

## APIS 60 - ALGAE TURF SCRUBBERS

### DESCRIPTION

The Foursquare Aquatics line of Algae Turf Scrubbers (ATS) units are designed to use algae as a natural method to help remove nutrients from your aquarium water. The design of these units is unique in that the screens are mounted in a drawer that can be removed easily without disconnecting any plumbing.

### ASSEMBLY BULKHEADS

The three (3) bulkheads are packaged and shipped inside the drawer box. The ¾" bulkhead is installed backwards. Remove the nut and flip the bulkhead around so that the flange and gasket are now inside the unit. For the 1" bulkheads, install them in the two drain holes in the bottom of the unit. The bulkhead with a short piece of 1" black pipe creates the emergency drain; the other 1" bulkhead is the main drain.

### SPRAY BAR

The spray bar is slip-fitted into the ¾" bulkhead. There is a white indicator dot located near the cap off the spray bar that helps align the spray bar. This indicator dot should be facing straight up.

### ALGAE SCREEN

The algae screen is attached to the black lid of the drawer box by fitting three of the wider posts into the three small openings in the mesh screen. The remaining posts on both sides help keep the mesh screen in a straight line under the spray bar. The algae screen will stick above the top of the lid but will not make contact with the spray bar.

### LIGHT FIXTURES

The two (2) LED light fixtures should be installed with the power cord connection towards the top of the unit. The LED fixtures should fit into the light support guides for proper alignment.

The LED fixtures have cooling fans for active cooling. Make sure to leave room for proper air exchange to enter and leave the unit.

### PLUMBING

The water supply is fitted with a ¾" threaded bulkhead.

The two (2) drains are fitted with 1" slip bulkheads.

### INSTALLATION

The ATS unit can be installed over a sump or a remote location that allows for the water to drain into the sump. Having the drain lines extend ¼" to ¾" below the water surface in a sump helps reduce splashing and noise.

The ATS unit should be installed so that the drawer can be easily removed for maintenance. You may also want access to the top of the unit to assist in removing/replacing the spray bar when needed for maintenance.

The screen should be attached to the drawer lid and will line up with the spray bar when the drawer is closed.

The two (2) LED fixtures should be plugged into time controlled GFCI outlets. Do not get the fixtures wet!!!

Connect your feed pump to the ¾" threaded bulkhead. A feed rate around 300gph is a good start; may need to adjust according to your pump and needs.

### MAINTENANCE

When you're ready to harvest the algae, turn off the feed pump (if necessary) and slide the drawer out of the unit by tipping the drawer up to allow water to exit out the back of the drawer box. When the drawer box is almost clear of the unit, you can tip the drawer down to keep the algae and remaining water inside the drawer.

Lift the lid and screen out of the drawer box and scrape most of the algae from the screen. Replace the screen and lid into the drawer box and replace the drawer into the ATS unit; keeping the door tight against the unit.

If you need to clean the drawer box, use a soft cloth or Magic Eraser cleaning pad; scouring pads and blades will scratch the polycarbonate and create a place for algae to grow.

Turn on the feed pump. It is also a good practice to have the drain of the unit flow into a filter sock or other mechanical filter to catch any loose algae.

