Airmix

Creating cooler and drier air during the blackout period in the greenhouse.



The purpose of the Airmix system is to facilitate adequate ventilation and dehumidification in greenhouses with shading screens while the screening fabric is fully rolled out. The Airmix draws in air from above the screen and expels it into the cultivation area below. As the Airmix can also be used as a horizontal circulation system it is, in fact, multifunctional. This enables the system to provide 'controlled' ventilation, and means that, under cold weather conditions, it is no longer necessary to create a gap in the screen to allow moisture and/or heat to be discharged outside. Creating a gap in the screen can cause considerable differences in temperature and will also result in a substantial loss of energy.

The Airmix is equipped with the same sort of fan that is used in horizontal circulation systems. A suction unit with twin valves is attached to the input section of the fan. This enables the air to be drawn in from below as well as above the screen. When the valves are closed, the Airmix draws in air from beneath the screen, operating just as a conventional horizontal circulation system does. When the valves are open, the fan does not draw air out of the greenhouse itself, but from the area above the screen. This way, the Airmix functions as a ventilation system.

Applicable with screen installation

The system can be applied to both single and double screening systems. What makes this system so unique is the fact that the valves can be controlled by a climate computer, ensuring precisely the right amount of air beneath as well as above the screen. The system also allows air from above to be mixed with air from below. Regulation of the air can be based on relative humidity as well as temperature. The greatest added value lies in the fact that all of this can be done with a fully closed screen, to create an optimum climate while saving energy.

Climate control

The amount of air drawn in from above the screen by the valves has no adverse effect on the horizontal circulation of air. Cold air from above the screen is quickly heated by the greenhouse's own heat buffer at the top of the greenhouse. As a result, the crops will not be affected by the air drawn into the greenhouse.

Technical specifications

- 4-pole motor, 230 V50 Hz

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- 1380 rpm
- 0,38 kW / 1.7 A
- circulation capacity 5800 m³/h
- ventilation capacity Airmix 5200 m³/h, depending on the pressure differences
- IP54, THCL 155, and thermal overload protection
- plastic fan housing (high-quality composite)
- aerodynamically designed fan blades
- air outlet grille
- 5 m cord, plus earthed plug (type F)
- ERP in accordance with 2015

Air valve control

- linear drive with rack and pinion
- 24 V AC 50/60 Hz. 24 V DC, 1.5 W
- working range AC/DC 19.2 28.8 V
- runtime 116 sec
- IP54
- positioning force 150 N
- 5 m cord 3 × 0.75 mm² plug not included

Suction unit

- construction aluminium sheet 3 mm
- white coated
- 2 air valves-coupled
- double-connected assembly

Example of how the Airmix operates

