

## Bio-Microbics FAST<sup>R</sup> Installation Suggestions FAST<sup>R</sup> 0.5, 0.75, 0.90, 1.5 and 3.0

Installing the Bio-Microbics FAST<sup>R</sup> unit is straightforward and takes less than one hour if all the tools and supplies are available. FAST<sup>R</sup> 4.5 and 9.0 units are always installed on legs inside the tank, other sizes can be floor mounted also but this would require a deep tank. The below suggestions are supplemental to factory instructions to help you plan for a Bio-Microbics FAST<sup>R</sup> 0.5 to 3.0 installation into the cover of a concrete tank. Your tank manufacturer will have a tank approved for each FAST<sup>R</sup> size. Call Petersen any time to discuss how we can help. Please let us know if you have other suggestions to help improve our product and service. Thank you for your cooperation.

### FAST<sup>R</sup> Unit Installation:

1. Verify that the centerline of the 4" tank outlet is 15" down from top of the tank cover. 2. Clean the area around the FAST<sup>R</sup> cut out for the FAST in the tank cover.
3. Use a caulk gun to apply sealant to concrete around cut out to seal the flange on the FAST<sup>R</sup> unit. Apply the sealant approximately 2" from edge of the cut out. Some sealant is supplied with FAST<sup>R</sup> unit but you may need another tube or two.
4. Lower the FAST<sup>R</sup> unit into tank. Tip the outlet end up to allow circulation trough to enter tank first. Make sure the unit is centered in the hole and covers the sealant.
5. Line up FAST<sup>R</sup> outlet with tank outlet by installing a 4" outlet pipe through tank outlet and into FAST<sup>R</sup> unit. Chamfer end of pipe and lubricate then push the pipe through the FAST<sup>R</sup> outlet seal up to stop. 6. Apply sealant to the top of the flange on FAST<sup>R</sup> unit.
7. Position the FAST<sup>R</sup> cover so it is centered on the FAST<sup>R</sup> unit and covers the sealant. The 6" observation port should be toward the inlet end on the tank.
8. Install the 2" air supply PVC pipe through FAST<sup>R</sup> cover and cement it into the 2" coupling in center of lower unit FAST<sup>R</sup> media. Slide the rubber seal onto the 2" pipe before installing. Check that the 2" air line is plumb then fasten the cover and FAST<sup>R</sup> unit to the concrete tank.
9. Locate pre-drilled holes in the FAST<sup>R</sup> cover and hammer drill 3" holes through these holes into the concrete. Use a 6" concrete bit and drill at a slight angle away from the cut out opening to prevent breaking out the concrete. Use 3" x 3" drive pins with 5/16 washers or anchor bolts with 5/16" washers. (Drills, pins, and bolts are not supplied unless requested)
10. Slide the included rubber seal on 2" PVC air supply pipe into the FAST<sup>R</sup> cover.
11. Install the 6" vent/observation pipe into the FAST<sup>R</sup> cover with the 6" rubber seal provided. (Chamfer and lubricate pipe to protect rubber seal during installation. Schedule 35 pipe is easier to install than schedule 40.)
12. Venting options:
  - a. To vent away from FAST<sup>R</sup>, attach a 6"x 6" x 3" tee to the 6" observation/vent pipe. Install a pipe cap or plug to the tee or 6" pipe extension for observation and sampling. Attach a 3" pipe to the tee for venting up to 100' away and end the 3" pipe with a 3" drain grate to keep out rodents and small animals. Alternatively use vent cap but remove the screen to prevent plugging.
  - b. To vent over the FAST<sup>R</sup> unit, simply install a 6" floor drain grate.

### Blower Installation:

1. Mount the blower base on a concrete slab, plastic pad or 6" of gravel. The blower must be on a firm base or settling will break the 2" PVC pipe connection. If mounting above the tank, support the blower from the top of the tank, do not set on loose fill. The pad should be larger than the blower base (24"x 17" for a MicroFAST<sup>R</sup> 0.5). Petersen has plastic pads available or you can have a concrete pad delivered with the tank.
2. Blower piping: Install the supplied short steel pipe nipple to the blower motor outlet and the longer one to the inlet port.
3. Connect the blower outlet to the 2" air supply pipe with a 1" x 2" reducer, 2" Fernco coupling, and a 2" street elbow pointing down. (The Fernco coupling and 2" elbow are not included.)