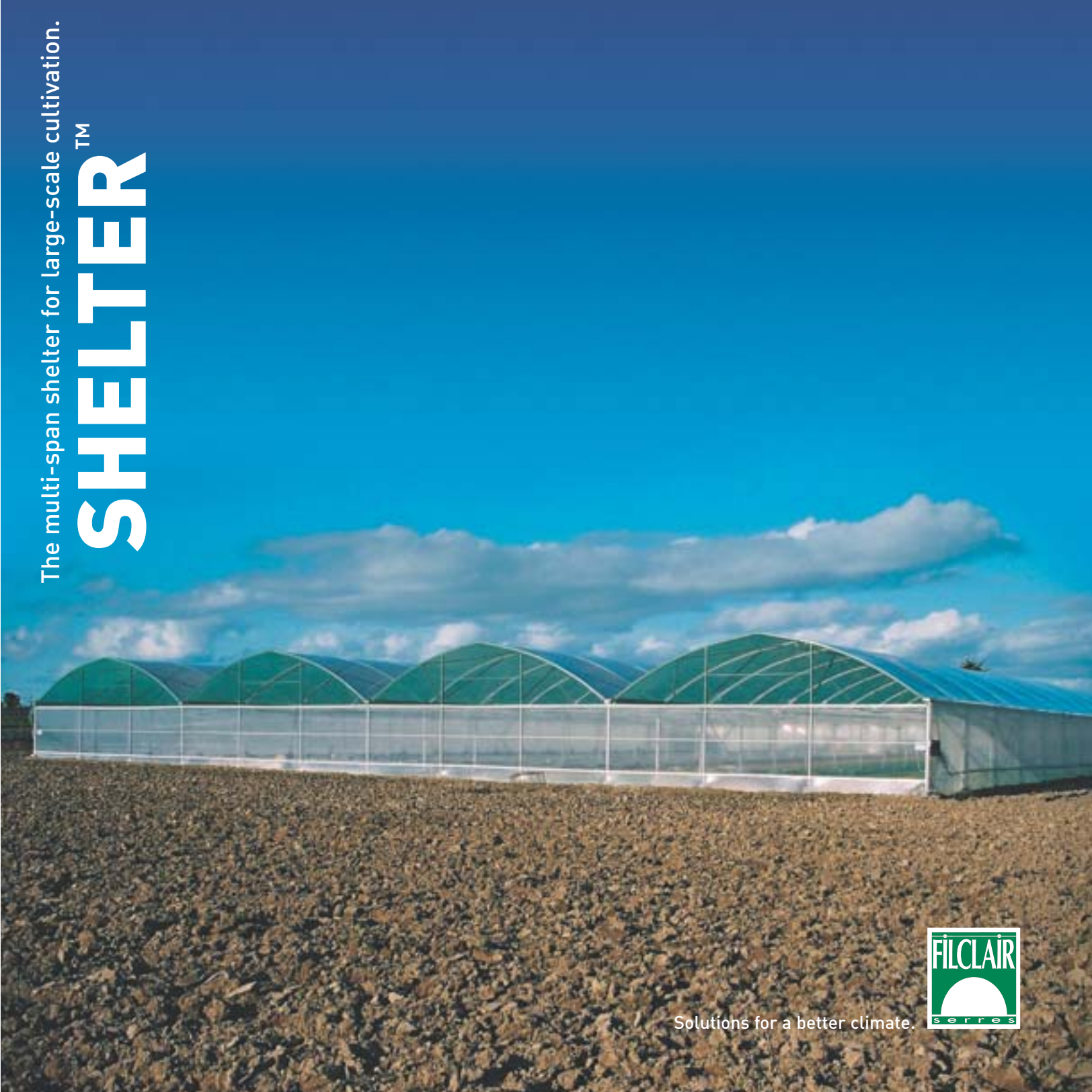


The multi-span shelter for large-scale cultivation.

SHELTER™



Solutions for a better climate.





The Shelter™ Spirit

Shelter™ is the obvious solution for creating a controlled, uniform climate for crop production on land blocks of 1000 to 7000 m².

- **Work mechanization**

- Clearance height of 2.50 m
- Full frontal access

- **Multi-span volume and space**

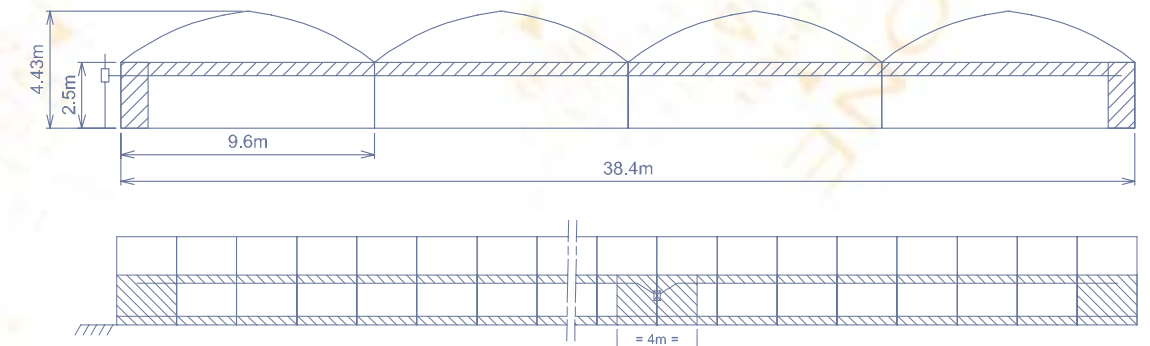
- Optimization of land use
- Minimized border effect
- Large working area
- Ease of maintenance

- **Environmentally friendly**

- Collection of rainwater
- Lower ratio of film / m² of covered area to be installed and recycled compared with tunnels
- Installation and energy consumption gains

- **Uniform, controlled climate**

- Large volume
- Sweeping ventilation
- Quality, homogeneity and productivity of cultivation raised to highest levels





Using DPS technology with a spacing of 3.00/2.50/2.00 meters: DPS is a complete portal frame consisting of a reinforced arch directly connected to poles by a one-piece post head.



Using Quick - Foundation™ anchoring with quick telescopic assembly capabilities: SHELTER™ removes the need for heavy machinery in parcels and concrete foundations, respecting the integrity of the land.



Single or double inflatable layer covering. In its single layer version, the tensioning technology with double inverted curve perfectly holds the film in place, allowing very easy installation.



Sweeping ventilation via continuous lateral circulation on gable ends and sides. SHELTER™ may be opened all along its perimeter to provide an extremely effective transfer surface.



Each attachment component for the film is made with Aluclair™

- Single Aluclair™ clip
- Triple Aluclair™ clip
- Aluclair™ roll-on tube

The obvious solution

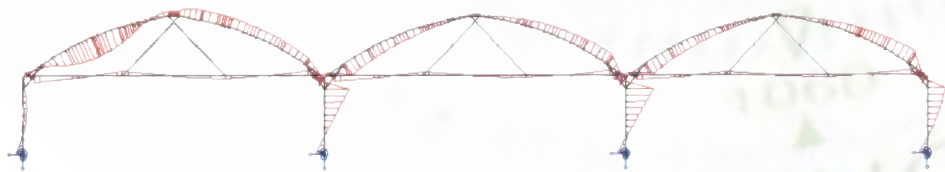


The framework components are made exclusively with the best galvanized steels (European standard EN- 10147).

Each Shelter™ structure meets the "Snow and Wind" stability requirements of your production site.

Regardless of the density of the structure's latticework, Shelter™ forms a homogenous and coherent assembly, calculated and manufactured for each individual set of specifications.

The structures comply with the most demanding standards (EN-13031-1). CAD software performs the integral calculus in order to optimize each element.



Bending moments: leeward with overpressure (Shelter™ Structure)



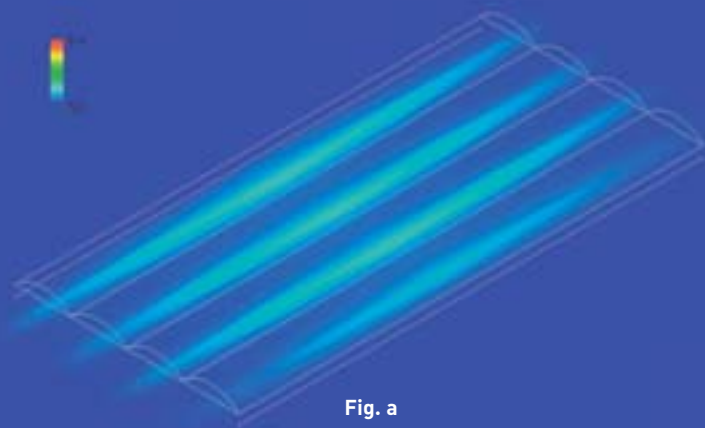


Fig. a

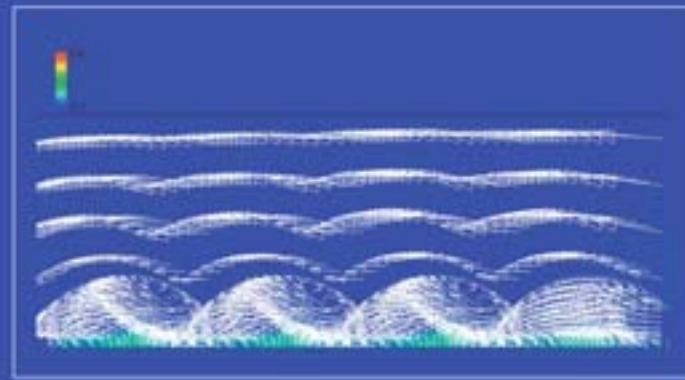


Fig. b

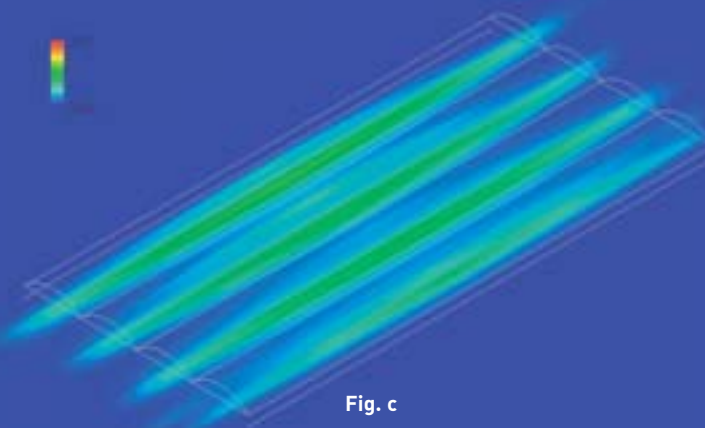


Fig. c

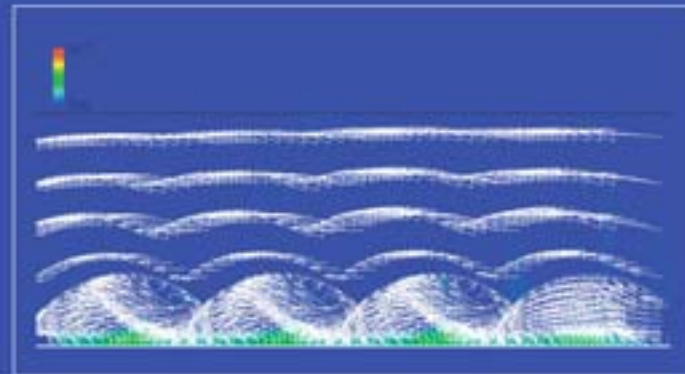


Fig. d



The homogenous solution

The reliability and productivity of cultivation depend on the quality of the implemented climate control solutions.

- **Light**

Choice of DPS structure provides the maximum light: SHELTER™ is remarkable for its luminosity.

- **Relative humidity and temperature**

The airflow forms a dynamic system that Filclair, partnership with the PSH Unit at INRA, models using fluid mechanics software. The aerodynamic profiles of the structures, as well as the position and geometry of the vent panels, have a direct influence on the relative humidity and temperature in the greenhouse.

- **Ventilation**

Sweeping ventilation, which is identical in nature to the ventilation of open field crops, provides extremely uniform climatic control with strikingly limited gradients.

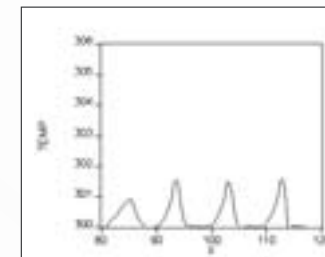


Fig. b'

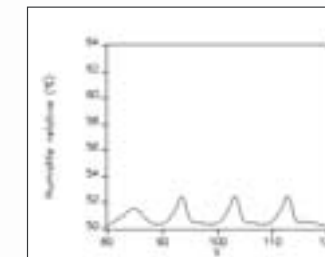


Fig. d'

Fig.a : Humidity field (horizontal section at 0.5 m) in %





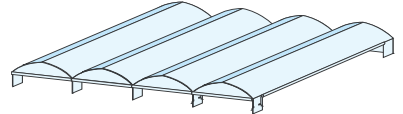
Fig.b,b': Vertical section of relative humidity field (vertical section) in %

Fig.c : Temperature field (horizontal section at 0.5 m) in °K

Fig.d,d': Vertical section of temperature field (vertical section) in °K

Environmental conditions
 Temperature: 27 °C
 Radiation: 690 W/m²
 Wind: 2.5 m/s
 Humidity: 50 %
 Cultivation: height of 1 m

TECHNICAL solutions

Model	SHELTER™ SERIE
 Ground width	9.60
 Height beneath gutter	2.50
 Ridge height	4.43
 Spacing	3.00 / 2.50 / 2.00
Gable Ends and Roof Edges  Complete opening (height 2.50 m) by rolling (along gable ends and roof edges) Sliding service door 3.00 / 2.50 / 2.00 Standard swing-type door Option: fixed gable end	

Distributor

Solutions for a better climate.



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