

# SAMI Plant Protection Sprayers





# Choices and adaptability.

## PLANT PROTECTION SPRAYERS

SAMI sprayers have a modular structure. This means that from our body, pump, valve set and boom set models you can select a combination corresponding to your plant protection sprayer requirements. The modules are type-approved by Vakola (Finnish testing company), in addition to which independent validation approves the ordered combination before delivery to the customer.

All models include a clean water tank, stepping board, lights and reflectors according to road traffic regulations as standard supply



Pump

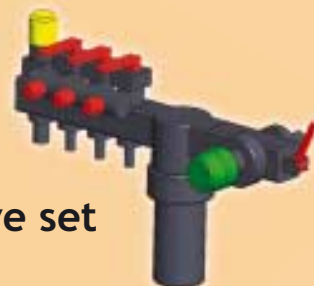
Boom set



Body and tank



Valve set



Accessories





### Lifting device sprayers

The lifting device models can be built into more inexpensive packages equipped with the features of larger sprayers. When electrical and hydraulic functions are replaced with mechanical ones, a lower price level is achieved without compromising spraying quality.

The agile lifting device model is particularly suited for spraying wedge-shaped, small and uneven lots. It also suits smaller tractors, since the sprayer's center of gravity is close to the tractor.

### *SAMI 3/900/12 Ekoline with foam marker equipment*



### Towed sprayers

The large tank of a towed sprayer enables spraying large areas with a single fill. This feature is emphasized when the lots are separate from the main farm or from each other. The additional 500 liter tank, sold as an accessory, enables cleaning or filling the sprayer main tank when filled with water on the field. Thanks to the mixing function it can also be used as a plant protectant tank.

Thanks to the large wheels the equipment surface pressure is low. The track can be adjusted to suit both a spraying tractor and a seeding fertilizer.

## PLANT PROTECTION SPRAYERS

### BODY AND TANK

The modern sprayer is made of light materials, such as plastics, aluminum and tube beam structures to keep the dead weight low.

The tank is of durable MDPE plastic. The filling point is placed at the edge for easy filling. The suction pipe to the pump is located in the bottom well, which is an advantage particularly on uneven and inclined terrain: plant protectant flow to the pump is not interrupted if the sprayer tilts. When the plant protectant remains in the bottom well, cavitation can be avoided as well as suction malfunctions which are hard to detect.

The drain valve is at the bottom of the bottom well, so the tank can be emptied completely.

The sprayer is attached to tractor with a freely moving drawbar. Tractor-sprayer inclination is not related.

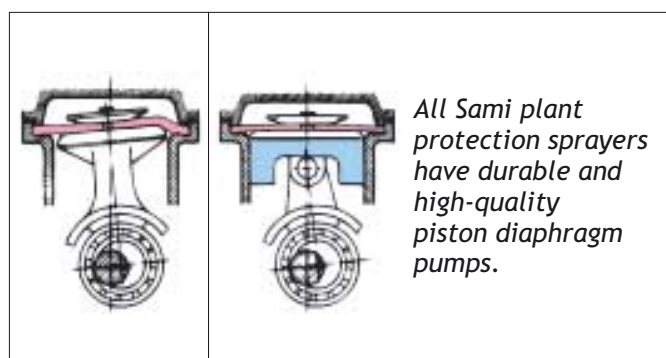
The body of the towed sprayer is articulated so that the center point of the sprayer turning circle is the same as that of the tractor, so the sprayer follows in turning without cutting corners. This advantage is most evident in row and potato cultivation, as well as in grain fields marked with a spraying line. The body articulation has a brake as standard supply, which adds stability particularly when transferring the machine.

The pump is placed in the body so that the cardan shaft angle does not change during turns.

The towed sprayer axles have been placed as far back as possible, so that even the empty sprayer has shaft weight. The large 44" tire keeps surface pressure low.

### PUMP

Our long experience as a sprayer manufacturer has shown that piston diaphragm pumps are more durable than ordinary diaphragm pumps. When the pressure is divided evenly on the diaphragm, it significantly adds to the pump life.





## VALVE SET

All Sami plant protection sprayers have a quadruple filtering system which efficiently cleans the liquid circulating in the sprayer. The first phase is coarse filtering, which takes place either in the filling port or in the suction device (accessory). The second phase, suction filtering, is after the tank on the suction side, before the pump. The third filtering is on the pressure side before the valve set in the self-cleaning pressure filter. The fourth filtering takes place in the block filters before the nozzles. The water is cleaned once

with coarse filtering. The suction and pressure filtering cleans the liquid continuously.

There are 6 options for the sprayer valve set. The basic functions of all models are the same:

- main cut-off valve
- outward relief valve
- self-cleaning pressure filter
- block valves
- balancing valve between blocks
- pressure regulation valve
- circulation needed for mixing in the tank
- pressure measurement



(1)



(2) (3)



(4)

(5)



From manual regulation to automatic drive

(6)

(7)

(8)



(9)



### Ekoline (1)

The Ekoline valve set is a basic mechanic 3-block valve set with a liquid-damped pressure gauge.

### Ergo (2)

An electrically controlled valve set includes Ekoline features and:

- electric-controlled main valve
- electric-controlled pressure gauge
- electric controller (3) in the tractor cabin to control the aforementioned valves

### Elektro (4)

An electrically controlled valve set includes Ekoline features and:

- electric-controlled main valve
- electric-controlled pressure valve
- electric-controlled block valves (electric controller (5) in the tractor cabin to control the aforementioned valves)
- pressure gauge in sprayer valve set

Elektro is available with 3 and 5 blocks

### Elektro with a digital pressure gauge (6)

The Elektro valve set is available also with a controller with a digital pressure gauge (7) in the tractor cabin. The valve set is available with 3 and 5 blocks.

### Bravo 180 (8)

Spraying monitor(9) includes Elektro features and:

- a flow meter which keeps the liquid quantity to within the set value despite driving speed changes
- a spraying display showing:
  - switches for foam marker and wash nozzles
  - the surface area driven
  - l/ha liquid amount
  - sprayed liquid quantity in liters
  - driving speed in km/h
  - pressure
  - nozzle size used
  - tank filling level
  - elapsed spraying time
  - transfer drive travel

## PLANT PROTECTION SPRAYERS

### BOOM SET AND NOZZLES

You can select either a mechanical or a hydraulic boom set for the SAMI plant protection sprayer. In the hydraulic boom set you can also select either a light-weight boom set suitable for lifting device sprayers, or a wide boom set for large areas and contracting. The wide (18-21 m) hydraulic boom sets are recommended for use only with a towed sprayer with a front tank (2300 +500 liters).

#### Mechanical boom set 12 m

The mechanical boom set is inexpensive and it's structure is light, sturdy and reliable. The boom set can be folded together mechanically. It also has a launching device which slants the boom upwards and backwards at it's base if hitting an obstacle.

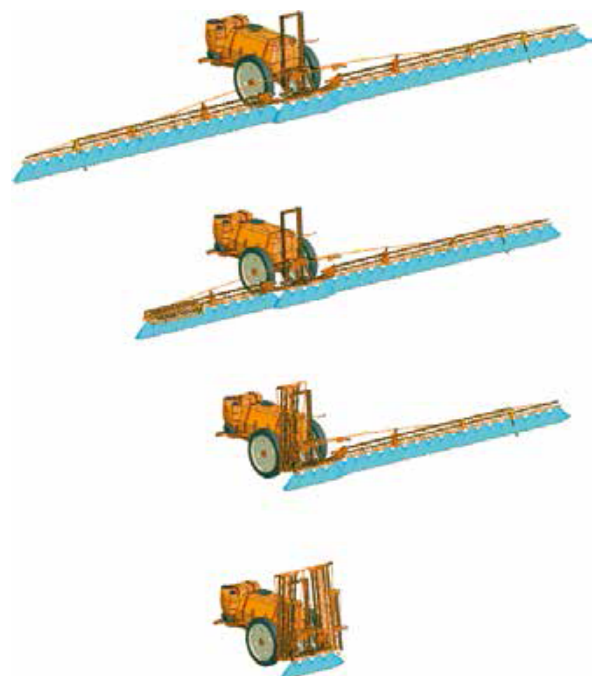
#### Hydraulic Triangle boom sets 12,15,16 m

The triple frame structure of the hydraulic boom set makes the boom set stiffer and protects the nozzles. The nozzles are in the sturdy upper beam of the boom set. The strong lower frame prevents the nozzles from being damaged. Thanks to the open structure changing the nozzles is easy, though.

Boom set sections can be divided according to customers' wishes. A divided boom set can be used to spray with less than full working width. This is a great advantage if the spraying area has obstacles, such as large rocks or poles. A part of the boom set can be folded before the obstacle and spraying is continued with the other parts of the boom set while passing. The boom set can be folded hydraulically.

The hydraulic boom sets always include a hydraulic boom lift and stabilizer. The stabilizer includes suspended one-point suspension. The high suspension point, shock absorption and versatile adjustments of the stabilizer make boom set control easy. The hydraulic lift can easily reach the correct spraying distance from the plants.

The boom set has a launching device if an obstacle is hit. At hitting the most extended part of the boom set folds upwards and the rest folds upwards and backwards.



Several different size nozzles for different uses are available for the SAMI sprayer. The boom set has blue fan nozzles as standard. A triple nozzle and different air-operated nozzles are available as accessories.



# Greater efficiency and practicability

## EXTENSIVE ACCESSORY SELECTION

### Foam marker

- an electrical compressor mixes air and marker fluid into foam in the nozzle.

### Electrical boom set tilting cylinder

- helps the stabilizer to balance the boom set to the desired angle in relation to the horizon

### Wash nozzle

- eases tank cleaning

### Manual spraying bar

- you can spray areas you cannot reach with a sprayer manually, e.g. spaces between A poles

### Suction device

- the suction device draws water efficiently into the tank with a pump

### Mechanical boom lift and stabilizer

- accessory for a mechanical boom set

### Hydraulic boom set lift and stabilizer

- accessory for mechanical boom set
- it works with tractor hydraulics

### Chemical filling device

- fits lift device model 1300 and the towed sprayer
- an active substance can be added into the tank safely from waist height
- mixing the active substance is more efficient and faster
- the device can be used to rinse empty active substance canisters

### Rinsing tank, 130 liters

- suitable for lift device sprayers
- can be used to rinse the main tank on the field

### Additional tank, 500 liters

- fits in the towed 2300-sprayer
- for transporting clean water, so the main tank can be cleaned or filled
- can be used also as a plant protectant tank



Foam marker



Boom set tilt cylinder



Wash nozzle



500-liter additional tank



Chemical filling device

# PLANT PROTECTION SPRAYERS

## Technical specifications

Model	3/900/12 /12H	4/900/12 /12H /15H /16H	4/1300/12H /15H /16H	6/1300/12H /15H /16H	6/2300/12H /15H /16H
Tank volume (l)	900	90	1300	1300	2300
Pump yield (l/min)	106	141	141	197	197
No. of pump diaphragms	3	4	4	6	6
Working pressure (max bar)	15	15	15	15	15
Boom set width (m)	12	12/15/16	12/15/16	12/15/16	12/15/16
No. of nozzles	24	24/30/32	24/30/32	24/30/32	24/30/32
Boom folding	mechanical	hydraulic	hydraulic	hydraulic	hydraulic
Launching device	mechanical in all models, the boom set bends backwards and up				
Tires	-	-	-	-	9.5x44"
13.6x38"					13,6x38"



Manufacturing

Sales



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