



POLY GREENHOUSES





>>> The RICHEL Group

The RICHEL Group was created in 1964 and has been a family-run business for 3 generations.

For more than 50 years, we have been the French specialists and European leader in the manufacture of plastic-covered greenhouses.

Our know-how has also enabled us to grow in other business areas that have become essential for the Group:

- The manufacture of VENLO glass greenhouses since 2004
- The development of storage solutions through our SHELTERALL® range

Every day, 230 employees help carry out some 500 projects a year, in France and throughout the world. 50 project managers and technical supervisors, based in all 5 continents, support our customers, providing advice on their projects.

As a supplier of turnkey agronomic solutions, we are committed to building lasting relationships with our customers.
Quality, innovation and meeting deadlines for a long-term partnership.



Our subsidiary, RicHEL Equipment, located in the French city of Angers, has been a specialist in equipment for crop production for over 30 years. We offer our customers comprehensive equipped-greenhouse solutions, meeting their climate control, water and energy management needs.



- >>> Present in 80 countries
- >>> 2 production sites in France
- >>> 10,000 ha built
- >>> 15 sales offices throughout the world



Our production plant, based in the South of France in Eygallières, is a high-tech manufacturing facility with a production capacity of 350 hectares and 25,000 metric tons of steel per year.



>>> Our TECHNOLOGY dedicated to YOUR AGRONOMIC REQUIREMENTS

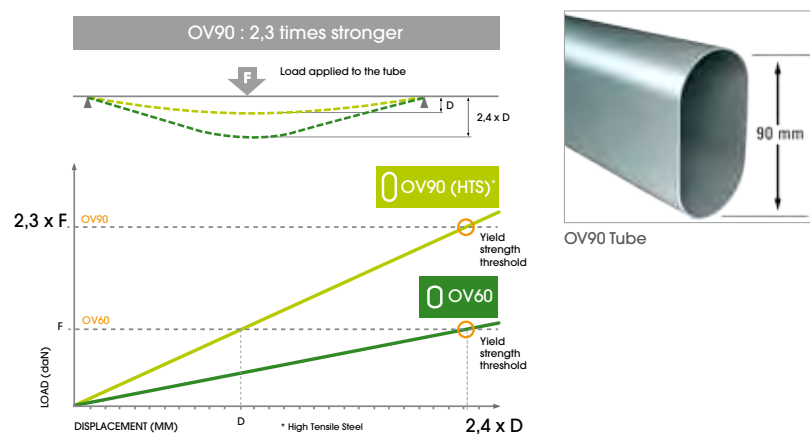


QUALITY THAT STANDS THE TEST OF TIME

> OV90

To combine strength and volume, we have developed the OV90 tube. Made of High Tensile Steel (HTS), the OV90 tube's inertia is more than twice that of the 60 mm ovalised tube made of conventional quality steel.

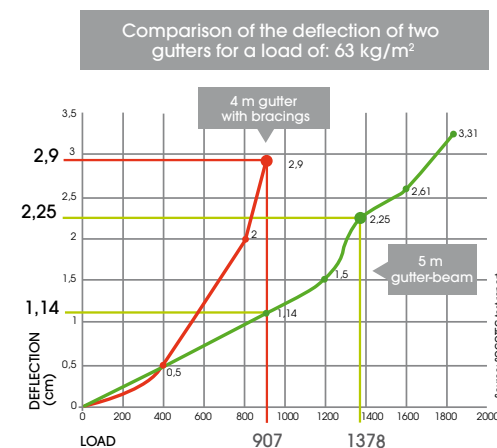
For optimised light and volume.



> GUTTER-BEAM

For **greater resistance to snow loads**.

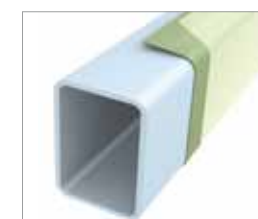
We have created the gutter-beam, with a 5 m span (European patent). For the same snow load, deflection is approximately 25 % less than for a 4 m gutter with braces (SOCOTEC report No. 91/1579 dated 30/05/91).



Gutter-Beam

> COATED TUBE

The coat of varnish applied during the manufacture of our rectangular tubes provides more than twice the protection of a standard tube with Sendzimir Z275 galvanisation (CETIM test, November 2007).



Coated tube

Additional guaranteed protection against white rust between delivery and assembly.

> ASSEMBLY

Our attachments and connecting parts are designed and sized with the utmost care, and subject to rigorous testing in real conditions.

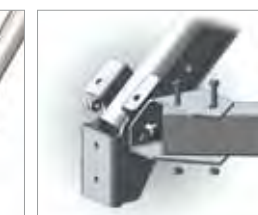
The **quality of the assemblies** is essential to the **structure's resistance to snow and wind stress**.



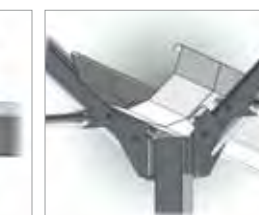
Bracing attachment on arch



Bracing attachment on post



Bracing attachment on gable

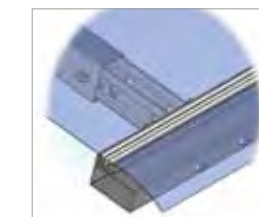


Posthead

> FILM TENSION

We have created a system for on-demand control of the covering film tension.

For **excellent film resistance over time**.



Film tension

> STANDARDS

All Richel greenhouses are meticulously designed by our Design Office, in line with the highest requirements.





>>> An AGRONOMIC APPROACH

IMPROVING LIGHT TRANSMISSION

Thanks to streamlined arches, spans of 2.5 to 4 m, combined with our films quality, **our greenhouses are the brightest on the market**. Their Gothic form (27°C) allows **maximum penetration of light**.

When there is not enough natural light, **assimilation lighting** provides crops with the extra brightness needed for growth (High Pressure Sodium (HPS) lamps and LED lighting).

TAILORED NUTRITION

Consistency and **control of the intake of nutrients** are key to **effective nutrition**.

We design the **ferti-irrigation system** to suit your project, in line with your specifications.

Ferti-irrigation units composed of a fertilizer injector station and a fertilizer solution distribution system.



>>> An AGRONOMIC APPROACH

Our systems adapt to suit the needs of **your crops!**



AN OPTIMUM CLIMATE

> Better insulation

The **double inflated film**, created by Richel in 1978 provides heat insulation (**30% energy savings**). The shape and size of our sections and vents guarantee better sealing.



Vent base seals

> Volume

The towering heights under the gutter and the accentuated Gothic form of bays up to 16 m in width provide more volume per covered square metre, while ensuring a **more stable** and easily **controllable climate**.

> Uniform temperatures

Climate control facilitates crop management.

It is an essential driver for the leaf-fruit ratio. Our heat engineers design effective systems to meet your requirements: **controlling the climate in your greenhouse** and **reducing the impact of heat fluctuations**.

> Tailored ventilation

The range, quality and position of our vents guarantee better ventilation.



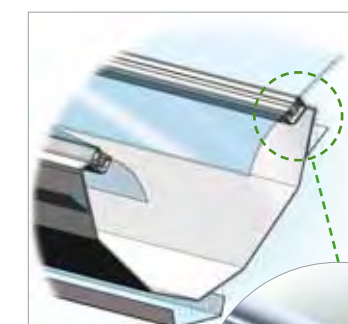
Vents

HUMIDITY CONTROL

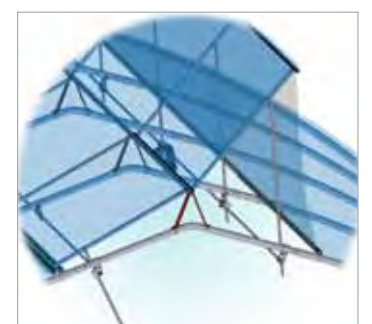
Humidity and condensation are kept under control in our greenhouses. We design **our own profiles**, integrating the attachment of films and insect-proof systems, as well as condensation collection systems. Thus, in our greenhouses, dripping is largely controlled.

The moisture level can also be adjusted via our equipment:

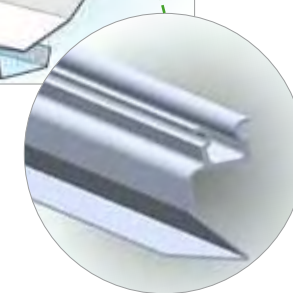
- Dehumidifying solutions
- High/Low pressure FOG systems
- PAD & FAN cooling systems
- Recirculation of air



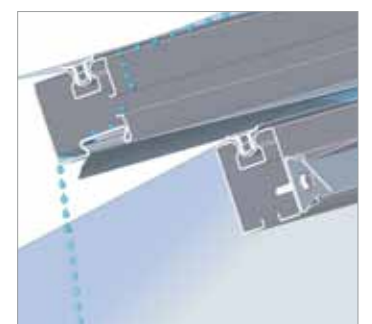
Condensation collection gutter



Ridge raising



Clip with integrated condensation collection



Clip profiles



>>> An AGRONOMIC APPROACH

AN ECO-FRIENDLY APPROACH

Our approach takes the environment into account **by saving, storing and optimising water: rainwater collection and UV treatment.**

Our equipped-greenhouse solutions are designed taking the **reduction of energy consumption** into account in its entirety.

Equipped with insect-proof nets, our greenhouses offer protection against pests, therefore reducing the need for pesticides.

CO₂, an essential nutrient for photosynthesis, is redirected to the core of the greenhouse to be directly assimilated by the plants.



>>> Our RANGE



THE **FIRST** SEMI-CLOSED GREENHOUSE WITH **PLASTIC COVERING**

A new generation of greenhouses for a perfectly-controlled climate.



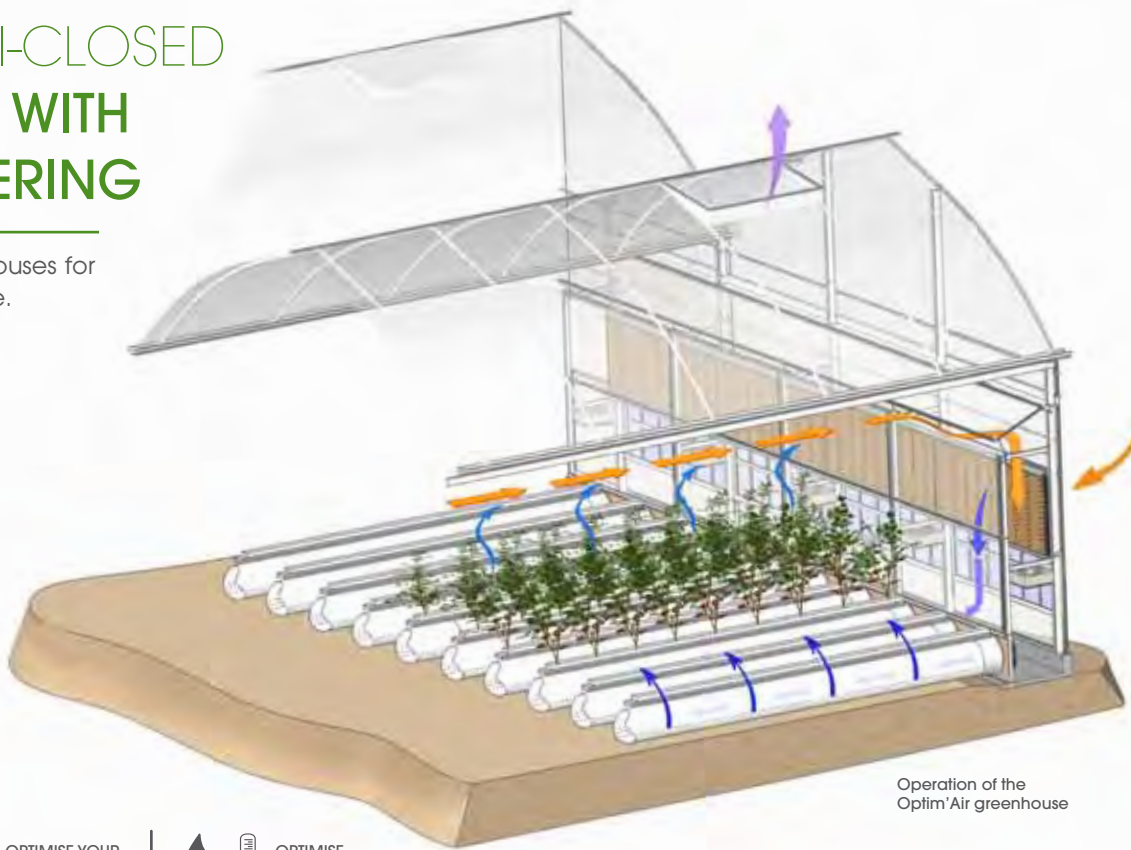
OPTIMISE YOUR PRODUCTIVITY



OPTIMISE YOUR INTEGRATED PEST MANAGEMENT



OPTIMISE YOUR CLIMATE



Operation of the Optim'Air greenhouse

		6,20 m	8 m	8,50 m	9,30 m	9,60 m	12,80 m	16 m
	Round tunnels*	✓	✓	✓	✓			
	Straight-sided tunnels*					✓		
	Multispan		✓			✓	✓	✓
	Optim'Air		✓			✓	✓	✓
	Technical hall		✓			✓	✓	✓

*Connected tunnels option



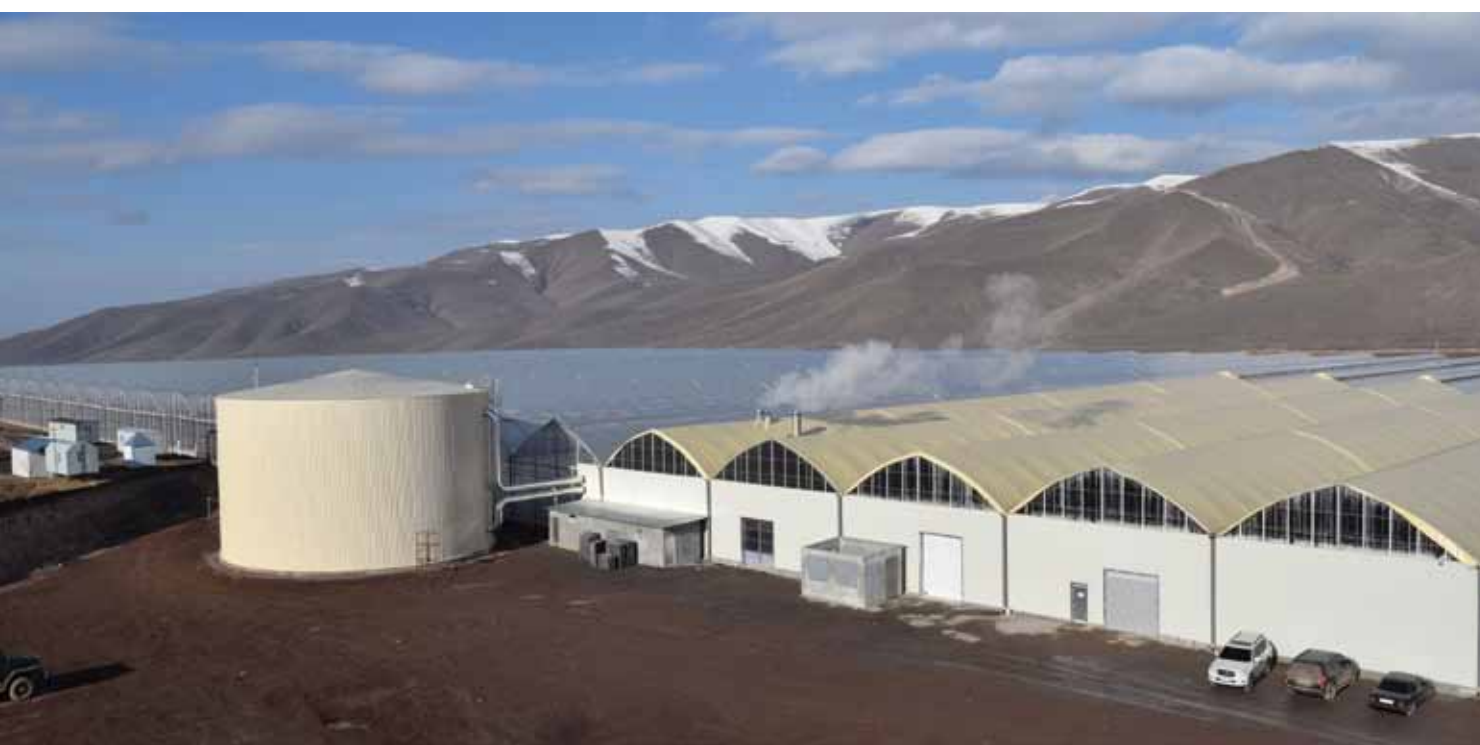
Drip irrigation



Corridor



Duct



>>> TURNKEY PROJECTS

FROM GREENHOUSES TO EQUIPMENTS

Equipped with our own unique and integrated centre of expertise, we are involved in every stage of your project, from design to completion. Specialising in greenhouses, growing and climate systems thanks to our subsidiary, Richel Equipment, we ensure that your project runs smoothly.

ASSEMBLY AND SAFETY

For 20 years, we have been investing in finding solutions for the safe installation of plastic films. Our trolley guarantees safety for assemblers.

A **member of AXEMA**, the union of agricultural equipment manufacturers, we are working on greenhouses designed as per trade practices: design and insurance, in addition to layout and assembly standards in line with labour, operating and maintenance regulations.



