

swingfog[®]
Made in Germany

High Performance Fog Generators



At the end of the 1940's,

the first Swingfog thermal fogging machine was developed and built.

Originally, the engine principle served for the propulsion of rockets. Further development of this technology resulted in the so-called Swingfire process. The idea has been successful in the market for more than 60 years, and the Swingfog brand name has become synonymous worldwide for thermal fog technology. Our present manufacturing programme is the result of our competence and experience, continuous development, as well as the permanent improvement of our products.



In the early days: Mosquito control at the Lake of Constance, Germany

Andes/Amazon expedition 1951 with Swingfog

Today, Swingfog means: Engineering at a high level combined with a complete utilization of know-how. In other words: Technology and application under one roof.

We are certified as compliant with DIN EN ISO 9001.



Swingfog fogging technology is the efficient and economic method for:

- Mosquito and pest control
- Plant protection in plantations and greenhouses
- Stock protection in warehouses, silos and plants for processing foodstuffs, agricultural products, textiles and tobacco
- Disinfection in the foodstuff industry, in areas occupied by people and in the livestock industry



swingfog® SN 50, SN 81, SN 101

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Swingfog SN 50

Portable machines, available with four types of spraying tank made of stainless steel or polyethylene.

The fuel tank is made of stainless steel.

All metal parts coming into contact with the chemical are also made from stainless steel.

All types also available equipped with automatic chemical solution cut-off device.



SN 50



SN 81

Swingfog SN 81, SN 81-PE, SN 81-20 PE, SN 81 Pump

Stationary machines, available with a variety of spraying tanks made of stainless steel or polyethylene. Fuel tanks made of stainless steel. The Swingfog SN 81 Pump is equipped with an electric stainless steel feeding pump to draw the fogging mixture from a separate tank. It is supplied with an integrated rechargeable battery to drive the chemical pump and a battery charger.

Swingfog SN 101

Vehicle mountable large fogging machines. Available with manually operated starting pump (SN 101 M) or with an electrical starter (SN 101 E and SN 101 Pump). Both, the SN 101 M and SN 101 E types are equipped with stainless steel spraying tanks that have a capacity of 69 l.

The SN 101 Pump has no integrated spraying tank, but a large fuel tank with a capacity of 21.3 l, which allows for a continuous operation of approximately 5 hours.

The fogging mixture is drawn by means of an electrically driven stainless steel feeding pump, from a separate spraying tank.



SN 101



SN 101 Pump

All Swingfog SN 101 models, the SN 81-20 PE and SN 81 Pump are supplied with an automatic chemical solution cut-off device for the fogging mixture. A cut-off device for models SN 81 and SN 81 PE is available on request.

Remote controls for all Swingfog SN 101 models are available as optional accessories.

Power supply for SN 101 E and SN 101 Pump through cable connection to the vehicle battery (12 V) or to a separate 12 V battery; SN 101 M through 8 dry batteries, 1.5 V each.

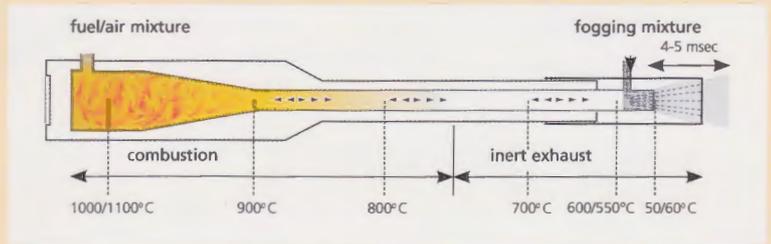
Swingfog fogging machines run with regular grade gasoline (petrol) in accordance with the Swingfire principle. A fuel/air mixture is ignited in the combustion chamber and the deflagrations oscillate a column of gas in the resonator pipe between 80 and 110 times per second (depending on the type of machine).

At the end of the resonator, the fogging mixture is injected into the air stream emerging at high velocity, and is dispersed into fine aerosol droplets, which are distributed into an extensive, dense fog.

Fuel and fogging mixture are conveyed by a small positive pressure in the tanks*.

The system has, with the exception of diaphragms, no moving parts and, therefore, practically no wear.

*For the SN 81 Pump and SN 101 Pump types, the fogging mixture is drawn by an electrically driven stainless steel pump.



Vector control

Power supply – Power consumption

Electrical energy is only required to start the machines, it is not required for ignition during operation. The battery capacity is selected to match the power consumption of the magnetic valve of the automatic solution cut-off device and the fog on/off functions of Swingfog SN 81 Pump and all SN 101 types, as well as for the operation of the electrically driven feeding pump for the fogging mixture of Swingfog SN 81 Pump and SN 101 Pump.

Wind Force	Description	Observations	Wind Speed		Effective Swath Width in meter*
			m/s	km/h	
0	calm	smoke rises vertically	0.0 - 0.2	0.0 - 0.7	25 - 50
1	light whiff	observable drift of smoke	0.3 - 1.5	1.1 - 5.4	35 - 70
2	light breeze	rustle of leaves	1.6 - 3.3	5.8 - 11.9	50 - 100
3	soft breeze	leaves and twigs are moving constantly	3.4 - 5.4	12.2 - 19.4	75 - 150
4	moderate breeze	movement of small branches, whirl of dust and paper	5.5 - 7.9	19.8 - 28.4	Application possible when big dosage nozzles are used, generating bigger droplets with reduced droplet drift range.

*Effective swath width = total swath width \cdot overlap (approx. 30 %)
The given higher effective swath widths refer to an application in an open area.
For obstacles such as dense vegetation or buildings these values are to be reduced by up to 50 %.

Effective swath widths dependent on differing wind speeds according to the Beaufort scale



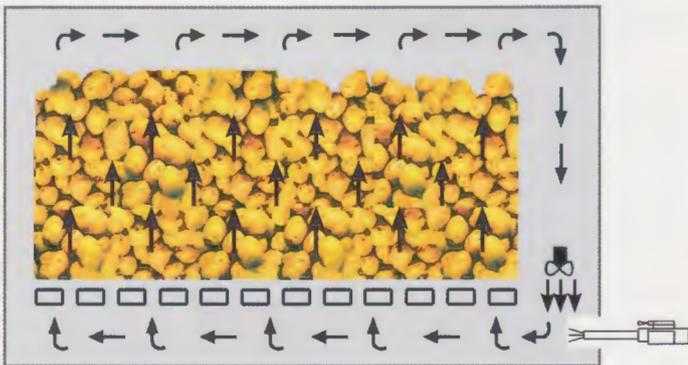
Pest control in a grain store



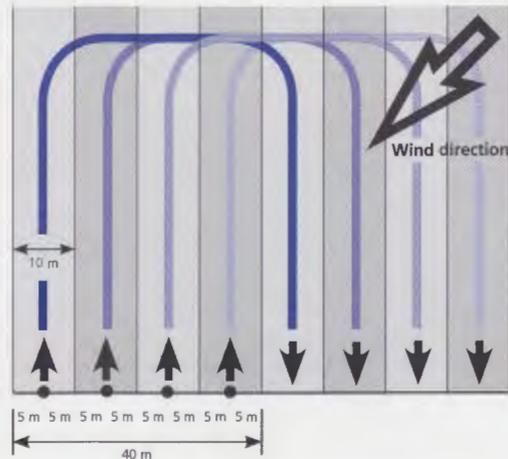
Plant protection in plantations



Fog application in a greenhouse



Treatment of a potato store with a germination inhibitor



Example of plant protection measures in large plantations with 4 operators and 4 units Swingfog SN 50

Typical droplet distribution generated by Swingfog

Our advantage: Using water-based fogging mixtures, together with the high performance fogging tube, an excellent droplet spectrum is achieved, which is usually only possible with oil-based mixtures.

Swingfog SN 50



Standard fogging tube for oil-based fogging mixtures



High performance fogging tube for water-based fogging mixtures (optional accessory).

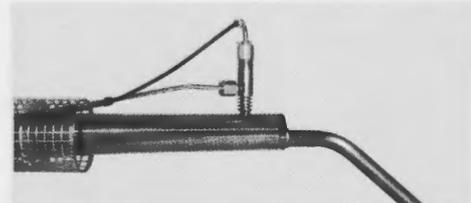
Using this device for the application of water-based fogging mixtures, an excellent droplet spectrum is generated, which is almost identical to that of oil-based mixtures.

The high performance fogging tube must only be used for water-based fogging mixtures.



Electrically driven feeding pump, made of stainless steel for Swingfog SN 81 Pump and SN 101 Pump.

The pump can be applied as a submerged pump or can be connected to a quick-release coupling to draw the fogging mixture out of a separate container. Power supply is provided by connection of the Swingfog SN 101 Pump to a 12 Volt vehicle battery. The Swingfog SN 81 Pump is supplied with a rechargeable 12 V, 12 Ah battery and a battery charger. The pump can be driven by the battery or by the public power supply by connecting the battery charger to the power source and the battery.



Special type Swingfog SN 50A

Using this special fog applicator, it is possible to direct the fog into the smallest of apertures in buildings or sewage systems, or to combat leaf-cutting ants in subterranean ant nests. The fog outlet is put directly into one of the ant nest entrances and the complete nest is saturated with fog.

All models of SN 50 are available in a special "A" version and have an automatic chemical solution cut-off device.



Control panel of Swingfog SN 101 E, SN 101 Pump



Remote controls for the Swingfog SN 101 M, SN 101 E and SN 101 Pump. All operational functions can be controlled via the remote control from the cabin of the vehicle or directly at the control panel of the machines (optional accessories).



Automatic solution cut-off device for the fogging mixture by means of an electro-magnetic valve.
Standard with Swingfog SN 81 Pump and with all models of Swingfog SN 101



Automatic, mechanically acting cut-off device for the fogging mixture.
Standard with SN 81-20 PE.
Optional for all models of SN 50 and for the Swingfog SN 81 and 81 PE types.



Standard accessories supplied with every Swingfog machine
(here example Swingfog SN 50)

- Fogging tube
- Spraying mixture funnel with strainer
- Fuel funnel with strainer
- Filter insert spraying tank
- Bag with tool kit and cleaning equipment
- Set of spares, containing all important gaskets, O-rings and diaphragms
- Set of dosage nozzles
- Ear protection (2 sets)
- Dip Stick/level indicator for stainless steel spraying tanks SN 50 and SN 81
- Carrying strap (for SN 50 and SN 81 types only)
- Instruction manual with operation, maintenance and repair instructions and with complete spare parts list (not shown in the picture)



Start of treatment before sunrise



Fog distribution in wind direction



Micro climate:

- The sun rays cannot penetrate the fog layer and heat up the soil.
- The fog stays in the plantation even after sunrise.



swingfog[®] + **fontan**[®]
QUALITY WINS