



HANSON UV BATH CLEAN USER GUIDE



About Hanson Research

Hanson Research is a global technology company specializing in analytical test instruments for the pharmaceutical industry. Founded by the innovator of modern dissolution test technology, Hanson Research helps ensure the world's pharmaceuticals are pure, safe, and effective by manufacturing equipment that sets the global standard for quality, innovation, and long-term value. Hanson instruments are used by scientists in over 75 countries worldwide and are supported by the industry's top customer service team. For more information, visit hansonresearch.com.

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Sales and Support

Congratulations on your purchase of the Hanson UV Bath Clean system. While we are certain you will enjoy this new product, we also understand from time to time you may have a question or technical issue requiring our assistance. Please feel free to contact us at any time by any of the methods below. We're happy to help!



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Revision History

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A	07 July 2015	Original issue
B	25 March 2016	Updated entire document

To confirm that you have received the latest version of this User Guide, contact Hanson Research Technical Support.

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A. Introduction

The UV bath clean uses ultraviolet light energy to kill microorganisms, molds, and fungi commonly found in untreated water. Ultraviolet light damages the DNA of microorganisms, making reproduction impossible, but it does not otherwise alter the water being treated. During sterilization nothing is added to the water except ultraviolet wavelength energy. Dead microorganisms, inorganic particles, and chemicals are not removed from the treated water. To be effective, UV radiation should be used only on water that is clean from the start.

UV Bath Clean Assembly

Since microorganism DNA is altered only when in direct contact with the UV light, it is very important that the Vision heater water pump is turned on so that it is circulating bath water constantly. Bath temperature is not a factor, so the heating element may be turned on and off as needed. To keep the water circulating when running dissolution test protocols, the “Heater off at end of test” field on the tester should be set to “No.”



UV Bath Clean Assembly

B. Installation

The installation of the UV bath clean involves draining the dissolution tester waterbath; disconnecting the heater; sizing and cutting the tubing; attaching fittings; connecting the UV sterilization unit in-line with the circulation of bath water; and re-connecting the heater.

Required Tools

1. Pliers
2. Scissors or razor blade

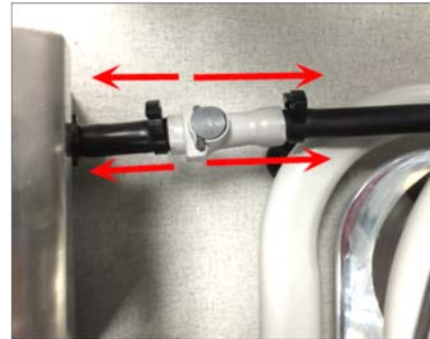
Procedure

1. Drain the Vision tester waterbath. For instructions on how to drain the bath, refer to "Vision G2 Classic 6 and Elite 8 Dissolution Tester User Guide" (74-108-800), Section 4.6.
2. Once the waterbath is drained, power off the Vision tester and the heater.
3. Remove the quick-disconnects located between the Vision heater inlet and waterbath outlet; remove the quick-disconnects between the Vision heater outlet and the waterbath inlet. Unplug the Vision heater and move it to a suitable location where further work can be performed.

Disconnect heater from waterbath.



Heater inlet to waterbath



Heater outlet to waterbath

B. Installation

4. Remove the black clamp and then the male fitting from the waterbath outlet tubing. This is the tubing still connected to the bottom outlet port of the waterbath. There will be some water left in the tubing.



5. Using a razor blade or sharp scissors, carefully cut the waterbath outlet tubing to the appropriate length as specified below:



May require shorter or longer length.

- For Vision G2 Elite 8 testers, leave approximately 8 inches (20 cm).
- For Vision G2 Classic 6 testers, leave approximately 18 inches (46 cm).
- Note: Shorter or longer lengths may be needed depending on space requirements behind the tester. Check (measure) the configuration before cutting.

B. Installation

6. Use a pair of pliers to reattach the black clamp to the male fitting inserted into the newly cut tubing. Ensure the black clamp is on straight; then tighten the fitting 3 to 5 audible clicks to prevent leaks.



7. Remove the tubing from the inlet of the Vision heater by removing the black clamp and gently pulling the tubing from the connector. There will be some water left in the tubing and pump.



B. Installation

- Using a razor blade or sharp scissors, carefully cut the heater inlet tubing to the length specified below.

May require shorter or longer length.

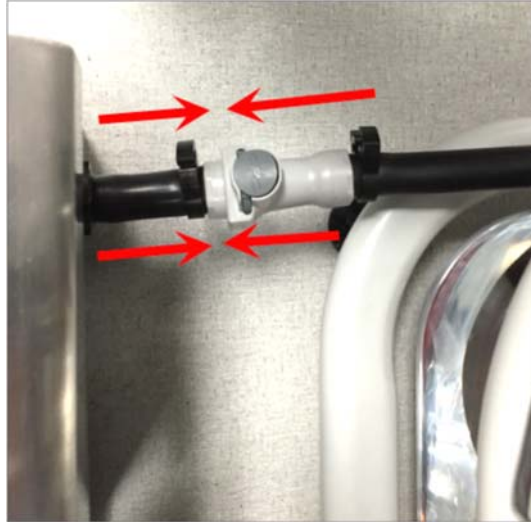


- For Vision G2 Elite 8 testers, leave approximately 6 inches (15 cm)
 - For Vision C2 Classic 6 testers, leave approximately 2 inches (5 cm).
 - Note: Shorter or longer lengths may be needed, depending on the space requirements behind the tester. Check (measure) the configuration before cutting.
- Use a pair of pliers to attach the black clamp to the tubing and the Vision heater inlet. Ensure the black clamp is on straight, and then tighten the clamp 3 to 5 audible clicks to prevent leaks.



B. Installation

10. Connect the quick-disconnects from Vision heater outlet to the waterbath inlet.



11. Loosen the cord strain relief nut and slide it away from the threads.



12. Loosen and remove the lamp seal from the UV housing so that the plug receptacle is exposed.



B. Installation

13. Remove the new UV lamp from the packaging. Be careful not to touch the glass lamp housing.

Caution!
Do not
touch the



14. Connect the plug receptacle to the UV lamp. The receptacle is keyed, so the UV lamp will only fit one way. Do not touch the lamp housing.



15. Slide the UV lamp into the UV bath clean housing.



B. Installation

16. Connect the lamp seal to the UV housing and tighten.



17. Push the cord strain-relief nut towards the lamp seal and tighten.



18. Plug the UV bath clean into a power outlet and look through the blue, translucent screw-on cap to confirm the bulb is lit.
19. Connect the quick-disconnects from Vision heater inlet to the UV Bath clean outlet.



B. Installation

20. Connect the quick-disconnects from waterbath outlet to the UV bath clean inlet.



21. Fill the Vision tester waterbath with water. For instructions on how to properly fill the waterbath reference the Vision G2 Classic 6 and Elite 8 Dissolution Tester User guide 74-108-800 section 4.8.
22. Plug the UV bath clean into a power outlet.
23. Prime the Vision Heater and ensure that there is proper flow. For instructions on how to prime the Vision Heater, reference the Vision G2 Classic 6 and Elite 8 Dissolution Tester User guide 74-108-800 section 4.9.

Remove air during priming.

Note: During the priming process it may be necessary to tip the UV Bath clean to remove air.

C. Maintenance

In general, the UV bath clean is designed to be a low-maintenance accessory when installed and operated as per the guidelines set forth in this manual. It is recommended that the UV lamp be changed every 12 months to maintain maximum effectiveness. The following procedure will guide the user through the process of changing the UV Lamp.

Required Tools:

None

Required Parts:

91-500-117 Bulb Replacement, 8 Watt

Procedure:

1. Touch the **Temp Setpoint** field on the main screen to access the **Temperature Setpoint** screen. Touch the **Pump** button to turn the pump off.

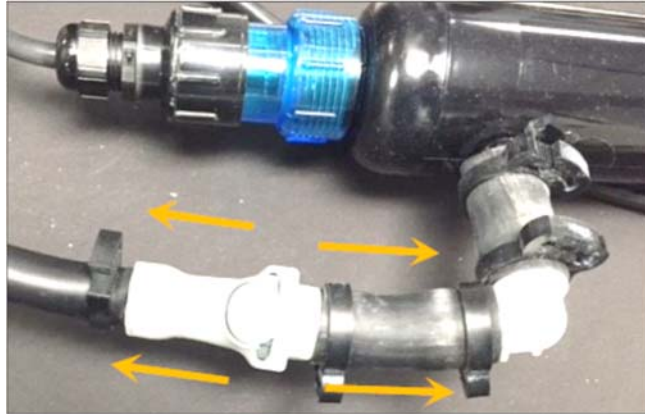
*Lamp
replacement*



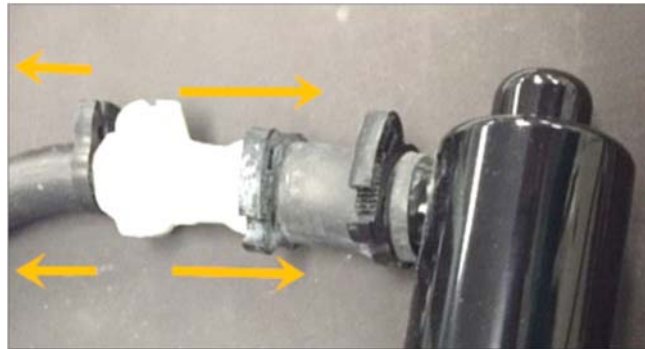
2. Unplug the UV bath clean from its power source.

C. Maintenance

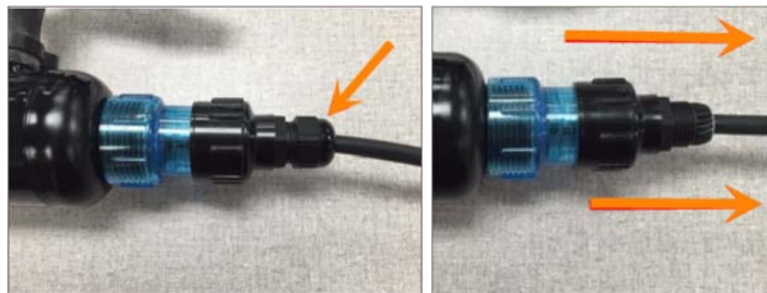
3. Disconnect the quick-disconnects from Vision heater inlet to the UV Bath clean outlet.



4. Disconnect the quick-disconnects from waterbath outlet to the UV bath clean inlet.

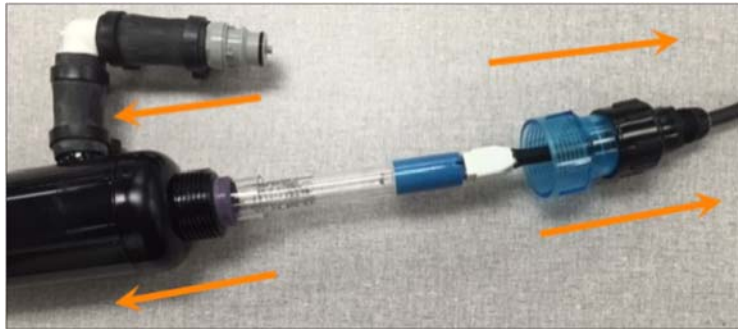


5. Loosen the cord strain-relief nut and slide it away from the threads.



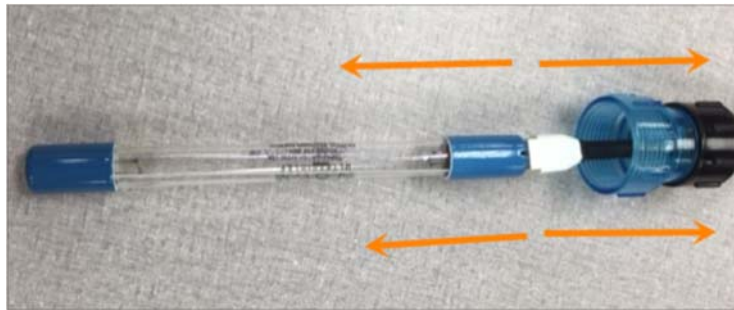
C. Maintenance

6. Remove the UV lamp from the UV lamp housing.



7. Disconnect the plug receptacle from the UV Lamp. Pull gently to remove the lamp from the receptacle.

Caution!
Do not touch
the glass.



8. Remove the new UV lamp from the packaging. Do not touch the glass surface of the lamp housing.

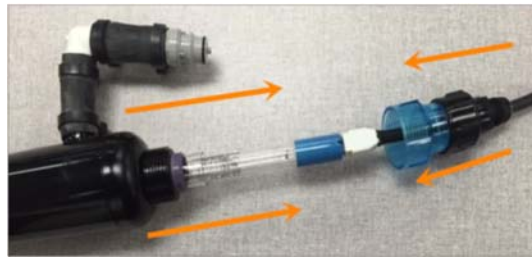


C. Maintenance

9. Connect the plug receptacle to the UV lamp. The receptacle is keyed, so the UV lamp will only fit one way. Do not touch the glass surface of the lamp housing.



10. Slide the UV lamp into the UV bath clean housing.



11. Connect the lamp seal to the UV housing and tighten.



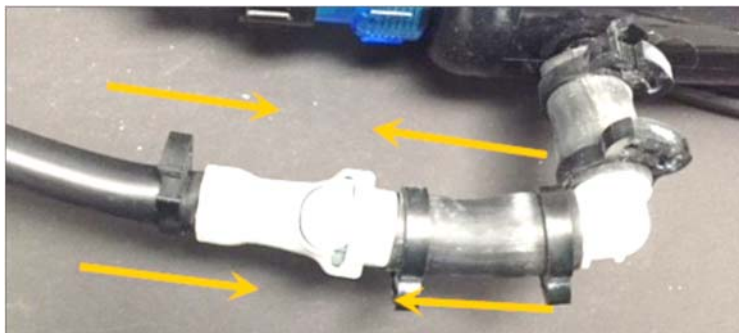
12. Push the cord strain-relief nut towards the lamp seal and tighten.



13. Plug the UV bath clean into a power outlet and look through the blue, translucent screw-on cap to confirm the bulb is lit.

C. Maintenance

14. Connect the quick-disconnects from Vision heater inlet to the UV Bath clean outlet.



15. Connect the quick-disconnects from the waterbath to the UV bath clean inlet.



16. Prime the Vision heater and ensure that there is proper flow. For instructions on how to prime the Vision Heater, refer to “Vision G2 Classic 6 and Elite 8 Dissolution Tester User Guide” (74-108-800), Section 4.9.

Change UV lamp frequently.

Important! If the lamp is not changed with regular frequency, or if the water pump is powered off for an extended period of time, or if non-organic contamination is present, the bath will need to be cleaned. See the appropriate dissolution tester user manual for proper bath cleaning procedure.

D. Troubleshooting

If the UV bath clean shows signs of improper operation (e.g., lamp failure, algae growth), refer to the troubleshooting table below to assess and resolve the problem.

Problem	Possible Causes	Recommended Action
UV lamp does not illuminate	Unit unplugged and/or power outlet failed UV lamp incorrectly installed UV lamp has failed UV bath clean system has failed	Plug in unit; check power outlet Re-install per procedure Replace the lamp Replace the system
Algae growth seen in bath even though UV lamp is illuminated	Vision heater water circulation was powered off for some time. Bath water is not circulating properly Bath location in contact with direct sunlight UV lamp sterilization capability has failed.	Clean bath; ensure water pump remains on. Refer to Vision tester user guide for possible causes. Clean bath; shield bath from direct sunlight. Clean bath; replace UV lamp.

E. General Warranty

General Warranty

Hanson Research (Hanson) products are warranted for one full year including parts and labor. Service contracts and Preventive Maintenance contracts are available for post-warranty support. International dealer warranties may vary. Hanson makes no warranty, expressed or implied, for glassware, consumables, or products not manufactured by Hanson, as evidenced by nameplate on the item or other designation. Hanson will give reasonable assistance to buyer in obtaining from the respective manufacturer whatever adjustment is available under the manufacturer's own warranty. Hanson shall be released from any and all obligations under any warranty, either expressed or implied, if the product covered is repaired or modified by other than its own personnel, or without written authorization from Hanson. There are no other warranties, expressed or implied, and Hanson shall not be liable under any circumstances for damages of any kind, direct, consequential, or otherwise.

