QCID™ Ventilated Odor Control System

US Patent #6,132,678

Specifications

Floor Mounted Chamber Unit	
Height:	62" plus horizontal inlet size
Width & Depth:	1.6 sq. ft./1000 cfm
Static Pressure Loss:	0.40" to 0.60"
Velocity in Chamber:	800 to 900 fpm
Shipping Weight:	500 to 1400 lbs.
Operating Weight:	520 to 1440 lbs.
Fan Motor Size:	1/2 to 5 hp
Number of 1.3 gph Nozzles	
1000 to 2500 cfm:	2 nozzles
2600 to 5000 cfm:	4 nozzles
5100 to 8000 cfm:	9 nozzles
Utilities	
Fan Electrical 1/2 hp:	120V, 1Ø, 60 hz, 10 amp
1-1/2 to 2 hp:	220V, 1Ø, 60 hz, 10-15 amp
3 to 5 hp:	460V, 3Ø, 60 hz, 6-12 amp
Feed System Water:	4 gpm, 45 psi, Potable
Drain:	Sanitary Floor Drain
Operating Costs	
Chemical Costs/cfm/year:	$0.50 to $1.00
Fan Electrical Usage 1/2 hp:	1.03 kw/h
1-1/2 to 2 hp:	1.89 to 2.84 kw/h
3 to 5 hp:	4.10 to 8.21 kw/h

Applications - 1,000 to 8,000 cfm

Municipal Wastewater Sites

- Enclosed Headworks Areas
- Enclosed Lift Station Wet Wells
- Enclosed Sludge Dewatering Areas
- Enclosed Sludge Storage Areas
- Enclosed Grit and Screening Areas

Industrial Sites

- Enclosed Solid Waste Receiving Areas
- Enclosed Solid Waste Processing Areas
- Industrial Exhaust Systems

Companion Chemical Feed System

- Mist Pro® Chemical Feed and Dilution System
- Series 950 Chemical Feed and Dilution System

System Overview

The QCID™ system provides both ventilation and odor control for point source areas. QCID™, which stands for "Quick-Contact-In-Duct" features a contact time of 0.3 seconds. The system has the smallest footprint of any comparably sized odor control system and is an excellent choice when space is limited. This system is designed to use NuTech's Chi-X® or DeAmine™ Odor Eliminators. The targeted odors are oxidized organic odors for applications with fairly consistent odor loading.

Seasonal variation in ventilation requirements is accommodated by the use of a two-speed or variable speed fan motor. Fabricated from stainless steel, the QCID™ system can be supplied in sizes from 1,000 to 8,000 cfm for situations where the total static pressure requirement is 3.5" or less. Custom designed, the QCID™ is built to handle any needed air inlet and outlet configuration. Systems are typically floor mounted, however; mounting options are available to fit the site. Installation costs average 10 to 20% of the capital costs.

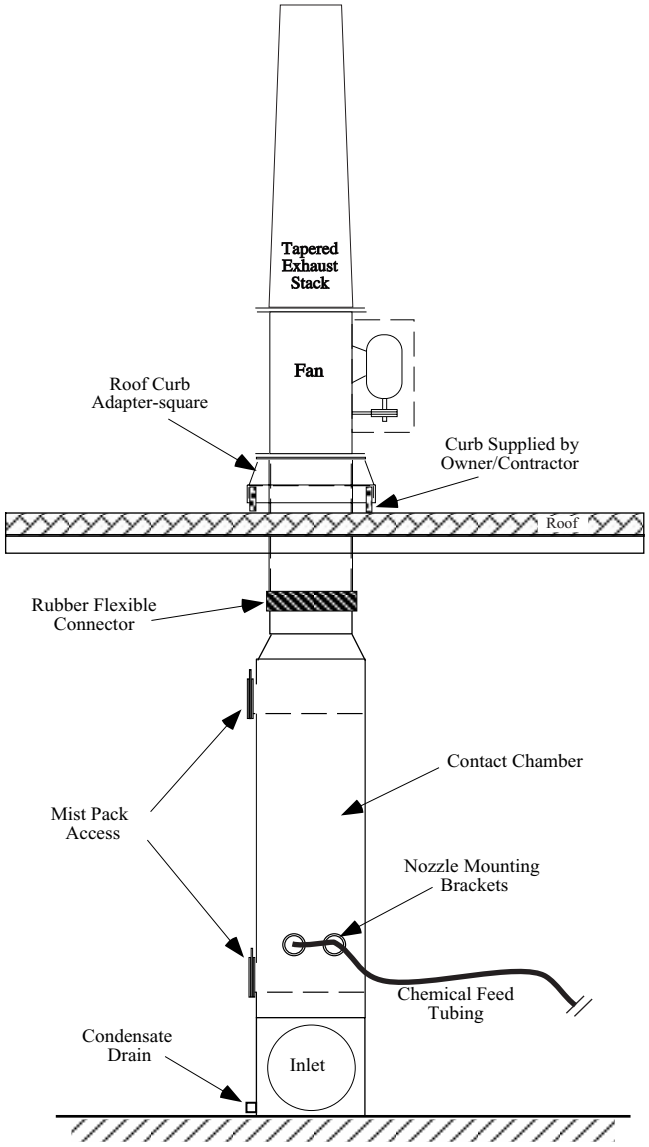
With a QCID™, NuTech guarantees odor reduction at the discharge stack to 200 odor units or less (D/T), with Butanol intensity of 3 or less. Butanol intensities as low as 1 are possible. Effectiveness on hydrogen sulfide is limited to 1 ppm. If H_2S levels exceed one ppm, companion treatment for H_2S should be considered.

Technical Experts in Odor Control

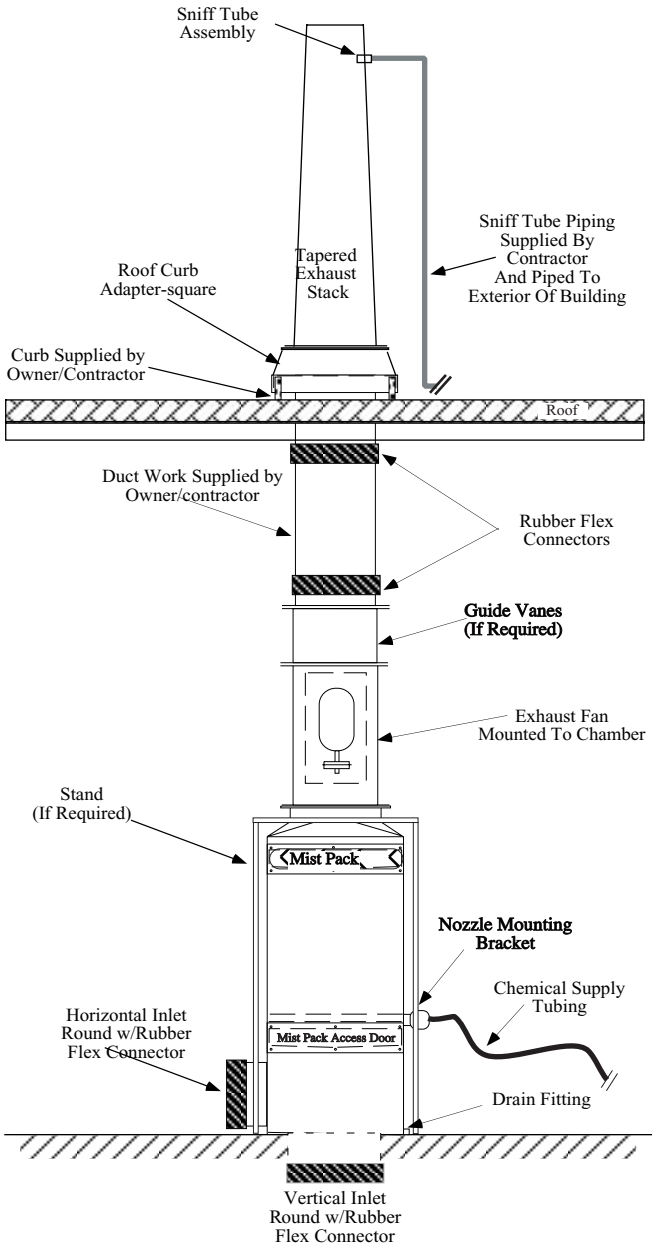
HLS ECOLO® A HYDROLOGIC SYSTEMS INC. COMPANY

QCID™ Typical Installations

Fan Mounted On Roof Curb Adapter



Fan Mounted On Chamber



QCID™ Ventilated Odor Control System Components

Fan and Motor

- In-line Axial, FRP, Sized by cfm requirement
  - Guide Vane–when required
- TEFC Motor–1/2 to 5 hp
- Flanges, Rubber Connectors and Mounting Hardware

Control Panel

- Nema 4X, FRP or Polycarbonate Construction
- Panel Disconnect for 220V and 460V Panels
- Motor Controls
- Chemical Feed System Controls
- Optional Items
  - Day Timer
  - Photohelic Pressure Differential Switch
  - Additional Panel Tie-ins

Chamber

- Stainless Steel Chamber
  - Horizontal or Vertical Inlet–site specific
  - Horizontal or Vertical Outlet–site specific
  - Mounting Design-site specific
- SS Nozzle Mounting Brackets–union mounted
- Force Packs (2)–mist eliminators to 40 microns
- Inlet and Discharge Rubber Connectors and Hardware

Optional Items

- Discharge Stack–stainless steel or fiberglass
- Roof Curb Adapter–stainless steel
- Chamber/Blower Stand, stainless steel–when required