molitron

VERSION 2.0 · OCTOBER 2026
LEAVE THIS MANUAL WITH THE OWNER

MOLITRON ODOR ABATEMENT SYSTEM (MOAS)

Installation, Operation & Maintenance Manual

For the owners and kitchen staff who look after it day to day, the contractors who install it, and the technicians and engineers who start it up and specify it.

ETL LISTED C US
Intertek
Control No.
4009704

Rendered from the model in Molitron's 3D viewer

⚠ ON DELIVERY
Inspect the equipment inside and out for damage. **If you find any, report it to the carrier immediately and contact Molitron immediately at 303-969-8888 or cleanair@molitron.com.** Check that every accessory is present and undamaged.

24 × 32 × 8 in	120 VAC, 20 A	10 gal
stainless steel cabinet	circuit dedicated to MOAS	solution container

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WHERE TO START

Owners and kitchen staff

The daily level check, the monthly routine, what the alarm means, your warranty and the maintenance log.

Sections 08, 09, 11, 12

Installing contractors

Mounting, water, the nozzles and lines, the interlock and power, start-up, and the check-off list.

Sections 04, 05, 06, 12

Technicians and engineers

How it works, the wiring, settings and adjustments, the parts reference and copy-ready specification text.

Sections 02, 07, 10, 13

RECORD FOR THIS SYSTEM

Model number _____ Serial number _____

Ship date _____ Start-up date _____

Installing contractor _____ Contractor’s phone _____

Interlock location _____ Remote alarm location _____

This manual online

Search, step-by-step start-up and pump-tube walkthroughs and fill-in forms, at molitron.com/products/moas/operation-maintenance. Questions, parts or Odor Neutralizer Solution: 303-969-8888 · cleanair@molitron.com.

SECTION 01 About this manual

IMPORTANT

Installation must be performed by a qualified professional who has read and understands these instructions and is familiar with proper safety precautions; a trained HVAC technician is present for installation and start-up. Read this manual before installing or servicing the equipment.

This manual belongs to the owner of the equipment and is needed for future maintenance. Leave it with the owner when installation or service is complete; it is kept in the plastic envelope inside the cabinet door. The owner is responsible for maintaining and servicing the equipment.

On delivery

Inspect the equipment inside and out for damage. If you find any, report it to the carrier immediately and contact Molitron immediately at 303-969-8888 or cleanair@molitron.com. Check that every accessory is present and undamaged (section 03).

Who does what

Installing contractor	Mounts the cabinet and container, connects the water, mounts the nozzles and runs the lines, and completes the check-off list (section 12).
Installing electrician	Runs the dedicated circuit, and mounts and wires the exhaust-fan interlock and any remote alarm.
Start-up	Authorized personnel or trained kitchen staff start MOAS up, with a trained HVAC technician present, and fill in the equipment record.
Owner and staff	Check the solution level daily, make the monthly checks and keep the maintenance log. For maintenance or repair, authorized technicians or trained staff open the cabinet door and work on the components directly.

Listing

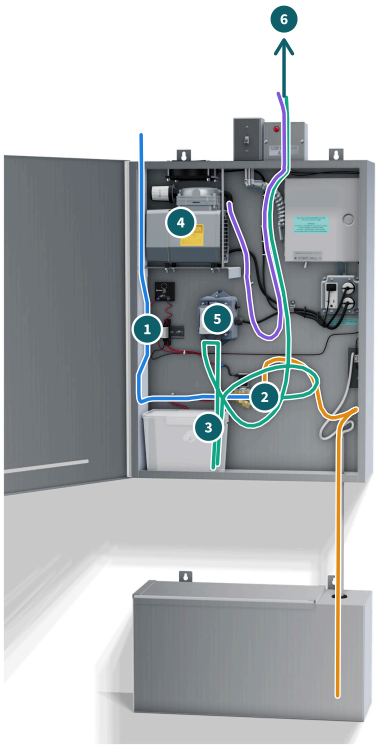
MOAS is ETL Listed under Intertek Report 101453585DEN-002. The report identifies UL 197 and CSA C22.2 No. 109 as the applicable standards. Listing does not establish approval of a field installation.

Performance: up to 95% odor reduction, up to 50% smoke reduction and up to 6,000 CFM per two-nozzle system. Performance varies with cooking process, hood grease-removal performance, exhaust configuration, installation, dwell time and calibration. Results are not guaranteed. Capacity is subject to project-specific configuration; smoke reduction is not a particle-filtration rating.

SECTION 02

How MOAS works

MOAS mixes Molitron Odor Neutralizer Solution with your building's cold water and sends it, with compressed air, to two nozzles that mist it into your exhaust duct. The exhaust carries the mist toward the fan, giving it time to act on cooking odors. Everything that mixes and meters the solution is in one stainless steel cabinet on the wall.



- Cold water
- Odor Neutralizer Solution
- Diluted solution
- Compressed air

Rendered from the model in Molitron's 3D viewer, door open. Paths are illustrative.

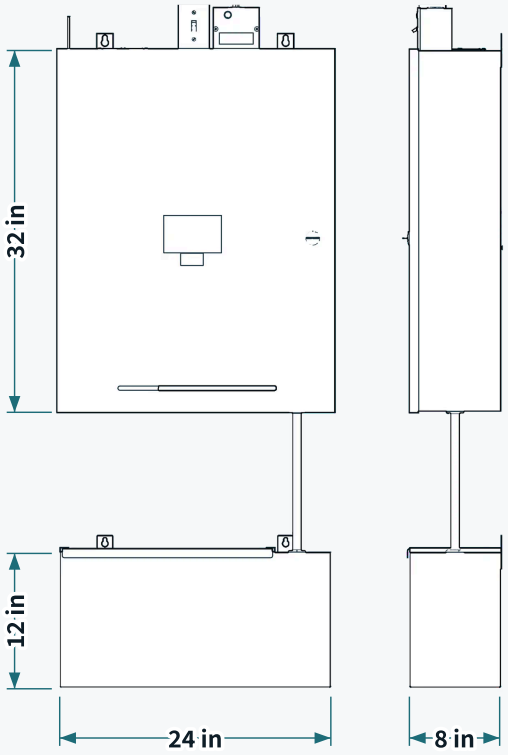
1. **Cold water in**
   A 1/4 in copper line brings the building's cold water in at the top and down the left side to the ball valve, the cabinet's own shutoff.
2. **Solution drawn in**
   When the solenoid valve opens, water passing through the brass injector draws Odor Neutralizer Solution up from the container below, through a clear pickup tube and a check valve.
3. **Mixing container**
   Water and solution flow into the clear mixing container. A float switch and the refill delay timer decide when it refills.
4. **Air compressor**
   The Gast compressor sends air up the black line to the AIR port of each nozzle. The cooling fan above it carries its heat out of the top of the cabinet.
5. **Metering pump**
   The Stenner pump's rollers squeeze its pump tube to send a measured flow of diluted solution up the red line to the LIQUID port of each nozzle.
6. **Out to the duct**
   The red and black lines leave the cabinet top for two nozzles on opposite sides of the exhaust duct, where compressed air and solution combine into a fine mist.

Three separate circuits

Refill	The float switch in the mixing container. When it drops, the refill relay and delay timer open the water solenoid valve after the delay; when the level rises, the float closes it.
Low-solution alarm	A pressure switch senses the container's level through a separate sensing tube. When the level is low, it sounds the buzzer inside the cabinet and lights the red light on top. Like the refill, it works only while MOAS runs.
Delivery	The metering pump draws from the mixing container and feeds the red line to the nozzles; the compressor feeds the black line.

SECTION 03

Dimensions and what ships



Front and side, to scale, from the 3D viewer's model. Body dimensions; projections and service clearances additional. The cabinet is 18-gauge stainless steel, about 100 lb; the container 16-gauge, about 20 lb empty and 100 lb full.

Additional accessories included in the shipment

- The MOAS and exhaust fan field interlock
- Red 1/4 in OD polyethylene tubing, 100 ft roll, for solution
- Black 3/8 in OD polyethylene tubing, 100 ft roll, for air
- The nozzle assembly: two atomizing nozzles with their fittings, each on a 4 in square stainless steel mounting plate

In the plastic envelope inside the cabinet door

- This installation and maintenance manual
- A spare squeeze tube for the solution pump
- A spare filter for the air compressor's B300F intake muffler
- 3/8 in and 1/4 in tubing tees for the nozzle lines
- Weld studs with bolts, nuts, washers and lock washers, for the nozzle mounting plates
- Four 1/4 in lag bolts, for mounting the cabinet and the solution container

The stainless steel solution container ships with the cabinet. The remote low-solution alarm is optional.

SECTION 04

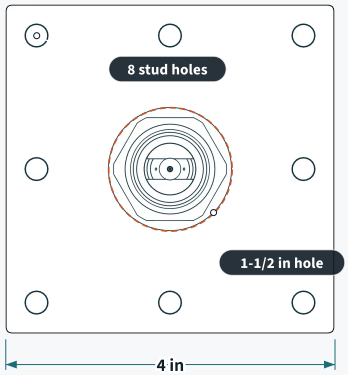
Installation

Location	Any convenient, ventilated indoor spot near your kitchen staff, where they can reach the solution container and hear the alarm. Never an enclosed closet without ventilation. It need not be beside the cooking line.
Mounting	Hang the cabinet on wall studs, 16 in centers, through the two keyhole tabs at the top of its back, with the 1/4 in lag bolts supplied. Mount the solution container on the wall below it. Final support and anchorage are project-specific.
Clearance	Keep the cooling-fan opening on top clear, and leave room to open the door and slide the solution container lid forward to add solution.
Finished spaces	Where the cabinet is above or near a finished space, protect that space from water damage in case of a plumbing leak or equipment failure.
Cold water	A 1/4 in copper cold-water supply to the connection on the cabinet top, 80 PSI maximum, with enough pressure for the injector to draw solution. Fit a building shutoff valve; the ball valve inside the cabinet is MOAS's own shutoff.
Backflow protection	A white check valve above the injector lets solution flow one way only, so the mixing container's contents cannot siphon back down the pickup tube into the 10-gallon solution container.
Power	A 120 VAC, 20 A circuit dedicated to MOAS, in conduit from the electrical panel through the MOAS exhaust-fan interlock to the cabinet. Everything inside the cabinet is factory wired. See section 05.

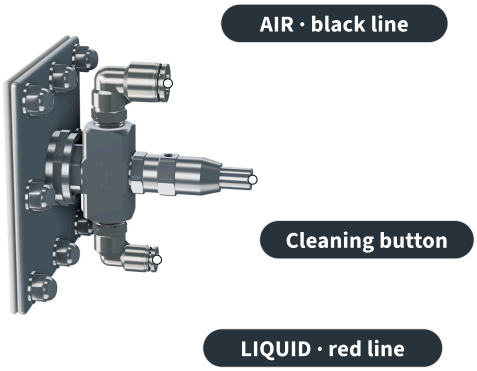
Mounting the nozzles

Each nozzle comes attached to a 4 in square stainless steel plate with eight holes. The plate mounts on the outside of the exhaust duct, over a 1-1/2 in hole the contractor drills, and the nozzle sprays into the exhaust stream.

1. **Choose the spot**
   Two nozzles go on opposite sides of the exhaust duct, as close to the odor source as practical, with at least 10 ft of duct between them and the exhaust discharge so the mist has time to act. Leave each nozzle's rear cleaning button within reach for the monthly cleaning.
2. **Weld the studs**
   Weld the eight stainless steel studs supplied to the outside of the duct wall, to match the eight holes in the 4 in square mounting plate.
3. **Drill the hole**
   With the plate in place over the studs, mark the centre of the plate. Remove the plate and drill a 1-1/2 in hole through the duct wall at the mark.
4. **Mount the nozzle**
   Fit the plate, with its nozzle, over the studs so the nozzle sprays through the hole into the duct. Secure it with the nuts, washers and lock washers supplied.
5. **Connect the lines**
   Push the black 3/8 in air line into the port marked AIR and the red 1/4 in solution line into the port marked LIQUID. The nozzle and plate come off the duct as one piece if they ever need service.



The mounting plate as it faces the duct, to scale from the nozzle's model: 4 in square, eight holes for the weld studs, and the nozzle tip centred over the 1-1/2 in hole drilled through the duct wall (dashed).



A nozzle as it mounts on the duct, from the 3D viewer's model.

Running the lines

Air	Black 3/8 in OD tubing, from the cabinet top to a 3/8 in tee, then a branch to the AIR port of each nozzle.
Solution	Red 1/4 in OD tubing, from the cabinet top to a 1/4 in tee, then a branch to the LIQUID port of each nozzle.
Length	Up to 100 ft for each routed path from the cabinet, through its tee, to a nozzle. Keep matching branches close in length, comparing the two air branches with each other and the two solution branches with each other. Confirm routing with Molitron.
Conduit	Running both lines in 1 in conduit is recommended to protect them. It is not a universal code requirement.

Container tubes	The clear pickup and pressure-sensing tubes run inside a 1/2 in PVC tube from the bottom of the cabinet down into the solution container, through its fixed top panel. Keep them in their installed positions.

SECTION 05

Electrical and exhaust-fan interlock

DANGER: RISK OF ELECTRIC SHOCK

Disconnect power before wiring or servicing. The interlock and the cabinet carry 120 VAC; exhaust-fan circuits can carry up to 277 V.

MOAS needs a **120 VAC, 20 A circuit dedicated to it**, run in conduit from the electrical panel through the MOAS exhaust-fan interlock to the power switch on top of the cabinet. The exhaust fan has its own, separate connection to the interlock. Everything inside the cabinet is factory wired. The listed equipment rating, 120 V, 3.5 A, 60 Hz, is a separate value from the dedicated-circuit requirement.

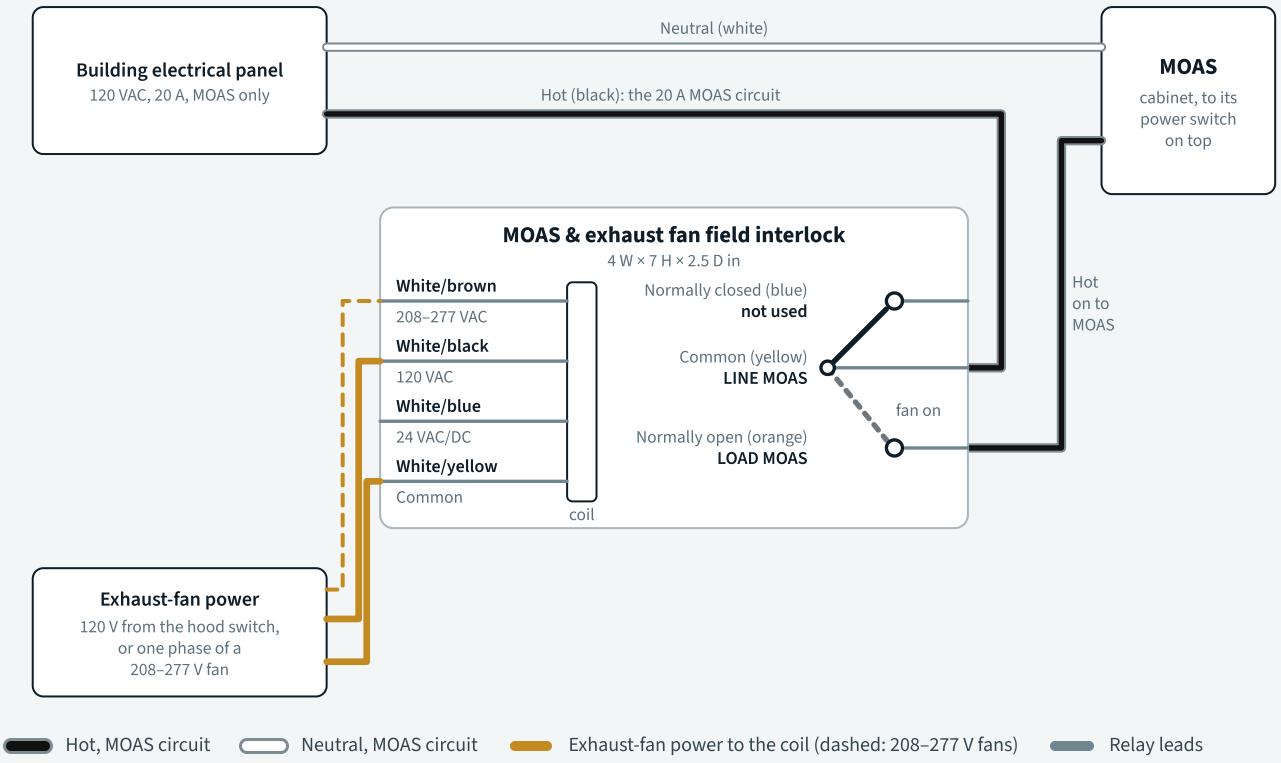
Exhaust-fan interlock

The relay keeps MOAS from running whenever the exhaust fan is off. It is energized by the exhaust fan's power: when the fan is on, the relay closes and completes the MOAS circuit from the building panel to the cabinet. MOAS does not power the exhaust fan. It measures 4 W × 7 H × 2.5 D in.

The red light. The small red light on the relay on top of the interlock comes on whenever the exhaust fan's power energizes the relay. Light on: the fan is on and the interlock is letting power through to MOAS. Light off: the relay is not energized, so MOAS cannot run.

Exhaust fan off: light off

Exhaust fan on: light on



Redrawn from the 2024 manual. Wire the interlock to the schematic printed on the relay; the installing electrician mounts it in a convenient, accessible location. Shown at rest: the fan's power pulls the contacts to normally open.

Coil leads: the fan's power

LEAD	RATING	USE
White/brown	208–277 VAC	Exhaust-fan power, on 208–277 V fans: one phase
White/black	120 VAC	Exhaust-fan power, preferred: 120 V from the hood switch
White/blue	24 VAC/DC	Exhaust-fan control power, 24 V
White/yellow	Common	Common for whichever coil lead is used

Contacts: the MOAS circuit

LEAD	CONTACT	USE
Yellow	Common	LINE MOAS: the hot (black) wire of the 20 A MOAS circuit from the building panel
Orange	Normally open	LOAD MOAS: the hot wire on to the MOAS cabinet
Blue	Normally closed	Not used

Powering the coil

- Preferably, use the 120 V power and common from the hood switch that energizes the exhaust fan's magnetic motor starter coil (white/black and white/yellow leads).

- For 208–277 V exhaust fans, use one of the phases and the common (white/brown and white/yellow leads).

Remote low-solution alarm (optional)

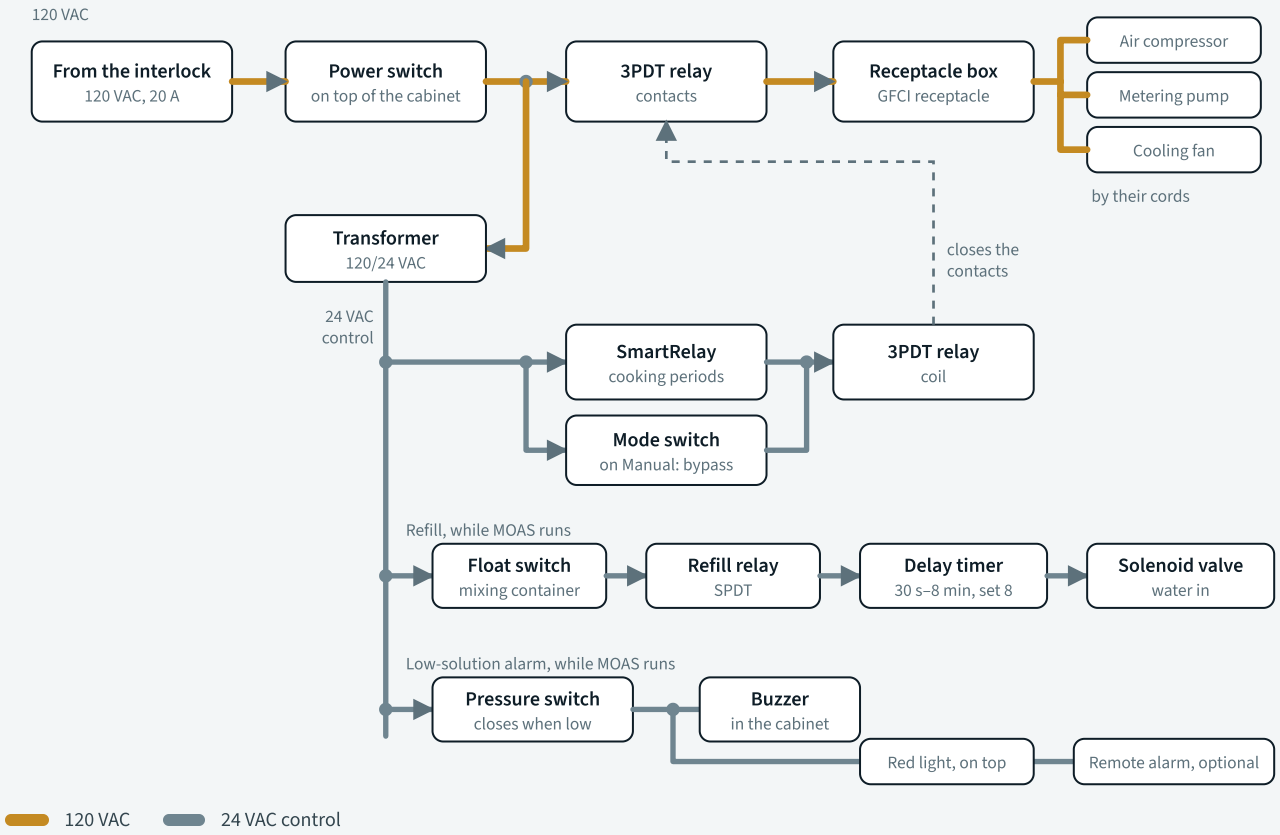
Size	3 W × 5 H × 3 D in
What it does	Repeats the cabinet's low-solution alarm where staff can see it. Its faceplate carries a red light, a speaker grille and two contacts marked Touch to silence.
Power	24 V, from the cabinet's low-solution alarm terminals, where it shares the red light's power.
Cable	18/2 shielded security cable from the cabinet to the alarm.
Location	Mounted and wired by the installing electrician, somewhere staff can see it while they work.

1 Touch-to-silence contacts
2 Speaker grille
3 Red light
4 Label

Rendered from Molitron's model of the remote alarm.

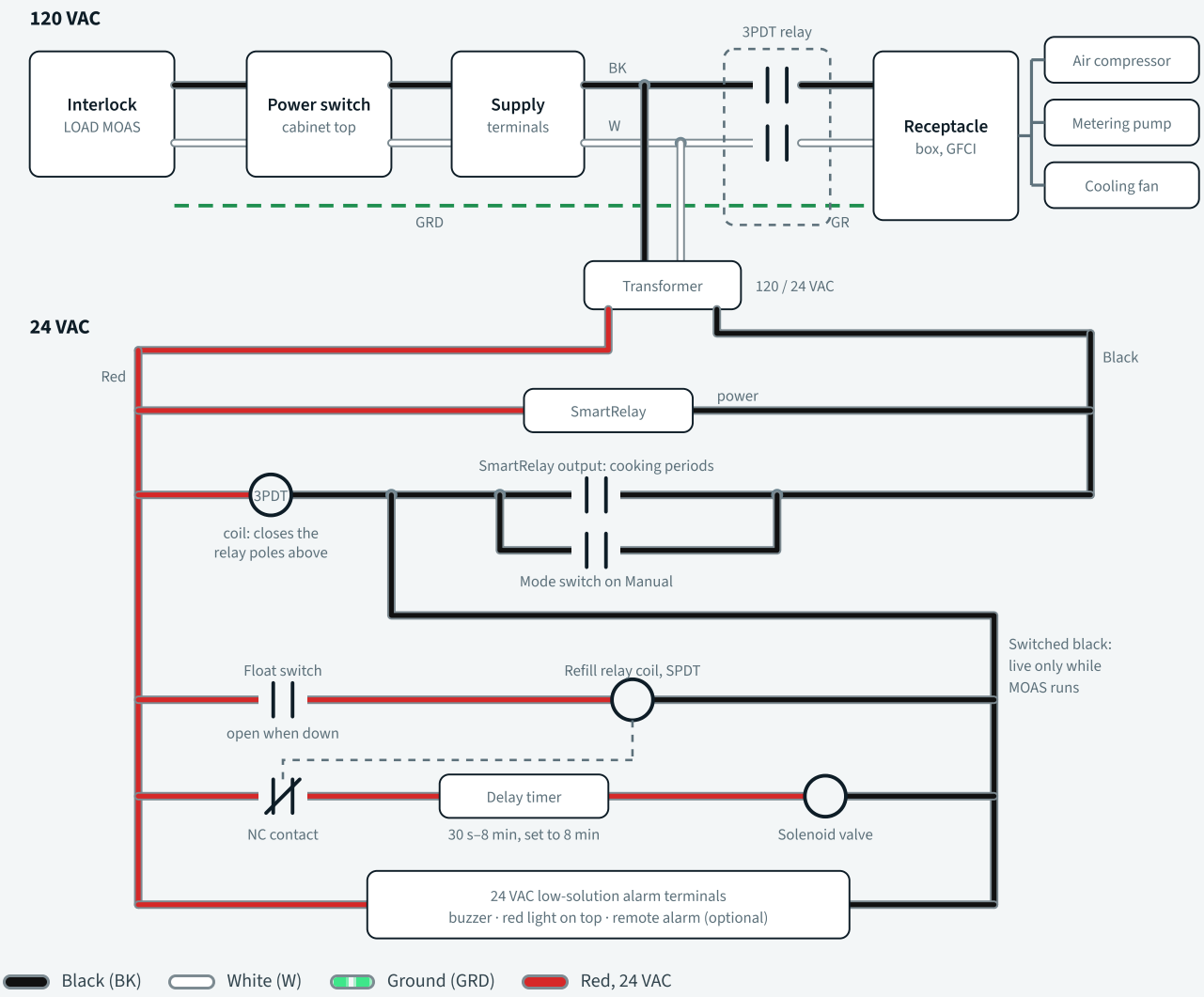
Inside the cabinet

Logic diagram



A functional diagram, redrawn from the 2024 wiring diagram: what powers and switches what, not terminal numbers or wire runs. The refill and the alarm work only while MOAS runs (see the Schematic). Everything inside the cabinet is factory wired.

Schematic



On the 24 VAC side, red runs to each coil or load and black returns from it, as in 2024. Traced from the 2024 wiring diagram and redrawn as a ladder. The refill circuit and the alarm terminals return through the relay coil's switched side, so they work only while MOAS runs: during a cooking period, or with the mode switch on Manual. The interlock, the power switch and the transformer's 120 VAC feed are not drawn in 2024; the 2024 timer was 3–60 min. Contacts are shown at rest. Everything inside the cabinet is factory wired.

Refill sequence. When the float switch is down, the refill relay is not energized, and the water solenoid valve opens once the delay timer has timed out. When the water raises the float, the relay is energized and the solenoid valve closes. The delay is adjustable from 30 seconds to 8 minutes and is set to 8 minutes.

SECTION 06

Start-up

BEFORE START-UP, CHECK THE INSTALLATION

- The MOAS cabinet is securely mounted in a ventilated location, close enough to the kitchen staff that they can hear its alarm.
- The 10-gallon solution container is securely mounted on the wall below the cabinet.
- The MOAS and exhaust fan field interlock is mounted and wired to both the exhaust fan and MOAS, and the 120 VAC, 20 A circuit dedicated to MOAS runs through it to the power switch on top of the cabinet.
- The 1/4 in copper cold-water supply is connected, and the building's shutoff valve is open.
- Both nozzles are mounted in the exhaust duct where they can be reached for monthly maintenance.
- The black 3/8 in air line and the red 1/4 in solution line are connected to the couplings on top of the cabinet and to the tees that supply the nozzles, with equal lengths of tubing from each tee to its two nozzles.

Start-up follows these 13 steps, in this order. The parts are pictured in section 10.

1. **Check the starting positions**

   With the cabinet door open and the power still off, check that:

   a. The power switch on top of the cabinet is OFF.
   b. The operation mode switch is on Manual.
   c. The refill delay timer knob is set to 8 minutes.
   d. The pump speed control is off, turned fully counterclockwise.
   e. Nothing blocks the cooling fan's guard at the top of the cabinet, above the compressor.

2. **Prepare the solution container**

   A 1/2 in PVC tube carries two clear tubes from the bottom of the cabinet down into the solution container. Check that:

   a. The PVC tube is inserted through the bottom of the cabinet into the solution container.
   b. The 3/8 in clear tube is connected to the white check valve on the injector.
   c. The 1/4 in clear tube is pushed onto the black nipple of the low-solution pressure switch, with the snap hose clamp closed over it. Connect and clamp it before the tube goes down into the solution, or the alarm will sound when MOAS is powered on.
   d. The solution container holds at least 4 gallons of Molitron Odor Neutralizer Solution. Slide its lid forward to fill it.

3. **Free the float switch**

   Remove the rubber band that holds the float switch in the mixing container for shipping.

4. **Unplug the three cords**

   In the receptacle box inside the cabinet, unplug the cords for the solution pump, the air compressor and the cooling fan. This keeps the air compressor quiet while you set up, and leaves the GFCI receptacle's red RESET button easy to reach.

5. **Power on**

   With the exhaust fan running, so the interlock lets power through, turn the power switch on top of the cabinet to the ON position. The SmartRelay display lights up; the air compressor stays off until its cord goes back in. If the alarm sounds, turn the power switch off and see Troubleshooting, section 09, to clear it.

6. **Turn on the water**

   Turn the red handle of the water ball valve, on the left side inside the cabinet, to its vertical ON position.

7 **Fill the mixing container**

Run the first fill with a short refill delay, then set the delay back:

- **a.** Turn the refill delay timer knob to 30 seconds.
- **b.** Within 30 seconds, the water solenoid valve opens and water runs through the injector into the mixing container. You should see Odor Neutralizer Solution drawn up the 3/8 in tube from the solution container below.
- **c.** Turn the timer knob back to 8 minutes. Delaying each refill by 8 minutes gives better control over the solution's concentration.

8 **Start**

Make sure the SmartRelay's program is running. Press Esc, and the menu shows Stop, Program, Setup, Network and Diagnostics. If it shows Start instead of Stop, select Start and press OK.

9 **Set the clock**

The SmartRelay display shows the time and date in 24-hour time. Press Esc to see the menu:

- **a.** Select Setup with the down arrow and press OK.
- **b.** Select Clock, and set the time, in 24-hour time, and the date with the arrow buttons.
- **c.** Keep pressing OK until you return to the time and date display.

10 **Run periods**

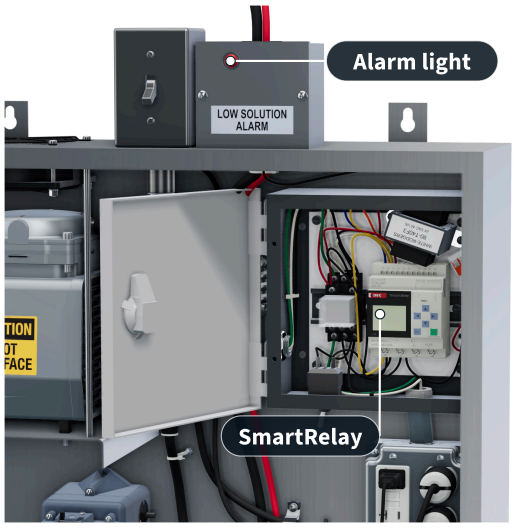
When the switch is in the Automatic position, MOAS runs only during the run periods (cooking periods) set on the SmartRelay, and only while the exhaust fan runs. Set up to three periods. The example on the left is the factory default; change the times to match your cooking hours.

- **a.** Press Esc, then select Program, Set Parameter, Run Periods.
- **b.** For each period, toggle its days (D1, D2, D3) on or off with the arrow buttons, and set its start (On) and stop (Off) times in 24-hour time.
- **c.** Leave Pulse Off.
- **d.** Come back to this screen whenever your cooking hours change.

```
D1     = MTWTFSS
On1    = 10:00
Off1   = 14:00
D2     = MTWTFSS
On2    = 17:00
Off2   = 20:00
D3     = MTWTFSS
On3    = 00:00
Off3   = 00:00
Pulse  = Off
```

D1	Days for period 1: toggle each day on or off with the arrows
On1	Start, 24-hour time
Off1	Stop
D2	Days for period 2
On2	Start
Off2	Stop
D3	Period 3, not set
Pulse	Do not change: Pulse must stay Off

An example: a lunch and a dinner period. Set your own cooking hours. Leave Pulse Off.



The control enclosure open on the SmartRelay.

11 **Reset the GFCI and plug in the cords**

On Manual, with the power switch on, the GFCI receptacle has power.

- **a.** Press the red RESET button on the GFCI receptacle.
- **b.** Plug in the cords for the solution pump, the air compressor and the cooling fan.
- **c.** The air compressor and the cooling fan above it start. The pump stays off until its speed control is turned up.

12 **Start the solution pump**

Turn the pump speed control clockwise to 100. Through the pump head's clear cover, watch the rollers turn around the squeeze tube: the pump draws mixed solution from the mixing container up the clear 1/4 in tube and sends it up the red 1/4 in line to the nozzles in the duct. MOAS is in full operation as soon as solution and air reach the nozzles.

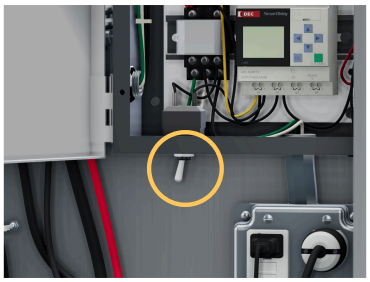
13 **Check the nozzles and switch to Automatic**

Finish the start-up:

- **a.** Check that both nozzles in the duct are misting.
- **b.** Return the operation mode switch to Automatic, where it stays in service. MOAS now runs during the cooking periods, whenever the exhaust fan runs.
- **c.** Record the start-up settings in the equipment record, section 12.

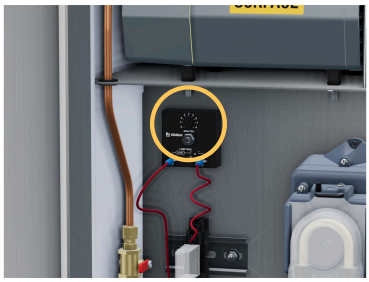
SECTION 07 Operation and adjustment

The cooking periods are set in start-up step 10, and changed there whenever your hours change. These are the other settings a technician can change.



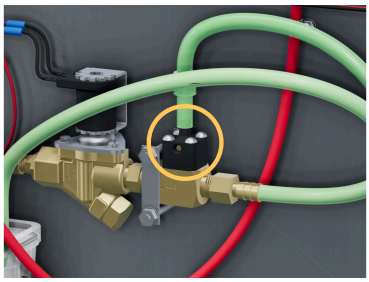
Operation mode switch

On Automatic, the SmartRelay runs MOAS during the cooking periods. On Manual, the schedule is bypassed and MOAS has continuous power, for testing and maintenance. In both modes the exhaust-fan interlock keeps MOAS off whenever the fan is off. Leave it on Automatic in service.



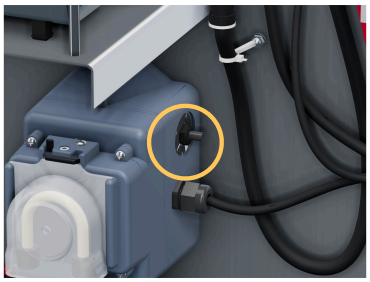
Refill delay timer

The square black Littelfuse solid-state timer, 24 V, on the left wall above the refill relay. It waits before opening the water solenoid valve, so the mixing container refills less often and mixes better. Adjustable from 30 seconds to 8 minutes; set to 8 minutes. If the mixing container needs to refill more often, set a shorter delay.



Injector volume screw

The set screw on the front of the injector controls how much Odor Neutralizer Solution is drawn in. From the factory it is normally set one half turn counterclockwise from fully closed, which uses approximately 40 fl oz of water and 1 fl oz of solution per hour. To change the concentration, adjust the pump speed first. If that does not give the results you want, use a small flathead screwdriver: turn the screw counterclockwise (left) to increase the concentration, or clockwise (right) to decrease it, a quarter turn at a time, checking the results between turns. Do not unscrew it all the way, or it will fall out. Check the color of the solution in the mixing container and the odor at the exhaust, and record any change in the maintenance log.



Pump speed control

The potentiometer (speed control) on the side of the Stenner pump sets its output: fully counterclockwise is off, and turning clockwise raises it gradually to 100% at fully clockwise. A raised line on its edge shows the setting; graduations are approximate. MOAS starts at 100. If the solution runs out too fast, turn it counterclockwise about a quarter, to 75, and check that both nozzles still mist. Record the start-up setting in the equipment record, and any change in the maintenance log.

SmartRelay clock

It keeps time for several days without power. Check it monthly and after any long power outage, and reset it under Setup, Clock if needed.

SECTION 08

Maintenance

EVERY DAY

- Check the solution level. When MOAS is working, it drops a little each day of use.
- Refill only with Molitron Odor Neutralizer Solution. Slide the lid forward to check or refill; the tubes stay in place. Refill right away when the alarm sounds, at approximately two gallons remaining.

Every month, with MOAS running

1. **Clean the nozzles**
   With MOAS and the exhaust fan running, press and release the rear cleaning button on each nozzle several times. This keeps grease buildup from obstructing the nozzle tips. While you are there, check the tubing fittings at each nozzle for leaks.
2. **Check for leaks**
   Check every tubing and plumbing connection, from the lines to the nozzles to the copper water line at the cabinet.
3. **Test the alarm**
   Slowly raise the 1/2 in PVC tube in the solution container until the buzzer sounds and the red light illuminates, then lower it back to the bottom of the container.
4. **Check the clock**
   Check that the SmartRelay shows the correct time.
5. **Check the level is dropping**
   If the solution level has stopped dropping, check that the pump tube is still moving liquid, and replace it if it is worn (below).

Every month, shut down

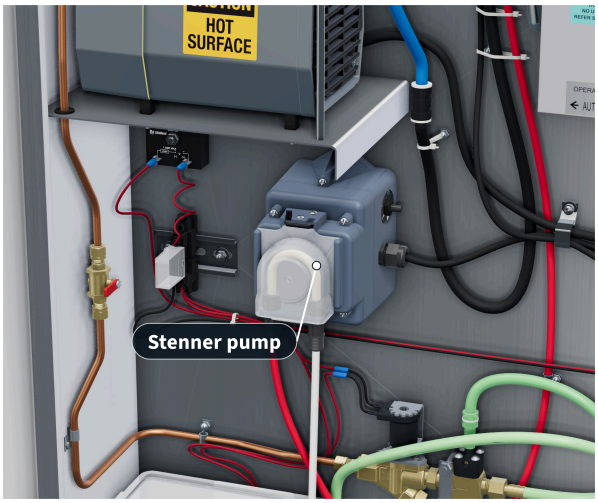
1. **Shut down**
   Before any service except the monthly nozzle buttons, turn the cabinet power switch off and close the cabinet water valve.
2. **Open the muffler**
   Find the B300F intake muffler at the top left of the air compressor. Twist its cover a quarter turn and pull it off.
3. **Replace the filter**
   Replace the fabric filter with the spare from the plastic envelope inside the cabinet door, then order a new spare from Molitron. If there is no spare, rinse the filter and let it dry completely before refitting it.
4. **Refit and restart**
   Refit the filter and the cover. Open the cabinet water valve and turn the power switch back on. Record the visit in the maintenance log, in the plastic envelope inside the cabinet door.

Record each month in the maintenance log (section 12).

Replacing the pump tube

BEFORE SERVICE

Before any service except the monthly nozzle buttons, turn the cabinet power switch off and close the cabinet water valve. The cabinet carries 120 VAC: always unplug the pump before working on it.



The Stenner pump, from the 3D viewer's model. The pump tube is the U-shaped tube under the pump head's clear cover.

If the pump tube is worn, or the solution level has stopped dropping, replace the tube with the spare from the plastic envelope inside the cabinet door. Follow Stenner's own Tube Replacement instructions, which start on page 21 of the **Stenner ECON FX and VX instructions (stenner.com)**. They come from the pump's manufacturer, so you work from its current steps, and they include the cautions to read before you start.

Open the water valve and turn the power back on when you are done.

SECTION 09

Troubleshooting

Before you call for service. Before any service except the monthly nozzle buttons, turn the cabinet power switch off and close the cabinet water valve.

The buzzer is sounding and the red light is on	
The solution container is low.	Refill it with Molitron Odor Neutralizer Solution.
It keeps sounding after you refill.	Liquid is trapped in the sensing tube. Pull the clear 1/4 in sensing tube off the black pressure-switch nipple. Lift the 1/2 in PVC tube just above the solution container (it does not need to come out of the cabinet) and shake or tap it to clear the liquid, or blow through the top end of the clear tube (the solution is non-toxic). Reconnect the clear tube to the nipple before you lower the PVC tube back in, then set it on the bottom of the container without forcing it.

The mixing container is not filling with water	
The refill delay has not run out.	The solenoid valve opens only after the timer's delay, set to 8 minutes. Wait out the delay. (section 07)
The cabinet water valve is closed.	Open the red-handled ball valve inside the cabinet. (section 10)
The building water is off or its pressure is low.	Check that the building supply is on and reaching the cabinet's valve.
The solenoid valve has failed.	Replace the solenoid valve. (section 10)

Little or no solution is reaching the mixing container	
The refill delay is set too short.	Set the timer back to 8 minutes, which mixes best. (section 07)
The injector needs adjusting.	Adjust the injector's volume screw. (section 07)
The check valve is stuck.	Remove and clear the check valve above the injector, in the clear pickup tubing. (section 10)
The building water pressure is low.	There must be enough pressure for the injector to draw solution up from the container.
The injector has failed.	Replace the injector. (section 10)

MOAS runs while the exhaust fan is off	
The exhaust-fan interlock is missing, wired incorrectly or has failed.	The interlock keeps MOAS off whenever the fan is off, in Automatic and Manual alike. Have an electrician check the interlock's wiring, and install or replace it. (section 05)

MOAS is not running while the exhaust fan is on	
It is outside the cooking periods.	On Automatic, MOAS runs only during the run periods. Set them to match your cooking hours. (section 07)
No power.	Check that the power switch on top of the cabinet is on, and reset the GFCI receptacle. (section 10)

The pump, compressor or fan has no power	
The GFCI receptacle has tripped.	Unplug the cords and press the reset button on the receptacle, then plug them back in. (section 10)
The GFCI receptacle has failed.	Replace the GFCI receptacle. (section 10)

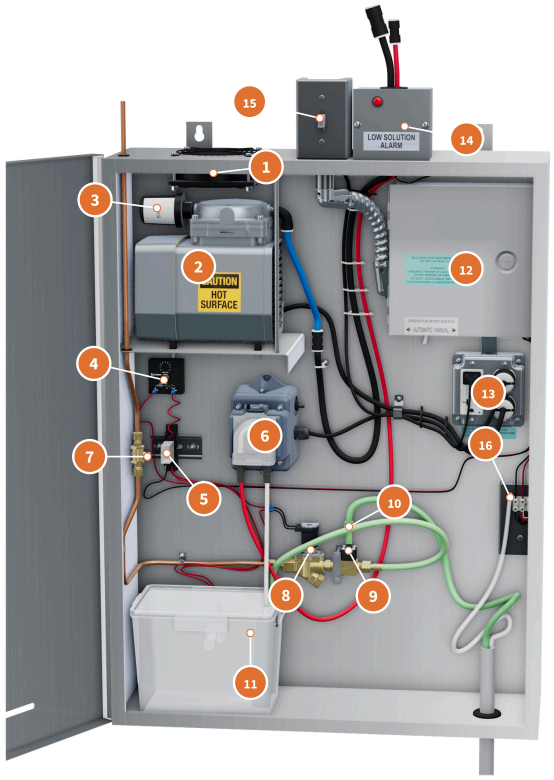
The mixing container is overflowing	
The float switch is stuck or has failed.	Check that the float's lever moves freely; replace the float switch if it does not. (section 10)

The nozzles are not misting	
The air compressor is not running.	Check it has power (reset the GFCI), that the cooling fan above it is running with its opening clear, and that it is not overheating. Replace the muffler filter. (section 08)
The pump is not running.	Check it has power, and reset the GFCI receptacle. (section 10)
The pump tube is worn.	Check the tube and replace it. (section 08)
The nozzles are clogged.	Press each nozzle's rear cleaning button several times, with MOAS and the fan running. (section 08)

Still not right? Call Molitron: 303-969-8888 · cleanair@molitron.com.

SECTION 10

Parts reference



The cabinet with its door open, from the 3D viewer's model.

1. **Cooling fan**
   Dayton axial fan, 120 VAC, in the top of the cabinet.
2. **Air compressor**
   Gast, 1/3 hp, 120 VAC, on rubber vibration isolators.
3. **Intake muffler**
   B300F, with a washable fabric filter.
4. **Refill delay timer**
   Littelfuse solid-state timer, 24 V, 30 s to 8 min, set to 8 min.
5. **Refill relay**
   IDEC SPDT relay, 24 VAC coil, with LED.
6. **Metering pump**
   Stenner variable-speed peristaltic pump, 120 VAC.
7. **Water ball valve**
   The cabinet's own cold-water shutoff, red handle.
8. **Water solenoid valve**
   1/4 in, normally closed, 24 VAC.
9. **Injector**
   Brass, 1/4 in, with the volume screw on its front.
10. **Check valve**
    3/8 in, above the injector, in the clear pickup tubing.
11. **Mixing container**
    Clear, with the float switch.
12. **Control enclosure**
    The IDEC SmartRelay (24 VAC), the 3PDT relay (24 VAC coil), the 120/24 VAC transformer and the operation mode switch.
13. **Receptacle box**
    4 × 4 in box with the GFCI receptacle for the compressor, pump and fan cords.
14. **Low-solution alarm light**
    The red light in the box on top of the cabinet.
15. **Power switch**
    On top of the cabinet, 120 VAC. Everything inside the cabinet is factory wired to it.
16. **Low-solution pressure switch**
    At the very top left of the panel on the right wall of the cabinet, 24 VAC, with its buzzer inside the cabinet. Only its front shows: the black nipple, with the clear 1/4 in sensing tube connected to it.

Not in the picture

Pump tube	A spare squeeze tube ships in the plastic envelope inside the cabinet door.

Order replacement parts and Odor Neutralizer Solution from Molitron: 303-969-8888 · cleanair@molitron.com.

SECTION 11 Warranty

MOAS and its component parts are warranted to be free from defects in material and workmanship for **12 months from the date of shipment**. The component parts are:

- Electrical control panel
- Air compressor
- Solution metering pump
- Liquid level switch
- Miscellaneous electrical components

What's covered	Should any part of the equipment prove defective in material or workmanship within the 12-month warranty period, upon examination by the factory, that part will be repaired or replaced by the factory at no charge, for parts only. All labor costs incurred in connection with the repair or replacement are not included. The factory does not accept returns of Molitron products.
Not covered	Parts damaged by the freight carrier between the factory and the destination, or by the installing contractor. The factory is not liable for incidental and consequential losses and damages potentially attributable to malfunctioning equipment.
The warranty does not apply if	• MOAS is not installed by a qualified installer according to the factory's installation instructions shipped with the product. • MOAS is not installed in accordance with federal, state and local codes and regulations. • MOAS is misused or neglected. • Factory-authorized parts and Molitron Odor Neutralizer Solution are not used. • MOAS is not operated within its published capacity. • The invoice is not paid within the terms of the sales agreement.

The warranty is activated once the owner's acknowledgement (section 12) is signed and returned to the factory. Email a signed copy to cleanair@molitron.com.

SECTION 12 Start-up and owner forms

Complete the check-off list before start-up and the equipment record at start-up. Email the signed owner's acknowledgement to cleanair@molitron.com to activate the warranty. Keep the maintenance log with this manual.

Installing contractor's check-off list

Complete this list before start-up by authorized start-up personnel. Installation must follow this manual.

- [ ] The MOAS cabinet is securely mounted on wall studs in a ventilated location, not an enclosed closet, where staff can reach the solution container and hear the alarm.
- [ ] The stainless steel solution container is securely mounted on the wall below the cabinet.
- [ ] The MOAS and exhaust fan field interlock is mounted and wired to both the exhaust fan and MOAS, with a 120 VAC, 20 A circuit dedicated to MOAS.
- [ ] The 1/4 in copper cold-water supply is connected through a building shutoff valve, at 80 PSI or less.
- [ ] Both nozzles are mounted on opposite sides of the exhaust duct, with at least 10 ft of duct before the exhaust discharge.
- [ ] The black 3/8 in air and red 1/4 in solution lines are connected to the cabinet top, the tees and the AIR and LIQUID ports of both nozzles; each path is 100 ft or less, with matching branches close in length.
- [ ] If supplied, the remote low-solution alarm is mounted where staff can see it and wired with 18/2 shielded cable.

Warranty. To keep the 12-month warranty, the first year needs:

1. Monthly maintenance as described in this manual, recorded in the maintenance log.
2. Molitron Odor Neutralizer Solution purchased from a Molitron representative.

Contractor's signature

_____

Printed name

_____

Establishment

_____

Model number

_____

Serial number

_____

Equipment record

Fill this in at start-up and keep it with this manual, so whoever services MOAS later has its details and settings in one place.

Model number

Serial number

Ship date

Start-up date

Installing contractor

Contractor’s phone

Started up by

Interlock location

Remote alarm location, if supplied

Refill delay setting (factory: 8 min)

Injector screw setting (factory: 1/2 turn open)

Pump speed setting, %

Cooking period 1, days and hours

Cooking period 2, days and hours

Cooking period 3, days and hours

Owner’s warranty acknowledgement

Regarding the maintenance required to keep the MOAS one-year limited warranty.

I have read the required maintenance instructions for the Molitron Odor Abatement System and I understand the monthly maintenance must be performed to keep the MOAS one-year warranty. This includes using only Molitron Odor Neutralizer Solution purchased from a Molitron representative.

I accept full responsibility for maintaining the equipment, keeping a maintenance log, and using only factory-authorized products in accordance with the MOAS Installation, Operation & Maintenance Manual.

I understand that if this equipment is not adequately and properly maintained using factory-authorized products, it will not satisfactorily perform its intended purpose, and this warranty will be void.

Owner’s signature

Printed name

Establishment

Address

City, state, ZIP

Telephone

Email

Ship date

Start-up date

Model number

Serial number

The warranty is activated once the owner’s acknowledgement is signed and returned to the factory. Email a signed copy to cleanair@molitron.com.

Monthly maintenance log

Record each month’s routine (section 08): tick each check made, and note anything replaced. Keep it with this manual.

Date	Checked					By	Notes, parts replaced
	Nozzles	Leaks	Alarm	Clock	Filter		

Nozzles: cleaning buttons pressed. Leaks: all connections checked. Alarm: tested. Clock: correct time. Filter: muffler filter washed or replaced.

SECTION 13 Engineer’s corner

Copy-ready text for a project specification, written only from this manual. Confirm details with Molitron for your project.

```
MOAS — Kitchen exhaust odor abatement system

1. Manufacturer: Molitron Company Inc. Molitron Odor Abatement System (MOAS), with standard external
solution container and two atomizing nozzles.
2. Listing: ETL Listed for the United States and Canada, Intertek Report 101453585DEN-002 (UL 197, CSA
C22.2 No. 109). Commercial, indoor-use, permanently connected equipment; listed rating 120 V, 3.5 A, 60
Hz.
3. Performance: up to 95% odor reduction, up to 50% smoke reduction, up to 6,000 CFM per two-nozzle
system. Performance varies with cooking process, hood grease-removal performance, exhaust configuration,
installation, dwell time and calibration; results are not guaranteed.
4. Cabinet: 18-gauge stainless steel, 24 W x 32 H x 8 D in, approximately 100 lb, wall-mounted on 16 in
centers through two keyhole hanging tabs; ventilated indoor location, not an enclosed closet.
5. Solution container: 16-gauge stainless steel, 24 W x 12 H x 8 D in, up to 10 gallons of Molitron Odor
Neutralizer Solution, wall-mounted below the cabinet, with sliding fill lid. Low-solution alarm below
approximately 2 gallons: buzzer inside the cabinet and red light on top; optional 24 V remote low-
solution alarm.
6. Equipment: cold-water solenoid valve and injector with refill delay timer (30 s to 8 min, set to 8
min) and float-controlled mixing container; Stenner variable-speed peristaltic metering pump; Gast air
compressor; IDEC SmartRelay schedule control with Automatic/Manual operation mode switch; cooling fan.
7. Nozzles: two atomizing nozzles on 4 in square stainless steel plates, mounted on opposite sides of the
exhaust duct over 1-1/2 in holes, at least 10 ft of duct upstream of the exhaust discharge.
8. Lines: black 3/8 in OD air and red 1/4 in OD solution polyethylene tubing, each through a tee to both
nozzles; up to 100 ft per cabinet-to-tee-to-nozzle path, matching branches close in length; 1 in conduit
recommended.
9. Utilities: 120 VAC, 20 A circuit dedicated to MOAS through the MOAS exhaust-fan interlock (supplied),
which prevents operation whenever the exhaust fan is off; 1/4 in copper cold-water supply, 80 PSI
maximum, with building shutoff valve; backflow protection provided by Molitron.
10. Maintenance: daily solution-level check; monthly nozzle cleaning, leak check, alarm test, clock check
and intake-muffler filter service.
```

The online installation planning guide: **molitron.com/products/moas/installation-planning**. For drawings or project questions: 303-969-8888 · cleanair@molitron.com.

MOAS Installation, Operation & Maintenance Manual, Version 2.0, October 2026; supersedes the manual revised 8/2024. Molitron Company Inc · 303-969-8888 · cleanair@molitron.com · molitron.com. Specifications may change; confirm current details with Molitron.