

# JET Model 952 UV Disinfection Device Installation Instructions

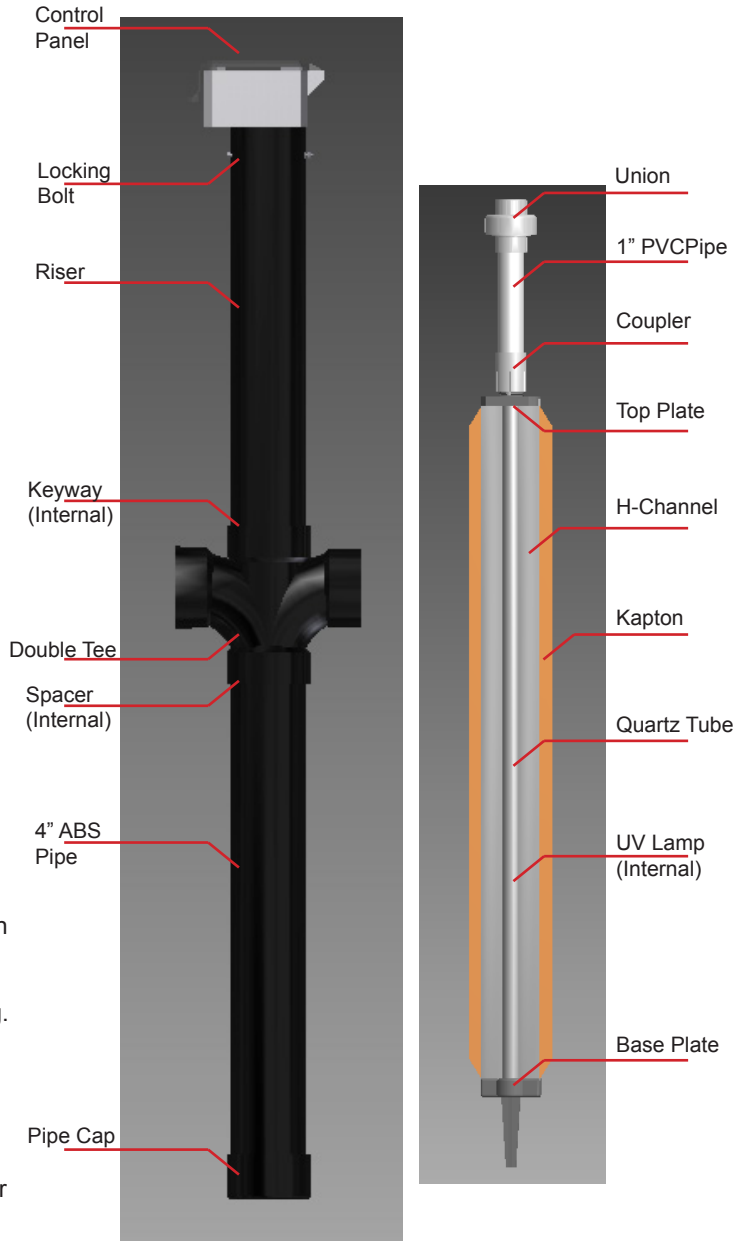
## COMPONENTS

The following components are supplied in the disinfection system:

1. Control Panel
2. 4" ABS riser pipe
3. UV Housing with 4" ABS cap, 4" ABS pipe, 4" double sanitary tee, spacer insert and keyway
4. UV Insert with top and bottom plates, H-Channel risers, quartz tube and lifting handle
5. UV lamp - 37 Watts

The following components should be supplied by the installer:

1. All-Purpose Cement
2. Clear Cleaner for plastics
3. Drill with Universal Bit
4. Clean soft cloth
5. Isopropyl alcohol
6. Small slotted screwdriver
7. Wire strippers
8. Phillips Screwdriver
9. Water tight conduit connectors
10. Conduit and Wiring



**WARNING:** Exposure to UV light is harmful. Immediate or prolonged exposure to UV light can result in painful eye injury, skin burn, premature skin aging, or skin cancer. Do not remove an active UV lamp from the UV housing or attempt to activate lamps which are not installed within the UV housing.

**Avertissement:** L'exposition à la lumière UV sont nocifs. Exposition immédiate ou prolongée aux rayons UV peut entraîner des blessures douloureuses de l'œil, de brûlure de la peau, le vieillissement prématuré de la peau, ou cancer de la peau. Ne retirez pas une lampe UV active à partir du boîtier UV ou de tenter d'activer les lampes qui ne sont pas installés dans le logement UV.

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## INSTALLATION INSTRUCTIONS

### EXCAVATION

1. Excavation should be made as close as possible to the effluent end of the treatment plant.
2. Excavation(s) should be as minimal as possible to reduce settling of backfill.
3. Verify the horizontal hubs of the double sanitary tee are able to line up with the treatment plant outlet and effluent line.
4. The UV disinfection device must be level upon installation.

### CONNECTING THE INLET & OUTLET LINES

1. Carefully unpack the UV disinfection device. Verify all pieces are present and in good condition.

**NOTE:** The UV housing has to be installed so that the flat edge of the keyway is on the inlet side. If this is not installed correctly the treatment plant effluent will not flow through the device correctly and the UV disinfection will not be effective. See Figure 1.

2. Clean the ends of the upstream and downstream piping and the hubs of the UV cross with clear plastic cleaner.
3. Connect the inlet end of the UV housing to the upstream piping using All-Purpose Cement.
4. Connect the outlet end of the UV housing to the downstream piping using All-Purpose Cement.

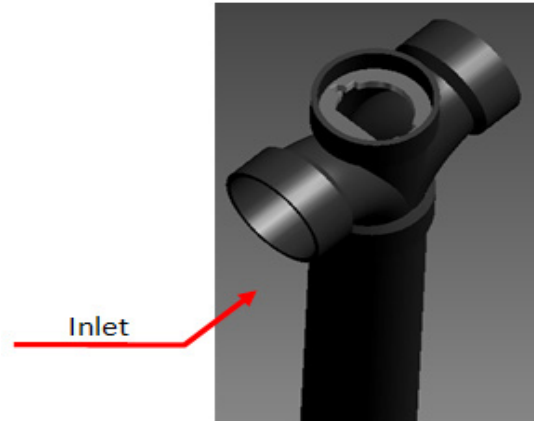


FIGURE 1

### BACKFILLING AND RISERS

1. Once the UV housing is installed and level, backfill up to the bottom of the inlet and outlet hubs.
2. Fit the 4" ABS riser pipe into the top hub of the UV housing. The recommended height for the top of the riser is no more than 6" above the final grade. The riser may need to be cut to fit properly.
3. Once the riser pipe has been cut, and both the pipe and hub have been cleaned, glue them together using All-Purpose Cement.
4. **Note: The end of the riser pipe with the locking bolt must be located at the top of the unit after installation.**

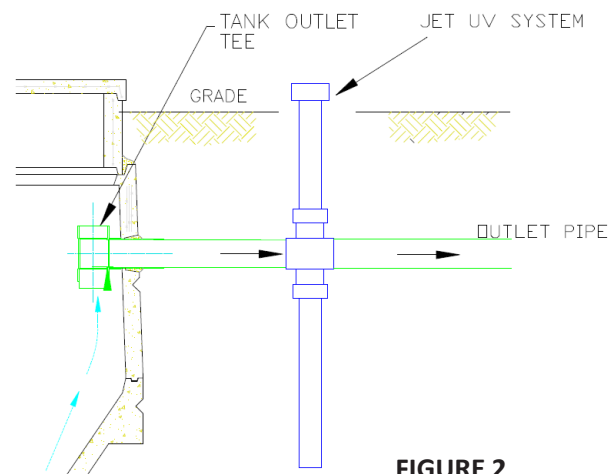


FIGURE 2

# JET Model 952 UV Disinfection Device Installation Instructions

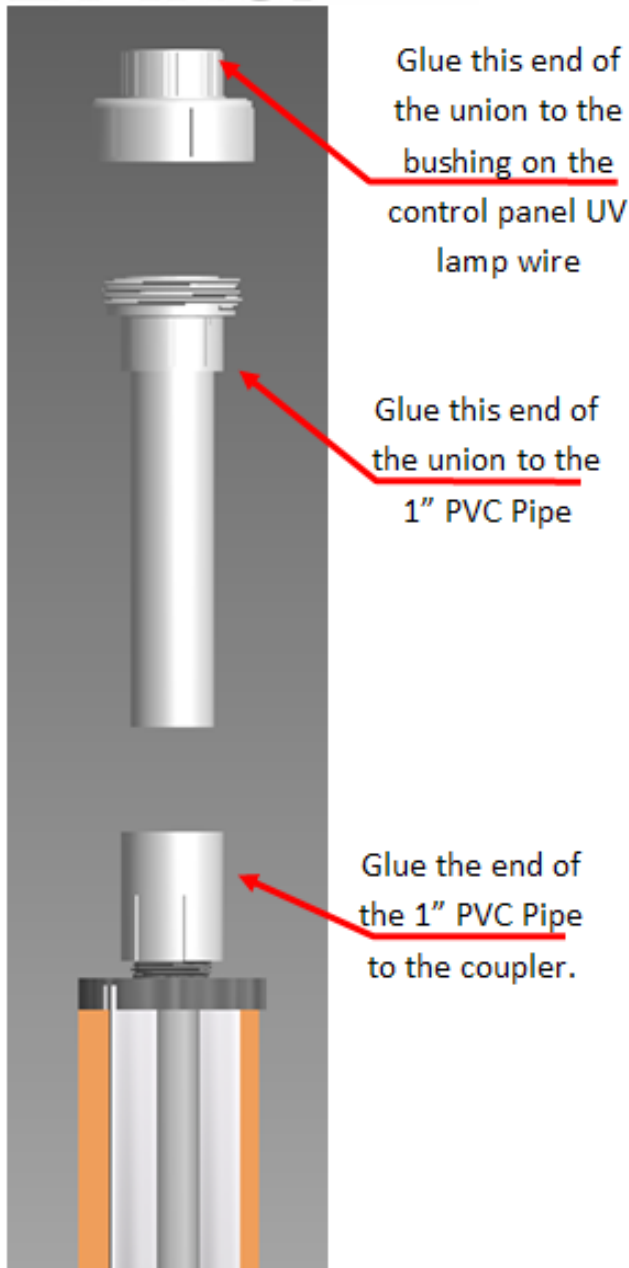


FIGURE 3

## UV INSERT INSTALLATION

1. Place the 1" Schedule 40 PVC pipe in the coupler of the UV insert to help determine where the 1" pipe should be trimmed so that it is easily reached when in the riser.
2. Remove the 1" Schedule 40 PVC pipe from the coupler and trim it.
3. Glue the bottom side of the union to one end of the 1" PVC pipe. See figure 3. Glue the opposite end of the union to the bushing on the control panel UV lamp wire.
4. Glue the other end of the 1" PVC pipe into the coupler that is on the UV insert.
5. Using a soft clean cloth moistened with isopropyl alcohol wipe off the quartz tube.
6. Gently set the UV insert in the UV housing using the lifting handle. Be sure that the Kapton edges curl into the openings in the keyway shown in Figure 4.

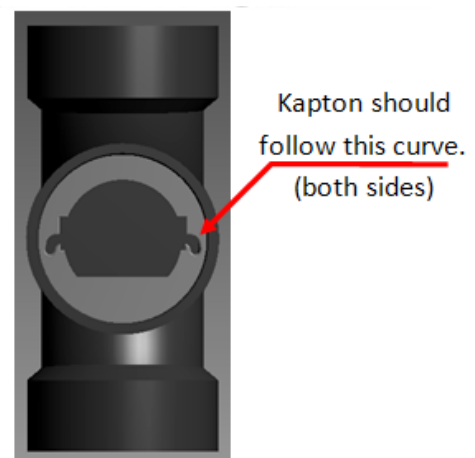


FIGURE 4

# JET Model 952 UV Disinfection Device Installation Instructions

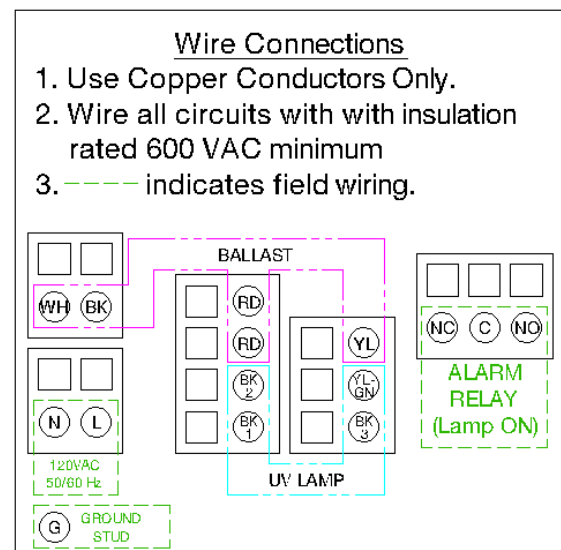
## WIRE THE CONTROL PANEL

1. The UV unit operates on 120 VAC single-phase power (optional 110-240VAC single phase power available). A 15 amp circuit breaker on the main electrical panel should be used for the UV disinfection device. Make sure the breaker is "OFF" before continuing.
2. Install at least a #14 AWG copper wire cable from the specified breaker in the main electrical panel to the UV control panel.
3. Remove locking bolt from control panel. **\*\*Do not discard locking bolt\*\***
4. The UV control panel is not equipped with knockouts for electrical conduit connections. Drill a properly sized hole in the UV control panel enclosure for the conduit, ONLY UL LISTED CONDUIT MAY BE USED. Ideally the conduit should enter from the bottom of the enclosure to increase protection against water infiltration into the panel. The maximum allowable size of the conduit is 3/4 inch.
5. Attach all conduit and cable connectors to the control panel. Follow the conduit manufacturer's instructions for proper connection installation.
8. Use the wiring diagram schematic on the inside of the control panel cover to help wire the panel. The incoming power wires are outlined in green on the wiring diagram. Attach the incoming hot (black) lead to the terminal block corresponding to "L" in the UV control panel. Attach the neutral (white) lead to the terminal block corresponding to "N" in the control panel. The ground (green) lead is to be attached to the grounding bolt in the corner of the control panel.
  - a. The terminals are spring loaded, insert a small flat head screw driver into the square opening of the terminal and use to lever terminal open (pry away from round opening) while inserting wire into round opening.
  - b. Once wire is seated in round opening release terminal by removing screwdriver from square opening.
9. Seal all incoming wires with a UL listed RTV sealant to the inside of the conduit for both the inbound power conduit hub and the UV lamp cord grip.
10. OPTIONAL: The Alarm Relay terminals can be used if desired. Connect one alarm lead to either the normally open (NO) or normally closed (NC) terminal based on the type of signal required by the alarm panel. Connect the remaining lead to the common (C) terminal.

**NOTE:** ONLY UL APPROVED WATERTIGHT HUB AND FITTINGS CAN BE USED WHEN ATTACHING CONDUIT AND WIRING TO THE CONTROL PANEL.

Jet recommends using Carlon or T&B liquidtight non metallic conduit and fittings for field installations.

6. Verify all connections are properly installed and watertight.
7. Pull all cables and wiring through the conduit and connectors into the control panel. Allow sufficient wiring to make all connections in the control panel.



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## UV LAMP INSTALLATION

1. Apply provided grease onto the face of the four pin connector of the power cable to protect against moisture and corrosion.
2. You do not want to touch the UV lamp surface with your hands. Use a clean, soft cloth to hold the UV lamp and insert it into. The four pin connector being sure to align the two red prongs on the UV lamp with the two red holes on the four pin connector.
3. Use supplied heat shrink tubing to completely seal lamp and connector.
4. Carefully insert the UV lamp into the quartz tube of the UV subassembly.

**NOTE: Both the quartz tube and UV lamp are very fragile. HANDLE WITH CARE.**

5. After verifying the UV lamp is seated properly in the UV insert and the cord is the correct length, tighten the cord grip that is attached to the bushing. This must be done to ensure a watertight enclosure.
6. Verify the union on the lifting handle has been fastened.
7. Fill the UV housing with water up to the outlet piping. Be careful not to get water in the UV insert.
8. Place excess UV lamp cable in the riser.
9. **The control panel fitting should not be glued inside the riser.**
10. Insert the locking bolt through the riser and ABS fitting and secure with wing nut.
11. Continue to back fill around the disinfection chamber and riser until even with the final grade

being no more than 6" below the bottom off the control panel.

12. Turn the UV disinfection device on at the main electrical panel.
13. The "Lamp Active" light should be illuminated to indicate the system is operating

## SERVICE PROCEDURES

Jet recommends servicing the UV system at a minimum every six months.

1. Inspect condition of UV and note that "Lamp Active" indicator light is active.
  - a. If "Lamp Active" light is not lit and alarms are not working refer to troubleshooting guide pg.
2. Turn off main power from alarm panel (indicator light should now be off.)
3. Remove control panel assembly and UV Insert.
4. Clean quartz tube with soft cloth and alcohol wipe.
5. Inspect UV insert assembly for any damage, water infiltration, or worn components.
6. Re-install UV Insert and control panel assembly.
7. Turn on main power and observe that "Lamp Active" indicator light is lit and system is functioning.
  - a. If "Lamp Active" light is not lit or if alarms activate after service refer to troubleshooting guide pg.
8. Replace the UV lamp every other year. Refer to UV lamp installation section for instructions on replacing lamp.

## Troubleshooting Guide for Jet Model 952 UV Disinfection Device

<b>Problem</b>	<b>Probable Cause</b>	<b>Solution</b>
Excess Wire Tension On Union	<ul style="list-style-type: none"> <li>Excess wire between cord grip and UV lamp connector</li> </ul>	<ul style="list-style-type: none"> <li>Loosen cord grip and adjust length of wire to match Lamp Insert handle</li> </ul>
Control Panel Not Seating	<ul style="list-style-type: none"> <li>Excess wire not stored in UV housing</li> <li>Lamp Insert handle too long</li> </ul>	<ul style="list-style-type: none"> <li>Reposition wire in UV housing</li> <li>Trim and reconnect Lamp Insert handle</li> </ul>
Lamp Insert Not Seating	<ul style="list-style-type: none"> <li>Check alignment of keyway and top plate</li> <li>Check for debris in UV housing</li> </ul>	<ul style="list-style-type: none"> <li>Re-position top plate</li> <li>Flush debris from UV housing with hose</li> </ul>
Water in Enclosure	<ul style="list-style-type: none"> <li>Enclosure cover not secure</li> <li>Conduit hub not secure</li> </ul>	<ul style="list-style-type: none"> <li>Align and tighten enclosure cover</li> <li>Tighten conduit hub</li> </ul>
"Lamp Active" Light Not Lit	<ul style="list-style-type: none"> <li>No power from main breaker panel</li> <li>No power to UV Lamp</li> <li>The "Lamp Active" bulb has burned out</li> </ul>	<ul style="list-style-type: none"> <li>Check wiring and main breaker panel</li> <li>Check internal wiring to UV Lamp</li> <li>Check internal wiring to UV Lamp</li> <li>Check orientation of control panel cover</li> </ul>
UV Lamp Not Lit	<ul style="list-style-type: none"> <li>Inbound power inactive</li> <li>UV Lamp burned out</li> </ul>	<ul style="list-style-type: none"> <li>Check wiring to UV Lamp</li> <li>Check UV Lamp</li> </ul>
Auxiliary Alarm After Start Up	<ul style="list-style-type: none"> <li>Alarm settings incorrect</li> <li>Alarm condition is active</li> </ul>	<ul style="list-style-type: none"> <li>Check alarm setting jumpers for proper NO/NC</li> <li>Check external devices</li> </ul>

## 24- MONTH LIMITED WARRANTY

Jet Inc. warrants the 952 UV components supplied by Jet against defective materials and workmanship, under normal service for 24-months commencing upon date of shipment from the factory. To make a claim under this warranty, you should notify your Jet Distributor or notify Jet Inc., Customer Service Department by phone at 1-800-321-6960 or by mail at 750 Alpha Drive, Cleveland, Ohio 44143. If a component or part is proven defective during this warranty period there shall be no charges for labor or materials required for the repair or replacement of the defective component. Jet shall have the option to require the defective part be returned, freight prepaid, for evaluation at the factory before allowing a claim. All components must be returned by an authorized Jet distributor who is in good standing with Jet Inc. Jet Inc. may, at its option, elect to repair or replace the defective components, or refund the purchase price of the defective component(s). The system owner shall assume all responsibility for freight charges to and from Jet Inc. This warranty does not cover system components or parts that have been (I) damaged due to disassembly by unauthorized persons, improper installation, misuse, or lightning, (II) subjected to external damage, (III) damaged due to improper or altered wiring, or overload protection, or (IV) damaged by failure to follow the suggestions outlined in any associated product documentation or Owners Manuals. Items normally consumed in service such as UV lamps, fuses, filter cartridges, spin plates, grease, oil, etc. are not warranted. This warranty applies only to the Jet system components supplied by Jet Inc. and does not include any of the wiring, plumbing, drainage, or any other part of the disposal system.

**JET INC. SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGES CAUSED BY DEFECTIVE COMPONENTS OR MATERIALS, OR FOR LOSS INCURRED BECAUSE OF THE INTERRUPTION OF SERVICE, OR ANY OTHER SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES OR EXPENSES ARISING FROM THE MANUFACTURE, SALE, USE OR MISUSE OF THE COMMERCIAL TREATMENT PLANT. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY WARRANTY IMPLIED BY LAW, INCLUDING FITNESS IS IN EFFECT ONLY FOR THE ONE YEAR WARRANTY PERIOD SPECIFIED ABOVE. (SOME STATES DO NOT ALLOW EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ALLOW LIMITATIONS OF HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.)**

Jet Inc. reserves the right to revise, change, or modify the construction and design of the Jet system components or any component part or parts thereof supplied by Jet, without incurring any obligation to make such changes or modifications in present equipment. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.