

Arid Bilge Systems, Inc. – Series 1 installation and operations manual

The Arid Bilge System is designed to remove the residual trace amounts of bilge water that always remain after traditional bilge pumps turn off. Larger amounts of water that may affect your vessel's trim or floatation should be removed by traditional bilge pumps, which should be maintained aboard your vessel for safety reasons.

Your new Series 1 Nano dry bilge system can be mounted virtually anywhere aboard your boat, except in the bilge. Please note the arrow with the word "up" for box orientation. The unit will not function correctly if mounted on its side. If your boat has a heeling angle on occasion, then keeping the box close to perfectly vertical does become more important. There are four #6 mounting holes on the two mounting flanges which are for bulkhead mounting. Brackets can be fabricated for shelf mounting if needed.

The intake tubing is pre-attached to the unit. It's a specific length for a reason. It provides the correct resistance needed for both back pressure during discharge, and to trip the internal sensor to notify the internal PLC that the unit is pulling a liquid. Please spool any excess tubing anywhere along the run between the central unit and the bilge pickup. Never cut or lengthen the 5/32" intake tubing. The spooled tubing is best left in a horizontal orientation.

The black 1/2" barbed discharge fitting may be rotated to any direction as needed and is best to turn it clockwise when possible. Half inch ID Polybraid hose is the most commonly used discharge hose. It is usually T connected to an existing overboard deck or sink thru hull drain. As with all overboard discharge devices, the vessel owner or Captain is responsible to see that hydrocarbons are not expelled from the vessel into the surrounding waters. At Arid Bilge Systems we do offer the Eco Friendly Discharge Companion III which is designed to capture and store oil, fuel etc..

The two conductor power cord needs to be connected to a 12 volt DC power source. Connect red to positive and black to negative. We do NOT offer a 24 volt DC version in the Series 1 product line. The power cord does need to be protected with a fuse or circuit breaker. The unit does have an internal fuse designed to protect the system internals. You may size your fuse or breaker with a minimum rating of 1 amp and not to exceed 10 amps. The system does draw approximately 20 milliamps.

There are two styles of bilge pickups available for the Series 1 units. The 2" x 3" mini standard bilge pickup is designed for flat bottom bilges. The L shaped pickup wand is designed for V bilges. One of the bilge pickups was provided with your order. The intake tubing should be routed first and then the pickup attached. The tubing should be inserted approximately 7/16" into the fitting. When you start to feel resistance while inserting the tube into the fitting, you are about half way to the locked position. If the tube is not fully inserted, it creates a vacuum leak and your Arid Bilge will not be able to dry the bilge. The tube may be removed from the bilge pickup fitting by depressing the ring that surrounds the tube into the fitting snugly, and then pulling the tubing out of the bilge pickup.

The output hose can pump the water up a maximum of 18" above the unit and no more than 10 feet from the unit. If the unit cannot discharge the water properly, an alarm will sound. The unit can pull water on the intake side up to 6 feet above the bilge.

Operation . . .

Once intake and discharge are connected, power is applied. The Arid Bilge Series 1 unit will wait 25 seconds, then the compressor starts to run, and this is normal operation.

During the first 9 seconds of unit run time, any liquids held in the internal collection chamber will be discharged through the black ½" discharge port.

After the 9 seconds there is an audible click. If the unit is pulling a liquid, the pump will shut down after an additional 11 seconds of run time, 20 seconds in total. You might also hear the pump speeding up and laboring. The unit will restart after a brief pause and discharge the water it collected. As long as the bilge pickup is touching water, the Series 1 will continue cycling on and off, discharging a small amount of liquid at the start of each cycle.

If the unit is pulling air, i.e. the bilge is dry, the unit will run for 29 seconds with no speeding up of the pump or laboring. The unit will then hibernate for three hours and start the process again.

Alarms . . .

If the alarm sounds immediately when power is applied and the pump starts running, then the collection chamber is full and the discharge hose is likely blocked. Remove the discharge hose to verify if it is blocked.

If the alarm sounds and pump restarts, 45 seconds after the pump shuts off, then the intake is clogged. The pad should be removed and cleaned.

Other issues . . .

This unit has a five quart per hour capacity. If your vessel has a slow and continuous leak or leaks, they should be repaired. Obviously, if the volume generated by your leaks exceeds the capacity of the unit, the bilges will never become dry.

Questions or comments please call (802) 734-3389 or email Steve@seadogboatingsolutions.com