



INSTALLATION- TANK & AERATOR

J-750 MEDIA PLANT

NSF LISTED J-750 SERIES PLANTS

- These instructions apply to the J-750 media plants.
- J-750 plants have been tested and meet class I effluent standards under the NSF standard 40 testing protocol.

TANK INSTALLATION

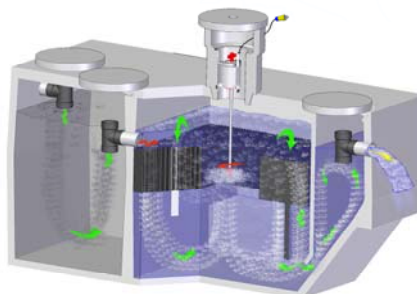
Only sanitary wastewater should be permitted to enter the system. The plant is not designed to receive flow from footer drains or roof downspouts. Water softener backwash should not be discharged into the system. The system should be located in an area which provides protection of the air intake from snow, ice or debris which may accumulate.

It is important that all local regulations, state laws and plumbing codes regarding the plant installation are followed. Items such as the connection of plumbing fixtures to the tank inlet line, position of inlet and discharge lines, grade and any other aspects of plant or plant related plumbing should be checked with the appropriate contractors to make sure all work conforms to state and local regulations.

Location of the tank must be in accordance with the local regulations. Tanks should be installed with a level pipe between the tanks and a minimal separation distance. Choose a ground location which will not flood, which provides adequate fall and allows installation of lines which are as short and as straight as possible. Tank separation distances should be as close as possible or according to Oregon DEQ rules and regulations.

There are many considerations in proper installation of a tank and the most important of which is that the tank installation meets the health department's regulations. Some major items are: have solid earthen pad; consider sand or small pea gravel pad; seal tank at shop if set in one piece; seal at the job site if delivered in sections; tank must be level within 1" from end to end and side to side; use mastic sealant for sealing risers and mounting casting; seal inlet and outlet sewer lines to tank; backfill carefully around tank; fill tank with water.

REPRESENTATIVE J-750 MEDIA PLANT



The J-750 media installation should be completed by the distributor before the tank is delivered. The "B" media set is installed for the J-750.

AERATOR INSTALLATION

IMPORTANT

- When installing the aerator, be extremely careful with the aspirator shaft. It has a critical straightness tolerance. It should not touch anything except liquid. Remember that the fit between the coupling and the shaft is quite close. Be careful not to burr or dirty the ends of the shaft or coupling.
- The aerator models have been carefully designed and built to give years of trouble-free operation. To assure long, trouble-free life, it is absolutely necessary to carefully follow the aerator installation and handling instructions.
- The life of the aerator depends on a straight shaft. Never lift the aerator by the shaft or subject the shaft to any bending, bumping or strain.
- Always inspect the final outlet and test for proper drainage at the time of installation.
- The aerator is sealed to protect it from water damage by flooding. However, it is not designed to operate underwater. Do not disassemble it or remove any parts.
- The control panel instructions contain a wiring diagram and detailed wiring instructions. A wiring diagram, and detailed instructions are also on the inside of each control panel box.

BEFORE GOING TO THE JOB SITE

The contractor should be contacted to check on the following items:

- There should be access to the facility and tank location.
- Take additional risers to the install, they may be needed.
- The plumbing must be complete so a proper drainage test can be run.
- Verify that the correct control panel is installed and connected to the system.
- The control panel must be an authorized Jet Control Panel.
- The underground cable must be connected, extended to the tank, and inside the mounting casting.
- There must be enough cable in the mounting casting to extend 48" above grade.
- The tank should also be full to the flow line.

INSTALLATION STEPS

1. Turn Off Power

Turn the aerator Control Panel switch to "OFF". Next turn the power that controls this circuit at the main panel "OFF".

2. Install Plastic Inlet Tee

Attach the tee to the influent pipe with the short pipe pointing down. Seal the influent pipe in place.

3. Install Plastic Transfer Tee

Install the tee in the submerged transfer hole on the inlet compartment side. Refer to the drawing for the appropriate plant size being installed. Seal the tee in place.

4. Install Plastic Outlet Tee

Attach the tee to the effluent pipe with the short pipe pointing down. Seal the effluent pipe in place.

5. Check Aerator/Flow Line Measurements

The location of the aerator flow line is very important. Measure the distance from the ledge in mounting casting to the liquid level in the tank (filled to the flow line). If it is between 25"-27", the aerator location is correct. If it is not, change the aerator mounting casting

6. Check Vent Position

Check the position of the vent cap in the cover. It must be installed in the center of the cover, as shown in the illustration. If the cap is not centered, the outside-air-hose will bend and air to the aerator will be cut off.

7. Inspect Outlet

Inspect the final discharge point of the system to insure it is not and can not be blocked. If there is a chance that it may become blocked in the future, inform the owner and contractor that this situation must be corrected before the aerator is installed. Inform them that the blockage will lead to improper drainage and repeated stoppages.

8. Effluent Sample Means

Collection and assessment of effluent samples is required for all NSF listed plants. There are four sample taking means from which samples may be taken. One of these methods must be chosen prior to plant installation and necessary arrangements made during installation to incorporate this method into the overall system. The means are as follows:

- A. Final Outlet Samples- Can be taken at the final outlet point if it is accessible. The final outlet must be elevated sufficiently to allow a free-flowing sample to be taken.
- B. Sample Cross Samples- The cross must be as close as possible to the discharge end of the tank. One horizontal arm of the cross should act as the first section of the discharge line from the tank. The other horizontal arm acts as a continuation of the discharge line. One vertical arm of the cross extends downward and the other extends up to grade. The arm to grade should be covered with a removable cover. This is highly recommended if lab sampling is or will be required.
- C. Distribution Box Samples- To use this method, the box must have an inlet line high enough above the box floor so that a free-flowing sample can be taken. Also the top of the box must be slightly above grade and covered with a removable cover. If the box doesn't meet these qualifications it must be modified or this method of sample collection cannot be used.
- D. A sample from inside the plant outlet baffle may be taken. The outlet must have an open top and the plant discharge line must lead directly to it. It must also be accessible from grade and covered with a removable cover.

9. Test for Proper Drainage

Be sure the tank is full to the flow line. Fill a bathtub, laundry sink, and other fixtures that drain into the system. Then simultaneously drain all the fixtures and flush the toilets. Go quickly to the tank and observe any rise in the water level. It's sometimes necessary to observe the tank for as long as ten minutes in order to give the water time to reach it. In other cases, water reaches it almost immediately. If the water rises over 3" and does not go down immediately, inform the contractor that the aerator can not be installed until the situation is corrected.

10. Unpack Aerator

Carefully remove the aspirator shaft. Slide the foam restrictor onto the shaft so that the side of the foam restrictor labeled "This side toward motor" faces away from the aspirator. Set this down gently in a safe place and remove the parts bag, owner's manual, and aerator. Inspect all the parts for shipping damage. Immediately notify Jet Inc. and the carrier if there is any damage.

Exposing the aerator to severe cold, such as the back of a truck or an unheated storage area could cause the breaker to trip when power is first applied. To prevent this problem, keep the aerator in a warm area for a short time before the installation. After the aerator is initially started, cold weather will not affect its operation.

11. Electrical Connection

Before proceeding, make sure the power is “OFF” at both the aerator Control Panels and the main electrical panel in the house. Test all three leads of the cable with a neon glow tester to be sure the power is “OFF”. Check the dimension of the underground cable to make sure it is not smaller than 23/64” x 11/64”. If it is smaller, the grommet (Included with the female plug) will not be watertight.

A. Factory-installed cord & connector.

1. Install female half of the electrical connector on the end of the cable on the mounting casting.

B. How to make a power cord assembly.

1. Cut a piece of cable 15” long for a power cord to be connected to the aerator.
2. Strip and connect one end of the power cord to the aerator following instructions for wiring aerator direct. (above)
3. Connect the male half of the electrical connector to the other end of the power cord. Following the wiring instructions furnished with the electrical connector.
4. Install the female half of the electrical connector on the end of the cable in the mounting casting. Follow the wiring instructions furnished with the electrical connector.

NOTE: Aerator power cord assemblies with or without the connector are available.

12. Install Foam Restrictor and Aspirator Shaft

An aerator lying on its side would rest on the foam restrictor and bend the motor shaft. For this reason, it is necessary to either block up the lower end of the aerator, or allow it to overhang on object during installation of the aspirator shaft.

Slide the foam restrictor down the shaft until it stops. Tighten the set screw firmly. The Allen key should spring, but do not tighten it so much that it slips and rounds the hex socket.

To ease future disassembly, many distributors apply a light coating of lubricant, such as white grease, to the end of the motor and aspirator shaft. If the lubricant is applied, do not use too much or allow it to get into the hollow end of the connector or shaft.

13. Fit Brackets

If the bumpers on the bottom brackets do not press against all sides of the mounting casting, remove the aerator and spring the brackets out until all of them touch the sides.

The fit should be snug, but not tight enough to push bumpers off when the aerator is installed. If mounting casting risers are used, it is easier to install and remove an aerator using the lift fork. The lift fork can be screwed onto a piece of 1” threaded pipe. A 5’ length should be adequate for most installations. The lift fork should be positioned under the aerator lift handle.

14. Install Drip Loops

Install aerator in mounting casting and push cable down below connector an inch or two.

This forms a “drip loop” which channels any water running down the cable away from the aerator.

15. Rotate Aerator Clockwise

Looking down at the installed aerator, rotate it clockwise until one of the mounting brackets engages anti-rotation block in the mounting casting. This prevents cutting off the air supply by twisting the air hose and also eliminates electrical problems caused by twisted cables.

16. Outside-Air-Hose

Aerators are equipped with a hose adapter and a 4 ½” length of attached hose. The hose must be in place to insure fresh air for proper treatment and to prevent possible moisture damage to the bearings on certain models. If one or more risers are used, a longer hose is required. Remove the air hose from the top of the aerator and cut a piece from bulk coil and install it. It must be long enough to fit completely on the plastic hose adapter and go straight up into the center of the vent. With one riser, the hose length should be 15 ½”

long. Each additional riser will require an additional 11” of hose. Be sure the hose is properly installed in the vent cap. It must not be bent or kinked when the riser cover is replaced. After the riser cover is in place, remove the vent cap and check the position of the hose. It should be in the vent body but not too close to the vent lid to restrict air flow.

17. Perform Electrical Test

The instructions on the inside of the control panel cover describe Control Panel operations.

- A. Check that the Control Panel installed is the correct one for the system. Also, verify that the circuit breaker is the proper amps. All model 700LL aerators should operate on a 7 amp circuit breaker inside the control panel.
- B. Before turning on the circuit breaker, check the wiring to be sure all the above instructions have been followed. If necessary, have the electrical contractor correct the work.
- C. Set the control panel switch to the “OFF” position. Turn the power to the control circuit “ON” at the main panel. With the power “ON”, the aerator warning light will glow and the warning buzzer will sound. This indicates the current sensor is functioning and without the aerator installed and operational the alarms will sound.
- D. Test for power to the pump circuit by placing a volt meter on the pump contacts. With the alarm enabled there should be no power to the pump circuit. This indicates the interlock function is working between the aerator and pump circuit.
- E. Turn the Control Panel switch “OFF”. Install the aerator and connect it to the power supply.
- F. Turn the Control Panel switch to “HAND”. The aerator should run and the aerator warning light and buzzer should now be off. Also the pump circuit should now be active, check the pump contacts with a voltmeter. Make sure the float controls and timer controls if included on the panel are set to allow power to the pump circuit.
- G. If these tests or checks are not satisfactory, correct the wiring.
- H. When all checks are completed, make sure the Control Panel switch is in the “HAND” position for aerator control. Close and latch the Control Panel cover.

18. Observe Aerator Operation

It should be quiet and free from excessive vibration. Heavy vibration indicates shaft damage. If heavy vibration occurs, install a new shaft and return the damaged shaft to the factory.

19. Final Steps

- A. Fill in the “Installation and Service Record” card.
- B. Explain “Owner’s Manual” to owner and wire manual to the Control Panel. Instruct the owner to fill in the “Owner Warranty Registration” card and mail it in.