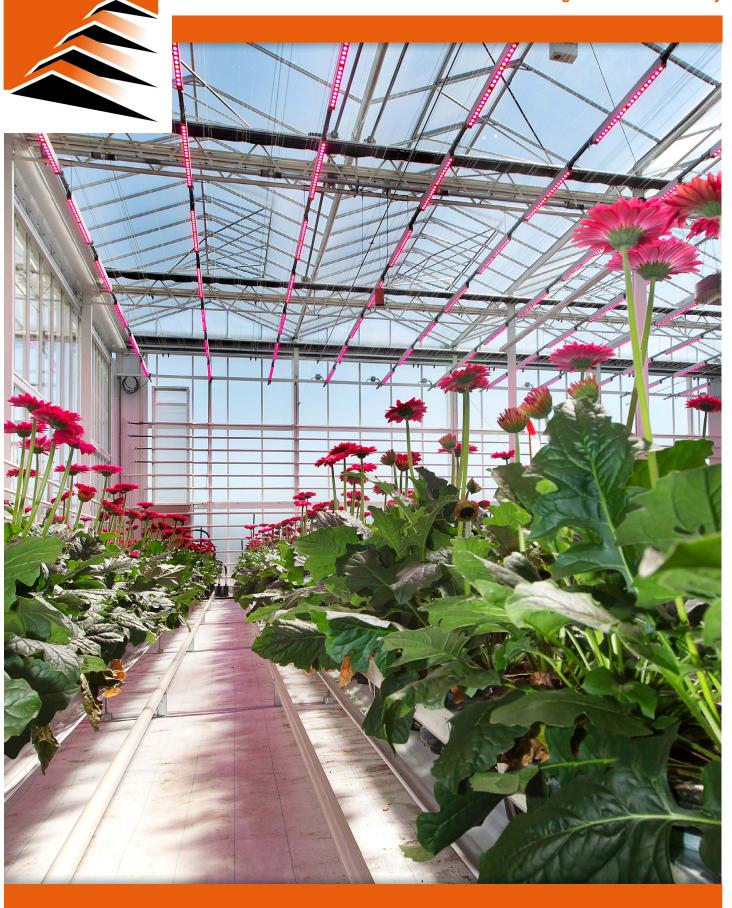


Greenhouse • Screening • Climate • Turnkey





## Introduction

Bom Group is one of the most innovative turnkey greenhouse construction companies in the modern horticulture. As renowned pioneering turnkey greenhouse builder for over 50 years, Bom Group has a wide project portfolio covering every climate zone. We are specialised in customised high-tech glass greenhouse projects across the globe, enabling growers and investors to grow their own fresh and sustainable vegetables, fruits, flowers and plants locally. Bom Group offers turnkey-services from conceptual-design to after-service and from A to Z. In the past 50 years Bom Group has grown to a world-leading greenhouse construction company with more than 1.000 projects across the globe.

Plants don't sleep, that is why we work day and night, for your growth!



## **Bom Group**

Bom Group was founded in 1966 as a greenhouse construction company, but soon expanded with the screening- and climate division. Our screening division was founded in 1977 and our climate division in 1983. Over the years our three divisions have been closely intertwisted and are able to realize large turnkey projects under the name: Bom Group. Bom Group is a leading turnkey partner which means that we are able of taking on, and realizing, an entire project from A to Z. Bom Group is besides horticultural architect also the developer, engineer, producer, advisor and constructor of the project.

## **Innovation**

Innovation has always been one of the most important pillars of our organisation. With an impressive portfolio of innovations, Bom Group is recognized as one of the founding fathers of the modern glass greenhouse industry. In 1982 we became worldwide famous with the introduction of the revolutionary aluminium gutter. The aluminium gutter (1982) was a ground-breaking innovation by Bom Group and is nowadays the standard gutter in greenhouse horticulture. Besides the aluminium gutter, Bom Group has a large innovation portfolio. We innovate based on developments in the market, climate, energy, crop, customer demand and many other factors.

#### **Portfolio**

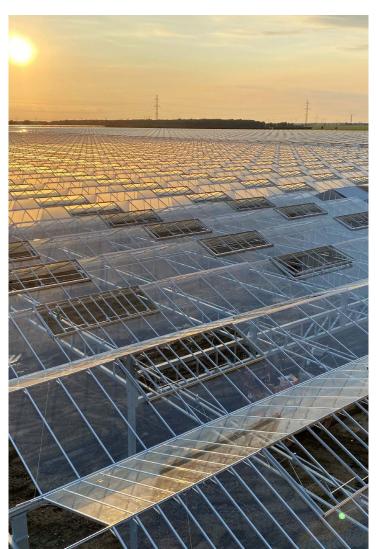
Bom Group has already over 65.000.000 m2 of worldwide experience and a proven track-record with efficient and highly profitable turnkey-projects across the globe. Besides our large scale turnkey projects we are also specialists in high-tech training facilities. Together with research institutions and (local) government we have built several state-of-the-art research facilities such as KAS2030, All-Climate-Greenhouse, Winterlight Greenhouse and The Water Saving Greenhouse. These Bom Group "specials" are investments in order to lift the whole horticultural sector to the next level and to achieve higher productions with lower costs, energy- and water consumptions!



#### Greenhouse

Bom Group (P.L.J. Bom) is the founder of the aluminium greenhouse system which is nowadays the standard in glass greenhouse horticulture. Bom Group is specialist in designing and producing high-tech customizes venloglass-greenhouses. The venlo-type greenhouse is most advanced greenhouse concept, in our organisation and worldwide. However, due to the fact that Bom Group has its own greenhouse design and production we have, over the years, further developed various variants based on client's wishes and to guarantee quality. This flexibility is needed in order to modify each greenhouse entirely to the local climate conditions. We use a number of greenhouse designs within our range, which function optimally, wherever they are used in the world.

Our range of greenhouses consist of Venlo-Greenhouses, Semi-Closed Greenhouses, Solar-Greenhouses, F-Clean Greenhouses and Cabriolet-Greenhouses. With these greenhouse-concepts we have a proven track-record and references in many climate-zones.





That we are flexible and always looking for ways to optimize our greenhouse systems is proven by the introduction of our Twinlight® column. The Twinlight® column is an open column which consist of less steel and enables the sun to shine through.

That we are greenhouse specialist was also noticed by the Wageningen University & Research and the World Horti Center. Together with the Wageningen University & Research we have built three state-of-the-art greenhouses that are used as high-tech training facilities by researchers and horticultural professors. Together with the Wageningen University & Research we have built the KAS2030, Water-Saving-Greenhouse and the Winterlight-Greenhouse. But our most sophisticated greenhouse is located in the World Horti Center. The All-Climate-Greenhouse is a state-of-the-art training facility that enables us to simulate every climate in the world. By doing research in the All-Climate-Greenhouse we can advise our worldwide customers even better!



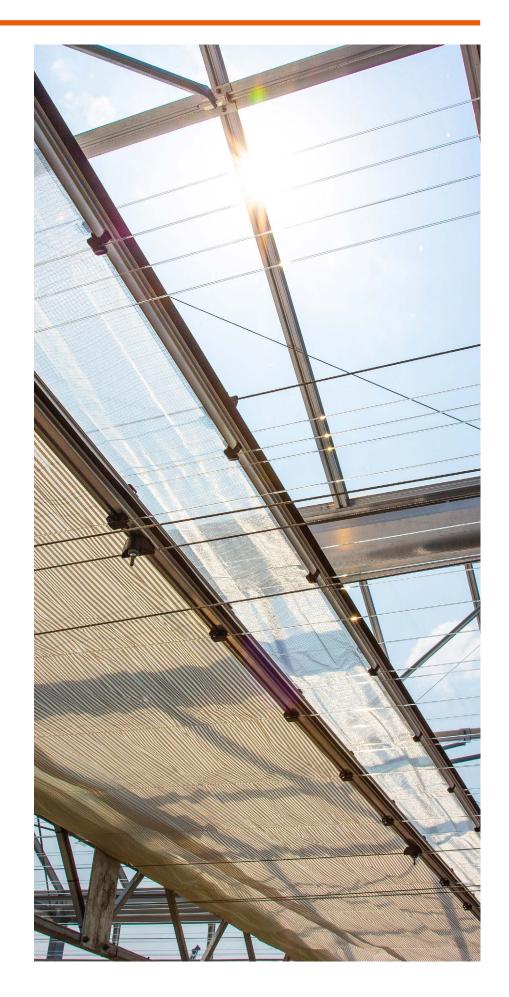
## Screening

Bom Group has an own screeningdivision which is already more than 45-years operational. We have been developing screen systems ourselves since 1979. This has resulted in our own ABS-slip system and own screen-profile. The ABS-slip system prevents skewing and ensures that the screen is always fully- and neatly folded. The result is a compact screen package with low-light interception. Our screening-installation is unique in the world and can handle up to 250.000 screen movements (official test-result). Our screening-installation is of the highest quality and is very user-friendly.

Screens are an very important factor to control the relative humidity, temperature and UV-radiation inside the greenhouse. By using screens, optimal (climate) conditions are created, resulting in even higher production in the greenhouse. In good consultation with our screening-department and our experts we provide custom-made screening advice based on crop, customer demand and of course (local) climate conditions.

Our screening system can easily be integrated in every greenhouse. Our range of screening-systems consist of: Horizontal-screens, Roll-up Gable-screens and Twinroll-screens. Besides the system we are also able to offer high-quality screens to make the system complete. We can offer energy-screens, light-screens, blackout-screens, and many more. Combinations of different screens are no problem as we can offer single-, double- or even triple-screening installations.

For installing the screen Bom Group has developed the ZIP-INN screening system. Our ZIP-INN system enables customers to easily instal-, and replace the screen at any given moment, even during cultivation-season.





#### **Climate**

Our climate-division is already more than 38-years operational, even though the climate-division is added last, yet it is one of the most important aspects in our greenhouses. The climate is constantly changing and that is why our climate-division is continuously, in cooperation with our R&D department, looking for ways to improve our systems. Where it used to be about heating the greenhouse, the climate possibilities of Bom Group are now endless, with: cooling-solutions, dehumidification-solutions and combined-solutions.

Bom Group has its own semi-closed greenhouse concept, namely: Air in Control. Our Air in Control system or Sunergy greenhouse 2.0 is the evolution of the Sunergy greenhouse which was developed in 2005. Back in 2005 Bom Group was one of the first to built a semi-closed greenhouse system. Nowadays we have a proven track-record and numerous references of Air In Control greenhouses. The system has been developed on the basis of air-circulation and air-treatment. Every climate system is unique and designed, developed and produced based on the location of the project and the local climate conditions. Our systems are always developed for the most efficient and sustainable use.





When Bom Group designs the climate system, we look at local sources to attach to our system. For example, we have projects that get their heat (partly) from waste-heat of a nearby factory or industrial area. Besides waste-heat we make us of geothermal-heat, electrical-heat or even biomass. Bom Group knows the possibilities and has a wide experience with systems based on fossil- and renewable fuels (boilers, CHP and residual heat), heat pumps, heat/cold storage and geothermal energy.

## **Turnkey**

Bom Group is a leading turnkey partner. Over the years, Bom Group has gained a lot of experience with turnkey end-to-end projects. We accompany the customer from the very beginning to the absolute end. In this process we can help the customer with feasibility studies, advice, cultivation guidance, on-site training, consultancy and after completion we stay connected to monitor his processes where necessary.

When it comes to a turnkey project, we work closely together with experts and partners in the sector but Bom Group remains main contractor of the project. It is our goal to completely unburden the customer. We arrange the entire process from A to Z.

Take for example our Low Carbon Farming project. Bom Group is main contractor of this 290.000 m2 project which is one of the most sustainable greenhouse projects in the United Kingdom. In this project we use waste-heat from a nearby water-treatment station to warm up the greenhouses. Low Carbon Farming is an overarching project consisting of three locations, namely: Place Farms 127.000 m2, Crown Point North 94.000 m2, Crown Point South 67.000 m2. In these greenhouses tomatoes, cucumbers and peppers will be grown, which will meet about 5% of the domestic demand.

Bom Group is the main contractor for this project, which means that in addition to greenhouse, screening, climate, water and electricity, we have also provided all utilities. The "new normal" demands complete end-to-end turnkey solutions and this project, Low Carbon Farming, can therefore be called turnkey "plus"!





# **Low Carbon Farming**

Country: United Kingdom Disciplines: Turnkey

Cultivation: Vegetables Size: 290.000 m2

Special features: This project make us of waste heat from a nearby sewer station to warm up the greenhouses. The project is one of the most sustainable projects in the United Kingdom. We have even made a documentary about this project:



## **Pure Green Farms**

Country: United States
Disciplines: Turnkey
Cultivation: Leafy-Greens
Size: 19.000 m2

Special features: This project is a semi-closed greenhouse with our Air-In-Control technology. The greenhouse is customized for growing full-automatic leafy-greens. The project is very user-friendly and achieves high production rates.



#### Hokuto

Country: Japan
Disciplines: Turnkey
Cultivation: Vegetables
Size: 18.000 m2

Special features: This project is customized to all (local) Japanese requirements and loads. This greenhouse is earthquake resistant and can withstand high wind- and snow loads. despite the heavy construction, high production numbers are still achieved.





# **Bom Group**

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