

PuraSys_{SBR}

Sequencing Batch Reactor

Installation or Inspection Checklist



Only modules bearing the NSF® logo and designated PS1-XX are certified to NSF/ANSI Standards 40 and 245



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Pre-installation and Set-up

While unpacking the box, the contents should be verified with the inserted parts list (packing slip). The components must be unpacked with care while unwrapping the protective shipping material. The components should be laid out on a clean surface for verification and inspection. In order to assemble the kit, please provide the following:

- PVC primer/cleaner
- PVC cement
- Tape measure
- Diagonal cutters/linesman's pliers
- 1.25" Schedule 40 PVC pipe for connection of reactor chamber pipe stands into the riser

Aerator Stand Assembly

Step 1

- Set 3" PVC weighted base stand on a smooth, hard surface for assembly.

Step 2

- Note positions of the black alignment marks on both parts.

Step 3

- Apply primer to the weighted base 1.25" PVC female slip socket and the bottom of the 1.25" PVC aerator stand.

Step 4

- Apply PVC cement in the same order as Step 3.

Step 5

- Insert 1.25" PVC aerator stand into weighted base and turn at least a quarter inch until the black markers on the parts are in alignment.

Step 6

- Repeat Steps 1 through 5 with 1.25" piping.

Step 7

- Secure electrical cable to the stand using a wire tie.

Step 8

- Repeat Steps 1 through 7 for the siphon/sludge pump stand and the clear water pump stand.

Installer Alert

To ensure proper bond, always twist PVC piping at least a quarter turn after mating pipe to fitting.

Installer Alert

After assembly, trim wire tie ends with cutters/pliers as needed.

Installation into Reactor Chamber

- | | |
|---|---|
| <input type="checkbox"/> PVC primer/cleaner | <input type="checkbox"/> Stainless fasteners to mount the stand clip into riser |
| <input type="checkbox"/> PVC cement | <input type="checkbox"/> Nutdrivers or screwdrivers |
| <input type="checkbox"/> Tape measure | <input type="checkbox"/> 2" hole saw |
| <input type="checkbox"/> Diagonal cutters/linesman's pliers | <input type="checkbox"/> Permanent marker (Sharpie) |
| <input type="checkbox"/> Drill | <input type="checkbox"/> PVC pipe cutters |

Step 1

- Align each stand clip mount in the riser making sure to use a marker to mark on the 1.25" pipe stand clip and on the riser. The pipe stand clips are included in the kit.

Step 2

- Fasten all clips to the riser.

Step 3

- Lower stands into the reactor chamber one-by-one.
Make a mark on each 1.25" pipe just below each clip, respectively.

Step 4

- Remove pump stands and cut pipe 7" below the mark.

Step 5

- Insert 1.25" PVC tee into the stand and mark both the fitting and the pipe in the correct location.

Step 6

- Apply primer to the 1.25" PVC tee female slip socket the top of the 1.25" PVC stand.

Step 7

- Apply PVC cement in the same order as Step 6.

Step 8

- Insert PVC tee into PVC stand and turn at least a quarter inch until the marks (see Step 5) are in alignment.

Step 9

- Repeat steps 5 through 8 for each stand. Ensure 1.25" unions are used with the siphon/sludge pump and the clear water pump. 1.25" unions are included in the kit.

Step 10

- Cut an 8" section of 1.25" Schedule 40 PVC pipe and repeat steps 5 through 8 to make a connection in the top of the PVC tee.

Step 11

- Install 1.25" PVC cap on top of each stand by repeating steps 6 through 8.

Step 12

- Lower the stands into the tank and clip the stands into place.
Connect the siphon/sludge pump and the clear water pump.

Step 13

- Cut the pipe off the aerator stand 3" from the top of the aerator riser clip.

Installer Alert

Aerator should always be in the middle of the pumps within the reactor chamber.

Step 14

- Install the barbed fitting on the top of the aerator stand by repeating steps 6 through 8.

Step 15

- Floats can be installed on either pump stand. The timer enable (bottom) float must be installed 24" from tank bottom. The high water alarm float must be installed per the engineered site plan. See section 3.4 of the *PuraSys SBR Reference Manual* for emergency storage information.

Wiring and Air Hose Connections

- Flat-head screwdriver
- Wire zip ties
- Wire stripper
- Wire nuts or heat shrink connectors
- Electrical coating or liquid electrical tape
- Heat gun
- 2" hole saw
- Slip joint pliers

Installer Note

The air tube must exit to the atmosphere in order to obtain fresh oxygen to inject into the aerator.

Step 1

- If the ambient air temperature is below 75°F, heat the end of the vinyl braided tubing with a heat gun.

Step 2

- Place the 2.5" SS clamp over the end of the tubing.
Insert tubing into the barbed fitting in the aerator stand. Tighten the SS clamp to secure the tubing.

Step 3

- Use the hole saw to drill a 2" hole into the riser cover or the side of the riser.
If exiting the side of the riser for the vent, a grommet and piping must be provided.

Step 4

- Install the vent and tighten the retainer nut on the bottom of the vent with slip joint pliers.

Step 5

- Direct the end of the tubing into the vent housing and cut to the proper length to insure the hose will rest inside of the vent housing without impeding air flow to the aerator.

Step 6

- Direct all cables to the junction box and tie them in place using wire ties.
Run cable ends through the appropriate cord grip in the junction box.

Step 7

- Run wires from the junction box to the control panel according to the wiring instructions located inside the smart control panel. In junction box, splice wires together with wire nuts, waterproof wire nuts, or heat shrink connectors. If using standard wire nuts, use electrical coating or liquid electrical tape on the connections to ensure a waterproof connection. After all electrical connections are made in the junction box and smart control panel, ensure the electrical conduit from the junction box to the smart control panel is properly sealed off.

Pretreatment Tank Pre-drilled Siphon Pipe Installation

- PVC primer/cleaner
- PVC cement
- Tape measure
- 1.25" Schedule 40 PVC coupler
- 1.25" Schedule 40 PVC 90 degree elbow
- 1.25" Schedule 40 PVC pre-drilled siphon pipe with pre-glued 90 degree elbow

Step 1

- The kit comes with a 90 degree elbow pre-glued to the bottom of the pre-drilled siphon pipe. The pre-drilled siphon pipe must be installed at a relative height from the bottom of the pretreatment tank as outlined in Table 2 on page 7 of the *PuraSys SBR Reference Manual*.

Step 2

- The top siphon hole must be installed at a height from the inside top of the tank as indicated on the engineered site plan. Mark the pre-drilled siphon pipe at the correct height. Cut the pre-drilled siphon pipe, leaving enough room to glue on a 1.25" PVC coupler.

Step 3

- Apply primer to the end of the 1.25" PVC pre-drilled siphon pipe and 1.25" PVC coupler female slip socket.

Step 4

- Apply PVC cement in the same order as Step 3.

Step 5

- Insert 1.25" PVC pre-drilled siphon pipe into 1.25" PVC coupler female slip socket and turn at least a quarter inch.

Step 6

- Cut a length of 1.25" PVC Schedule 40 pipe (not included in the kit) at a height sufficient to clear the baffle wall.

Step 7

- Repeat Steps 4 and 5 for gluing the other end of the 1.25" PVC coupler to the 1.25" PVC pipe.

Step 8

- Repeat steps 4 and 5 for gluing the 1.25" PVC 90 degree elbow to the 1.25" PVC pipe.

Step 9

- Repeat Steps 4 and 5 for gluing the other end of the 1.25" PVC 90 degree elbow to the 1.25" siphon/sludge pump line.