ODOR ABATEMENT SYSTEM

- Self-contained system for neutralizing offensive odors and smoke
- Reduces odor particles up to 95% and smoke particles up to 50%
- Easy installation and maintenance

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MOLITRON ODOR ABATEMENT SYSTEM

THE MOAS FOR SIMPLIFIED ODOR NEUTRALIZATION

The Molitron Odor Abatement System (MOAS) is designed to provide a totally self contained system for neutralizing offensive odors and smoke emanating from commercial exhausts or any other source of undesirable odors and smoke. The MOAS can be used independently, or with the Molitron Enviro-Clean Air Scrubber or Enviro-Pak Filter Assembly.

The Molitron Odor Abatement System can reduce up to 95% of the odor particles and up to 50% of the smoke particles.

The MOAS dispenses a neutralizing solution through nozzles located in the exhaust air stream. Chemical neutralization changes the particle’s molecular structure, effectively modifying it. And, unlike chemical masking agents or perfumes that superimpose a pleasant fragrance on an unpleasant odor, odor neutralizers absorb and convert malodors resulting in a reduction in odor and smoke particles.

EASY INSTALLATION AND MAINTENANCE

All necessary components, except for the remote atomizing nozzles, are located in a stainless steel wall mounted cabinet. Utilities required are one 115 VAC electric service and one 1/4” cold water supply. Connecting the basic MOAS cabinet to the remotely located atomizing nozzles are one 1/4” OD liquid hose and one 3/8” OD air hose.

RECENT INSTALLATIONS

Alexander’s Steak House
Chipotle Restaurants
Island Burgers
Eureka Burger
The Counter Burgers
Cooper’s Pit Bar-B-Que
Mike's BBQ
Good Union Urban BBQ
Skyline College
Your Pie
Tupelo Honey
Rito Loco
Park Burger
Jersey Mike's Subs
St. Anthony’s Hospitals
True Food Kitchen

WALL MOUNTED 18 GA. STAINLESS STEEL CABINET, 24” WIDE, 32” HIGH, 8” DEEP APPROXIMATE WEIGHT: 95 LBS.

OPTIONAL: 10 GALLON SOLUTION CONTAINER, WALL MOUNTED 16 GA. SS, 24” WIDE, 12” HIGH, 8” DEEP APPROXIMATE WEIGHT: 20 LBS EMPTY, 100 LBS FULL.
To Whom It may Concern

The MoliTron “MOAS” Odor Abatement System can reduce up to 95% of the odor particles and up to 50% of the smoke particles. The exact reduction of smoke particles cannot be determined because of various cooking processes utilized and the variation in the efficiency of kitchen hood grease removal devices. However, we recommend that the MOAS nozzles be located as closely as possible to the source of the contaminants, both odor and visible smoke particles, in order to maximize the effectiveness of the MOAS system.

Arlen Gallagher
President
MOLITRON ODOR ABATEMENT SYSTEM

MOAS CONCENTRATE INFORMATION

The Molitron Odor Abatement System is one which automatically dilutes the MOAS concentrate for atomization into an exhaust air stream. The amount of concentrate required to neutralize all odors and smoke depends on the solution concentration setting and the length of time available to mix the atomized MOAS concentrate with the air stream before being released into the atmosphere. The amount of concentrate required is manually adjusted inside the MOAS cabinet. Satisfactory performance will result after the volume of concentrate is adjusted to the proper amount required to neutralize the odors and smoke in question. In most cases up to 95% of offensive odors and up to 50% of smoke particles can be neutralized.

For greater efficiency with the least amount of product used, there should be a minimum of 10 feet of duct from the point of the atomization nozzle to the point of air discharge into the atmosphere. Increasing the duct length, to greater than 10 feet, increases efficiency because it allows more time for the neutralization process before discharging into the atmosphere.
MISTING NOZZLES ARE FURNISHED ATTACHED TO A 4 INCH SQUARE STAINLESS STEEL PLATE. THIS PLATE IS FURNISHED WITH 8 HOLES, AND IS MOUNTED TO THE OUTSIDE OF THE KITCHEN EXHAUST DUCT.

MOUNT THE NOZZLE ASSEMBLY AS FOLLOWS:
1) WELD THE 8 STAINLESS STEEL STUDS PROVIDED TO THE DUCT SIDE WALL TO MATCH THE HOLES ON THE STAINLESS STEEL MOUNTING PLATE
2) WITH THE MOUNTING PLATE IN PLACE ON THE DUCT, MARK THE CENTER OF THE PLATE. REMOVE THE PLATE AND DRILL A 1-1/2" HOLE IN THE SIDE WALL OF THE DUCT.
3) ATTACH THE NOZZLE TO THE MOUNTING PLATE AND MOUNT THEM OVER THE PREVIOUSLY CUT HOLE.

SHOULD NOZZLES REQUIRE SERVICING, THE NOZZLE AND MOUNTING PLATE ASSEMBLY CAN BE EASILY REMOVED FROM THE SIDE WALL OF THE DUCT.

THE MOAS IS PROVIDED WITH TWO SETS OF TUBING AS WELL AS THE NECESSARY FITTINGS TO CONNECT THE NOZZLES TO THE CONTROL CABINET.
MOLITRON ODOR ABATEMENT SYSTEM

THE "MOAS" FOR SIMPLIFIED ODOR NEUTRALIZATION FOR USE WITH ANY TYPE OF EQUIPMENT REQUIRING A MEANS OF NEUTRALIZING ODORS.

WALL MOUNTED 18 GA. STAINLESS STEEL CABINET, 24" WIDE, 32" HIGH, 8" DEEP. APPROXIMATE WEIGHT: 95 LBS

PARTS IDENTIFICATION:
A) UL LISTED ENCLOSURE FOR IDEC TIME CONTROLLER.
B) 24 VOLT SOLUTION PUMP FOR ODOR NEUTRALIZER SOLUTION
C) 115 VOLT GAST AIR COMPRESSOR
D) 24 VOLT SOLENOID VALVE AND SOLUTION INJECTOR
E) MIXING TANK
F) ONE GALLON ODOR NEUTRALIZER SOLUTION
G) 1" CONDUIT CONNECTION FOR TUBING TO MOAS MISTING NOZZLES.
   ......RED LIGHT ALARM FOR LOW SOLUTION WARNING.
P) 115 VAC, 15 AMP SUPPLY CONNECTION
W) 1/4" COLD WATER SUPPLY CONNECTION
J) FRESH AIR INLET
K) CAM LATCH HANDLE
T) AIR AND SOLUTION TUBING TO MISTING NOZZLES

UTILITIES: 115 V, 15 AMP CIRCUIT AND ONE 1/4" COLD WATER (80 PSI).
MOLITRON ODOR ABATEMENT SYSTEM

OPTIONAL 10 GALLON STAINLESS STEEL SOLUTION CONTAINER

PROVIDED: 1/2" TUBE 30" LONG CONTAINING SOLUTION AND ALARM TUBES, CUSTOM LENGTHS MAY BE SPECIFIED WHEN ORDERING. OPTIMAL LENGTH IS 8 FEET OR LESS.

ANGLE GRIP FOR REMOVING SLIDING LID FOR FILLING CONTAINER

OPTIONAL: 10 GALLON SOLUTION CONTAINER, WALL MOUNTED 16 GA. SS, 24" WIDE, 12" HIGH, 8" DEEP

APPROXIMATE WEIGHT: 20 LBS EMPTY, 100 LBS FULL. ALARM SOUNDS WHEN LESS THAN 2 GALLONS REMAIN.
EQUIPMENT DESCRIPTION

The MOLITRON ODOR ABATEMENT SYSTEM (MOAS) is designed for the express purpose of neutralizing odors and smoke emanating from commercial exhaust systems. The MOAS is comprised of a stainless steel cabinet with a hinged door, 24" wide, 32" high and 8" deep. Interior components consist of an air compressor, a solution pump, an internal cooling fan, a mixing tank, a solenoid valve, a solution injector with an adjustable volume control and an electrical control system with a disconnect switch that turns the system on and off at preset time intervals. Utility requirements are one 1/4" cold water supply (80 PSI) and one 115 vac supply circuit. Connections for both water and electric are on the top of the stainless steel enclosure as are the connecting points for 3/8" OD compressed air tubing and for 1/4" OD neutralizing solution tubing. Maximum tubing length should not exceed 100 feet.

Injection of the odor neutralizing solution into the contaminated air stream is accomplished through the use of stainless steel atomizing nozzles mounted through the wall of the exhaust duct. The nozzles must be connected to the 3/8" and 1/4" tubing that exit from the stainless steel enclosure. When the system is in use, the nozzles spray a fine mist of compressed air and neutralizing solution which quickly mixes with the moving air in the duct system as it neutralizes the odors and smoke.

Each system is furnished with two nozzles which are adequate for up to 6,000 CFM. Nozzles should be located as far as possible from the point of discharge to the atmosphere to allow for maximum neutralization of odors and smoke.

System performance can be increased or decreased by adjusting the dilation ratio set point located on the brass solution injector on the cold water supply. Start up and calibration must be done in accordance with the MOLITRON MOAS installation manual.

ETL LISTING

The Molitron Odor Abatement System is ETL listed and tested to the following standards: UL 197: Commercial Electric Cooking Appliances
UL 710, Clause 43: Fire and Leakage Test of Fittings for Hood Penetrations
Subject: Evaluation of the nozzle assembly for MOAS to be installed in commercial cooking hood exhaust ducts.

Dear Mr. Arlen Gallagher,

This letter report represents the results of our evaluation of the above referenced product(s) to the requirements contained in the following standards:


ULC S646 Issued: 2010/07/01 Ed:3 Standard for Exhaust Hoods and Related Controls for Commercial and Institutional Kitchens Clause 6.18

**SECTION 1: SUMMARY**

Intertek wishes to inform you that, during our evaluation we found that the nozzle assembly is acceptable for installation in commercial cooking exhaust ducts.

During our evaluation we concluded, per the manufacturer’s instructions, the odor neutralizing nozzle assembly was intended to be installed in exhaust ducts for commercial kitchen cooking exhaust hoods.

The nozzle assembly for the MOAS model line was tested to clause 43 of UL 710 and clause 6.18 of ULC S646, Fire and Leakage Test of Fittings for Hood Penetrations.

As a result of this evaluation we concluded the nozzle assemblies complies with the applicable requirements of the standards listed above, and possessed acceptable performance per the applicable test clauses cited above.

**SECTION 2: TESTING**

The following testing was completed with passing results.

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<th>ULC S646 Clause</th>
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<td>Fire and Leakage Test of Fittings for Hood Penetrations</td>
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7.0 Illustrations

Illustration 2 - Installation Instructions

**PARTS ENCLOSED:**
1. ODOR ABATEMENT CABINET WITH MOUNTED PARTS
2. NOZZLE ASSEMBLY
1. ROLL 3/8" OD HOSE
1. ROLL 1/4" OD HOSE
2. 2" LAG BOLTS, 1/4" OD

**INSTALL MOAS CABINET:**
The MOAS cabinet is to be securely mounted using the 2 lag bolts provided, on a wall in the vicinity of the kitchen exhaust hood, where adequate ventilation is available. Using the mounting tabs on the top of the cabinet, the lag bolts should be screwed into wood studs in the wall. The MOAS must not be located in an enclosed closet where there is no ventilation.

Utilities required are one 115-VAC, 15 AMP electric service hard wired to main disconnect switch on cabinet top and one 1/4" cold water supply. Connection points for both water (W) and power (P) are located on the top of the cabinet as shown on prior page.

The water connection consists of a 1/4" copper union. The electrical point of connection is a UL Listed disconnect switch.

All components inside the cabinet are factory wired to disconnect switch.

**A. INSTALL NOZZLES:**
Misting nozzles are furnished attached to a 4” square stainless steel plate. Installation of this nozzle assembly requires cutting a 1 1/2” hole in the side wall of the exhaust duct (drilled by the contractor) in order to mount the assembly. See **INSTALLATION INSTRUCTIONS** diagram on the next page. Nozzles must be located in exhaust duct, as close to the hood as possible. The purpose is to allow as much time possible for the odor neutralizer to interact with the odor molecules in exhaust air before being exhausted to the outside atmosphere.

**B. CONNECT MOAS TO NOZZLES:**
1.) The air (3/8” OD Hose) and solution (1/4” OD Hose) are to be then connected to the appropriate points of connection on the nozzle as shown in the diagram on the next page. The words “Air” and “Liquid” are imprinted on the nozzles.

2.) After hoses are connected to nozzles, connect opposite ends to point of connection (G) on MOAS cabinet.

**NOTE:** It is recommended by the factory that all hoses be run inside a 1” conduit for safeguarding the integrity of the tubing.
9.0 Correlation Page For Multiple Listings

The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.

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ED 16.3.15 (1-Jan-13) Mandatory
**MOAS ETL LISTED**

UL 197: COMMERCIAL ELECTRIC COOKING APPLIANCES  
UL 710, CLAUSE 43:  
FIRE & LEAKAGE TEST OF FITTINGS FOR HOOD PENETRATIONS

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