



LUMENEX™
ETFE

Covering for extreme
conditions

ABOUT US

BOAL SYSTEMS **GREENHOUSE ROOF SYSTEMS**

BOAL Systems offers an extensive range of aluminum deck and sidewall systems for high-tech glass and foil horticulture, as well as for the growing demand for horticultural solar solutions. We have established long-term cooperative relationships with our customer base of regional and global greenhouse construction companies. BOAL Systems has delivered more than 10,000 hectares of new greenhouses worldwide.

Our modular greenhouse systems can be equipped with fully integrated sustainable solutions such as climate screens, insect netting, insulation and ventilation systems. These are tailored to specific project requirements, size and complexity, as well as local geographic or climatic challenges such as earthquakes, extreme storms, heavy snow, hail or rainfall.

With a strong focus on partnership, engineering and R&D, BOAL Systems is at the forefront of high-tech indoor growing with superior technical capabilities and improved light transmission. It enables growers to achieve optimal yields with minimal resources.



BOAL F-CLEAN® ETFE GREENHOUSE ROOF SYSTEM

THE ETFE GREENHOUSE ROOF SYSTEM FOR EXTREME CIRCUMSTANCES

For locations where system aging due to UV radiation, contamination or mechanical stress, such as earthquakes, must be considered, our innovative ETFE Venlo greenhouse roof system is the ideal solution. The use of this F-Clean® brand material in our Venlo greenhouse roof system ensures high UV light transmission. The film itself is self-cleaning and has unsurpassed resistance to aging and unexpected external forces.

The BOAL greenhouse roofing system, suitable for integration of ETFE film, has been developed in collaboration with AGC Green-Tech with special attention to sustainability and ease of construction.

As a result of this collaboration, the highly translucent F-Clean® roofing material integrates extremely well with our high-tech Lumenex™ Venlo greenhouse roofing system.

TECHNICAL DATA

Our ETFE greenhouse roofing solution is ideal for areas with extreme geographic and climatic challenges. Thanks to the extremely slim aluminum greenhouse profiles combined with the well tensioned ETFE, you are guaranteed high light transmission of up to 94%.

The Venlo ETFE system is designed for greenhouse configurations with a section size of 4.80 meters and sections up to 5.00 meters. The specially designed sleek greenhouse profiles provide a robust greenhouse roof solution into which you can efficiently integrate and enclose the stretched ETFE to create a protected growing environment quickly and safely. Anywhere in the world!

The system is made based on the membrane size of the film, which saves time in fixing and avoids unnecessary material loss.

The Lumenex™ Venlo greenhouse roof system suitable for ETFE foil integration is accurately calculated and tested for local load factors using specific TNO software. By producing according to certified quality processes ISO 9001, ISO 14001, OHSAS 18001 and CE, we guarantee the quality of the BOAL F-Clean® greenhouse cover solution.

For effortless integration of the ETFE foil into the BOAL F-Clean® foil greenhouse roof system, we recommend using our specially developed roofcart. It ensures a fast, safe and efficient installation.

ETFE GREENHOUSE ROOF SYSTEM

SAFE AND EFFICIENT INSTALLATION

THE BENEFITS AT A GLANCE

- Extremely sleek and robust greenhouse profiles
- Suitable for integrating and enclosing ETFE films such as the highly transparent F-Clean® cover material
- Extremely durable greenhouse solution for areas with extreme geographic and climatic challenges, thanks in part to large roof spans
- Safe and efficient installation using the special BOAL roof cart
- Reduced transport volume

THE PROPERTIES OF ETFE FILM, F-CLEAN

- Strong, flexible and highly transparent
- High self-healing and self-cleaning properties
- High UV resistance and permeability (UBV) up to 94%.
- Long service life up to 35 years



CULTIVATION

The Venlo ETFE system is extremely suitable for conditioned growing of vegetables and soft fruit*.

*See also the Wageningen University & Research (WUR) publication "The climate and risk resistant greenhouse the efte one greenhouse"