

Thermal foggers with pulse jet engines generate hot exhaust gas which may incinerate flammable objects, gases or dusts. The electrical coldfoggers or ULV machines are not explosion proof as well. It is therefore mandatory to read and observe the operating instructions and the safety instructions below. Failure to comply with these may result in fire or accidents. Observe the EU Directive 89/391/EEC (e.g. Article 6) and/or 1999/92/EC (ATEX 137, e.g. Article 5).

INTENDED USE

The pulsFOG foggers are designed for fogging all kinds of pesticides, disinfectants and pest control agents authorized and approved for this type of application insofar as there are no risks for the environment, human beings and animals involved. The following type specifications must be observed:

- The pulsFOG thermal fogger types K-10-STD, K-22-STD, K-30-STD are suitable for plant protection in enclosed greenhouses. They can be used for fogging aqueous liquids or wettable powders with a water content of more than 60%. Application of flammable liquids is prohibited. Fogging of non-flammable peroxides or other fire accelerants releasing oxygen is only permitted with an automatic shut-off function.
- The pulsFOG thermal foggers K-10-SP, K-10-DESERT, K-10-O, K-22-O, K-22-10-O, K-22-20-O, K-30-O, K-30-10-O, K-30-20-O, all of them without air agitator, are suitable for epidemics control, plant protection in enclosed greenhouses, warehouse pest control in enclosed spaces from the outside to the inside and for the disinfection of cleaned empty animal stables with agents tested and approved for this purpose. These units with an "O" type designation are suitable for flammable (flash point > 70°C) and non-flammable fogging liquids. For safety reasons, fogging of flammable products or non-flammable products releasing oxygen (e.g. peroxides) requires using the automatic shut-off function on the unit. "O"-type units are not suitable for fogging suspensions (because of the risk of clogging).
- The pulsFOG thermal fogger K-10-SP-SAN is suitable for use in sewerage systems from the outside to the inside and for termite and vole control using approved products.
- All pulsFOG BIO thermal foggers are suitable for fogging flammable and non-flammable fogging liquids including peroxides (H₂O₂), suspensions and sensitive biological preparations.
- The pulsFOG series SUPER PRO and COLFOGGER are designed to apply liquid oil or water based pesticides including suspensions with a concentration of < 6%. Acidic chemicals are not approved for the use with these units

⚠ WARNING:

Repeated application of acidic products requires acid resistant unit versions.

CONTRARY TO INTENDED USE

Contrary to intended use and improper handling may cause hazards for people, objects and environment. With a not intended use of the unit the general permit of operation/use expires.

AUTHORIZED OPERATOR GROUPS

The equipment is restricted to professional use by persons of age and qualified operators duly instructed by an authorized dealer.



⚠ WARNING: FIRE HAZARD

Any formation of aerosols or fogs from flammable substances or acids releasing oxygen in a mixture with air and/or dust always involves the risk of fire or explosion if there is a source of ignition. The hot exhaust gas of the engine of thermal foggers is a potential source of ignition. For this reason: Make a risk analysis and develop a strategy to prevent risks! Accordingly observe strictly the following safety instructions:

- Do not smoke when handling the unit!
- Never fill fuel into the chemical tank!
- Whenever fogging flammable liquids – including peroxides – into enclosed spaces, always keep a fire extinguisher readily available near the unit. Take care the fire extinguisher is adapted to the disinfectant in use (e.g. fires caused by peroxides require an extinguishing agent based on water or CO₂)
- Do not use thermal foggers to fog in rooms if there is a risk of fire, dust explosion or dust whirling up (e.g. in grain mills, non-cleaned storage silos or on floors which have not been cleaned or are covered with straw or wood dust).
- Stationary application of approved flammable agents (including peroxides) into enclosed spaces:
 - Only from the outside to the inside using circulating air ventilation within the room
 - Only with automatic shut-off function on the unit for the disinfectant
 - Ensure a stable position of the unit on a non-inflammable support
- Observe the safety data sheet (MSDS) and instructions of the fogging product. Check the flash point of flammable fogging liquids. Do not fog any liquids with a flash point of less than 70°C into enclosed spaces.
- Never fog more than 3 l of an approved flammable liquid or more than 10 l of a flammable aqueous liquid with a water content of less than 70 % per 1000 m³ of space!
- Never fog flammable liquids into a tube or tunnel without suction ventilation (explosion hazard). Exception: pulsFOG BIO units with separate water injection during operation.
- Do not refill fuel into the unit when the engine is still hot! The minimum cooling time is 20 minutes.
- Whenever performing any work on the carburettor or fuel tank, remove all sources of ignition from the vicinity and remove the spark plug cap and the batteries.

⚠ **Caution:** a defective membrane (diaphragm) at the carburettor may lead to a fire accident.

PROPERTY, OPERATOR AND ENVIRONMENTAL PROTECTION

- Observe the specified intended use of the chemical agents. In arid environments or dry seasons and if there is a general risk of fire, only operate the unit with the built-in automatic shut-off function active. Keep a fire extinguisher readily near at the unit available.
- Observe the application instructions and safety data sheets of the manufacturer or supplier of the active substances and fogging liquids used (however, without restricting the unit manufacturer's safety instructions in any way).
- Outdoor application is only permitted with the wind calm, or at a maximum air movement of 6 km/h. Avoid application beyond the target area by keeping a safety distance to the boundary line.
- Always use a funnel and sieve when refilling the chemical tank. Close any product drain valves before filling the chemical tank.
- Wear suitable protective clothing during the preparatory work and when fogging (full-face mask with filter A2 B2-P3, protective suit, gloves, rubber boots) as well as ear protection against the engine noise.
- The unit shall only be accessible to duly instructed persons during operation and in the cooling phase.

REGULAR MAINTENANCE REQUIRED

The unit must be subjected to maintenance at regular intervals (after 50 h of operation at the latest) by a qualified person (technician), observing all applicable safety and accident prevention standards. Wear parts as well as the vibrating diaphragms of the carburettor of a thermal fogger must be replaced as described in the operating instructions by an authorized person.

▲ WARNING:

Worn-out vibrating diaphragms on the carburettor not replaced in time may result in an accident involving fire.

Any repairs must be made by a qualified person, at the manufacturer's works or an authorized dealer.

WARNING LABEL



Heat, hot surface



Use ear protectors



No fire and no smoking



Read manual and safety instructions

PRIOR TO APPLICATION

- For safety reasons the fog tap is always closed.
- Check the functional safety of the unit (e.g. by trial fogging with water). Repair any loose or leaking lines.
- If functional safety is not ensured, do not put the unit into operation.
- The dosing nozzle and the nozzle holder (screw insert for the dosing nozzle) on the fogging tube of the thermal foggers must be screwed hermetically tight (never omit the heat-resistant gasket).
- When filling the tanks with flammable liquids, handling a source of ignition is prohibited in the vicinity of the unit.
- In case of stationary use, ensure the stability of the unit (e.g. to prevent sliding, shaking or tilting over) on a non-flammable support.
- Make sure that the fresh air supply to the carburettor is unobstructed. Whenever fogging a flammable liquid into a room, all sources of ignition must have been removed from there and all electrical switches disconnected.
- Make sure to prevent unauthorized access to the application area (e.g. attach an access prohibition sign on the door). Close any openings of the application area and eliminate any leaks found.

DURING APPLICATION

- Wear protective clothing (protective suit, gas mask with filter A2B2-P3, safety gloves and ear protection).
- Keep a fire extinguisher readily at hand whenever using flammable products in enclosed spaces. Stay near the unit in order to be able to intervene immediately in an emergency.
- Never let the unit run without supervision.
- Open the fog tap only with the engine running. Close the fogging valve when the engine is still running. In case of misuse or an accident close the tap immediately even if the motor is not running.
- The thermal fogger must not stand in the fog in an enclosed space (otherwise there is a risk that the engine could stop suddenly due to the sucking of fog into the carburettor). For this reason, keep the unit away from the fog or fog from the outside to the inside.
⚠ WARNING: If the engine should suddenly stop unexpectedly (e.g. because of a lack of fuel or energy) during application, close the fogging valve immediately and interrupt the application. Fix the problem when the unit has cooled down.
- When the chemical tank gets low (end of fogging), close the fogging valve instantly and stop the engine immediately afterwards.
- If any leakage should occur on the unit or tank during fogging, immediately
 1. close the fogging valve,
 2. stop the engine,
 3. loose the cap of the chemical tank of the thermal fogger (depressurize the tank) and
 4. terminate the application.
- Do not insert the fogging tube of an thermal fogger into another tube of similar diameter for fogging (this may result in overheating of the engine and inflammation of the fog).
- The hot fogging tube and the hot exhaust gas of a thermal fogger must never touch or reach any flammable material. For through-wall application, the minimum distance from the fogging tube surface to the wall is: 6 cm

AFTER APPLICATION

- Close and lock the fogged room and attach a warning sign. Ventilate the treated room thoroughly before re-entering.
- Close the fuel main valve of the unit
- The fogging tube of the thermal fogger will still be hot for up to 30 minutes after stopping the engine. Do not touch the fogging tube!
- Do not transport a hot unit in an enclosed vehicle/ car.
- If there is any fuel or active substance left in the tanks, the unit must be kept upright and fastened to prevent tilting and the tanks must be well closed.
- Shipping of units is only admissible with the fuel tank and the rinsed chemical tank empty.
- Store in a safe place, use the original cardboard box if possible; store in a dry and dust-free room, protected against tilting and only with the rinsed chemical tank empty. Drain the fuel tank if the unit is not going to be used for more than 3 weeks.