



PRM AST SERIES AIR STRIPPER OPERATION INSTRUCTIONS

All PRM Lo Profile air strippers require approximately 4" to 6" of static pressure per tray to operate properly. Higher static pressures may occur if the stripper is fouled due to precipitated iron, calcium, or sediment.

All stripper systems are designed such that the air stripper blower must be running prior to operating recovery pumps or transfer pumps feeding the air stripper. A low pressure switch on the stripper blower discharge will prevent pumps from feeding water to the stripper if the blower is not operating.

OPERATION

1. Start air stripper blower with unit dry. It is best to have the blower discharge damper open only 50%.
2. Begin pumping water into the air stripper at a regulated rate. For maximum efficiency, be sure to throttle the flow of water into the stripper to only slightly exceed the rate at which water is entering the treatment system. Try to avoid batching large slugs of influent into the air stripper.
3. When water can be seen in the sump site glass, then the air stripper is fully primed.
4. If a transfer pump is connected to the discharge of the stripper, make sure that the influent and effluent pumps are tuned in to allow for the effluent flow to slightly exceed the influent flow. This will maintain efficiency downstream of the air stripper as well as prevent H/L alarms at the stripper sump.
5. Once the system is started and operational, check and tighten the tension rods so that none of the stripper trays leak. It is only necessary to tighten the trays until the $\frac{1}{2}$ " gasket is compressed to approximately $\frac{1}{4}$ " on the upper trays. Further compression can cause gasket failure. (Note that on some of the lower trays, the gasket will compress more than $\frac{1}{4}$ " due to the weight of trays and water above.)
6. Adjust the airflow damper to ensure that the stripper is getting the proper air-flow. (See table 1). For maximum efficiency, the damper can be opened to the point that the stripper exhausts water droplets through the stack and then adjusted slightly back from this point.

TIPS

1. System logic should always dictate that the pump(s) feeding the air stripper will not run unless the air stripper blower is operational. This is generally achieved with a low pressure switch that is set to detect blower operation.
2. When tightening tension rods, tighten in a slow, progressive diagonal pattern approximately 1/4 - 1/2 turn at a time. Do not overtighten rods as gasket failure will occur. The weight of the water for the most part will generate the proper compression of the gaskets. The tension rod nuts need only to be tightened at most 2-3 turns more than this natural compression.
3. Before shutting down the air stripper blower, make sure that the blower runs for at least 5 minutes after any influent has entered the unit.
4. Keep in mind that when the blower is de-energized, suspended water in the trays will fall to the sump of the stripper. Be sure there is at least 12" of capacity in the sump beneath the H/L alarm float.

AIR STRIPPER OPERATIONAL FLOWS	
AST STRIPPER SERIES	OPERATIONAL FLOW
130 Series	150cfm
230 Series	300cfm
620 Series	600cfm
630 Series	900cfm
640 Series	1200cfm

OPERATIONAL PARAMETERS

AIR STRIPPER OPERATIONAL PRESSURES	
Number of Trays	Operational Pressure
1 Tray	4-6"WC
2 Trays	8-10"WC
3 Trays	12-16"WC
4 Trays	16-20"WC
5 Trays	20-25"WC

POSSIBLE PROBLEMS & REMEDIIES

PROBLEM	POSSIBLE REASON	REMEDY
Air Stripper gasket leaks	Gaskets are not sufficiently tightened Gaskets have been overtightened	Tightened until approximately ¼" compression or leaks stop Replace with new gaskets. Call PRM for materials
Low air flow from exhaust of stripper	Trays fouled with scale or bacteria Demistor element fouled Air damper restricted	Break down unit and clean with mild acid solution Remove lid, clean or replace element. Open air damper to achieve proper air flow
Water coming from exhaust stack	Air flow is too high Water influent rate exceeding rated capacity of stripper	Adjust airflow with the airflow damper Reduce/throttle influent flow rate
Pumps feeding air stripper are backing up	Nozzles clogged	Open top tray, remove nozzles and clean or replace
Pumps feeding stripper will not activate	Low pressure switch not detecting blower operation	Check pressure switch. Adjust or replace if defective
Contaminants not sufficiently removed as modeled	Surfactants in water (Check for foam in stripper) Low air flow Slugging influent Influent concentrations exceeding modeling	Analyze for potential constituents. Re-evaluate the situation and consult with PRM Open air damper to achieve proper/maximum air flow Adjust influent flow to stripper to an equalized flow rate within the specified operating parameters Sample influent. Consult PRM with result.

Server/prm/equipment/ast/ast operating instructions