Seeder SEM100 & SEM200

The SEEDER mod. SEM100 or 200 is a semiautomatic nursery machine for seeding seeds in honeycomb plastic or polystyrene trays.

One staff member required to operate machine, the same operator would be responsible for loading and unloading seed trays and supervising the seeding operations.

SEM200 in concept it is identical to the SEM100 but different, as the seeding takes place on the longest side of the tray and not on the shortest side as happens in the SEM100 seeder.
This increases the production rate because the SEM200 sows into more cells each cycle.

Operating Cycle

Once the machine is suitably adjusted the trays are filled of substrate, then placed onto the support sliding table which is moved forward manually to the starting position.

- A dibbling bar makes a conic shaped hole into the media substrate to facilitate the centring of seeds.
- The nozzles on the sowing bar pick up the seed from the seed hopper and drop it through the holes, over the dropping tubes.
- By means of the plastic dropping tubes, the seed is laid down into the conic shaped hole.
- The tray is then automatically indexed forwards to each new row of cells.

The cycle terminates automatically when the entire tray has transited under the seed tubes where all the cells have been supplied with seeds.

The following manual operations must be performed by the operator:

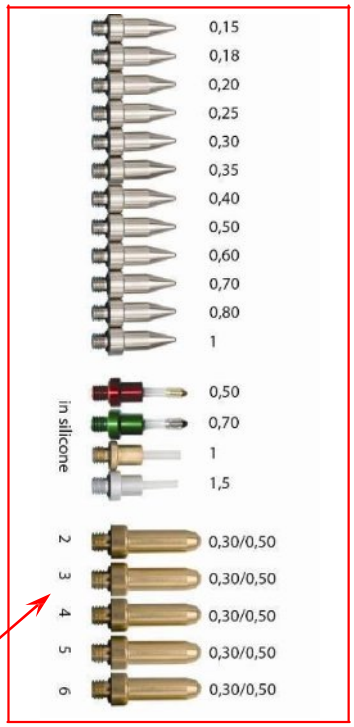
- loading of trays on the machine sliding frame
- unloading of the seeded trays from the sliding frame
- maintenance operations
- loading the seeds

The nozzles to be fitted to the bar must have a hole diameter suitable for the seed you wish to use (refer to the following table). At the start of each cycle with a different type of seed the bar must be equipped with the correct nozzles.

Correspondence between nozzle diameter and seed type

nº nozzle hole	Seed type
0,18	petunia, tobacco, celery, etc.
0,25	violet, primerose, mint, lettuce, etc.
0,30	basil, endive, radicchio (chicory), tomato
0,40	cabbage, onion, gladiolus, cyclamen, eggplant, pepper
0,50 silicon	Φ 1-2 mm pellet
0,60	water melon, melon, etc.
0,70 silicon	Φ 2-3 mm pellet
1,0 silicon	Φ 3-4 mm pellet

N.B.: The table alongside is purely guideline because the type of nozzle to use may vary with the level of suction.



Sucking out left over seeds after seeding operation completed.

TECHNICAL DATA

	SEM 100	SEM200
Dimensions (max. length x width x height)	1380 x 670 x 1210 mm	970 x 793 x 1210 mm
Working pressure	4,5 ÷ 6 bar	
Air consumption	50 ÷ 100 Nl / min.	50 ÷ 150 Nl / min.
Minimum power of compressor to supply compressed air:	1,8 kW	
Weight	70 kg	70 kg
Max. seed tray dimensions (max. length x width x height)	400 x 600 x 120 (max.) mm	
Max. sowing rate	30 rows / minute	
Time of average cycle for sowing one row in a tray	1,5 sec. (excluding idle times for tray loading / unloading)	
Noise level	< 70dB (A)	
Seed requirements	Dry and clean	
Accessories	• a suction unit for removal of seed from tray at the end of operation • a wrench for adjustments	
Ambient working temperature range	+10°C to +40°C	

CE nameplate
Machine model SEM100 and 200 is designed and built in compliance with the European Council Machinery Directive 2006/42/CE and therefore has all the requisites for application of the CE mark.

The machine is equipped with protective devices and guards to ensure the safety of the operator.

A comprehensive manual is supplied with the machine.