



# PRODUCE GREENHOUSE SOLUTIONS

We are the only North American-based full-service provider with in-house capabilities to design, build, manufacture and install greenhouses.

# EXPERTISE YOU CAN TRUST. CAPABILITIES YOU CAN COUNT ON.

Prospiant delivers the expert touch your business demands. With three legacy greenhouse companies including Rough Brothers, Nexus Greenhouse Systems, and ThermoEnergy Systems, united under the Prospiant name, we have unmatched greenhouse manufacturing, design, engineering\*, construction, and maintenance capabilities. Our end-to-end expertise is backed by more than 150 years of combined experience in the industry, so you can trust us to deliver the results you need. Don't settle for less. Choose Prospiant and leverage the power of true greenhouse expertise for your business.



## Proven Track Record of Success

- 10,000+ customers
- 3,000+ completed projects

## Powered by Qualified In-House Talent

- In-house engineering\* for all disciplines
- We work with P.E. Registered partners as required
- Extensive nationwide qualified installer network
- Qualified and experienced Project Managers OSHA 10/30 certified

\*We work with partners to ensure proper, compliant performance of engineering and design services.

## Local Manufacturing in North America

- Multiple manufacturing facilities across U.S. and Canada
- National Greenhouse Manufacturers Association member



# END-TO-END GREENHOUSE SOLUTIONS UNDER ONE ROOF

Your business is unique, and so are your greenhouse needs. At Prospiant, we get it. We offer a diverse range of products and services, including every type of greenhouse structure available on the market. With such extensive capabilities, we're confident we can provide you with the perfect solution.

But we don't just stop at the breadth of our offerings. We go beyond, customizing your greenhouse project to fit your specific needs. Prospiant doesn't just sell greenhouses—our team of experts works closely with you from start to finish to ensure your greenhouse performs at its absolute best.



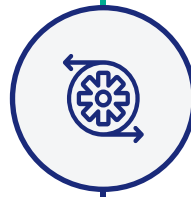
## DESIGN

- ✓ Design and Consultation Services
- ✓ In-house engineering\* for all disciplines
- ✓ Value Engineering\*



## BUILD

- ✓ Engineering\*
- ✓ Greenhouse & Indoor Grow
- ✓ Site Development



## INTEGRATE

- ✓ Control and Zoning Systems
- ✓ Automation and Growing Equipment
- ✓ Heating Systems



## OPERATE

- ✓ Operations and Maintenance
- ✓ Ongoing Support, Training, and Education

\*We work with partners to ensure proper, compliant performance of engineering and design services.

# DESIGN/BUILD SOLUTIONS

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What you plan to grow inside the greenhouse will dictate what you need—from the type of greenhouse structure to the growing equipment and integrated solutions.

Humidity, temperature, and light levels are key factors in the success of your produce cultivation. Different types of plants—vegetables and flowers—require specific growing environments to thrive. For produce growers, the height of the greenhouse structure plays an important role.



As greenhouses are designed with low insulation factor materials to achieve better light transmission, the outside climate directly impacts the interior of the greenhouse. Extreme temperature changes can lead to stunted growth and reduced fruiting for your plants. To protect the crop, you need a taller greenhouse with an air buffer and climate screens.

The air buffer will reduce temperature fluctuations in your greenhouse. The airspace also allows warm air to rise away from your plants and keep the temperature relatively balanced at the floor level. With proper venting equipment, you can create an optimal growing environment for your crop.

# THE VENLO

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Prospiant builds a dutch glasshouse style of greenhouse and the most common venting style we do is Venlo.

Venlo-style greenhouses are known for their diffuse glass roofs and high ceilings. They offer:

- Maximum light transmission at a lower cost per square foot compared to other glasshouses
- Energy efficiency due to shallow peaks
- Interior trusses for mounting light deprivation, shade curtains, and other equipment like light abatement and airflow fans
- High gutter heights to buffer temperature and humidity fluctuations

Prospiant can customize your cultivation environment to ensure the right greenhouse for your crops—with continuous, double continuous, and open roof options for the Venlo style.



A conventional greenhouse produces its environment through air exchanges. Exhaust fans pull the outside air through screens (sized for various pest control) and is cooled through cost efficient evaporative systems.

Semi-sealed greenhouses are expensive and are usually built in climates where both temperature and humidity are above the maximum thresholds for the given crop.

In a sealed greenhouse environment, the conditioned air within the space is recirculated and tempered to the model temperature and humidity levels as opposed to constantly conditioning outside air. The environmental system is closed, making pest management and pollen contamination easier to contain.

# SYSTEMS AND EQUIPMENT

## SYSTEMS INTEGRATION DELIVERS ULTIMATE CONTROL

Our in-house design and engineering experts consider factors such as crop, location, climate, production needs, and growing style to recommend an integrated greenhouse design to suit your unique needs. By seamlessly integrating automated systems, we enhance control and efficiency to help you optimize your climate, produce high-quality crops, and maximize your throughput and profits.



### Environmental Control

The environmental controller is the most important labor-saving and energy-efficiency tool in your greenhouse. It not only monitors and adjusts the growing conditions, but also ensures all integrated systems work together effectively to help you consistently maximize your production efficiency.

### Heating and Cooling

With today's higher energy costs, you need to maximize heating and cooling efficiency. Temperature also influences plant growth and development, making it a valuable production tool to manipulate for crop steering.

- Overhead heating
- Hot water/hydronic heating
- Boiler CO<sub>2</sub> recovery
- Fan/pad cooling
- High-pressure fogging



### Water Management

Effective irrigation and water management streamlines your operating costs, saves water, and boosts crop quality and yield. When selecting a watering system, it's important to match the delivery method to the needs of your plants and consider the potential impact on the greenhouse environment.

- Water recycling
- Prefiltration
- Water storage
- Fertigation
- Water Treatment (ozone, UV, pasteurizing, and filtration)



### Benching

A well-designed benching layout allows you to get the most out of your available space, resulting in increased productivity per square foot. Benching reduces the physical strain on workers and reduces the labor required for moving plants. It also facilitates better air circulation to improve plant health, particularly at the root zone.

- Rolling
- Stationary
- Palletized
- Flood trays
- Porous plastic
- And more

### Curtains

Curtain systems boost greenhouse efficiency by providing additional insulation or shade to help reduce energy costs. They assist with climate management and help facilitate light regulation and distribution to support healthy crop growth.



## Growing Gutters

Industry-standard growing gutters ensure equal lighting, spacing, and drip irrigation for crops. We make them on-site from high-quality coated steel to the design required by the growing medium, crop, and section span. These gutters support CO<sub>2</sub> dosing hoses, irrigation drip lines, and heating pipes. Growers can customize them with external or internal leachate systems.



## Supplemental Lighting

We design our systems to provide the levels of photosynthetically active radiation (PAR) to obtain the daily light integral (DLI) for your plants. We base our light plans on mounting style, light levels, and uniformity. By carefully analyzing the grow space, we can create a balanced and economical lighting solution to grow healthy plants with consistent yields.

- LED lighting
- HPS lighting

## Insect Screening

Minimizing insects inside a greenhouse is essential for all growing practices. Selecting the best type of screens for specific geographic locations help create a low pest environment.





# PROSPIANT

## EXPERIENCE THE POWER OF OUR EXPERT TEAM IN ACTION

Prospiant has a strong legacy, built on the foundation of three industry-leading brands, including Rough Brothers, Nexus Greenhouse Systems, and ThermoEnergy Solutions. With more than 150 years of combined expertise in greenhouse manufacturing, design, construction, and integration, our employees support customers in the commercial floriculture and nursery, retail, institutional, produce, and cannabis markets.

- ✓ Design and value engineer\* your project
- ✓ Build with local manufacturing and general contracting
- ✓ Integrate the perfect growing environment
- ✓ Operate your facility in optimum condition

*\*We work with partners to ensure proper, compliant performance of engineering and design services.*

### Contact us to purchase

(513) 242-0310

[sales@prospiant.com](mailto:sales@prospiant.com)

[www.prospiant.com](http://www.prospiant.com)

