The Venlo

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1. Introduction

Favored by many growers, the Venlo by Rough Brothers offers maximum light transmission with lower square foot costs than other glass houses. With tempered glass dry roof glazing, reglazing and maintenance are minimized.

2. Why Rough Brothers?

By working closely with you, we can help you select, construct and maintain the optimal structures and systems to meet your needs. Whether you are expanding your growing range, giving your garden center a fresh look or just starting out, Rough Brothers' experience is second to none; for over 71 years, we have provided the highest quality, best-crafted and most reliable greenhouses to the most successful growers and researchers in the industry. Rough Brothers is proud of our reputation for superior quality. Our people are a diverse group; backgrounds include engineers, educators, garden center managers, and growers, all working together to help you reach your dreams. From thermostats to computer-driven environmental controls or hand-watering to Ebb and Flo Benches, we can help you determine your needs.

3. Features

The structure can be designed to readily accept hanging baskets, displays, booms, echo systems, and other needed equipment. This truss has also been designed for use with heat retention and shading systems, reducing winter heat loss and summer heat gain for maximizing energy efficiency.

Roof vents are optional in the Venlo design, whether single vents or double vents are installed is up to you. Each zone utilizes just two motors, increasing efficiency while decreasing maintenance. Complete design specifications and structural details are available.

- Glass roof glazing provides maximum light transmission
- Low Maintenance Structure
- Natural or fan ventilation available
- Standard and custom widths available
- Available in various heights to accommodate your needs

4. Uses & Application

- Growers & Nursery Management
- Retail Garden Centers

5. Specifications

5.1. Available Widths

The standard widths of the venlo glass structures are 20' 6", 24' 0", 30' 9", 36' 0" and 41' 0" wide. Custom widths are always available.

5.2. Gutter Posts

Posts to be set directly into the concrete pier or on post stubs in the concrete pier. The pier size will be determined by loading requirements determined by engineering.

5.3. Post Top

A cast post top with an integral drip gutter support will bolt to the post and support the gutter saddle.

5.4. Gutter Saddle

A galvanized steel gutter saddle will be at each post to splice the gutter and to bolt to the post top.

5.5. Condensation Gutter

An aluminum extruded drip gutter is located under each gutter.

5.6. Downspouts

Cast aluminum downspout is used where downspouts are required. The hole in the gutter is predrilled for ease of installation of the downspout.

5.7. Gutter Extensions

There are many options in the gutter extensions depending on the situation:

1. Open ended to let the water run off the greenhouse
2. Welded end with no downspout
3. Welded in with a downspout

5.8. Bar Joists

At each interior post there will be a bar joist which shall span across the structure at 12' 0" centers. This not only substantially strengthens the structure, it also provides simplified installation of additional equipment such as:

- Hot Water Heating Systems
- Shade and Energy Curtains
- Watering Booms
- Hanging Basket Systems
- Monorails

5.9. Roof Bars

Aluminum extruded roof bars with a condensate clip to channel the condensate from the roof bar to the gutter and into the drip gutter is included. The roof bars allow for a "dry glazed" system with no putty or caulk in the glazing system.

5.10. Roof Glazing Options

- 4mm tempered glass
- 16mm acrylic

5.11. Ventilation

- Standard venting provides 15% roof ventilation capability with roof vents located on alternating slopes down length of each house.
- "Double" venting provides 30% roof ventilation capability with roof vents located on alternating slopes down length of each house, but twice as many.
- Continuous roof vents on one side of the slope or both sides of the slopes are available. The continuous vent provides 40% ventilation.

5.12. Rack & Pinion

A positive drive system shall be used with an easily understood and maintained rack and pinion drive system. Each roof vent zone to utilize rack and pinion operators (one per bay) connected to continuous push-pull vent shafting attached to individual aluminum lifting arm assemblies.

5.13. Drive Motor

Each zone will be driven with two drive motors with a drive motor to open the windward vents and a drive motor to open the leeward vents.

5.14. Control Box

Each motor will have a reversing motor control box to wire the motor.

5.15. Computer Control

A computer control system with a weather station is required to install this type of house. This can be accomplished with either a simple weather station with a vent control or a more intricate environmental control system.

6. Equipment

- Benching
- Shade & Curtain Systems
- Enviromental Controls
- Heating
- Irrigation
- Cooling
- Plant Growth Lighting
- Material Handling

7. Our Services Include

- Design & Build
- Systems Integration
- Project Management
- Installations
- Maintenance

8. Photos