



Handheld Pan Oiler

Installation, Operation, and Maintenance Manual

MODEL NO: AHO | VERSION 01.00.00



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WARNING

For your own safety, the instruction manual should be read in its entirety before operating the machine.

When using the AccuSpray Handheld Pan Oiler, the following safety precautions should be followed:

- Read all instructions thoroughly before operating the unit.
- Read and follow the startup guide, cleaning, and flushing procedures before operating the unit.

EQUIPMENT MISUSE HAZARD

- Use the unit only for its intended purpose.
- Do not use corrosive chemicals in the machine.
- Keep the power cord away from heated surfaces and objects.
- Do not immerse the power cord in water or oil.
- Do not obstruct the spray gun nozzle.



1 | Introduction

The AccuSpray Handheld Pan Oiler is a portable release agent applicator engineered to provide precise and consistent spray application for a wide range of bakery and food production operations. Its versatile design allows for use across various applications while functioning as a precision handheld spray gun without the need for compressed air. The integrated metered dispensing system helps optimize release agent usage by delivering controlled, repeatable application and supporting efficient consumption management. The unit is compatible with a variety of release agents, including oil and grease, and features an adjustable spray pattern to accommodate different pan types, sizes, and production requirements.

The unit was designed and tested using Synova branded release agents, including products from the Supra, Integra, and Primo product lines. While the system is compatible with a variety of release agents, optimal performance has been achieved using Primo 407 (70 viscosity mineral oil), Supra 110 (bread release oil), and Integra 150 (general release oil), as the spray system was configured and tested using these formulations.

Features:

- Microprocessor controlled precise oil spraying qualities with consistent spray quantity
- Automatic recirculating function operates without user intervention, ensuring oil supply in unit is fresh with no stagnation
- All wetted components meet food contact requirements for vegetable oil
- Stainless steel NEMA4 cabinet
- Purge function to empty unit of release agent and “load” spray gun nozzle with release agent
- Adjustable spray settings to accommodate different applications
- Able to spray a wide variety of release agents
- Compact design on roller cart (optional) for ease of movement

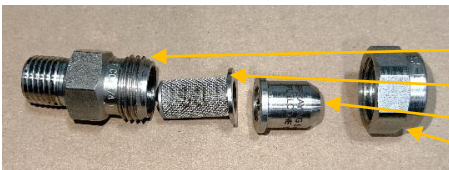


2 | Diagram of Components



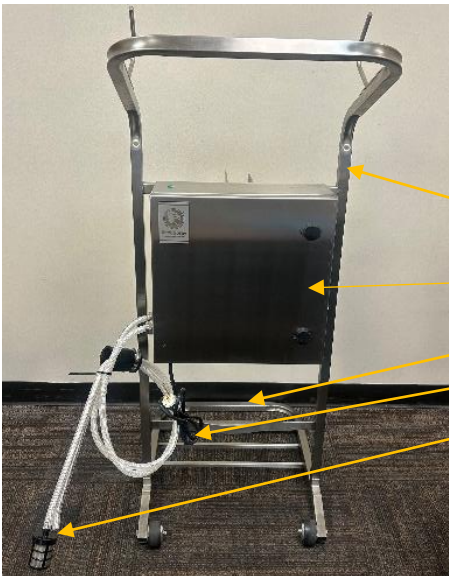
Hose and Spray Gun

- Nozzle Assembly
- Spray Gun Trigger
- Spray Gun Assembly



Spray Gun Nozzle Detail

- Tip Body
- Strainer
- Spray Tip
- Lock Collar



Electrical Cabinet (Back – Exterior)

- Roller Cart (optional)
- Access Door
- Tray for Oil Supply (if using roller cart)
- Power Supply Cord
- Supply/Return Wand



Electrical Cabinet (Back – Interior)

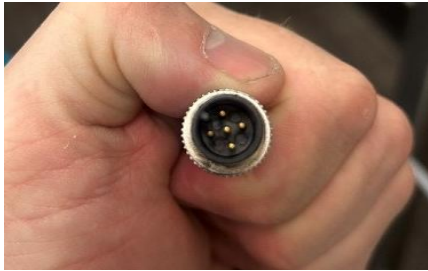
- Circuit Breaker
- Pump
- Pressure Gauge (set at 40-65 psi for optimal spray pattern)
- Regulator (factory set)



3 | Set Up & First Use

The unit has been designed for ease of use and set up.

For the spray gun electrical connection, locate the positioning key in the male connection point from the spray gun and line up with the corresponding slot on the female connection point on the front of the electrical cabinet. Push the connector in and tighten the locking collar to hold in place.



Place a pail of oil on the roller cart (or nearby if not using the roller cart) as shown below and insert the supply/return wand into the spout opening on the pail lid.



Plug the unit into a standard 110/120 VAC power outlet. Locate the power button on the side of the electrical cabinet and depress. At this time, the pump will start and the unit will prime. During this time, do not depress the spray gun trigger. Once the priming cycle is fully complete, the unit is ready for use.

NOTE: Priming the unit is important because it fills the pump and hoses with oil to ensure accurate and smooth application of oil. If the unit has not been used before, allow the unit to prime for an additional cycle by powering the unit off and back on.

4 | Normal Operation

The unit has a variety of settings depending on the type of release agent being sprayed and the spray pattern desired.

Constant Spray — This mode will rapidly pulse the spray gun valve enabling the unit to spray continuously (similar to a spray can). To select this mode, toggle the spray selector switch, located on the side of the electrical cabinet, to the left for “Constant.” In this mode, the unit will constantly spray as long as the trigger on the spray gun is depressed.

The volume of spray can be adjusted by using the rotary knob located above the spray selector switch. Turning the knob counterclockwise reduces the spray amount while turning the knob clockwise increases the spray amount.



Pulse Spray — This mode will deliver a “pulse” spray at approximately 1 second intervals. Pulse spray is useful for precision spraying of small pan moulds such as mini-muffin pans, but it can also be used for larger pans such as cheesecake pans. To select this mode, toggle the spray selector switch, located on the side of the electrical cabinet, to the right for “Pulse.” Similar to the continuous spray mode, the volume of spray can be altered by using the rotary dial located above the spray selector switch.

The unit is intended to be left in a “powered on” state, which ensures that the periodic recirculation function is enabled. This helps keep the unit filled with fresh release agent. The “powered on” state is easily determined by observing the green power-on light at the top of the cabinet.

5 | Additional Operation Notes

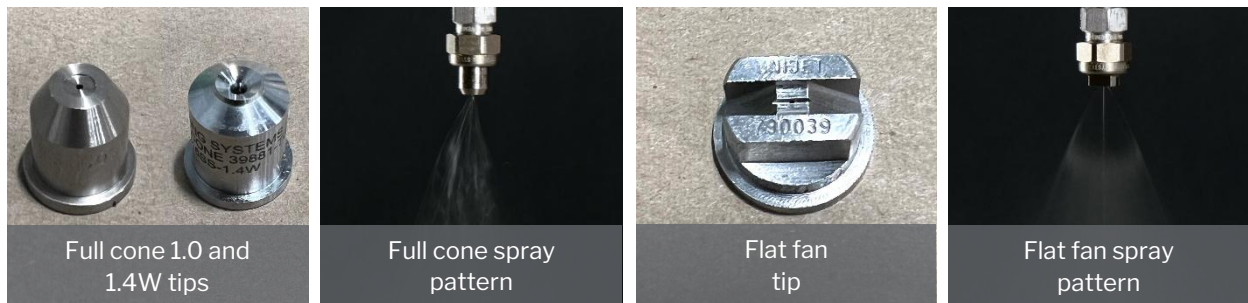
Recirculation Function — The unit is designed to periodically recirculate oil through the system and return it to the oil pail. The purpose of this function is to ensure that the unit always has a fresh supply of oil in the system. The recirculation function runs for approximately 10 seconds every 30 minutes so long as the unit is turned on and it is not otherwise performing a spray cycle. The unit must be turned on and powered up to perform the recirculation function.

Release Agent Viscosity and Temperature — The unit is designed for use with release agents having a viscosity range of 25–75 Cp and may accommodate higher-viscosity materials provided they do not contain solidified fats or particulates that could obstruct flow. Alternative spray tips may be required depending on the application and release agent characteristics. Use of oils or greases outside the intended operating parameters may affect performance and could void warranty coverage.

The recommended operating temperature of the release agent is 75–95°F (24–35°C).

6 | Tip Selection

The AccuSpray Handheld Pan Oiler spray gun nozzle supports multiple tip configurations to accommodate varying application requirements. Tip selection directly impacts spray pattern characteristics and release agent output volume. Available tip options include TG SS 1.0 FULL CONE, 1.4W FULL CONE custom wide spray (39881-TG-316SS1.4W), and TPU730039-SS UNIJET FLAT SPRAY. The TPU730039-SS UNIJET FLAT SPRAY is the standard tip option and will work best across a variety of pans. The appropriate tip should be selected based on the required application pattern and the volume needed for the intended operation.

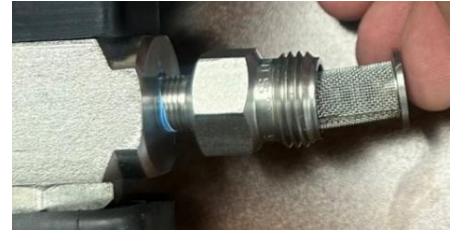


To change the spray gun nozzle tip, use a wrench to loosen the lock collar on the tip body. Remove the lock collar and push the tip out through the back. Use the reverse procedure to install the desired tip.



7 | Regular Care

Cleaning the Nozzle Strainer and Spray Tip — It is recommended that the spray gun nozzle strainer and tip be removed and cleaned after every two full days of operation, or more as needed. Remove the tip by loosening and removing the lock collar. At this point, the strainer can be removed by pulling the strainer out of the tip body as shown.



Soak the tip and strainer in a container of hot soapy water for at least 10 minutes.

NOTE: Do NOT allow the water to become cool as it will allow any oil residue to harden and clog the tip. If the water does become cool, re-soak the tip in hot soapy water for an additional 5 minutes.

Flushing the Unit — If the unit will not be used for an extended period (two weeks or longer), it should be flushed before storage. It is recommended to use 70 viscosity food-grade mineral oil for this procedure. Do NOT use water, as it may damage the system.

Begin by turning the unit off. Remove the supply and return wands from the current oil container and place both wands into a clean, empty container to be used as the waste container. Turn the unit on and allow the pump to run until oil is no longer flowing from the return line, then turn the unit off. Do not allow the pump to continue running after oil flow has stopped, as doing so may damage the pump.

Next, place only the supply wand into a container of 70 viscosity food-grade mineral oil, leaving the return wand in the waste container. Turn the unit on to circulate the mineral oil throughout the system. The pump will stop automatically when the startup sequence is complete. Actuate the spray nozzle approximately 20 times to flush the nozzle with mineral oil. Turn the unit off, place both the supply and return wands back into the waste container, then turn the unit on one final time and allow the pump to run only until mineral oil is no longer flowing from the return line. Turn the unit off once the flow has stopped.

At the next startup, place the return wand into a waste container and allow the unit to circulate fresh oil for approximately 5–10 seconds before returning the wand to the fresh oil container. Then actuate the spray nozzle approximately 12 times into a separate container and discard the oil to ensure the nozzle is primed with fresh oil. Performing this flushing procedure approximately twice per year is recommended to help prevent old oil from remaining in the system. Additional flushing is recommended whenever the unit has been idle for three to four weeks or longer.



8 | Troubleshooting

Trouble	Remedy
Unit Will Not Turn On	• Confirm the unit is plugged in and that the outlet is live • Check that the unit's circuit breaker switch is closed by confirming the switch is flipped upward and the red indicator light is on
Unit Turns On, But Does Not Prime	• Verify the supply/return wand is fully inserted into pail and the supply hose is submerged • Inspect the supply hose strainer for clogs or blockage
Unit Runs But Does Not Spray Properly	• Clean strainer and spray gun nozzle tip, if needed • Clear air from hoses by selecting "Constant" pattern and spray into a cup • Confirm the regulator is set to at least 40 psi by powering the unit off and back on, then checking pressure during the prime function
Spray Pattern Is Inconsistent	• Inspect the spray gun nozzle tip for buildup or blockage • Verify the regulator is set to proper operating pressure (at least 40 psi) • Check all hoses for trapped air; to purge air from the system, power the unit off and back on and allow the unit to execute the prime function
Oil is Leaking From Unit	• Inspect all hose connections for leaks • Tighten fittings where needed • Check hoses for cracks, wear, or damage throughout the system • Check the pail for leaks or other damage
Low or Weak Spray Pressure	• Confirm the regulator is set to at least 40 psi and adjust as needed • Inspect supply hose and strainer for restrictions • Check the spray gun nozzle tip for clogging
Unit Is Pulling In Air During Operation	• Verify the supply hose remains fully submerged • Inspect hose connections for loose fittings • Check hoses for cracks, wear, or damage throughout the system

If these troubleshooting steps do not resolve the issue, additional service or technical support may be required. Contact the AccuSpray team for assistance to help keep your equipment operating at peak performance and minimize production downtime.

9 | Specifications & Components

Name	Description
Power Consumption	110/120VAC plug (6 amps)
Pump	Pentair Shurflow 8000-543-290 12VDC Motor / Viton Seals Santoprene Diaphragm – 100 psi max
Solenoid Valves	Recirculation Solenoid: Unox 24VDC Direct Acting Stainless / Viton Seals 200 psi max 1A
	Spray Gun Solenoid: Unox 12VDC Direct Acting Stainless / Viton Seals 200 psi max 1A
Power Supplies	Main: 24VDC AC/DC Converter
	Peripheral: 5VDC AC/DC Converter
Processor	Pico 2 Single Board Processor
Switching Controls	Motor: 3-32VDC 25A SSR
	Solenoids: 3-32VDC 8A SSR
Cabinet	NEMA4/IP65 Lockable Stainless Steel





AccuSpray

Spraying Technology

A BUNDY BAKING SOLUTION

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