

SECTION 15500
AIR STRIPPER

PART 1 **GENERAL**

1.1 Description

- A. Furnish a ShallowTray® Model _____ low-profile air stripper system, complete with blower, controls, and related equipment as required by this specification. The ShallowTray air stripper shall be designed for the removal of volatiles from the liquids, incorporating fresh air flowing through multiple perforations in the bottom of one or more trays, developing a turbulent froth in the single-pass counter-current liquid stream flowing across each tray.

1.2 Quality Assurance

- A. Reference Standards: The air stripper construction shall comply with the applicable provisions and recommendations of the following:
1. Hydraulic Institute Standard
 2. National Electrical Manufacturers Association (NEMA)
 3. National Electric Code (NEC)
 4. Underwriters Laboratory (UL)
- B. Inspection: The quality of all equipment and materials shall be subject to the inspection and approval of the ENGINEER.
- C. Product Stewardship: VENDOR shall provide name and phone number of reference familiar with performance, operation, and customer support provided by VENDOR on identical technology in operation over a minimum of seven years.

1.3 Submittals

- A. VENDOR shall provide to the CONTRACTOR as a minimum, but not limited to, the following:
1. Manufacturer's catalog data for all equipment, components, and accessories
 2. Shop drawings
 3. Installation instructions
 4. Operation and Maintenance manual

PART 2 **PRODUCTS**

2.1 Materials / Equipment

A. Air Stripper

1. Materials of construction of sump, trays, and cover shall be 304L stainless steel
2. Hydraulic capacity shall range from _____ to _____ gallons per minute.
3. Stripper shall be skid-mounted on a modular steel frame with control stanchion.
4. Blower shall be direct-driven centrifugal design, with Type B non-sparking internal construction, integrally mounted on the stripper frame with the stripper, sized and arranged to deliver a constant fresh air influent air flow of _____ scfm at _____ inches of water column static pressure to the stripper air inlet. Blower motor shall be selected and factory tested to be non-overloading at the minimum air pressure condition at zero liquid flowrate with empty trays.

B. Performance

1. At a design influent liquid flowrate of _____ gpm, and a minimum influent water temperature of _____°F, the ShallowTray air stripper shall be able to provide the following stripping performance in continuous, 24-hour per day operation:

Contaminant	Influent Concentration (ppb)	Effluent Limit (ppb)
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2. Stripping performance for each volatile shall be guaranteed based on Vendor's actual results demonstrated during full-scale stripping of the volatile from water on a commercial ShallowTray air stripper. Performance projection shall be provided for the specific operating conditions listed above and based on operational data interpreted by Modeler™ software.

C. Standard Features

1. Sump level sight gauge
2. Gasketed removable trays
3. Clean-out ports on each tray

4. Sump inspection port
5. Sump drain valve
6. Mist eliminator, stainless steel
7. Blower inlet air screen with damper
8. Stainless steel tray latches
9. Internal spray nozzle

D. Optional Stripper Accessories

1. Feed pump with level control float switch; pump shall be rated for ____ gpm at ____ feet of water TDH
2. Discharge pump with level control float switch; pump shall be rated for ____ gpm at ____ feet of water TDH
3. Digital flowmeter with totalizer
4. Sampling ports at inlet and discharge
5. Air pressure gauge
6. Air flow meter
7. High water level switch & alarm
8. Low air pressure switch & alarm
9. Intermittent Operation Circuitry
10. Influent water temperature gauge
11. Influent water pressure gauge
12. Strobe alarm light
13. Alarm horn with pushbutton mute switch
14. Viewports for sump and tray
15. Power lapse indicator

E. Acceptable VENDOR:

1. Hydro Quip, Inc.
108 Pond Street; BLDG H
Seekonk, MA 02771 (508) 399-5771
2. Or equal, subject to prior written approval of the ENGINEER. Such written prior approval shall be included as part of Vendor's proposal package.

2.2 Controls & Electrical

A. Panel

1. Control Panel shall be rated NEMA ____.
2. Control Panel shall be UL listed.

B. Instrumentation

1. Float switches shall be UL listed.
2. Air pressure switches shall be Explosion-Proof.

C. Motors

1. Motor classification shall be _____.

D. Power Supply

1. Power supply to be provided at the site shall be ____ Volt, ____ phase, 60 Hertz, ____ wire plus ground

PART 3

EXECUTION

3.1 Fabrication & Assembly

- A. Skid Construction: Modular skid construction of frame and stanchion (for mounting controls and instrumentation) shall be of painted steel, with provisions for fork lift access.
- B. Testing: Assembled unit shall be fully tested at design air and water flow to confirm proper hydraulic, electrical, and leak-free performance of basic system and all accessories. Documentation of test results shall be provided as part of O & M manual.
- C. Shipping: Match-marked system components shall be reduced to minimum number of shipping sub-assemblies. Loose accessories, fittings, gauges, and documents shall be consolidated in a sealed shipping carton and included as part of shipment. VENDOR shall select best available freight company for most reliable, timely transfer of system to jobsite.

3.2 Warranty

- A. VENDOR shall supply as part of proposal package a copy of Equipment and Performance Warranty documenting formal warranty coverage for one (1) year from date of shipment.