of the unit.



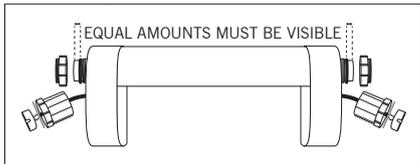
**IMPORTANT:** Ensure that equal amounts of the quartz sleeve are visible at each end of the unit before fitting the locking nuts.

7. Fit the quartz sleeve O-Ring (G) at the other end of the quartz sleeve, again ensuring that equal amounts of quartz sleeve are visible at each end of the unit.
8. Now screw the white locking nut (H) back into position.
9. Ensure the locking nut is **HAND TIGHTENED** to prevent causing damage to the O-Ring. No tools are needed.
10. Repeat steps 8 and 9 at the other end of the unit.
11. The quartz sleeve is now in position ready to take the UV bulb.
12. For all models, complete steps 1 to 4, then run the unit wet, with no bulbs to ensure the quartz sleeves and O-Rings have been installed correctly and are fully water tight. **HAND TIGHTEN FITTINGS ONLY - DO NOT USE TOOLS.**

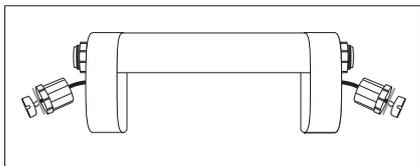
### 6.2 Testing the Quartz, O-Rings and Locking Nuts

Now that the unit is in position and connected to pipework, the quartz sleeve and O-ring at each end can be leak tested to ensure that they have been fitted properly. Failure to test for leaks and improper installation may cause water to seep into and damage the bulb socket and end cap sealing ring.

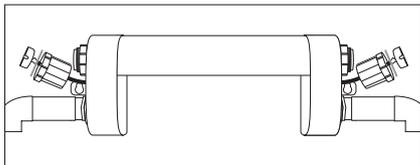
1. Fit quartz sleeve, o-rings and locking nuts.



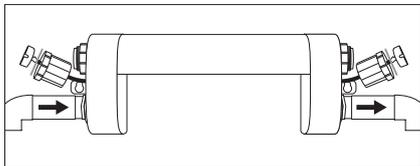
2. Check the locking nuts are hand tight only.



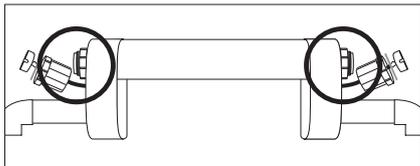
3. Position and mount UV and connect to pipework.



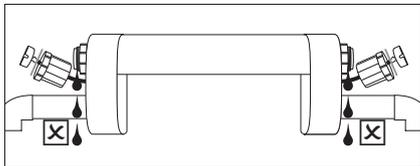
4. Turn on pump and pump water through unit.



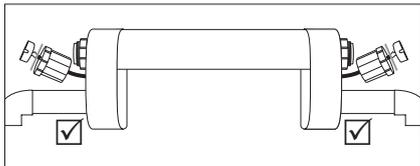
5. Check locking nuts for signs of water leaking.



6. If water leaks from locking nuts, review installing the quartz sleeve on page 7.



7. If no water leaks, quartz sleeve is properly installed.



### ⚠ WARNING

Failure to test for leaks and improper installation at this stage may cause water to seep into and damage the bulb socket and ballast. Water damage from improper installation is NOT covered under warranty.

### 6.3 Install the UV Bulb

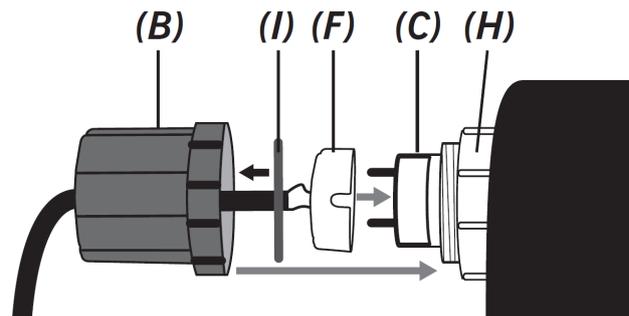


Figure 5. UV Bulb

1. Remove all packaging from the UV bulb (C).
2. Slide the UV bulb (C) carefully through the quartz sleeve (D) that you have just fitted. See 6.1.
3. While holding one of the black end caps (B) gently push the cable through the end cap which will make it easier to fit the bulb socket (F) in step 5.

**IMPORTANT:** Do not pull the cable by holding just the bulb socket.

4. The end cap sealing ring (I) is already seated on the inside of the bulb socket.

**IMPORTANT:** Ensure the end cap sealing ring is not twisted and it remains in this location throughout the installation.

5. In no particular order, align the UV bulb pins with the holes in the bulb socket and carefully push the bulb socket firmly onto the UV bulb pins. You may need to hold the other end of the UV bulb to help you fit the socket.
6. Ensure the UV bulb socket is firmly connected to the UV bulb.
7. Repeat steps 3 to 6 at the other end of the unit.
8. Now at one end of the unit, slide the black end cap (checking that the sealing ring is in position) over the bulb socket while carefully holding the cable to prevent the bulb connector disconnecting from the UV bulb.
9. Screw this end cap onto the thread on the white locking nut (H) already connected to the UV body. **HAND TIGHTEN ONLY.**
10. Repeat steps 8 and 9 at the other end of the unit.
11. Check that all of the fittings are hand tightened. No tools are needed.
12. On multiple bulb units, do not mix up the bulb connectors as this will result in the bulb not illuminating. **HAND TIGHTEN FITTINGS ONLY - DO NOT USE TOOLS.**
13. Please ensure that there is enough space at one end of the UV to enable bulb / quartz sleeve removal and maintenance.

## 6.4 Connect to the Electricity Supply

Electrical installations must be carried out by a qualified electrician. Do not attempt to tamper with or access the electrical control box or casing inside the UV, as doing so will invalidate the warranty.

The power supply must meet the specifications on the product. The cores in the supply cable are coloured in accordance with the following code:

Brown = Live  
 Blue = Neutral  
 Earth = Green/Yellow (where fitted)

**IMPORTANT:** Do not use the supply cable to lift the UV as this may cause damage.

## Section 7. Maintenance

### 7.1 UV Bulb Replacement

Isolate the unit from any electricity and water supplies before carrying out maintenance on the unit. It is not necessary to stop the water through the UV to change the bulb.

Life span of a UV bulb is 9000 hours (approx 1 year continue running). It is recommended that the bulb is changed during this running time.

#### 7.1.1 To Remove a UV Bulb

1. Disconnect the electricity supply.
2. Unscrew the black end cap at one end of the unit. Take care not to unscrew the white locking nut also.
3. Carefully slide the black end cap over the wire to reveal the bulb socket. Do not lose the end cap sealing ring.
4. Disconnect the bulb socket.
5. Repeat steps 2 to 4 at the other end of the UV.
6. With the end caps out of the way, carefully slide out the UV bulb.

#### 7.1.2 To Install a New UV BULB

1. Refer to the installation of the UV Bulb steps in 6.2.

**IMPORTANT:** After checking all the fittings are correctly tightened you can switch your unit back on.

### 7.2 Replace / Clean Quartz Supply

Always isolate the unit from any electricity and water supplies before carrying out maintenance on the unit.

#### 7.2.1 To Remove a Quartz Sleeve

**NOTE:** Removing the quartz sleeve will cause water to flow out of the unit.

1. Remove the UV bulb.
2. With the electricity supply disconnected, UV isolated and UV Bulb removed, unscrew the locking nut at one end of the UV.
3. Water should be drained from the unit.
4. Carefully remove the quartz sleeve O-Ring and keep safe.
5. Unscrew the locking nut from the other end and remove the quartz sleeve O-Ring and keep safe.
6. Carefully remove the quartz sleeve taking care not to allow it to drop inside the UV body.
7. To drain any water that may be left in the unit, we would recommend that you unscrew the mounting bracket(s), disconnect the unit from the pipework, and tilt the unit to drain the chamber of water.
8. Clean the sleeve and polish with a soft cloth or paper towel. If you live in a hard water area, you may get limescale on the quartz sleeve; this can be easily removed by using vinegar or a cold water descaler.

#### 7.2.2 To Re-Install a Quartz Sleeve

1. Refer to the re-installation of the quartz sleeve and UV bulb in 6.1.

**IMPORTANT:** After checking all the fittings are correctly tightened you can switch your unit back on.

#### 7.2.3 Check for Leaking Water

If you notice water leaking from around the end caps, you should check the following:

1. Check the O-Ring is undamaged.
2. Check there are no cracks and breaks in the quartz sleeve.
3. Check that the locking nut is compressing the O-Ring to form a water tight seal.
4. Check that the end caps are sufficiently tight.
5. All components are clean and free from dirt and debris.

**NOTE:** Please note that the items list 1-5 are service items and therefore not subject to a claim under warranty. The service items listed are available from your AstralPool stockist.

## Section 8. Troubleshooting

Issue	Solution
- UV BULB NOT LIT - RCD TRIPPED	<ul style="list-style-type: none"> <li>• Check for power</li> <li>• Check the UV bulb for signs of failure, and replace if necessary.</li> <li>• Unscrew the end caps and ensure the correct fittings.</li> <li>• Make sure the end caps are dry.</li> <li>• 11405 Bulbs are electrically linked as a pair. If one bulb fails, both bulbs will not illuminate. Substituting either bulb will identify which bulb has failed.</li> <li>• Do not mix up the bulb connectors as this will result in the bulb not illuminating.</li> </ul>
- LEAKING END CAPS	<ul style="list-style-type: none"> <li>• Make sure the end cap is not damaged or overtightened.</li> <li>• Check the quartz sleeve O-Ring, reposition it or if necessary replace it with a new one.</li> </ul>
- POWER SURGE	<ul style="list-style-type: none"> <li>• Commercial UV sterilisers have thermal overload protection which automatically shuts down and then enables a fast re-start when the problem has been cleared.</li> </ul>
- TEMPERATURE OVERLOAD	<ul style="list-style-type: none"> <li>• Should the temperature exceed the maximum operating temperature limits, the Thermal Overload Protection will enable itself.</li> </ul>

## Section 9. Frequently Asked Questions

### How often should I change the UV bulb?

The UV bulb has an effective lifespan of 12 months (9000 hours). This should be changed without fail in order for the unit to remain effective and fit for purpose.

### Is the UV suitable for salt water use?

The UV is manufactured from materials that will not corrode in salt water, however the stainless steel bracket will. Use alternative mounting means when using UV on saltwater systems.

### How long can I leave the unit running?

UVs have been designed and manufactured to the highest standards, and can be run 24 hours a day. For external applications, if the unit is frost protected it may be left running throughout the winter. Otherwise, the unit should be removed, drained and stored safely for the winter.

### Can I bury the unit underground?

No. The UV, although weatherproof, is not suitable for installing in any situation that may be subject to immersion in water.

### Can it be used with ozone?

Yes. The UV is safe to use with ozone units, however, the O-Rings are not. When using ozone units please use rigid pipe.

### When replacing the bulb I cannot locate it into the bulb socket at the opposite end of the UV?

Please follow the procedure for cleaning / replacing the quartz sleeve. This will explain the correct procedure for removing both end caps and sockets and explain the method for easy installation.

## Section 10. Warranty

This product is sold with a limited factory warranty. Detail are included with this product or for full terms and conditions, please visit [www.astralpool.com.au](http://www.astralpool.com.au)

All warranty issues should be resolved with your AstralPool dealer or place of purchase. Claims must include the UV Disinfection System serial number and model (this information can be found on the rating plate), installation date, and name of the installer. Shipping costs are not included in the warranty coverage.

The warranty does NOT cover damage caused by improper assembly, installation, operation or field modification. Also, any damage to the product caused by improper water chemistry will NOT be covered by the warranty.

**NOTE:** Keep this manual in a safe place for future reference when inspecting or servicing the heater.



For full warranty terms and conditions and to register your warranty, visit [www.astralpool.com.au/warranty](http://www.astralpool.com.au/warranty) and complete your details. Or scan the QR code and be taken directly to the registration page

Record your Equipment details here for quick reference:

Model No. : \_\_\_\_\_

Serial No. : \_\_\_\_\_



ASTRAL1020420191MAN

**Fluidra Australia Pty Ltd**  
219 Woodpark Rd  
Smithfield, NSW 2164, Australia  
1300 763 021

For contact details visit: [www.astralpool.com.au](http://www.astralpool.com.au)