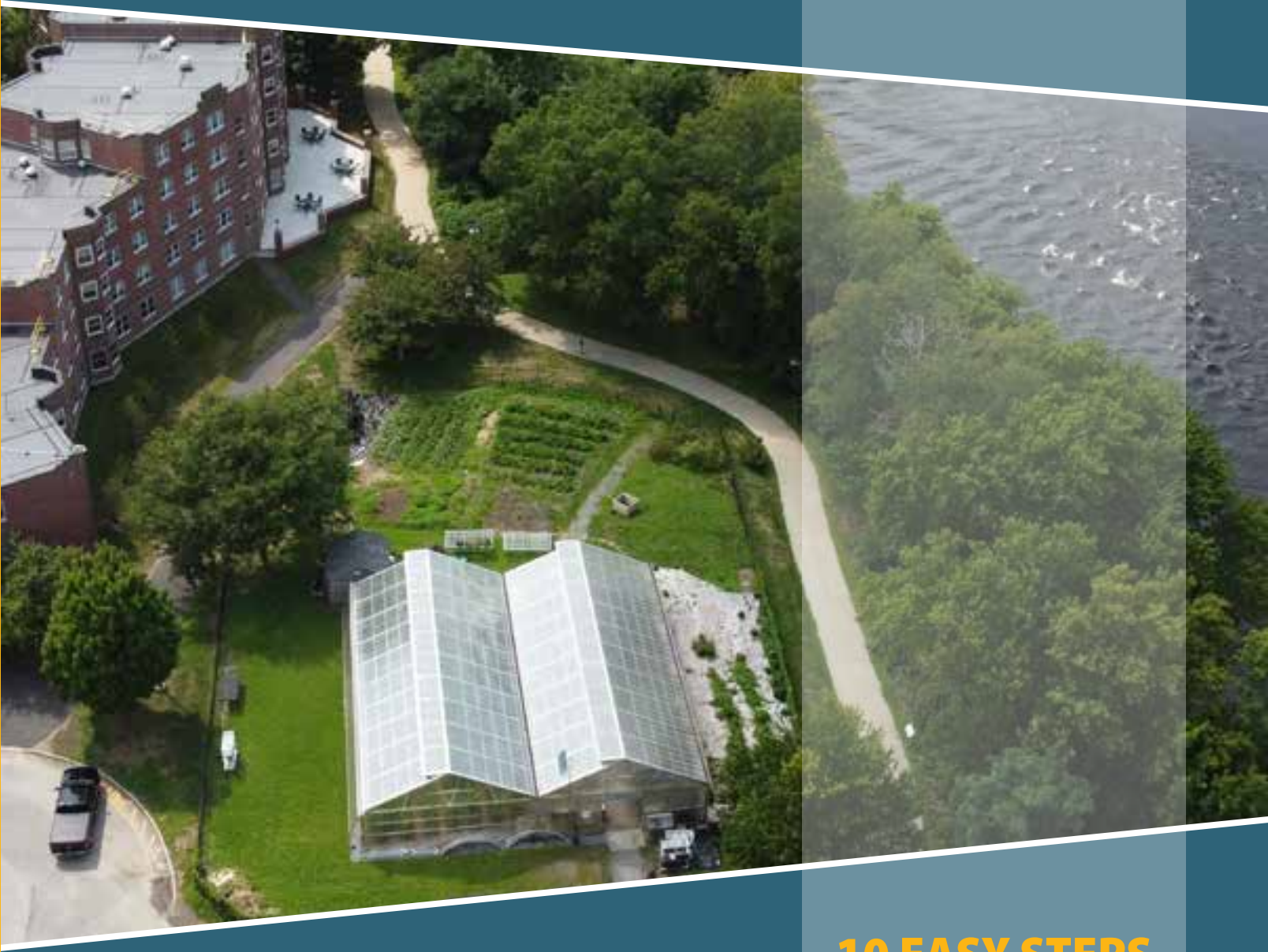
RIMOL

Greenhouse Systems

# 2025 PRODUCT CATALOG



## 10 EASY STEPS

TO MAKING YOUR GREENHOUSE DECISIONS

**Innovation • Education • Communication**

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# Matterhorns

**Plant Detectives**
Chester, NJ

**Wolf Hill Garden Center**
Ipswich, MA

**Rohsler's Nursery**
Allendale, NJ

Shown on cover:
**Mill City Grows – Rist Urban Agriculture Farm at UMass Lowell**
Lowell, MA

**Natural Art Gardens**
Toms Brook, VA

**Busy Bee Garden Center**
Indianola, IA

**Coger's Sugar House**
Springfield, VT

# Matterhorns

**Metropolitan Plants**
Fort Lee, NJ


**Palmiter's Garden Nursery**
Avon, NY

**Spring Brook Farms**
Littleton, MA

**Farm on Ogden**
Chicago, IL

**Donaldson's Farm**
Hackettstown, NJ

**Achille Agway**
Keene, NH

# Nor'Easters

**Shady Hill Greenhouses**
Londonderry, NH

**Mason Brook Nursery**
Mason, NH

**Flower Hill Farm**
Boonville, NY

# Northpoints

**Pinelands Nursery**
Columbus, NJ

**Mill Gardens**
Hanover, NH

**Pitarys Farm**
Nashua, NH

# Eastpoints

**Maple Lane Nursery**
Valatie, NY

**Lakedale Nurseries**
Berlin, NJ

**Dandelion Acres**
Bethel, VT

# Bobcats

**Hippeas Farm**
Hooksett, NH

**Johnny's Selected Seeds**
Albion, ME

**Skidmore College**
Saratoga Springs, NY

# Matterhorn Educational Greenhouses

**Wisconsin Dells School District**
Wisconsin Dells, WI

**West Virginia State University**
Institute, WV

**North Hampton School**
North Hampton, NH

# Free-Standing Polycarbonate Educational Greenhouses

**Foundation for Seacoast Health**
Portsmouth, NH

**Pemberton Township High School**
Pemberton, NJ

**Department of Youth Services**
Westborough, MA

# High Tunnels

**Frith Farm**
Scarborough, ME

**Copper Moose Farm**
Park City, UT

**Bumbleroot Organic Farm**
Windham, ME

**New Entry Sustainable Farm**
Beverly, MA

**Milkhouse Flower Farm**
West Chazy, NY

**Echo Creek Farm**
Salem, NY

# Hydroponic Greenhouses

**Herban Farms**
Cheyney, PA

**Lil Rooster Farm**
Pittsboro, NC

**Greenway Farms**
Hackettstown, NJ

**Maximuck's Farm**
Doylestown, PA

**Goler Community Development Corp.**
Winston Salem, NC

**Kimball Fruit Farm**
Hollis, NH

# Vegetable Greenhouses

**Peak Farm**
Bonnerdale, AR

**Barsuglia Farms**
Vineland, NJ

**Perrone's Farm**
New Milford, NJ

# Moveable Greenhouses

**Gaining Ground Farm**
Concord, MA

**Tangerini's Farm**
Millis, MA

**Four Season Farm**
Harborside, ME

# Alternate Use Greenhouses

Storage

Storage

Butterfly House

**Restaurant or Event Space**

**Chicken or Livestock House**

**Meditation or Relaxation**

# Shade Structures

**The Birdhouse**
Boxboro, MA

**Seoane Garden Center**
Abington, MA

**Troy's Garden Center**
Cohoes, NY

# *The Rimol Team... We are working for you!*

## Let our experienced sales technicians help you with your next project.

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**CONTACT US**
*for a free, customized quote!*

RIMOL
Greenhouse Systems

**Post St. Farm |** Franklin Springs, NY

# Contents

Step 1

# Choose the Greenhouse Style/Frame

**Lancaster Floral |** Lancaster, NH

STEP 1

**Palmiter's Garden Nursery |** Avon, NY

# The Matterhorn

## Peaked Roof Greenhouse

The Matterhorn stands alone as the most attractive and rugged traditional style gutter connected greenhouse.

Our Matterhorn greenhouse is inspired by the most majestic peak in the Swiss Alps, drawing intrepid climbers who risk their lives each summer scaling its rugged terrain and ridges.

The Matterhorn greenhouse is a high quality, strong and attractive greenhouse ideally suited for garden centers, growers and schools in any climate in North America. The Matterhorn can withstand heavy snow loads and wind loads which will allow you to get a good night's sleep during the worst winter storms and hurricanes.

Rimol Greenhouse Systems understands the unique requirements of garden centers, growers and schools. We will not sell you a greenhouse; we will provide you with a marketing concept, a growing plan or a blueprint for a classroom environment. Our experienced sales professionals will work with you every step of the way, from design through construction, to ensure that you get the most value from your greenhouse investment.

**Flowerland Garden Center|** Kingston, MA

**CONTACT US**

*for a free, customized quote!*

**(603) 629-9004**

**Seminary Hill Farm |** Delaware, OH

**Lakeside Nursery |** East Stroudsburg, PA

**Colonial Gardens |** Phoenixville, PA

## Features & Benefits

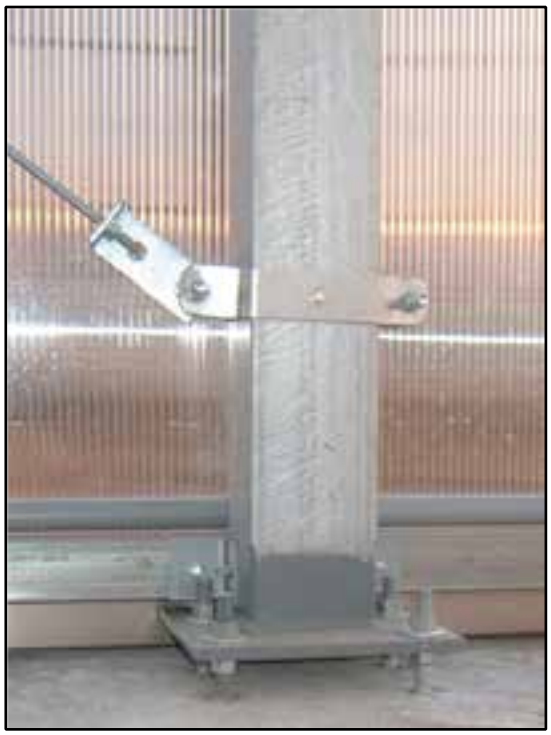
- Available in 20 ft., 24 ft. and 30 ft. widths
- Lean-to style available in 12 ft. and 15 ft. widths
- Engineered to meet most snow and wind load requirements and building codes across the U.S.
- Stamped plans available for your building permit
- Conceptual drawings available
- Typical truss spacing on 12 ft. centers allows for any length in an increment of 12 ft.
- Super easy to assemble with good directions and technical support
- Columns with base plates or "wet set" starter columns available
- Columns are 4 in. x 4 in., 12 ga. galvanized steel
- Non-welded truss is quality assurance when assembled and allows for easy shipping and assembly
- Trusses consist of 2 in., 16 ga. and 1½ in., 16 ga. galvanized steel
- Extra purlins near gutter provide additional snow load support in Northern climates which prevents premature wear on polycarbonate and eliminates leaking
- 6/12 roof pitch
- Large 12 ga. steel gutter allows easy access to roof and downspouts are designed to be located anywhere in gutter for maximum flexibility
- Can be glazed with 8mm polycarbonate, corrugated polycarbonate, or glass (walls only)
- Note that certain gauges of steel may be different, determined by load requirements from engineering/design standards

STEP 1

# The Typical Process of Building a Matterhorn

We will work closely with architects, engineers, contractors, excavators, electricians, or other key people involved in the construction process to answer technical questions and manage logistics. Here is the typical process for constructing a Matterhorn greenhouse.

1. **Contact Rimol Greenhouse Systems** to discuss your project with your sales partner. The discussion will begin with how the greenhouse will be used — for a garden center retail application, a school or institution, hydroponics, cannabis, etc.
2. **Site Visit.** Your sales partner will meet with you at your location to plan construction and discuss other logistics within your project such as parking, material flow, aesthetics, and a possible connection of the greenhouse to a building. This meeting can take place at any point during the planning phase.
3. **Customized Quote and Concept Drawings.** Our sales partner will evaluate your needs and provide a customized quote for your structure. Besides the actual footprint of the greenhouse, we will discuss options including doors, coverings such as polycarbonate or glass, cooling, heating and air-circulation, environmental controls, energy curtains and benches. We will then prepare a detailed quote for the materials that we will supply. If we need to make revisions or changes to the quote, it's no problem. We can also provide a conceptual drawing to you at no charge.
4. **Permitting.** After we come to an agreement on the quote, the next step is for you obtain your necessary permits from your municipality. You will order stamped engineering plans from us that are structural plans certifying snow, wind, and seismic loads in your area with a licensed, professional engineer's stamp on them.
5. **Order Your Greenhouse.** We will require a deposit to initiate the order, and shortly after the order is in process, you will be notified with a ship date. Rimol will communicate with you regarding all of the shipments from our warehouse as well as direct shipments from our suppliers so that you are ready for delivery.
6. **Construction.** We can connect you with one of our greenhouse construction partners or you may select your own construction firm to build the greenhouse. We have excellent, detailed instructions, but your sales partner can also assist at any point with questions. We can also conduct additional site visits as needed throughout construction and post-construction.

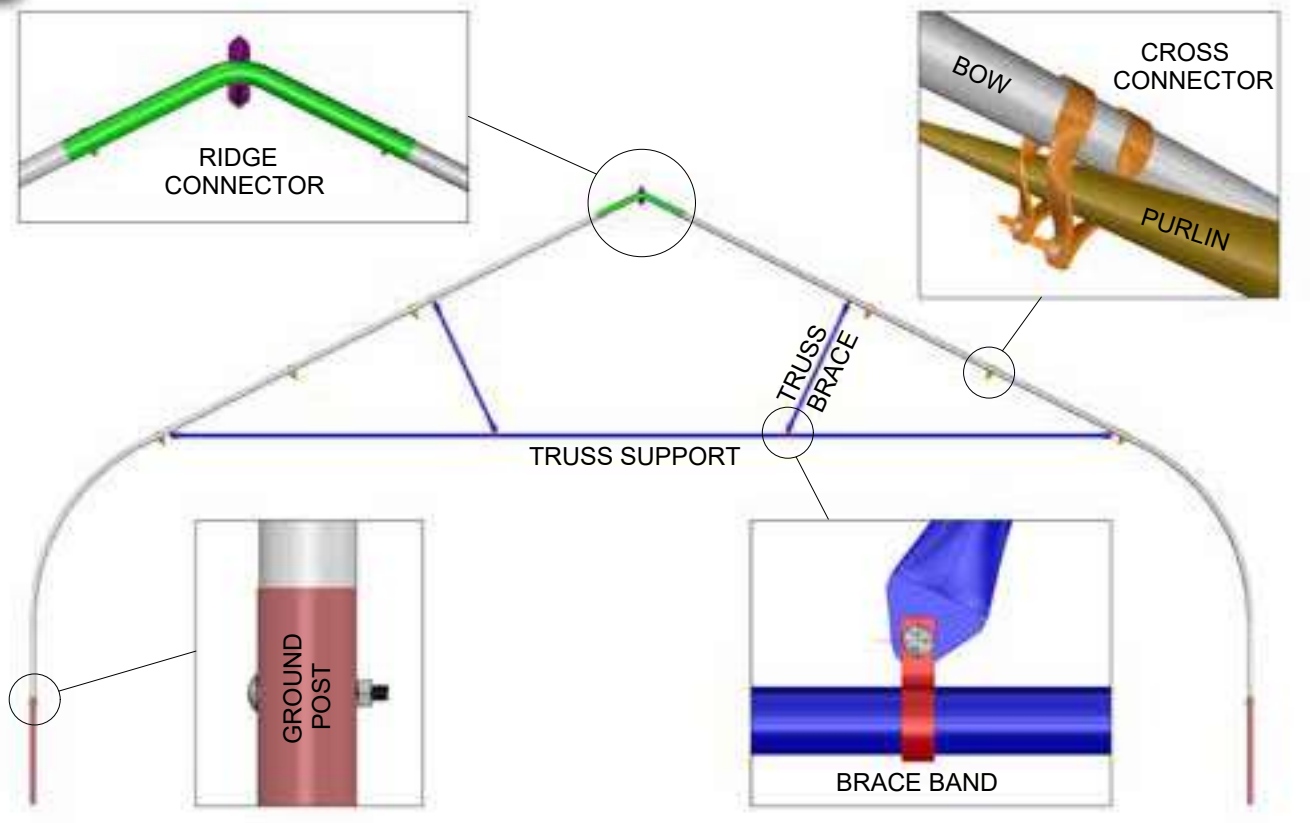


This photo shows a column with a base plate mounted on a concrete wall.

This photo shows how our truss is connected to our 4" column with a heavy duty saddle.

**P.S. 312 Bergen Beach |** Brooklyn, NY

STEP 1




All truss supports located at 8 ft. above ground level.

# Rimol Greenhouses are Built to Last

## Rock-solid construction – it's all about strength and durability.

This diagram shows how every bow is constructed with a truss support system on our Northpoint and Nor'Easter greenhouses. Since we include the truss assemblies with every bow, this virtually doubles the strength of every bow. Notice how all of the possible weak points have all the stress transferred to other parts of the frame. In addition to the strength attributes, the truss assembly provides an ideal location to hang swedged tubing for hanging baskets or vegetable supports.

This is a cross connector that is used to attach purlin pipe to bows or swedged tubing to truss supports. Since the purlins are attached to the bows in this manner, virtually all of the strength of the steel is maintained. Most other greenhouse companies drill a hole through the bow and the purlin which creates a weak spot. This weak spot will eventually cause a failure as the greenhouse ages.

# The Rimol Difference

## Detail-Driven vs. "Cutting Corners"

At Rimol Greenhouses, our products go above and beyond the "cookie cutter" greenhouse structures offered by our competitors. We have spent 30 years designing greenhouses that are stronger, more durable and easier to construct than anything else on the market — ensuring that our customers get the most value from their investment.

### Built for Harsh Winter Climates

All Rimol Greenhouse frames have been load tested and certified for snow load requirements. Our greenhouses have a 6:12 roof pitch for the best snow slide.

***The competition may make these claims, but they cannot back it up with engineering standards. Many only offer a 5:12 roof pitch or an oval-shaped design.***

### Braced to Stand Up to High Winds

Rimol Greenhouse frames have been load tested and certified for wind load requirements. Wind bracing kits for all four corners are included as part of our greenhouse packages with two braces or more per corner.

***Other manufacturers don't offer wind bracing or charge extra for it, and some have only one brace per corner.***

### Longer-Lasting Steel

Rimol bows are G90 galvanized steel, meaning they are specially coated for corrosion resistance, extending their service life.

***Most manufacturers only offer G60 galvanized steel bows. The service life of a G90 bow is approximately 1.5 times that of a G60 bow.***

### More Durable Hardware

All Rimol products are built with specialized coated tek screws that provide top-of-the-line strength, corrosion resistance and easier handling. The coating on these screws is 50% stronger than a typical coated screw.

***No other greenhouse manufacturer in the market today offers this hardware!***

### Extra Structure Support Is Built In

4' bow spacing with trusses on every bow is our standard. Rimol structures are also built with a single-piece half-bow, making them stronger than anything on the market.

***Many competitors do not offer trusses or only have them on every other bow. Competitors may only offer 5-6' bow spacing and use a multi-piece half bow.***

### Stronger Purlin to Bow Connections

Rimol uses a cross connector to connect purlins to our greenhouse bows. We do not cut corners with cheaper straps or weaken bows by drilling them.

***The competition through-bolts purlins or attaches purlins to the bow using a two-hole pipe strap. This weakens the structure, especially in wind and snow.***

### Designed for Ease of Installation

Every Rimol Greenhouse comes with a comprehensive instruction manual complete with photos. Color-coded parts make it easy to follow each step, and the Rimol team is always available for live installation support.

***Most companies provide instructions that are vague or confusing, and support takes days to return a phone call.***

### Manufactured in the USA with American-Made Steel

All of our structures are proudly built and fabricated in our factory in Hooksett, NH with American-made steel. We source all of our parts from trusted manufacturers.

***Our competitors cut corners using cheaper components or foreign steel.***

STEP 1

**Lorenzo's Outdoor Services** | Old Bridge, NJ

***Worried about constructing your greenhouse?***

Visit our website to download a free copy of our instruction manuals. You can see how easy we make it to build your Rimol!

# The Nor'Easter Series

## The Strongest Free-Standing Greenhouse

### Features & Benefits

- Available in 30 ft. and 34 ft. widths
- 4 ft. bow spacing standard, available in 6 ft. bow spacing
- Bows are 1.90 in., 13 ga. galvanized steel tubing
- There is a truss assembly with every bow, resulting in unmatched strength
- 5 purlins per 30 ft. greenhouse and 7 purlins per 34 ft. greenhouse
- Purlins connect to the bows using a cross connector which prevents unnecessary drilling into the bow
- Truss support system allows for additional purlin pipe to be hung for hanging baskets
- Wind bracing kits included with all greenhouses
- The height of the greenhouse can be raised with the extended ground posts option
- Engineering meets International Building Codes (IBC)

**Frame**

The frame includes all of the steel tubing pre-drilled, all hardware and ground post driver. Does not include baseboard or end wall framing materials.

**Roof Covering**

The roof covering includes two layers of poly, wire lock for along the sides and an inflation kit.

**Woven Poly End Walls**

Woven poly end walls include enough long-lasting woven poly for a single layer and wire lock to fasten poly to end walls.

**Polycarbonate End Walls**

Polycarbonate end walls include twin wall clear polycarbonate, all extrusions, hardware and gable wire lock.

**Mechanical Ventilation**

Mechanical ventilation includes an exhaust fan(s), shutters and necessary thermostats to control all equipment.

**Roll-Up Sides**

Roll-up sides include roll pipe, hardware and gear box operators for 2 roll-up sides.

**Gas Heat**

The gas heat option includes a Reznor high efficiency heater, HAF fans to facilitate even heat distribution, a heater hanger, a vent pipe kit and all necessary thermostats to control the equipment.

**Additional Options**

You can either frame your ends with our 2 ft. x 4 ft. end wall framing brackets or purchase metal end wall framing kits.

STEP 1

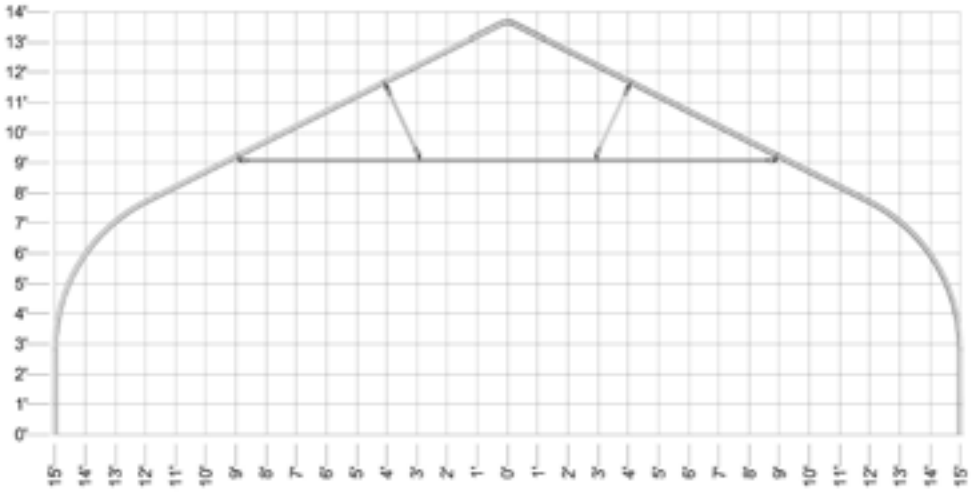
# Nor'Easter Greenhouse Packages

| Size | Frame | Roof Covering | Woven Poly End Walls | Polycarb End Walls | Mechanical Ventilation | Roll-Up Sides | Gas Heat |
|---|---|---|---|---|---|---|---|
| 30' x 48' | $5,400 | $1,108 | $856 | $2,200 | $2,387 | $1,127 | $3,132 |
| 30' x 72' | 8,100 | 1,603 | 856 | 2,220 | 3,900 | 1,450 | 3,557 |
| 30' x 96' | 10,800 | 2,013 | 856 | 2,220 | 4,264 | 1,675 | 4,336 |
| 34' x 48' | 6,316 | 1,237 | 1,024 | 2,385 | 3,744 | 1,127 | 3,381 |
| 34' x 72' | 9,474 | 1,796 | 1,024 | 2,385 | 4,275 | 1,450 | 4,058 |
| 34' x 96' | 12,632 | 2,258 | 1,024 | 2,385 | 5,125 | 1,675 | 4,951 |

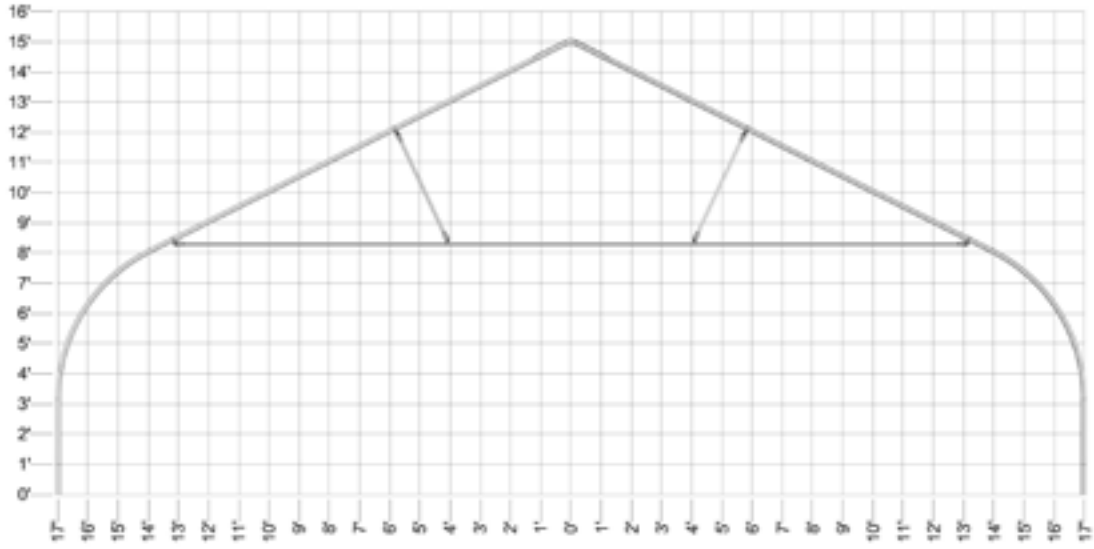
*Go to rimol.com for the most current pricing!*

Made in New Hampshire by

RIMOL Greenhouse Systems



1 Ft. Squares
30´ Bow



1 Ft. Squares
34´ Bow

These are bow assemblies. These drawings can help you plan the ends of your greenhouse. If you need more height, we can make the ground posts longer – which will require larger poly.

STEP 1

# The Northpoint Series

## The Ultimate in Free-Standing Greenhouses

### Features & Benefits

- Available in 22 ft. and 26 ft. widths
- 4 ft. bow spacing standard, available in 6 ft. bow spacing
- Bows are 1.66 in., 14 ga. galvanized steel tubing
- There is a truss assembly with every bow, resulting in unmatched strength
- 3 purlins for the 22 ft. and 26 ft. greenhouse
- Purlins connect to the bows using a cross connector system which prevents unnecessary drilling into the bow
- Truss supports allow for additional purlin pipe to be hung for hanging baskets (additional purlin pipe also available)
- Wind bracing kits included with all greenhouses
- Can be raised with the extended ground posts option
- Engineering meets International Building Codes (IBC)

**Pinelands Nursery** | Columbus, NJ

### Frame

The frame includes all of the steel tubing pre-drilled, all hardware and ground post driver. Does not include baseboard or end wall framing materials.

### Roof Covering

The roof covering includes two layers of poly, wire lock for along the sides and an inflation kit.

### Woven Poly End Walls

Woven poly end walls include enough long-lasting woven poly for a single layer and wire lock to fasten poly to end walls.

### Polycarbonate End Walls

Polycarbonate end walls include twin wall clear polycarbonate, all extrusions, hardware and gable wire lock.

### Mechanical Ventilation

Mechanical ventilation includes an exhaust fan(s), shutters and necessary thermostats to control all equipment.

### Roll-Up Sides

Roll-up sides include roll pipe, hardware and gear box operators for two roll-up sides.

### Gas Heat

The gas heat option includes a Reznor high efficiency heater, HAF fans to facilitate even heat distribution, a heater hanger, a vent pipe kit and all necessary thermostats to control the equipment.

### Additional Options

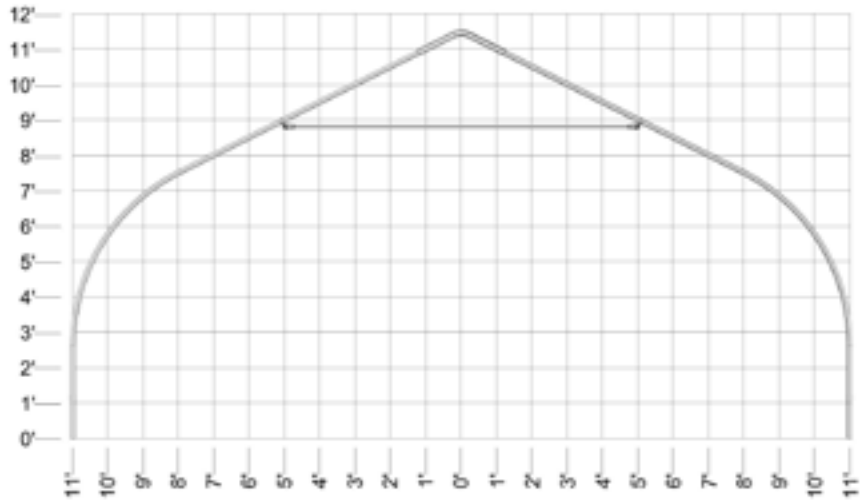
You can either frame your ends with our 2 ft. x 4 ft. end wall framing brackets or purchase metal end wall framing kits.

STEP 1

# Northpoint Greenhouse Packages

| Size | Frame | Roof Covering | Woven Poly End Walls | Polycarb End Walls | Mechanical Ventilation | Roll-Up Sides | Gas Heat |
|---|---|---|---|---|---|---|---|
| 22' x 48' | $3,834 | $915 | $746 | $1,685 | $2,175 | $1,127 | $2,765 |
| 22' x 72' | 5,750 | 1,305 | 746 | 1,685 | 2,383 | 1,450 | 3,381 |
| 22' x 96' | 7,667 | 1,637 | 746 | 1,685 | 3,886 | 1,675 | 4,408 |
| 26' x 48' | 4,531 | 980 | 746 | 1,870 | 2,285 | 1,127 | 3,381 |
| 26' x 72' | 6,796 | 1,401 | 746 | 1,870 | 3,744 | 1,450 | 3,381 |
| 26' x 96' | 9,061 | 1,769 | 746 | 1,870 | 3,982 | 1,675 | 4,408 |

***Go to rimol.com for the most current pricing!***




1 Ft. Squares
22'´ Bow

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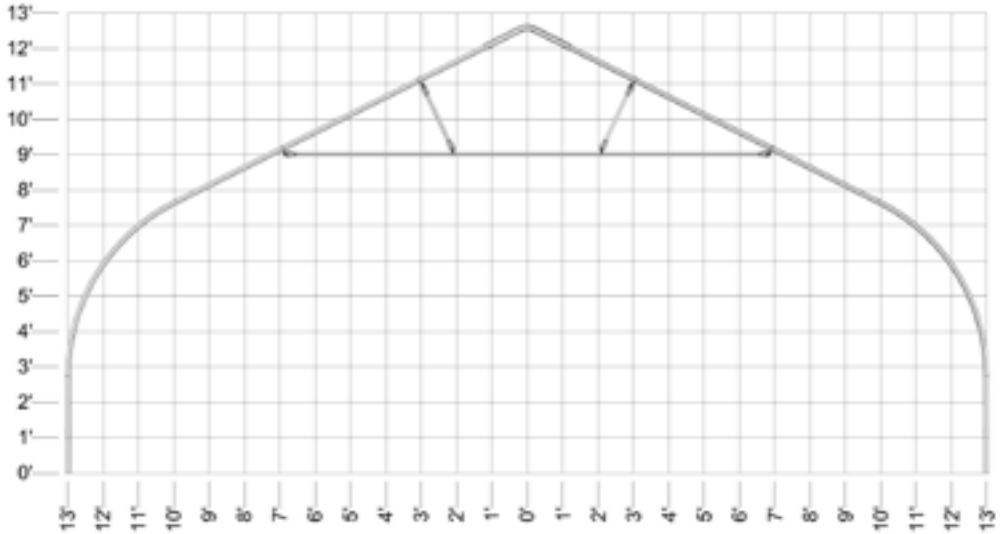



1 Ft. Squares
26´ Bow

These are bow assemblies. These drawings can help you plan the ends of your greenhouse. If you need more height, we can make the ground posts longer – which will require larger poly.

STEP 1

**Lakedale Nurseries** | Berlin, NJ

***Worried about constructing your greenhouse?***

Visit our website to download a free copy of our instruction manuals. You can see how easy we make it to build your Rimol!

# The Eastpoint Series

## Strength and Versatility at an Affordable Price!

### Features & Benefits

- Available in 18 ft. and 20 ft. widths
- 4 ft. bow spacing standard, available in 6 ft. bow spacing
- Bows are 1.66 in., 14 ga. galvanized steel tubing
- 3 purlins per greenhouse
- Can be used for overwintering, growing or season extension of vegetables
- Strong and able to withstand heavy snow loads
- Low cost per square foot
- Great for starter greenhouses
- Truss supports optional
- Engineering meets International Building Codes (IBC)

**Frame**
The frame includes all of the steel tubing pre-drilled, all hardware and ground post driver. Does not include baseboard or end wall framing materials.

**Roof Covering**
The roof covering includes two layers of poly, wire lock for along the sides and an inflation kit.

**Woven Poly End Walls**
Woven poly end walls include enough long-lasting woven poly for a single layer and wire lock to fasten poly to end walls.

**Polycarbonate End Walls**
Polycarbonate end walls include twin wall clear polycarbonate, all extrusions, hardware and gable wire lock.

**Mechanical Ventilation**
Mechanical ventilation includes an exhaust fan(s), shutters and necessary thermostats to control all equipment.

**Roll-Up Sides**
Roll-up sides include roll pipe, hardware and gear box operators for two roll-up sides.

**Gas Heat**
The gas heat option includes a Reznor high efficiency heater, HAF fans to facilitate even heat distribution, a heater hanger, a vent pipe kit and all necessary thermostats to control the equipment.

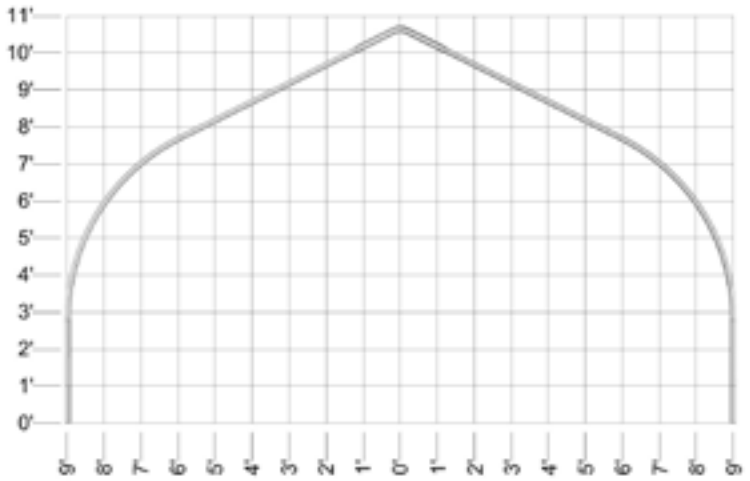
**Additional Options**
You can either frame your ends with our 2 ft. x 4 ft. end wall framing brackets or purchase metal end wall framing kits.

STEP 1

# Eastpoint Greenhouse Packages

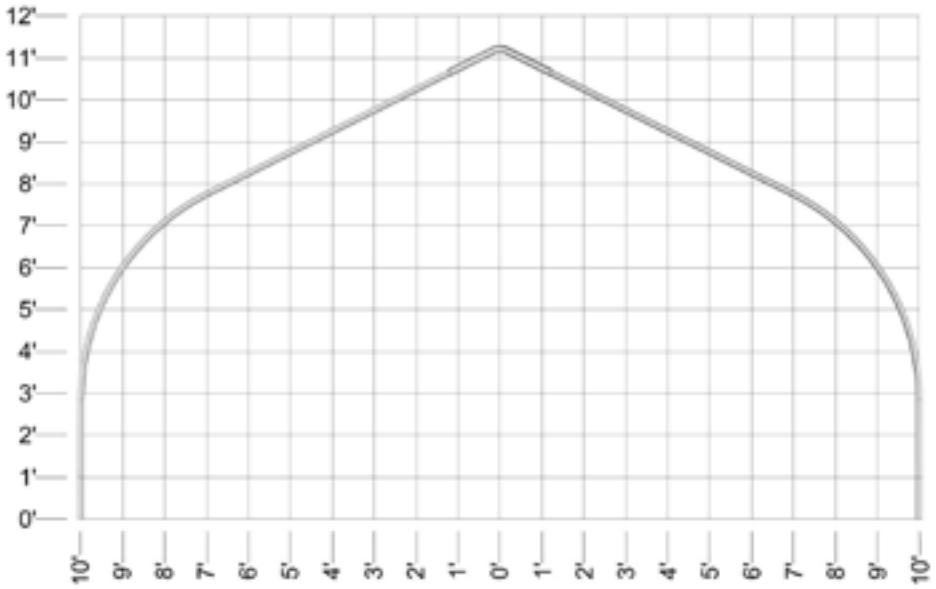
| Size | Frame | Roof Covering | Woven Poly End Walls | Polycarb End Walls | Mechanical Ventilation | Roll-Up Sides | Gas Heat |
|---|---|---|---|---|---|---|---|
| 18' x 48' | $3,042 | $851 | $567 | $1,250 | $2,175 | $1,127 | $2,800 |
| 18' x 72' | 4,562 | 1,208 | 567 | 1,250 | 2,367 | 1,450 | 3,020 |
| 18' x 96' | 6,083 | 1,515 | 567 | 1,250 | 3,548 | 1,675 | 3,766 |
| 20' x 48' | 3,380 | 915 | 567 | 1,445 | 2,077 | 1,127 | 2,800 |
| 20' x 72' | 5,069 | 1,305 | 567 | 1,445 | 2,367 | 1,450 | 3,020 |
| 20' x 96' | 6,759 | 1,637 | 567 | 1,445 | 3,746 | 1,675 | 3,766 |

*Go to rimol.com for the most current pricing!*




1 Ft. Squares
18'´ Bow

These are bow assemblies. These drawings can help you plan the ends of your greenhouse. If you need more height, we can make the ground posts longer – which will require larger poly.




1 Ft. Squares
20´ Bow

Made in New Hampshire by

RIMOL
Greenhouse Systems

STEP 1

# The Bobcat Series

## Functional and Easy to Install – Your Best Value for a Starter Greenhouse

### Features & Benefits

- Available in 16’ widths and lengths of 48’, 72’ or 96’
- Gothic shaped greenhouse with 4 ft. bow spacing, one ridge purlin and wind bracing
- Steel is 1.315 OD, 17 ga.
- Ground posts are 1.66 OD, 14 ga. 4 ft. long and are driven 2 ft. into the ground with a ground post driver that is supplied with the frame
- Side wall height is around 5 ft. before the curve begins. Peak height is around 10 ft.
- Straps are included to attach a baseboard to the frame
- Very resilient to wind and snow
- Super easy to assemble

**Hip Peas Farm** | Hooksett, NH

### Truss Support Option

- Adding a truss support will double the strength of the greenhouse
- Includes steel supports and hardware to attach to frame
- Good for crop supports
- Low cost for extra strength in climates with snow

### End Wall Framing Options

- 2 x 4 end wall brackets allow you to easily attach 2 x 4 lumber to end bows
- Includes 16 bracket assemblies (8 per end)
- Steel end wall framing is 1½” square steel for clean, permanent solution for end walls
- Steel is field cut to configure your end walls to your specific design. Includes all brackets and hardware

### Door Options

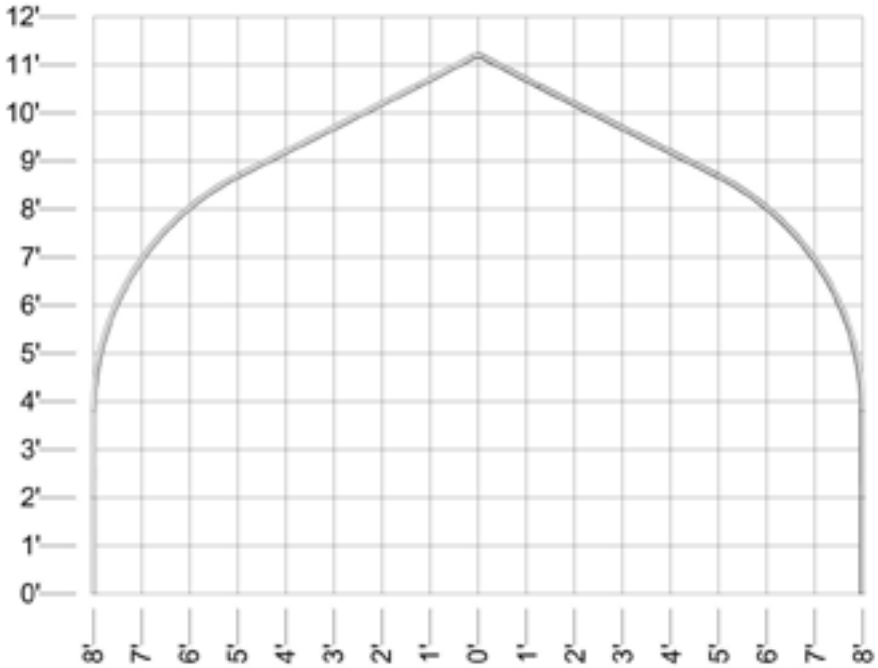
- 3’6” wide x 7’ high single sliding door made of aluminum and polycarbonate
- Includes door track for sliding and guide rollers to keep door snug against greenhouse

### Covering Options

- Single poly for the roof and end walls is 6 mil, 4-year clear greenhouse film
- Woven poly for the end walls is an upgrade — a reinforced woven material that is more resilient to wind/weather
- Double poly for roof with woven poly for end walls includes both layers of film and an inflation kit that can be powered with just an extension cord. A double layer of poly offers a few extra degrees of protection when growing in cooler temperatures
- Double poly for roof with polycarbonate end walls provides a permanent solution for your end walls that will last about 15-20 years, that looks great and provides more insulation for your greenhouse

## Poly Fastening Options

- End wall wire lock kit is used if you have either regular or woven poly on your end walls. Enough wire lock is sent to attach your roof poly to the end bows and your end wall poly to your end wall framing
- Gable wire lock is used for either end walls with polycarbonate or wood. The gable wire lock is a special wire lock with a lip that overlaps the end bow materials to help seal out moisture and provide a more clean finish to your end wall construction
- Double wire lock is used with roll-up sides. It creates excellent holding power for your roof and roll-up sides and adds more rigidity to your greenhouse. It includes the wire lock base, the wires and all necessary hardware to attach to your greenhouse




1 Ft. Squares
16´ Bow

***Visit rimol.com to build and price your Bobcat greenhouse!***

## Ventilation Options

- Roll-up sides include extra purlin pipe and all of the necessary hardware to convert the sides of your greenhouse for side wall ventilation. A T-handle is the least expensive option to roll-up your sides
- Roll-up sides with gear box operator kits are our most common option since the gear boxes allow you to roll up your sides much easier with a handle or an adapter that fits into a cordless drill that is provided. This is the safest way of rolling up your sides since the gear box has an internal brake that keeps the sides locked into place
- Gable peak exhaust fan and gable peak shutter thermostatically controlled is an option if you are not around to monitor your cooling. **This will not provide total cooling, but will help alleviate some of the heat build-up.** This is also a nice option if you are doing some winter growing and you do not want to roll-up sides if you need some ventilation. This option requires 110v power to your greenhouse.

Made in New Hampshire by

RIMOL
Greenhouse Systems

STEP 1

**Center for Discovery** | Harris, NY

# High Tunnels

**Our super-strong Nor'Easters, Northpoints and Eastpoints with longer ground posts.**

Rimol high tunnels are **NRCS-APPROVED**

High tunnels are a popular trend for growers and a proven technology for crop production. The term "high tunnel" is a loosely defined phrase for growing fruits and vegetables in greenhouses. High tunnels may be used to extend the growing season by providing protection for early or late season production or they may be used for year round growing. High tunnels are increasingly popular due to their low start-up cost and the quick rate of return on investment.

"High tunnels" were originally greenhouses with high sidewalls to enable tractors and tillers to easily enter and exit greenhouses. These structures were simple in design with usually one layer of poly, roll-up sides and no electricity. Some of these greenhouses only had poly on them for a few weeks before the warmer weather ensured that the cover could be removed safely without any damage to the crops.

High tunnel greenhouses essentially enabled local growers to produce

**NRCS Cost-Share Programs Can Support Your High Tunnel Purchase!**

Visit our NRCS Resource Center to learn more, or call us to speak with our NRCS experts.

crops all four seasons and helped to combat the forces of unpredictable weather, particularly in the early spring.

Today's high tunnels may be as simple as a greenhouse frame with one layer of poly and roll-up sides to more sophisticated greenhouses that are "movable," have roof vents, year-round covering, and irrigation systems. These freestanding greenhouses are available in all different widths and lengths. The most common high tunnel is 30 ft. x 96 ft. in size.

Many crops are grown in high tunnels such as tomatoes, cucumbers, lettuce, strawberries, raspberries and herbs. Rimol high tunnels are all customized to meet the individual grower's needs and specific to the crop that is being produced. We have many different options based on the size of your operation, the crops you are growing, your climate and location and the goals for your farm.

**Did you know that the Natural Resources Conservation Service (NRCS), a division of the U.S. Department of Agriculture (USDA), operates a program that can help fund your high tunnel purchase?** The NRCS Environmental Quality Incentives Program, known as EQIP, provides financial and technical assistance to agricultural producers. This program is designed to help growers conserve natural resources through cost share programs and technical education. Scan the QR code to visit Rimol's NRCS Resource Center and learn more!

**Slack Hollow Farm |** Argyle, NY

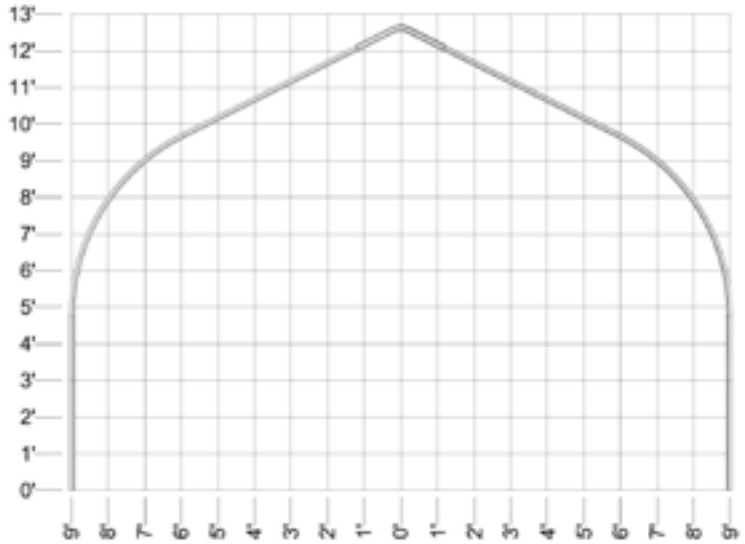
**Exclusive to Rimol high tunnels** is our polycarbonate and aluminum baseboard system, which provides more effective water management and pest control than traditional wooden baseboards – plus, they do not need to be regularly replaced!

**Blue Star Farm |** Stuyvesant, NY

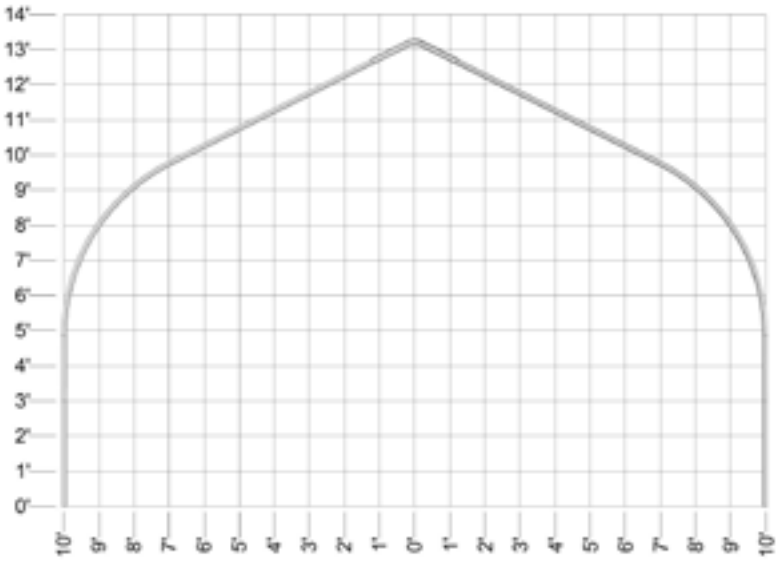
STEP 1

# Heights of the RGS High Tunnels

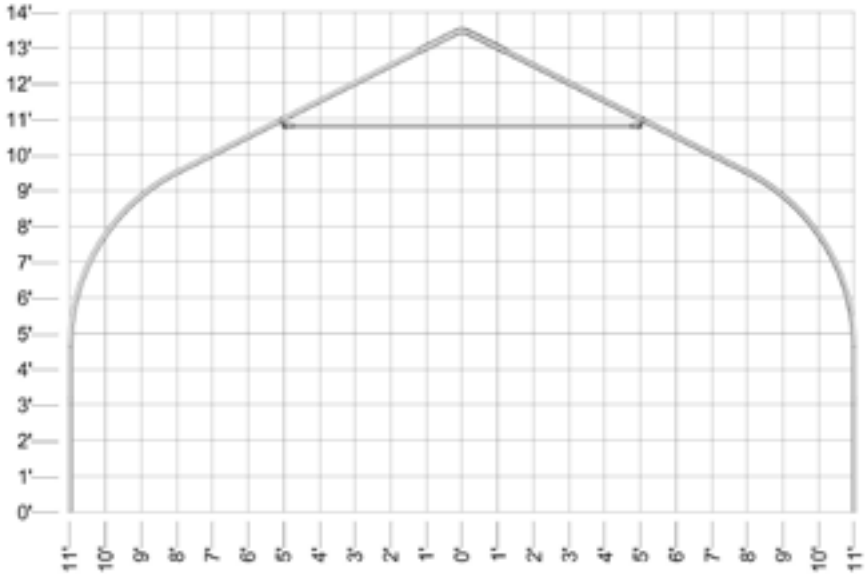
Our super-strong Nor'Easters, Northpoints and Eastpoints with longer ground posts.




18´ Bow

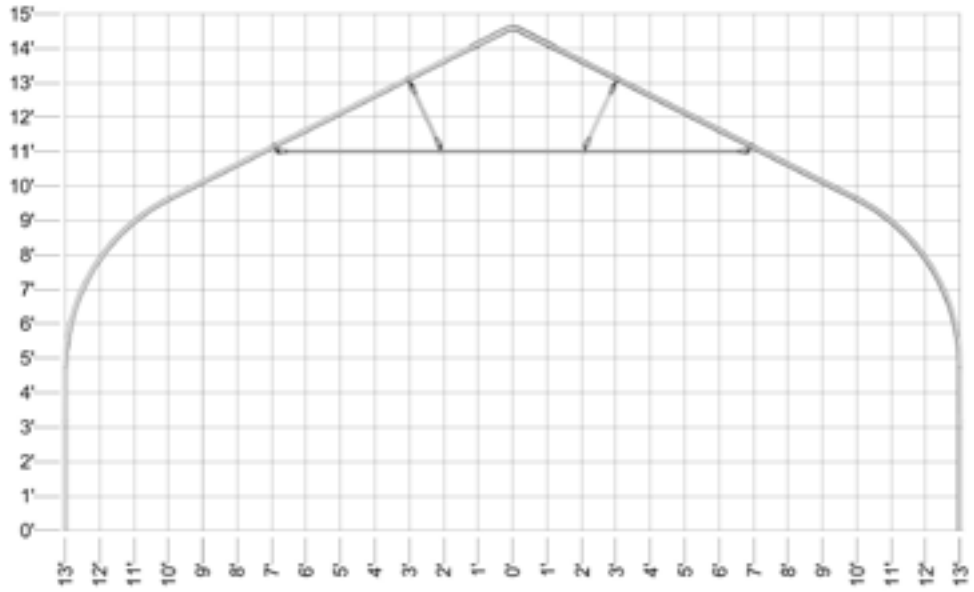



20´ Bow

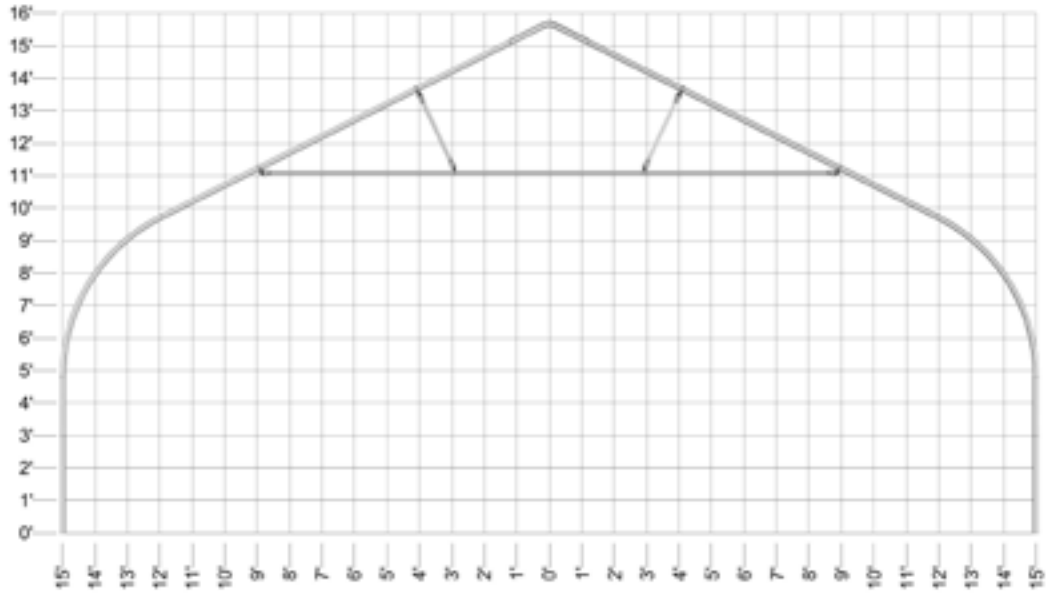



22´ Bow

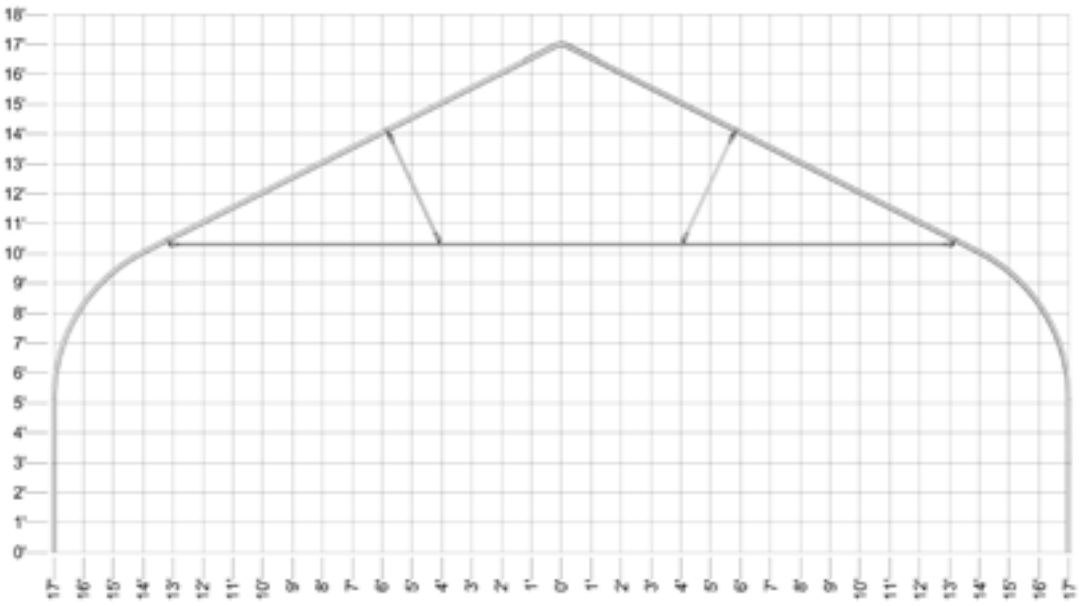
26´ Bow




30´ Bow




34´ Bow



STEP 1

# High Tunnel Packages

## Basic Package

The basic package includes:

- Framework with taller ground posts for 6 ft. high side walls
- 2 x 4 end wall framing brackets
- Single poly for the roof with double wire lock for the side walls
- Single poly for the end walls with wire lock
- Roll-up sides with T-handle kit

## Standard Package

The standard package includes

- Framework with taller ground posts for 6 ft. high side walls
- High wind kit for rigidity
- Metal end wall framing kits for both ends of the tunnel
- Two layers of poly for the roof
- Inflation kit and double wire lock for the sides
- Woven poly for the end walls with wire lock
- Roll-up sides with gearbox operators
- Manually operated gable peak shutters

## Upgraded Package

The upgraded package includes:

- Framework with taller ground posts for 6 ft. high side walls
- High wind kit for rigidity
- Metal end wall framing kits for both ends of the tunnel
- Two layers of poly for the roof
- Inflation kit and double wire lock for the sides
- Polycarbonate for both end walls with all extrusions and hardware
- Motorized roll-up sides
- Motorized gable shutters
- Controller to operate the roll-up sides and gable shutters

| Size | Basic Package | Standard Package | Upgraded Package |
|---|---|---|---|
| 18' x 24' | $3,597 | $5,938 | $9,238 |
| 18' x 36' | 5,052 | 7,393 | 10,705 |
| 18' x 48' | 5,278 | 7,873 | 11,178 |
| 18' x 72' | 7,629 | 10,302 | 13,572 |
| 18' x 96' | 9,988 | 12,717 | 15,902 |
| 20' x 24' | 3,800 | 6,141 | 9,446 |
| 20' x 36' | 5,414 | 7,755 | 11,079 |
| 20' x 48' | 5,928 | 8,332 | 11,593 |
| 20' x 72' | 8,194 | 10,923 | 14,180 |
| 20' x 96' | 10,751 | 13,543 | 16,706 |
| 22' x 48' | 6,492 | 9,220 | 12,440 |
| 22' x 72' | 8,985 | 12,061 | 15,254 |
| 22' x 96' | 11,769 | 14,948 | 18,007 |
| 26' x 48' | 7,305 | 10,153 | 13,820 |
| 26' x 72' | 10,222 | 13,440 | 17,048 |
| 26' x 96' | 13,336 | 16,715 | 20,209 |
| 30' x 48' | 8,332 | 11,842 | 15,559 |
| 30' x 72' | 11,609 | 15,564 | 19,222 |
| 30' x 96' | 15,233 | 19,274 | 22,818 |

**Frith Farm** | Scarborough, ME

*Please choose your doors from our door section (see page 42).*

## The Rimol Advantage

- All Rimol high tunnels are NRCS approved
- All high tunnels are designed for heavy snow and wind loads with extra support for crops
- All greenhouses are pre-drilled, pre-cut, include all hardware and assemble very easily
- Included are thorough and complete instructions with great customer service from our experienced sales staff
- Many different options available for cooling, doors and end wall design
- Crop support systems available
- Quick turnaround on shipping

Rimol high tunnels are
**NRCS-APPROVED**

Further information regarding the specifics of high tunnels is available on the internet State University sites and from other growers. The high tunnel concept will continue to gain popularity among growers due to the global need for food and the unpredictable weather patterns that farmers encounter. With the potential to increase cash flow out of season and open up new markets, high tunnels will create many opportunities for the family farm.

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Greenhouse Systems

STEP 1

**Hip Peas Farm** | Hooksett, NH

**Encompass Farm** | Union Mills, NC

**Divide Creek Farm** | Silt, CO

STEP 1

# High Tunnel Door Options

Doors are more important than you may realize!

**Double Sliding 4’ x 8’ Doors**

Providing an 8' x 8' opening.

**HCDS253HT** **$1,142**

**Single Sliding 3.5' x 7’ Door**

**HCSS20242** **$743**

**Single Pre-Hung 3' x 7' Hinged Door**

**HCSH100L** **$741**

**8' x 8' Insulated Roll-Up Door**

**TR9448x81** **$1,183**

# Cooling & Ventilation Options

STEP 1

## Don't stress out your plants by overheating

Gable shutters at each end of the high tunnel can be motorized for automatic control.

- Excellent for cooling in colder months without having to roll up your sides
- Helpful in releasing trapped humidity, especially in the winter months.

Motorizing your roll-up sides is an excellent investment in automation and climate control in your high tunnel. Motors and a simple controller (shown in the bottom photo) are easy to install and operate. Considering that you will never have to babysit your roll-up sides, this is a quick payback on your time!


STEP 1

**University of New Hampshire** | Durham, NH

# Homesteading Greenhouses

## Feed your family with a high tunnel – an investment that will quickly pay off!

The homesteading movement has gained traction in recent years, driven by interest in self-sufficiency, sustainable living and a simpler lifestyle. Today, there are thousands of modern homesteaders in the U.S. with operations of all sizes.

For homesteaders that are growing food for their family and community, a greenhouse can be a significant opportunity to increase harvests, lengthen the growing season and guard your crops against harsh weather. With payoff possible in less than a year, a greenhouse is one of the best investments you can make on your homestead!

Any Rimol Greenhouse structure can be used for homesteading. For smaller homesteads, the Bobcat or RGS High Tunnel are typically a good option (see pages 34 and 36).

For medium to large homesteads, our Homesteader High Tunnel package includes everything you need for a state-of-the-art, "Off-Grid" growing system:

- Durable steel framework built to withstand high snow and wind loads
- Taller, 6' side walls allow you grow plants easily with enough room and good inside air circulation
- Covered in 8mm polycarbonate with a 10 year warranty and a 15–20 year lifespan
- Two large double sliding doors (one set at each end wall) allows equipment to easily access greenhouse
- Ventilation includes an automated ridge vent and automated louvers for both end walls
- Solar kit with environmental controller allows greenhouse to be completely “off the grid”
- Spare parts included for replacement of possible parts that may wear out over time

The Homesteader High Tunnel is a smart investment that will last 20 years or more with little to no maintenance, able to produce food in every season and every climate!

# The Homesteader High Tunnel Package

## Complete Greenhouse Package

The Homesteader High Tunnel package includes:

- Framework with taller ground posts for 6 ft. high side walls
- Long-lasting 8mm polycarbonate for the roof and end walls
- Two large double sliding doors
- Automated ridge vent and automated louvers for both end walls
- Solar kit with an environmental controller

| Size | Homesteader Package |
|---|---|
| 30' x 36' | $37,022 |
| 30' x 72' | 51,118 |
| 30' x 96' | 62,808 |

**Homesteaders: You May Be Eligible for NRCS Funding to Support Your High Tunnel Purchase!**

Visit our NRCS Resource Center to learn more, or call us to speak with our NRCS experts.

**Happy Goat Farm** | Mariposa, CA

**Off Grid Living** | Sandpoint, ID

**Customer Spotlight: Off Grid Living**

Martin and Julie Johnson are homesteaders in North Idaho, growing food for their family in a Rimol Homesteader High Tunnel. Check out the full build of their greenhouse on their YouTube channel!

YouTube

@martinjohnsonoffgridliving

STEP 1

# Rolling Thunder

## Movable Greenhouse

Organic growing requires planning and diligence. Before the first crop is ever planted, much thought must be put into the types of crops to be grown, soil preparation and the greenhouse environment. The greenhouse is best utilized to protect the plants from exterior weather conditions and grow crops in a "resourceful way."

One of the innovations from Rimol Greenhouse Systems is the movable greenhouse – "Rolling Thunder." Rolling Thunder's design utilizes a heavy duty wheel with bearings at each set of hoops attached to a specially designed "ground post." The wheel/ ground post combination is seated on a rail which allows the greenhouse to move along the desired growing areas. Rolling Thunder's design allows for easy movement of a larger greenhouse such as a 30 ft. x 96 ft. with just an ordinary tractor. Smaller greenhouses can be moved by just two individuals.

The Rolling Thunder is constructed simply with the rail laid out flat according to the desired width of the greenhouse. The rail does not have to be pinned or staked, but should be set on a solid base of stone dust to prevent sinking into the soil. The first few hoops are the trickiest requiring several sets of hands due to the fact that the wheels, ground posts and hoops are all erected simultaneously. However, once a few hoops are erected, the rest of the greenhouse goes up quickly. There is significant bracing in the greenhouse to prevent any movement with the wind, and temporary bracing is used on the end walls of the greenhouse for stability purposes.

Our aluminum baseboard is offered in 12 ft. lengths. It is included with our Rolling Thunder greenhouse and also can be used on our high tunnels.

# Rolling Thunder Packages

STEP 1

## Complete Greenhouse Package

The Rolling Thunder complete greenhouse packages include the following:

- The greenhouse frame with all steel tubing pre-drilled and necessary hardware
- Steel end wall framing kits with all steel tubing and hardware
- A Rolling Thunder movable greenhouse kit with rails, wheels, bracing and hardware for growing on two plots
- Two 3'6" x 7 ft. single sliding greenhouse doors
- Polycarbonate, extrusions and hardware for both end walls
- Double poly with inflation kit for roof with all necessary wire lock for gable ends and sides
- Roll-up sides with all roller pipe, hardware and gear operator boxes for both sides

| Size | Greenhouse Package |
|---|---|
| 18' x 48' | $13,251 |
| 18' x 72' | 17,126 |
| 20' x 48' | 13,842 |
| 20' x 72' | 17,915 |
| 22' x 48' | 14,854 |
| 22' x 72' | 19,154 |
| 26' x 48' | 15,794 |
| 26' x 72' | 20,472 |
| 30' x 48' | 17,679 |
| 30' x 72' | 22,833 |

Additional options include adding extra tubing and hardware for a third plot, gable shutters, and solar kits.

Earth anchors are utilized to secure the structure in place.

STEP 1

# Hydroponic Greenhouses

Efficient crop production in a hydroponic greenhouse.

Hydroponics is growing a plant without soil, usually in an inert substance such as rockwool, perlite, or a soilless media to hold the roots for water and nutrient absorption. Hydroponics dates back many years as there is evidence that ancient civilizations grew plants in water.


Hydroponic greenhouses require strict environmental control to maximize yields from plants.

Nutrients are vital to the success of growing. There are 16 essential elements that a plant needs to grow and the right balance of these nutrients must be maintained for each specific variety of plants. Equally as important as nutrition are the factors of light, temperature (heating and cooling), CO2 and overall environmental control. Insects play a key role in pollination and pest management. When you combine all these factors, you have a controlled environment which is a hydroponic greenhouse.

The main benefits of hydroponics include plant productivity, getting a high yield per plant per square foot, and having "fresh produce." Today, there are many varieties of plants grown hydroponically serving many different market segments such as farm stands, grocery stores, restaurants, processing plants and institutions. Hydroponic operations vary in size from small operations (less than 1,000 square feet) to large operations with many acres being farmed.

At Rimol Greenhouse Systems, we believe that hydroponics will be a growth area of the future due

to such factors as the rising global population, climate change, people desiring healthier lifestyles, and more foodborne diseases from conventional farming practices. We take an individual approach with every customer to design and build your specific greenhouse factoring in your crop type, location and overall budget. We do not sell "cookie cutter" greenhouse packages. Our experienced sales professionals will closely assess your needs to determine what type of structure is best suited for you and then outfit your greenhouse with the correct environmental control systems. Contact us so that we can be a part of your business plan for success to meet today's agricultural demands.

**CONTACT US**

*for a free, customized quote!*

**(603) 629-9004**

**Greenway Farms |** Hackettstown, NJ

The end wall shown has a "No-Thrip" insect screen.

**Lil' Rooster Farm |** Pittsboro, NC

**Donabedian Bros, Inc. |** Salem, NH

STEP 1

# Institutional Greenhouses

## Cost-Effective Greenhouses for an Educational Environment

Schools and institutions across the country have discovered the value of greenhouses for education and therapy. These are strong, durable structures with a 20 year polycarbonate cover. Polycarbonate is fire resistant and the galvanized steel structure is fireproof, meaning that your greenhouse will be virtually indestructible for years of valuable service.

We can show you how K-12 institutions, colleges and universities, correctional institutions and alternative educational institutions have discovered the value of these greenhouses.

**Pemberton High School** | Pemberton, NJ

## Complete Institutional Greenhouse Package

Greenhouse package includes:

- Greenhouse frame with 1½" square steel purlins
- Steel end wall framing
- One pre-hung door
- All polycarbonate and glazing materials for roof and end walls
- A high-efficiency gas heater and heater hanger
- Double-walled vent pipe assembly
- HAF fans
- A-speed exhaust fan, motorized shutters and a shade cloth.

**China Spring Youth Camp** | Mindea, NV

Contact us for a detailed quote with a breakdown of costs.

| Size | Complete Greenhouse Package |
|---|---|
| 18' x 24' | $16,119 |
| 18' x 26' | 21,077 |
| 18' x 48' | 23,015 |
| 22' x 24' | 17,928 |
| 22' x 36' | 24,088 |
| 22' x 48' | 25,910 |
| 26' x 36' | 28,952 |
| 26' x 48' | 31,786 |
| 26' x 60' | 37,584 |
| 30' x 48' | 32,167 |
| 30' x 60' | 38,275 |
| 30' x 72' | 44,505 |

Other sizes are available. Please contact us for more information.

STEP 1

# Checklist for Building a School Greenhouse

**P.S. 312 Bergen Beach** | Brooklyn, NY

## Grant opportunities can help fund your school greenhouse project!

- USDA Patrick Leahy Farm to School Grant Program
- CARES ESSER programs
- Dept. of Education Perkins Grants
- SAM & Grants.gov
- Inflation Reduction Act grants

Scan to learn more:

## Here are a few things to consider when planning for a school greenhouse.

1. What is your budget?
2. Many greenhouse projects for schools require approval from State Ed as well as local building authorities. Before quoting, we will need to know the ground snow load and wind load requirements that our structure will have to meet if these approvals are required.

These code requirements are necessary in order to provide a stamped engineered drawing for submission to the state and/or local authorities for a building permit, if required.

If State Ed approval and/or a building permit is not required, we can quote any of our structures that will meet your needs.

3. How much square feet of greenhouse do you need? Our Matterhorn greenhouse is the most popular structure for schools and can easily meet or exceed most building code requirements. Standard sizes are 20 ft., 24 ft., and 30 ft. wide bays, in lengths 24 ft. or longer, in 12 ft. increments.

Sketch a floor plan on graph paper and include the following if needed.

- Bench size and layout to cover your production area needs
- Aisle width...handicap accessible?
- Work area...for how many?
- Sink and storage?

4. What else will have to come out of the budget?

- Construction cost...builder?
- Water, gas, and electric?
- Site preparation...excavating, stone, and concrete?
- If State Ed is involved, an architect is often used to prepare the package for approval.
- If the structure is going to be connected to the school an engineer or architect is required.

Call the sales rep for your area and discuss your project. We can help make sure you are getting the right structure and avoid any surprises in the end.

STEP 1

# Highpoint Matterhorn Cannabis Greenhouse

## A Solid Investment for Your Growing Operation

### Structure & Framework

- Stamped engineering plans included with purchase to obtain your building permit
- Designed and built to meet your snow and wind load requirements. If there are higher load requirements, we can add more structural components to increase loads
- 4 in. galvanized steel columns with trusses every 12 ft. with peaked 6/12 pitch roof design to easily shed snow
- 12 ft. gutter height allows enough room for light deprivation system and all internal components while maintaining plenty of space for an optimal growing environment. Other gutter heights available
- Large gutter provides excellent drainage and easy access to the roof if necessary
- Easy to assemble with smart design throughout entire construction process
- Strong 2 in. square steel framing for end walls that allow equipment to be mounted easily

### Doors & Covering

- One set of 4 ft. wide x 7 ft. high double hung aluminum black-out doors allows for 8 ft. wide opening, and one 3 ft. wide x 7 ft. high single-hung aluminum black-out door. Both doors are lockable. Additional doors are available
- End walls are covered with light blocking polycarbonate. This is for blacking out your greenhouse on the end walls and maintaining an excellent seal for heat retention
- Roof covering is diffused light polycarbonate that eliminates “hot spots” and provides superior protection of your plants for outside weather conditions

## Cooling & Ventilation

- All ventilation equipment is carefully sized to meet the exact needs of your greenhouse cooling requirements
- All fans and shutters are high-efficiency equipment with long lasting components that meet OHSA requirements
- Three stages of ventilation allow for precise cooling during all four seasons
- Four stages of ventilation with evaporative cooling available as an option
- Light traps included for all equipment

## Heating System

- Reznor high-efficiency heaters meet your maximum heating requirements. Heaters, heater hangers and vent pipe kits are all included
- Power vented heater is highly efficient compared to conventional heaters
- No standing pilot flame. Direct spark ignition on all heaters
- All components are totally enclosed within cabinet
- Integrated circuit board with diagnostic indicator lights
- Five-year warranty



**Customer Spotlight: Atlantic Farms**

Check out our "One Turn" video series on YouTube to follow a greenhouse cannabis grow from seed to sale with Jackson Mcleod, the co-owner and CEO of Atlantic Farms in Portland, Maine.

YouTube

## Horizontal Air Flow (HAF) Fans

- HAF fans in a greenhouse provide excellent air movement within the growing environment
- Fans maintain even heat distribution during cooler months so there are no hotspots in the greenhouse
- Internal ventilation greatly reduces airborne pathogens and possibility of diseases
- Mounting brackets included
- OSHA certified
- Two-year warranty

## Light Deprivation System

- Completely automated motorized light deprivation system
- Located inside of the greenhouse with highest quality black-out flame retardant fabric
- Slope-flat-slope design allows lights and other equipment to be mounted to greenhouse frame without interference
- Excellent perimeter seals provide tightfit with minimal light leaks
- Timed controller with manual override included

## CO2 Generation

- CO2 generator included gives you more rapid and efficient growth
- Better plant quality
- CO2 levels automatically maintained with environmental controller

## Environmental Control System

- Link 4 iGrow control system includes controller, contractor panel and all sensors
- Maintain both day and night temperature set-points
- Precise control of your growing environment for temperature, humidity and CO2
- Saves you money on electric costs by staging equipment and timed delays with certain equipment to reduce unnecessary cycling
- Phone app available for easy monitoring of your greenhouse


***Rimol Greenhouse systems will work closely with you on choosing the right systems for your greenhouse project. We will support you and your construction team on the installation and operation of these systems to guarantee a quality experience.***

STEP 1

# Highpoint Nor'Easter Cannabis Greenhouse

## A Great Value for Cannabis Cultivators

### Structure & Framework

**Coastal Cultivars |** Wareham, MA

- Stamped engineering plans included with purchase to obtain your building permit
- 2 ft. bow spacing meets most snow and wind loads. If there are higher load requirements, we can add more structural components to increase loads
- Bows are 1.90 in., 13 ga. galvanized steel tubing with gothic design and 6/12 roof pitch to easily shed snow
- Truss assembly with every set of bows enhances strength of greenhouse and allows equipment such as lights to be mounted to framework
- Five purlins and wind bracing included for rigidity
- Longer ground posts create a side wall height of about 6 ft. before the curve begins on the greenhouse
- Strong 2 in. square steel framing for end walls that allow equipment to be mounted easily

### Doors & Covering

- One set of 4 ft. wide x 7 ft. high double hung aluminum black-out doors allows for 8 ft. wide opening, and one 3 ft. wide x 7 ft. high single-hung aluminum black-out door. Both doors are lockable
- End walls are covered with light blocking polycarbonate. This is for blacking out your greenhouse on the end walls and maintaining an excellent seal for heat retention
- Two layers of 6 mil polyethylene film with 4-year warranty with all wirelock and inflation components included
- Inner layer of the film is IR anti-drip film which allows for heat retention at night in colder months and reduces condensation dripping in cooler months
- 2 rolls of greenhouse repair tape included

## Cooling & Ventilation

- All ventilation equipment is carefully sized to meet the exact needs of your greenhouse cooling requirements
- All fans and shutters are high-efficiency equipment with long lasting components that meet OHSA requirements
- Three stages of ventilation allow for precise cooling during all four seasons
- Four stages of ventilation with evaporative cooling available as an option
- Light traps included for all equipment

## Heating System

- Two Reznor high-efficiency heaters meet your maximum heating requirements. Heaters, heater hangers and vent pipe kits are all included
- Power vented heater is highly efficient compared to conventional heaters
- No standing pilot flame. Direct spark ignition on all heaters
- All components are totally enclosed within cabinet
- Integrated circuit board with diagnostic indicator lights
- Five-year warranty



**Customer Spotlight: Atlantic Farms**

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YouTube

STEP 1

## Horizontal Air Flow (HAF) Fans

- HAF fans in a greenhouse provide excellent air movement within the growing environment
- Fans maintain even heat distribution during cooler months so there are no hotspots in the greenhouse
- Internal ventilation greatly reduces airborne pathogens and possibility of diseases
- Mounting brackets included
- OSHA certified
- Two-year warranty

## Light Deprivation System

- Completely automated motorized light deprivation system
- Located inside of the greenhouse with highest quality black-out flame retardant fabric
- Slope-flat-slope design allows lights and other equipment to be mounted to greenhouse frame without interference
- Excellent perimeter seals provide tightfit with minimal light leaks
- Timed controller with manual override included

## CO2 Generation

- CO2 generator included gives you more rapid and efficient growth
- Better plant quality
- CO2 levels automatically maintained with environmental controller

## Environmental Control System

- Link 4 iGrow control system includes controller, contractor panel and all sensors
- Maintain both day and night temperature set-points
- Precise control of your growing environment for temperature, humidity and CO2
- Saves you money on electric costs by staging equipment and timed delays with certain equipment to reduce unnecessary cycling
- Phone app available for easy monitoring of your greenhouse


***Rimol Greenhouse systems will work closely with you on choosing the right systems for your greenhouse project. We will support you and your construction team on the installation and operation of these systems to guarantee a quality experience.***

# Greenhouse Financial Services

*Offering competitive financing solutions to fullfill ANY of your greenhouse needs.*

## Why Lease?

- **Smaller monthly payments** instead of a large traditional capital outlay.
- **Flexible terms** to suit your company's specific needs.
- **Easier budgeting** and **strategic planning** for your company's future.



This Section 179 Deduction calculator for 2024 may very well help in your decision, as Section 179 will save your company a lot of money.

## Section 179 is Back!

The Section 179 Deduction has a real impact on your equipment costs.

- Capital lease or $1.00 purchase qualifies
- 2024 deduction limit = $1,220,000
- Spending cap on equipment purchases = $3,050,000

## For More Information:

**(833) 384-4126**

**sales@westportfunding.net**

**westportfunding.net**


# Shade Structures

**Troy's Landscape** | Cohoes, NY

STEP 2

**Riverbend Landscape** | Woodstock, VT

# Shade Structures

## Relieve stress on plants, reduce watering needs and keep your customers cool.

These multi-purpose structures are easy to assemble with several options of shade cloth color and shade density. Everything you need is included in the price which includes the framework, hardware and shade cloth.

- Available in any multiple of 10 ft. x 20 ft. blocks
- Strong, rigid construction with diagonal bracing
- Easy to assemble and relocate if necessary
- Available in any percentage of shade
- 10 ft. height is standard – other heights available
- Framework consists of 1.66", 14 ga. steel

**Suncook Gardens** | Suncook, NH

**Rohsler's Allendale Nursery** | Allendale, NJ

Made in New Hampshire by

RIMOL Greenhouse Systems

| SHADE AVAILABLE | |
|---|---|
| Black | 30% 40% 50% 60% 70% 80% 90% |
| White | 40% 50% |
| Violet | 60% |
| Blue | 60% |
| Forest Green | 70% |
| Brown | 70% |
| Red | 80% |

**Bird House Garden Center** | Boxborough, MA

## Shade Structure Pricing

| | LENGTH IN FEET | | | | |
|---|---|---|---|---|---|
| WIDTH | 20 | 40 | 60 | 80 | 100 |
| 10 | $1,198 | $1,730 | $2,396 | $3,061 | $3,727 |
| 20 | 1,863 | 2,529 | 3,328 | 4,126 | 4,925 |
| 30 | 2,662 | 3,881 | 5,576 | 7,089 | 8,606 |
| 40 | 2,908 | 4,432 | 6,358 | 8,287 | 10,213 |
| 50 | 3,493 | 5,980 | 8,267 | 10,653 | 13,041 |
| 60 | 3,994 | 6,379 | 9,189 | 11,980 | 14,766 |
| 70 | 4,716 | 8,046 | 11,356 | 14,668 | 17,99 |
| 80 | 5,281 | 8,166 | 11,938 | 15,711 | 19,483 |
| 90 | 5,978 | 10,193 | 14,404 | 18,619 | 22,832 |
| 100 | 6,680 | 10,772 | 14,886 | 18,981 | 22,914 |

Standard height is 10 ft.
Standard shade cloth is 50% black.

## Bungee Balls

Used for attaching finished shade cloth to shade structures and greenhouses. Sold in bundles of 50.

**BungeeBall9** **$0.80 ea.**

- Shade structure pricing includes 50% shade cloth and bungee balls
- Other options available to fasten shade cloth to structure

STEP 2

# It's Good to Give Back: Rimol in the Community

**We are proud to support the agricultural and horticultural industries through sponsorships and donations to trade associations, educational groups and non-profit organizations. Here are a few of the causes we support:**

carolina farm stewardship association

COLORADO FRUIT & VEGETABLE GROWERS ASSOCIATION

ctnofa
Creating an Organic CT Since 1982

FUTURE HARVEST
Chesapeake Alliance for Sustainable Agriculture

FFA

MASSACHUSETTS FLOWER GROWERS' ASSOCIATION
Promoting growers & retailers of plants & flowers in Massachusetts

MAINE ORGANIC FARMERS AND GARDENERS

mnla
Massachusetts Nursery and Landscape Association

National Agriculture in the Classroom

NH VEGETABLE • BERRY GROWERS ASSOC.

NOFA/Mass
Northeast Organic Farming Association
Massachusetts Chapter

SUPPORTING NH'S FARMERS
Organic
NOFA-NH

N·O·F·A
ORGANIC FARMING ASSOCIATION
NEW JERSEY

Northeast Organic Farming Association of Vermont
NOFA·VT

PVGA

VERMONT VEGETABLE & BERRY GROWERS ASSOC.

VABF
Virginia Association for Biological Farming

UNLA
UTAH GREEN


# Greenhouse Benches

**West Virginia State University |** Institute, WV

STEP 3

# Greenhouse Benches

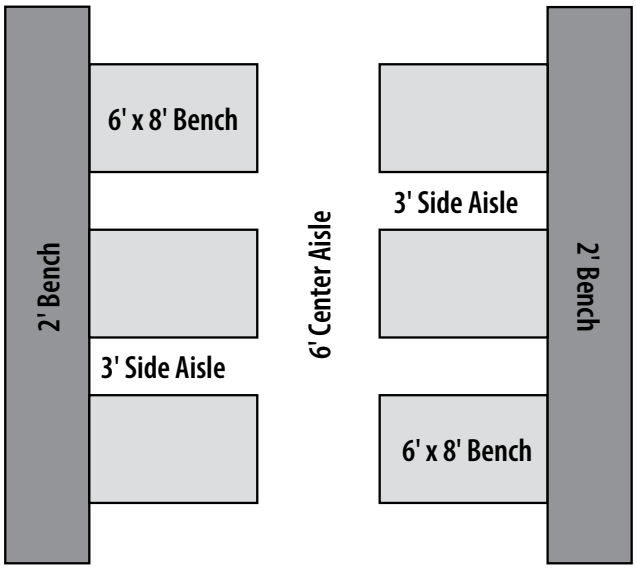
Greenhouse benches come in a wide variety of materials and styles. Your decision will be influenced by their purpose and your budget. If you are using the space for just growing, you can add rolling benches and gain more greenhouse space. This will cost less than adding a new greenhouse and lower your per square foot operating costs. If you are retailing, you may be after a certain type of "look" to enhance your operation.

Bench layout is important. By utilizing peninsula style benches (see below), you actually have more bench space compared to long benches with very long aisles. Peninsula benching is also very useful in retail for traffic flow and the movement of carts in and out of the greenhouse.

At Rimol Greenhouse Systems, we can provide you with a bench layout with the different types of benches available. We can provide you with our own prefabricated benches, just the bench tops for the construction of your own benches, or other types of prefabricated benches. Just contact us and we can help!

Expanded metal sheets are just one type of material which can be used for a bench top.

**Typical 26' Wide Greenhouse Bench Layout**




The 6 ft. x 8 ft. benches are shown in a "peninsula" layout – an excellent choice for retail!

**Need help designing your greenhouse bench layout?**
Check out our blog post!

# At Rimol, We Pay Attention to the Details with our Benches!

STEP 3

## Types of Benches

- Stationary
- Rolling top
- Moveable (with wheels on the legs)

## Bench Sizing

- Standard height is 30", height can be customized
- Widths are 3', 4', 5', 5'6" or 6'

## Features

- Made of strong galvanized steel with easy to assemble bench clamps
- Legs and supports are 1.315" round steel
- All corners have protectors to prevent clothes from ripping
- Rolling pipes and anti-tip device included on rolling benches
- High quality feet included on stationary benches, adjustable feet also available (feet are not necessary on concrete pad)
- Bench frame is adjustable for heat pipes if necessary

We fabricate all our benches in-house and can make virtually any custom setup. Just tell us what you are looking for and we will design a solution for you!

**STEP 3**

Our "F-Bar" can be upside down or right side up for a perimeter with a lip or without a lip.

Corner protectors prevent customers and employees from catching their clothes on sharp corner edges.

Rolling benches maximize your growing space. The standard legs are 30" high, but if you need taller or shorter benches, we can do this for you.


# Doors & Hardware

**Plant Detectives |** Chester, NJ

STEP 4

# Greenhouse Doors

## Sliding Doors

Our sliding doors are functional and energy efficient. The covering is either a clear glass cover that allows full vision or polycarbonate. Our doors also have brush molding to seal out drafts and air leaks. These doors are excellent for greenhouse environments.

Double sliding doors with clear vision glass panels.

Double sliding doors with polycarbonate panels.

Brush molding is included with all our doors and helps seal out the drafts.

## Hinged Doors

Our hinged doors open and close easily. They have a long lasting, durable design so that they will not wear out. Available with clear vision glass panels or polycarbonate panels.

Single hinged door with glass panels.

| Part # | Dimensions | Price |
|---|---|---|
| **DOUBLE SLIDING DOORS WITH GLASS PANELS** | | |
| HCDSGT250 | 3'w x 7'h | $1,289 |
| HCDSGT251 | 3'w x 8'h | 1,350 |
| HCDSGT252 | 4'w x 7'h | 1,456 |
| HCDSGT253 | 4'w x 8'h | 1,525 |
| **DOUBLE HUNG DOORS WITH POLYCARBONATE PANELS** | | |
| HCDH150 | 3'w x 7'h | $1,171 |
| HCDH151 | 3'w x 8'h | 1,248 |
| HCDH152 | 4'w x 7'h | 1,257 |
| HCDH153 | 4'w x 8'h | 1,349 |
| **DOUBLE SLIDING DOORS WITH POLYCARBONATE PANELS** | | |
| HCDS250 | 3'w x 7'h | $1,177 |
| HCDS251 | 3'w x 8'h | 1,276 |
| HCDS252 | 4'w x 7'h | 1,291 |
| HCDS253 | 4'w x 8'h | 1,406 |
| **DOUBLE HUNG DOORS WITH GLASS PANELS** | | |
| HCDHGT150 | 3'w x 7'h | $1,206 |
| HCDHGT151 | 3'w x 8'h | 1,305 |
| HCDHGT152 | 4'w x 7'h | 1,314 |
| HCDHGT153 | 4'w x 8'h | 1,441 |
| **SINGLE HUNG DOOR WITH GLASS PANEL** | | |
| HCSHGT100 | 3'w x 7'h | $759 |
| HCSHGT101 | 3'w x 8'h | 807 |
| HCSHGT102 | 4'w x 7'h | 817 |
| HCSHGT103 | 4'w x 8'h | 877 |
| **SINGLE HUNG DOOR WITH POLYCARBONATE PANEL** | | |
| HCSH100 | 3'w x 7'h | $741 |
| HCSH101 | 3'w x 8'h | 780 |
| HCSH102 | 4'w x 7'h | 788 |
| HCSH103 | 4'w x 8'h | 831 |
| **SINGLE SLIDING DOOR WITH POLYCARBONATE PANEL** | | |
| HCSS200 | 3'w x 7'h | $735 |
| HCSS201 | 3'w x 8'h | 794 |
| HCSS202 | 4'w x 7'h | 797 |
| HCSS203 | 4'w x 8'h | 857 |
| **SINGLE SLIDING DOOR WITH GLASS PANEL** | | |
| HCSSGT200 | 3'w x 7'h | $965 |
| HCSSGT201 | 3'w x 8'h | 823 |
| HCSSGT202 | 4'w x 7'h | 828 |
| HCSSGT203 | 4'w x 8'h | 902 |

## Double Sliding Doors

Rough opening is 3 ft. less than door width and 1 ft. less than door height.

## Double Hung Doors

Rough opening is 1½ ft. more than door height and 1¾ ft. more than door width.

## Single Sliding Doors

Rough opening is 3 ft. less than door width and 1 ft. less than door height.

## Single Hung Doors

Rough opening is 1½ ft. more than door height and 1¼ ft. more than door width.

STEP 4

## Roll-Up Doors

- Economically priced
- Roll-up system does not cut down on light or take up much space
- Easy to install
- Attractive white steel finish is corrosion resistant. Available in other colors
- Side seals and draft stop included to provide excellent weatherproofing in the winter
- Non-insulated doors available
- Sealed bearings for smooth operation
- Ten-year paint warranty
- Three-year material warranty

Rough opening for roll-up doors is the same as dimensions.

| Part # | Dimensions | Price |
|---|---|---|
| **INSULATED ROLL-UP DOORS** | | |
| TR9448x71 | 8'w x 7'h | $1,046 |
| TR9448x81 | 8'w x 8'h | 1,183 |
| TR9448x91 | 8'w x 9'h | 1,286 |
| TR9449x81 | 9w x 8'h | 1,255 |
| TR9449x91 | 9w x 9'h | 1,366 |
| TR944WL10x81 | 10w x 8'h | 1,704 |
| TR944WL10x91 | 10w x 9'h | 1,884 |
| TR944WL10x101 | 10w x 10'h | 1,920 |
| TR944WL10x121 | 10w x 12'h | 2,221 |
| TR944WL12x101 | 12w x 10'h | 2,213 |
| TR944WL12x121 | 12w x 12'h | 2,442 |

All doors with white finish.

***Color Options:*** Sunset Orange, Cedar Red, Evergreen, Desert Tan, Royal Blue, Polar Blue, Continental Brown, Garnet, Shale

## Pre-Hung Insulated Utility Doors

- Polyurethane foam core providing excellent insulation
- Super easy to install on wood or metal frame
- Resistant to warping, swelling, shrinking and chemicals from a typical greenhouse environment
- Full perimeter weather stripping
- White paint finish with 16 ft. x 20 ft. window
- Keyed lockset included

| Part # | Dimensions | Type of Opening | Price |
|---|---|---|---|
| **PRE-HUNG INSULATED UTILITY DOORS** | | | |
| PLY3068LIS66 | 3'w x 6'8"h | Left in swing | $741 |
| PLY3068LOS66 | 3'w x 6'8"h | Left out swing | 741 |
| PLY3068RIS66 | 3'w x 6'8"h | Right in swing | 741 |
| PLY3068ROS66 | 3'w x 6'8"h | Right out swing | 741 |
| PLY4068LIS66 | 4'w x 6'8"h | Left in swing | 850 |
| PLY4068LOS66 | 4'w x 6'8"h | Left out swing | 850 |
| PLY4068RIS66 | 4'w x 6'8"h | Right in swing | 850 |
| PLY4068ROS66 | 4'w x 6'8"h | Right out swing | 850 |

Rough opening for 3′ x 6′8″ door is 37¼ x 81″
Rough opening for 4′ x 6′8″ door is 47¾ x 81″

STEP 4

# Nuts, Bolts, Screws, Brackets...

## 2 x 4 End Wall Bracket Assembly

For attaching framing to end wall bows. Available for wood 2 in. x 4 in. Includes brace band, bracket, and fasteners.

| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| **END WALL BRACKET ASSEMBLY FOR 2" x 4" WOOD FRAMING** | | | |
| BOB2X4EW13BA | w/ 1 ⅜" band | 16 | $4.70 |
| NP2X4EW16BA | w/ 1 ⅝" band | 24 | 4.70 |
| NOR2X4EW19BA | w/ 2" band | 32 | 5.00 |
| J3PN0175 | 1 ½" bracket assembly | - | 2.75 |
| J3PN0177 | 2" bracket assembly | - | 2.90 |

## Brace Bands

Galvanized steel brace band used for trussing and bracing.

| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| **BRACE BANDS** | | | |
| HBB138E | 1 ⅜" | 25, 50 | $0.65 |
| HBB158E | 1 ⅝" | 25, 50 | 0.75 |
| HBB200E | 2" | 25, 50 | 0.85 |
| **NUTS & BOLTS FOR BRACE BANDS** | | | |
| FC21259 | 5⁄16 x 1 ½" carriage bolt | 50 | $0.25 |
| FC163104 | 5⁄16" hex nut | 100 | 0.08 |

## Two-Hole Pipe Straps

| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| **TWO-HOLE PIPE STRAP** | | | |
| FC44612 | fits 1 ⅜" tube | 25, 50 | $0.60 |
| FC44613 | fits 1 ⅝" tube | 25, 50 | 0.75 |
| FC44614 | fits 2" tube | 25, 50 | 1.00 |

## Ground Posts

Pre-drilled for 5⁄16 in. carriage bolts.

| Part # | Size | Price |
|---|---|---|
| **1 ⅝" (1.66 O.D.) 14 ga. GROUND POSTS** | | |
| RGS16GP | 48" length | $18.00 |
| **1 ⅞" (1.90 O.D.) 13 ga. GROUND POSTS** | | |
| RGSGP3 | 36" length | 18.00 |
| RGSGP4 | 48" length | 25.00 |
| RGSGP6 | 72" length | 39.00 |
| RGSGP9 | 108" length | 60.00 |

## Cross Connector

Drilling can compromise the safety of your greenhouse frame by reducing its tube strength by a full 25%. The unique, 2-piece, aluminum connector retains 100% of your frames' strength. Comes complete with bolts and nuts. Excellent for connecting purlin pipe to your greenhouse for additional hanging basket supports.

| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| **CROSS CONNECTOR** | | | |
| J4PN150 | 1 ⅜" x 1 ⅜" | 25, 50 | $4.25 |
| J4PN160 | 1 ⅝" x 1 ⅜" | 25, 50 | 4.50 |
| J4PN170 | 2" x 1 ⅜" | 25, 50 | 4.75 |

## Metal End Wall Angle Brackets

| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| **METAL END WALL CONNECTORS** | | | |
| JG15AB | 1 ½" bracket | 50 | $1.75 |
| JG20AB | 2" bracket | 50 | 2.00 |

**Note that quantity means quantity per bag or box.*

# and All Kinds of Hardware!



## Galvanized Steel Tubing

| Size | Length | Price Each |
|---|---|---|
| GALVANIZED STEEL TUBING | | |
| 1.315", 17 ga. round swedged | 12' 3" | $27 |
| 1.5", 16 ga. square swedged | 12' 3" | 44 |
| 2.0", 16 ga. square swedged | 12' 4" | 68 |

## Self-Tapping Tek Screws

| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| SELF-TAPPING TEK SCREWS | | | |
| FC31817 | #12 x ¾" tek screw | 100 | $0.18 |
| FC31818 | #12 x 1" tek screw | 100 | 0.20 |
| FC31819 | #12 x 1 ½" tek screw | 100 | 0.25 |

## Woodmate Screws

| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| WOODMATE SCREWS | | | |
| FC31123 | #12 x 1" woodmate screw | 100 | $0.13 |
| FC31127 | #12 x 1 ½" woodmate screw | 100 | 0.16 |

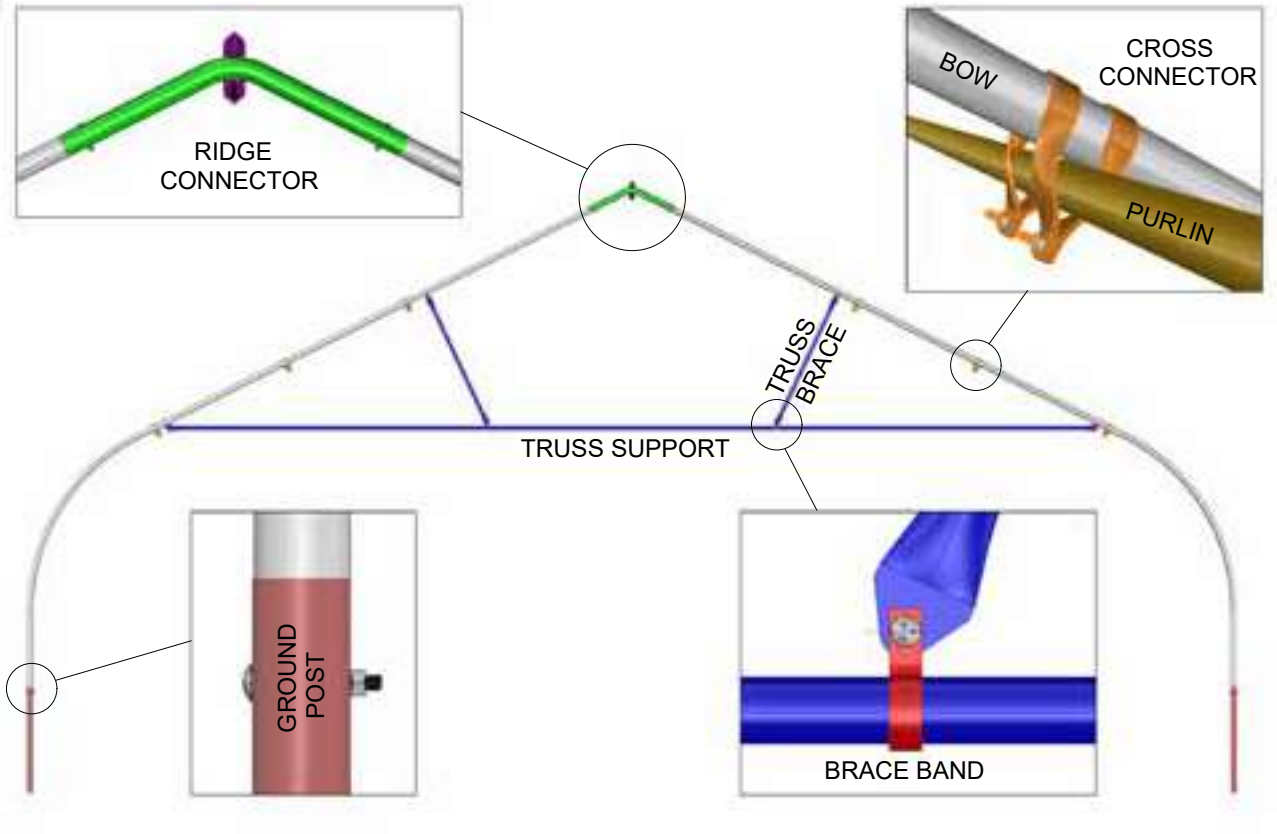
## Miscellaneous Hardware

| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| LINELEVEL3" | 3" line level | n/a | $4.00 |
| DRILLBIT3/8" | ⅜" drill bit | n/a | 6.00 |
| BUNGEEBALL9 | 9" bungee balls | 50 | 0.80 |

Place your hardware order online!

**RIMOL.COM**

STEP 4




# Strengthen Your Greenhouse
## with Truss Supports and Wind Braces

All truss supports and truss braces are 1.315, 17 ga. steel

The 26', 30' and 34' truss supports are sold in two pieces with a swedged fit connection

| Part # | Description | Price Each |
|---|---|---|
| | **TRUSS SUPPORTS** | |
| RGS22TS | 15', 18' 20', 22' Truss Support (10 ft.) | $18.00 |
| RGS26TS | 26' Truss Support (14 ft.) | 26.00 |
| RGS30TS | 30' Truss Support (18 ft.) | 32.00 |
| RGS34TS | 34' Truss Support (23 ft.) | 44.00 |
| | **TRUSS BRACES** | |
| RGS26TB | 26' Truss Brace (25 in.) | $5.50 |
| RGS30TB | 30' Truss Brace (32 in.) | 8.00 |
| RGS34TB | 34' Truss Brace (54 in.) | 20.00 |
| | **WIND BRACING FOR CORNERS (sold in bundles of 8)** | |
| RGSWB34 | 4' Bow Spacing Wind Brace (54 in.) | $20.00 |

Wind bracing shown.

*Brace bands, nuts and bolts are required for fastening. We will help you pick the right hardware!*


# Choose Your Covering

**Johnny's Selected Seeds** | Winslow, ME

STEP 5

# Polyethylene Coverings for Greenhouses

## Four-Year Poly

A high clarity, 6 mil covering, fully warranted for four years. Contains UV block and an anti-dust additive.

## IR Poly

A four year, 6 mil energy saving covering, with all the features of Drip-Less plus an additional additive that disperses light and helps to delay the exit of heat from the greenhouse during the night.

Make sure you do not pull your poly tight when using two layers. You want to have a "bubble effect" on the roof for proper inflation.

## Reinforced Woven Poly for End Walls

- Made of UV-resistant woven polyethylene
- Ideal for end walls on high tunnels
- Tear resistant, long lasting coated material
- Four-year warranty
- In-stock for immediate shipment
- Can be used on roof as a second layer of poly
- Please call for details and pricing

# The Rules of Installing Greenhouse Coverings



Using rope to pull poly over the greenhouse helps make the job easier.

1. Aluminum locking channels are recommended for securing poly to the structure. Troubled with the poly (PE) slipping in the lock? Could be the poly or, could be the lock. Try a narrow strip of PE in the lock – running the length of the house – to give extra bulk.
2. Apply two layers of sheeting or one roll of tubing to form an air space (bubble) in areas where wind imposes repeated stress. Single layer installations may not have sufficient resistance to wind damage due to repeated flexing. **GROWERS USE A SINGLE LAYER AT THEIR OWN RISK.**
3. It is important – when introducing the air into the "bubble" – that it be blown in obliquely rather than directly on the film. This is why we sell a deflector with every inflation blower. Proper air pressure in the "bubble" is extremely important.
4. After installation, avoid surface contact or extended exposure of the covering to herbicides, pesticides, fungicides, and, more specifically, bromine, chlorine, fluorine, iodine, sulfur, petroleum and/or wood preservatives containing copper.
5. It is best to re-cover in the early morning hours with little or no wind.

STEP 5

# Four-Year Poly Pricing

## Four-Year Poly

A high clarity 6 mil covering fully warranted for four years. Contains UV block and an anti-dust additive.

| Width | Length | Price | Lbs/Roll |
|---|---|---|---|
| 6 Mil Sheeting – 4 Year | | | |
| 20' | 100' | $290 | 66 |
| 24' | 100' | 348 | 79 |
| 24' | 150' | 522 | 116 |
| 28' | 100' | 406 | 92 |
| 32' | 100' | 464 | 105 |
| 36' | 100' | 522 | 129 |
| 36' | 150' | 783 | 174 |
| 40' | 100' | 580 | 131 |
| 40' | 150' | 870 | 194 |
| 48' | 100' | 696 | 157 |
| 48' | 150' | 1,043 | 232 |
| 56' | 100' | 812 | 185 |
| 56' | 150' | 1,217 | 278 |

Space your greenhouses at least 10 feet apart so that you have adequate room to roll out your poly and install it easily when re-covering greenhouses.

# IR Poly Pricing



## IR Poly

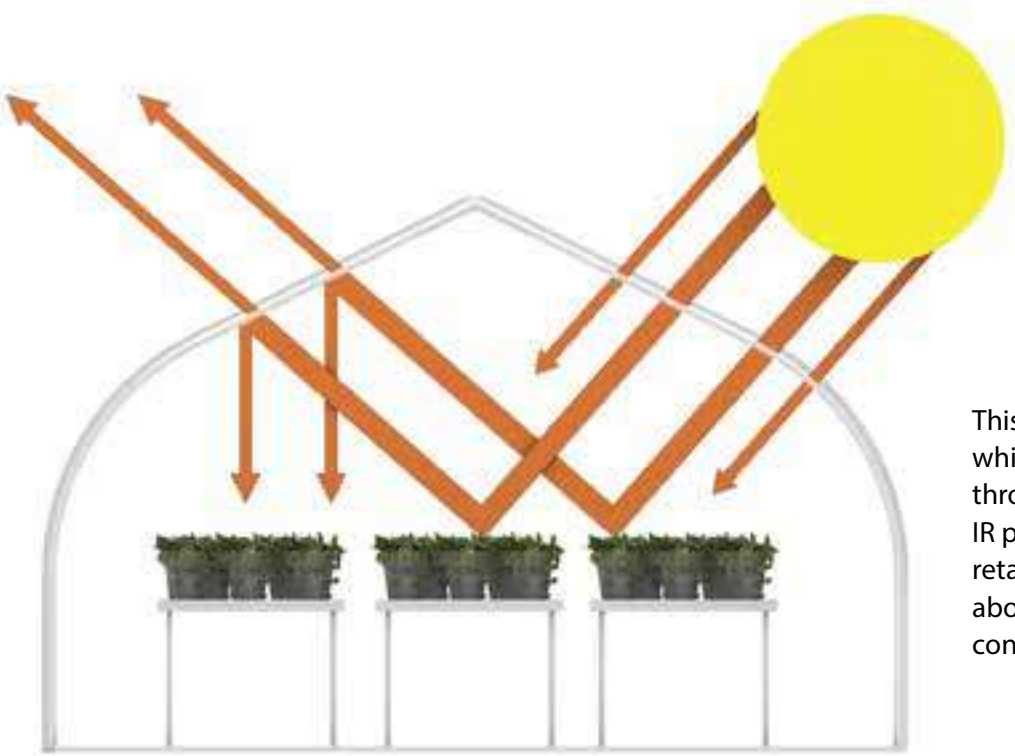
A high clarity 6 mil covering fully warranted for four years.

- Contains UV block and an anti-condensate additive.
- 30% light diffusion
- 87% light transmission

Place your poly order online!

**RIMOL.COM**

| Width | Length | Price | Lbs/Roll |
|---|---|---|---|
| IR 6 Mil Sheeting – 4 Year | | | |
| 24' | 100' | $386 | 81 |
| 24' | 150' | 578 | 120 |
| 32' | 100' | 514 | 108 |
| 32' | 150' | 771 | 160 |
| 36' | 100' | 578 | 133 |
| 36' | 150' | 868 | 180 |
| 40' | 100' | 643 | 135 |
| 40' | 150' | 964 | 199 |
| 48' | 100' | 771 | 162 |
| 48' | 150' | 1,157 | 239 |
| 56' | 100' | 900 | 175 |
| 56' | 150' | 1,350 | 278 |



This diagram depicts the way in which sunlight enters a greenhouse through layers of regular poly and IR poly. The IR inner layer helps retain heat at night resulting in about a 20-25% energy gain over conventional film.

STEP 5

# Wire Lock Poly Fastening System

- Extremely easy to install
- Will not cut poly and has superior holding strength
- Low cost per linear foot to install
- Can use just one wire over poly or can double wire for up to four layers of poly or shade cloth installation
- Re-usable when replacing poly
- Aluminum base with stainless steel wire is corrosion resistant
- Can easily bend on curved bows

## Side Wall Application

Poly fastening systems with wire are capable of securing greenhouse poly, shade cloth, screening, and a multitude of other flexible materials.

## End Wall Application

End wall wire lock can bend over curved bows.

## Double Wire Lock

Eliminates the need for a wood hip board for roll-up sides at about the same cost as traditional wood with a run of poly lock.

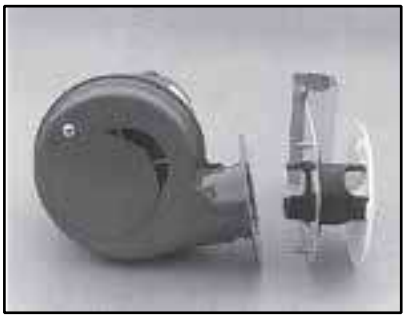
| Part # | Description | Price |
|---|---|---|
| ADWL8 | 8 ft. wire lock base (20/box) | $14.50 |
| AAENDWALL | 8 ft. end wall wire lock base | 18.00 |
| ADZZW4X20 | 4 ft. stainless steel wire (20/bundle) | 2.00 |
| ADDWL12 | 12 ft. double wire lock base (12/box) | 30.00 |
| FC31818 | #12 x 1" tek screw (100/bag) | 0.20 |
| FC31127 | #12 x 1 1/2 woodmate screw (100/bag) | 0.16 |

*Screws are recommended every one foot in base. Woodmate screws work best when fastening to wood and tek screws are recommended when fastening into steel. 1/4" hex head bolts with nuts are used with 2-hole pipe straps with double wire lock base.*

*12' lengths of single and double wire lock available.*

# Inflation Systems





## Inflation Blower Air Deflector & Bracket

Centrifugal blower maintains air space between film layers. Door on blower regulates air flow. Blower bracket and deflector results in easy installation and protects poly from ripping near the blower. Available in 60 and 148 cfm's.

## Jumper Hose

## Greenhouse Repair Tape

This rugged patching tape bonds aggressively to polyethylene film. This tape is greenhouse film with an adhesive on it.

| Part # | Size | Price Each |
|---|---|---|
| **INFLATION BLOWER AIR DEFLECTOR & BRACKET** | | |
| NBKBLOWER60RND | 60 cfm blower (round opening) | $114 |
| BLWRBRACKETKITRND | deflector/bracket for 60 cfm blower | 23 |
| NBKBLOWER148SQ | 148 cfm blower (square opening) | 119 |
| BLWRBRACKETKITSQ | deflector/bracket for 148 cfm blower | 29 |
| **JUMPER HOSE** | | |
| J4PN0026 | 24" hose | $27 |
| **GREENHOUSE REPAIR TAPE** | | |
| J4PN0248 | 2" x 48' repair tape | $17 |
| J4PN0448 | 4" x 48' repair tape | 36 |
| J4PN0648 | 6" x 48' repair tape | 65 |

STEP 5

# Polycarbonate: It's Like Safety Glasses for Your Crops!

## Polycarbonate Sheets Provide the Ultimate in Safety for Your "Budding" Business

- **Virtually Unbreakable**
  Able to stand extreme abuse, its impact strength is 200 times greater than glass and 10 times greater than acrylic.
- **Condensation Control**
  A factory applied condensation control is available on 8 mm polycarbonate panels. Reducing surface tension, the condensation control allows water to spread into a thin sheet rather than form into droplets.
- **Easy to Install**
  Polycarbonate won't crack or split when cut or drilled.
- **Extra Wide Panels**
  Standard widths of 4 ft. and 6 ft. are available.
- **Transparent**
  Offering up to 80% light transmission in clear. Also available in bronze and opal.
- **Lightweight**
  Weighing just one-eighth the weight of glass, these panels are self supporting and do not require the extensive structural support that a heavier glass wall or glazing material needs.
- **Highly Flexible**
  Unlike glass and acrylic, polycarbonate panels can be readily cold formed to many bending radii and can be fabricated on site to precise dimensions.
- **Saves Energy**
  The multiwalled construction of these panels give excellent thermal insulating values while blocking UV transmission.
- **Flammability**
  Polycarbonate sheets are classified as self-extinguishing. Compared with other plastic products used in the building industry. Polycarbonate multiwall sheets have an exceptional fire performance and most importantly, do not give off toxic gases.
- **Warranty**
  Polycarbonate is backed by a 10 year prorated warranty on light transmission and breakage caused by hail.

| LIGHT TRANSMISSION (Twin Wall) | |
|---|---|
| Clear | 81% |
| Opal (White) | 54% |
| Bronze | 50% |

# Tips for Installing Polycarbonate

STEP 5

- Polycarbonate should be stored in areas free from sunlight or heat, and materials should be stacked only on a flat surface. If polycarbonate is exposed to direct sunlight or high temperature, this could result in the protective film sticking to the polycarbonate.
- All polycarbonate is supplied with a protective film which should be kept on until the panel is fastened. The UV protected side should face out towards the sun and is marked with a printed film.
- If the protective film is sticking to the polycarbonate, it can be removed with a solvent, preferably naptha or isopropyl alcohol. After using solvent, the polycarbonate should then be cleaned and rinsed thoroughly using a mild soap or detergent.
- Allow 1/8 in. for thermal expansion.
- When cutting polycarbonate, use a saw with a fine tooth blade. Compressed air may be used to remove dust or form channels after cutting.
- Use screws with neoprene bonded washers to fasten polycarbonate to greenhouse. Use 1/2 in. washers with corrugated polycarbonate and 1 in. washers with polycarbonate.
- Do not fasten screws within 1/2 in. of the edge of a polycarbonate sheet. When fastening screws, do not tighten below the surface of the panel.
- Glazing sheets should be joined using either aluminum profiles from Rimol Greenhouse Systems.
- Use solid foil tape at the tops of the sheets to seal out water and insects, and foil vented tape at the bottom of the sheets to seal out any insects and allow condensation to drain out of sheets.
- Do not over bend polycarbonate sheets. Minimum bending radius is 150 times the thickness of the panel.
- When joining sheets of corrugated polycarbonate, allow for one corrugation to overlap. Sheets are 50 in. wide and will net 48 in. when overlapped.

## Recommended Loading

Guidelines for Selecting Sheet Thickness and Purlin Spacing

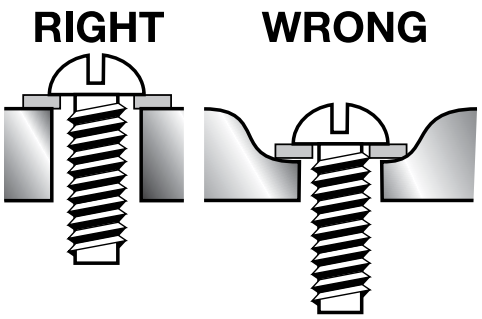
*(Sheet Supported on the Four Sides)*

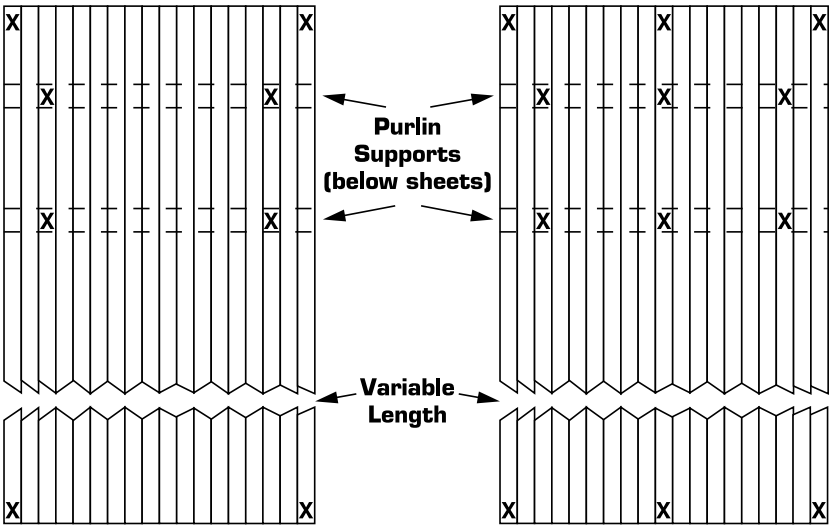
| Max. Purlin Spacing (Inches) Deflection - 1" | | | | |
|---|---|---|---|---|
| | 4' Width | | | |
| Load Per Gauge (lb/ft²) | 15 | 30 | 45 | 60 |
| 8 mm, 5/16" | 38" | 28" | 18" | - |
| | 6' Width | | | |
| Load Per Gauge (lb/ft²) | 15 | 30 | 45 | 60 |
| 8 mm, 5/16" | 36" | 26" | 12" | - |

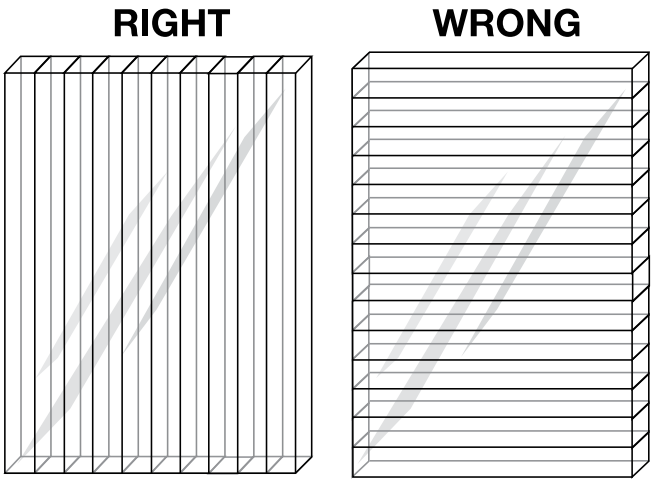
| Max. Purlin Spacing (Inches) Deflection - 2" | | | | |
|---|---|---|---|---|
| | 4' Width | | | |
| Load Per Gauge (lb/ft²) | 15 | 30 | 45 | 60 |
| 8 mm, 5/16" | 80" | 54" | 46" | 40" |
| | 6' Width | | | |
| Load Per Gauge (lb/ft²) | 15 | 30 | 45 | 60 |
| 8 mm, 5/16" | 60" | 44" | 38" | 34" |

STEP 5

# Twin Wall Polycarbonate Installation



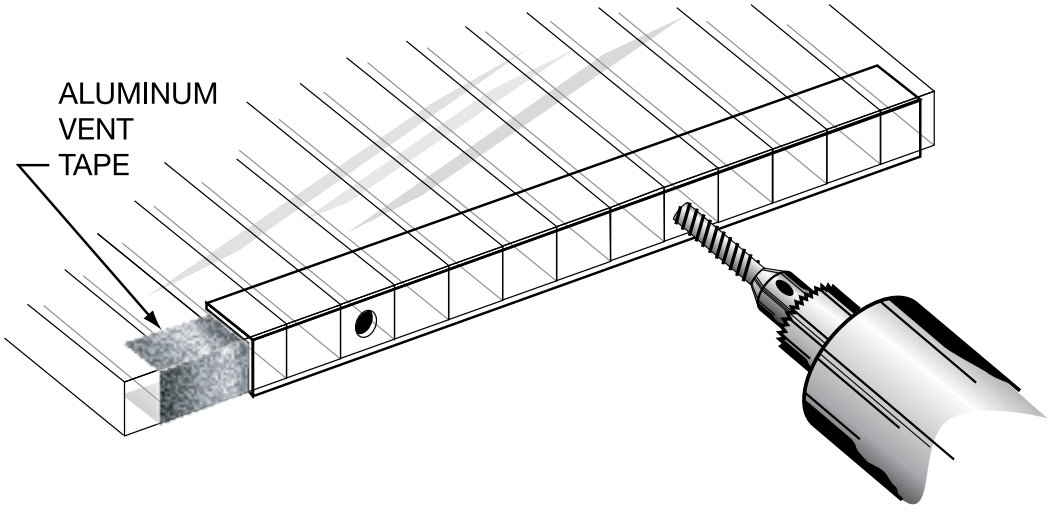

### 48" Width

48" wide sheets should be fastened to supports at all four corners, and at points 6" in from the edges of each purlin support.

### 72" Width

72" wide sheets should be fastened to supports at all four corners, and at points 6" in from the edges of each purlin support.

**Polycarbonate Installation**



# Polycarbonate Installation

STEP 5

Polycarbonate installation on a roof.

Polycarbonate installation on an end wall.

STEP 5

# 8mm Twin Wall Polycarbonate Pricing & Hardware

## Polycarbonate Pricing

| Length | 4' Wide Clear | 4' Wide Bronze/ White | 6' Wide Clear | 6' Wide Bronze/ White | Crating Charge* |
|---|---|---|---|---|---|
| 4' | $30 | $33 | $44 | $49 | $105 |
| 5' | 37 | 41 | 55 | 61 | 72 |
| 6' | 44 | 49 | 66 | 73 | 90 |
| 7' | 54 | 57 | 78 | 86 | 105 |
| 8' | 59 | 65 | 91 | 98 | 120 |
| 9' | 66 | 73 | 100 | 110 | 210 |
| 10' | 74 | 82 | 117 | 122 | 151 |
| 11' | 81 | 89 | 122 | 134 | 165 |
| 12' | 89 | 97 | 137 | 146 | 180 |
| 13' | 96 | 106 | 150 | 159 | 195 |
| 14' | 103 | 114 | 160 | 171 | 210 |
| 15' | 111 | 122 | 171 | 184 | 225 |
| 16' | 118 | 130 | 183 | 195 | 240 |
| 17' | 125 | 138 | 198 | 208 | 255 |
| 18' | 133 | 146 | 204 | 219 | 270 |
| 19' | 140 | 154 | 210 | 233 | 285 |
| 20' | 148 | 162 | 221 | 244 | 360 |
| 21' | 155 | 171 | 232 | 256 | 465 |
| 22' | 162 | 179 | 244 | 268 | 480 |
| 23' | 170 | 187 | 255 | 282 | 495 |
| 24' | 177 | 195 | 266 | 292 | 510 |

**One-time crating charge applies to the longest piece ordered.*

## Aluminum Flashing

| Part # | Size | Price Each |
|---|---|---|
| **ALUMINUM FLASHING** | | |
| FL404008 | 10' length, 4x4" | $90 |
| FL402008 | 8' length, 2x4" | 55 |

## Miscellaneous Parts

| Part # | Description | Price Each |
|---|---|---|
| **FOIL TAPE** | | |
| COEXFOIL | 1" x 150' solid | $19 |
| COEXVENT | 1" x 108' vented | 59 |
| **POLYCARBONATE SPACER** | | |
| FCY3MSJ009W | 72 per sheet | $0.60 |
| **LAVANTURE HYBRID SEALANT** | | |
| FCYLPLS250W | 1 tube | $19 |
| **NEOPRENE BONDED WASHERS** | | |
| FC1024700151 | sold in bag of 100 (screws not incl.) | $0.17 |

## Self-Tapping Tek Screws

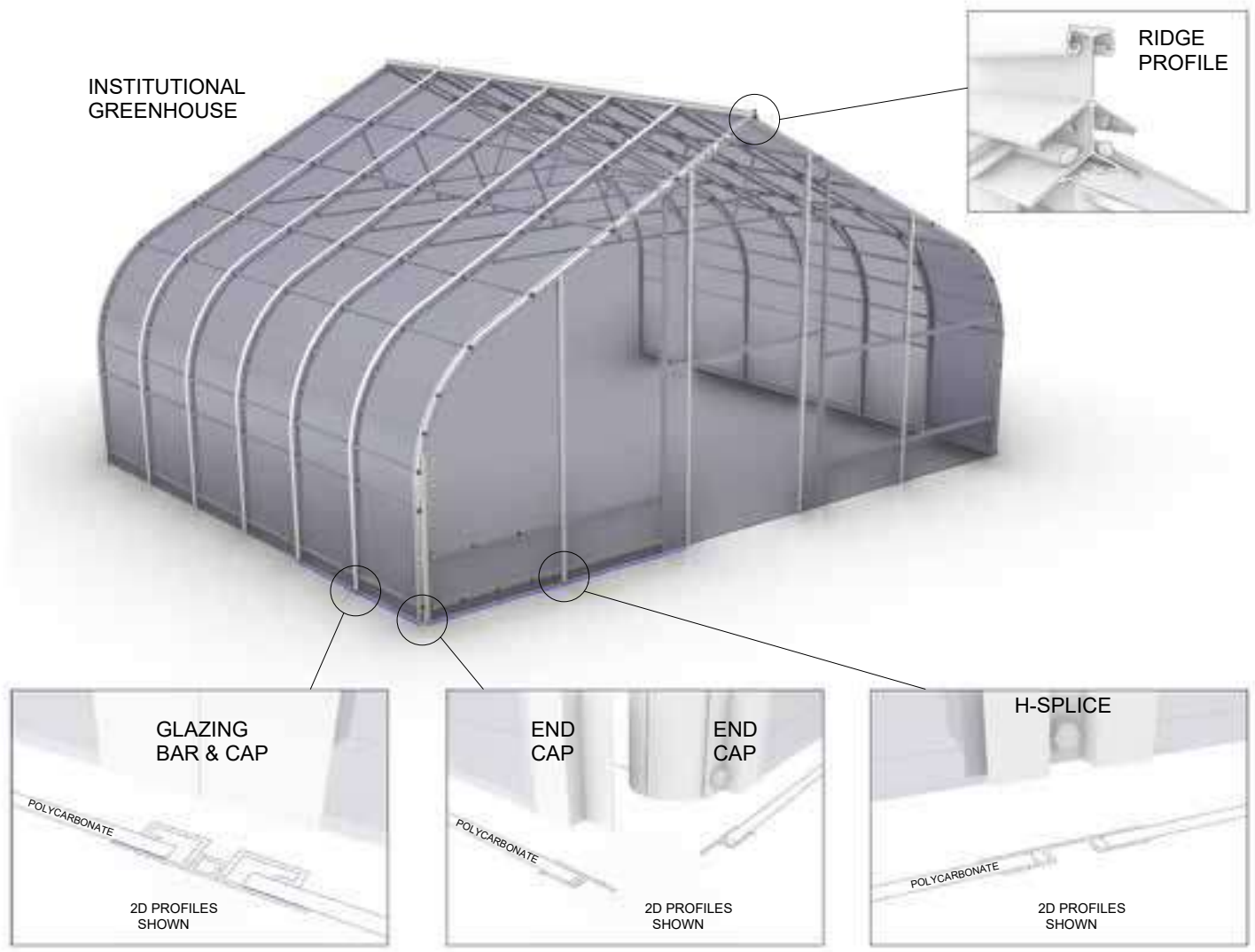
| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| **TEK SCREWS** | | | |
| FC31817 | #12 x ¾" screw | 100 | $0.18 |
| FC31818 | #12 x 1" screw | 100 | 0.20 |
| FC31819 | #12 x 1 ½" screw | 100 | 0.25 |

## Woodmate Screws

| Part # | Size | Bag Qty. | Price Each |
|---|---|---|---|
| **WOODMATE SCREWS** | | | |
| FC31123 | #12 x 1" screw | 100 | $0.13 |
| FC31127 | #12 x 1 ½" screw | 100 | 0.16 |

# Polycarbonate Profiles

STEP 5




## Glazing Bar Base & Cap

Used for splicing polycarbonate on roofs only. Available in 11, 14, 17, 20 and 25 ft. lengths.

| | |
|---|---|
| **AABarbase11** | **$61** |
| **AABarcap11** | **28** |
| **AABarbase14** | **77** |
| **AABarcap14** | **41** |
| **AABarbase17** | **94** |
| **AABarcap17** | **43** |
| **AABarbase20** | **110** |
| **AABarcap20** | **50** |
| **AABarbase25** | **138** |
| **AABarcap25** | **63** |

## Ridge Profile

Use at the ridge of a greenhouse. Fasten with 5⁄16 in. carriage bolts and nuts. Available 12 ft. 2 in.

**AARP** **$172 ea.**

## H-Splice

Use for splicing two pieces of polycarbonate on walls only. Available in 12 ft. lengths.

**AASplicePro12** **$23 ea.**

## End Cap

Used for finishing around doors, fans and other equipment. Available in 12 ft. lengths.

**AAEdgePro12** **$23 ea.**

STEP 5

# Aluminum/Polycarbonate Baseboard Kit

## You'll Never Have to Replace a Wooden Baseboard Again!

Rimol has developed a polycarbonate baseboard system that uses an aluminum extrusion, as an alternative to a wooden baseboard.

- Outstanding and long-lasting product that replaces wood baseboards – a great investment!
- Polycarbonate can be buried over a foot deep for rodent control
- Especially beneficial for organic growers
- Easy to assembly and durable
- Sold as a kit that includes polycarbonate and all hardware for both sides
- Aluminum extrusion also includes wire lock channel
- Wire lock can be used for insect screen attachment with roll-up sides

Our custom-designed aluminum extrusion makes it easy to fasten roll-up sides to the polycarbonate baseboard system.

### Aluminum/Polycarbonate Baseboard Kit

| Part # | Size | Price Each |
|---|---|---|
| POLYCARBONATE BASEBOARD KIT | | |
| RGSALBB48 | 48' kit | $1,130 |
| RGSALBB72 | 72' kit | $1,650 |
| RGSALBB96 | 96' kit | $2,140 |

*All sizes available in 12' increments.*

Step 6

# Cooling & Ventilation Systems

STEP 6

# How to Size Fans & Shutters

An easy and simple way to size greenhouse ventilation will depend on what style greenhouse you may have.

For free-standing greenhouses:

1. If you have a 18 ft., 20 ft., 22 ft., 26 ft., 30 ft. or 34 ft. greenhouse, use the same principle as above, except multiply the width and length by 7. For example, a 30 ft. x 96 ft. greenhouse will be 30 x 96 x 7 = 20,160 cfm's per minute of air flow. For larger houses, use two fans so that you can stage your cooling in two or three different levels. By using two fans, each fan will be required to move 10,080 cfm's of air. Using the chart on page 86, you will see that two 36 in., 1/2 hp fans will meet your requirements.

2. For a gutter connect greenhouse, multiply width times length times (gutter height plus 1/2 the gable height). For example, a 24 ft. x 96 ft. gutter connect greenhouse with a 10 ft. gutter height will be 24 x 96 x (10 + 3) = 29,952 cfm's per minute. Divide by 2 for each fan which amounts to 14,976 cfm's per fan. Refer to page 86, and you will see that 48 in. fans will come close to your requirements.

3. To calculate shutter size, take your total cfm's and divide by 600. The number is an air velocity number that means

4. that the air is traveling at 600 feet per second. Smaller shutter openings will create a higher air velocity and create more of a breeze and larger openings will create a lower air velocity and create less of a breeze. For example, a 30 ft. x 96 ft. greenhouse with two 36 in., 1/2 hp fans will equal (10,308 x 2) 20,616 cfm's of air movement. Divide by 600 and it will equal 34.36 square feet of opening required. Therefore, you can use two 51 in. shutters, or you can use two 45 in. shutters and one 30 in. gable shutter.

5. By using two large shutters and one small gable shutter, you can stage your cooling so that on stage one of cooling, the low speed of a two speed fan turns on, and the small gable shutter opens. This is ideal for winter cooling. On stage two of cooling, the large shutters open in addition to the small gable shutter, and the high speed of the two speed fan turns on. This is ideal for spring and fall cooling. On stage three of cooling the other fan turns on which is a single speed fan, and now that both fans are running, you have full ventilation with one air exchange per minute. This is ideal for summer cooling.

# Galvanized Angle Wall Fans

STEP 6

## Superior Design and Performance

### Features and Accessories

- Galvanized construction
- Quiet operation at low RPM
- Dust, dirt and moisture proof bearings
- High-efficiency, heavy-duty, totally enclosed motors have a low operating cost
- All aluminum gravity shutters/ louvers
- Permanently lubricated fan shaft ball bearings
- Guards included meet OSHA requirements

The six-bladed propeller with high-efficiency design produces more CFM/WATT at lower RPM. This saves on your electric bill!

The automatic belt tightener eliminates belt tension problems and one maintenance operation, plus the fan stays super quiet. This key feature is included in the price of each fan and will guarantee quiet operation.

**Fan CFMs and Pricing**

| Fan Size | Motor HP | SP at .10 Standard Cooling | SP at .125 Evaporative Cooling | SP at .25 Light Traps | Fan Pricing 1 Speed | Fan Pricing 2 Speed |
|---|---|---|---|---|---|---|
| 24" | 1/2 | 6,006 | 5,864 | 4,740 | $1,196 | $1,283 |
| 30" | 1/2 | 6,956 | 6,582 | 3,418 | 1,303 | 1,402 |
| 30" | 3/4 | 8,131 | 7,930 | 5,757 | 1,328 | 1,576 |
| 36" | 1/2 | 9,553 | 8,992 | 3,430 | 1,329 | 1,413 |
| 36" | 3/4 | 11,253 | 10,924 | 7,481 | 1,345 | 1,594 |
| 42" | 3/4 | 13,460 | 12,939 | 7,005 | 1,711 | 1,957 |
| 48" | 1/2 | 14,166 | 12,910 | - | 1,986 | 2,054 |
| 48" | 3/4 | 16,989 | 16,273 | 4,527 | 2,012 | 2,393 |
| 48" | 1 | 19,563 | 19,031 | 13,723 | 2,064 | - |
| 56" | 1 | 24,300 | 21,400 | - | 2,402 | 2,726 |
| 56" | 1.5 | 28,500 | 26,500 | 8,400 | 2,503 | - |

STEP 6

# Aluminum Wall Shutters

## They Don't Let the Cold Air in When They Are Sealed Shut!

These heavy duty aluminum wall shutters are designed to open and close according to air flow with minimum friction. Rain and foreign objects are prevented from entering when the shutters are open or closed.

Aluminum pivot rods and nylon bearings resist corrosion and prevent sticking. Counterbalanced aluminum blades ensure trouble-free operation.

| Shutter CFMs and Pricing* | | |
|---|---|---|
| **Size**** | **CFMs** | **Price** |
| 24" | 2,400 | $240 |
| 30" | 3,700 | 260 |
| 36" | 5,400 | 310 |
| 42" | 7,300 | 360 |
| 48" | 9,500 | 440 |
| 54" | 12,000 | 410 |
| 60" | 14,800 | 810 |
| 60"W x 24"H | 5,900 | 650 |
| 60"W x 36"H | 8,900 | 725 |
| 60"W x 48"H | 11,900 | 850 |

** All shutters are motorized. Non-motorized shutters are available; please call for pricing.*

*** Add 1/4" on each side for rough openings*

| Thermostats | | |
|---|---|---|
| TSTAT1STAGE | Single-stage | $82 |
| TSTAT2STAGE | Two-stage | 165 |

# Shade Cloth

STEP 6

## Knitted Shade Cloth Made to Order

Made to your specific dimensions, these shade covers are an easy way to reach the right light levels for your plants. Rugged and durable covers are easy to put on and take off.

- Knitted for extra durability
- Helps protect crops from sun, wind, pests, and rain
- Ships quickly
- Custom made to fit your greenhouse dimensions
- Protects for multiple seasons
- Long life, high UV resistant fabric
- Available in different colors for a "funky" look

| Standard Fabrics | Stock Widths (Feet) | | | | | | Price per sq. ft. | Finished Price per sq. ft. |
|---|---|---|---|---|---|---|---|---|
| | 6 | 8 | 12 | 20 | 26 | 32 | | |
| **Black** | | | | | | | | |
| 30% | X | | X | X | X | X | $0.21 | $0.30 |
| 40% | X | X | X | X | X | X | .23 | .32 |
| 50% | X | X | X | X | X | X | .25 | .35 |
| 60% | X | X | X | X | X | X | .29 | .35 |
| 70% | X | | X | X | X | X | .34 | .41 |
| 80% | X | | X | X | X | X | .39 | .46 |
| 90% | X | | X | X | X | X | .41 | .48 |
| **White** | | | | | | | | |
| 40% | X | X | X | X | X | X | .33 | .39 |
| 50% | X | X | X | X | X | X | .39 | .47 |
| **Blue** | | | | | | | | |
| 60% | X | | X | | | | .49 | .56 |
| **Violet** | | | | | | | | |
| 60% | X | | X | | | | .49 | .56 |
| **Forest Green** | | | | | | | | |
| 70% | X | | X | | | | .48 | .55 |
| **Brown** | | | | | | | | |
| 70% | X | | X | | | | .48 | .55 |
| *Any size can be custom sewn using a combination of widths available.* | | | | | | | | |
| *Finished price is shade cloth with finished edges with brass grommets spaced every 2 ft. on center.* | | | | | | | | |

### Brass Grommets with Finished Edges

### Plastic Grommets

Shade Rite Hinged Grommet Fasteners cover a larger surface area on the fabric for strength and stability.

$0.35 ea.

STEP 6

# Accessories for Roll-Up Sides

## Woven Polyethylene

A reinforced woven poly with excellent light transmission will outlast regular poly because of its durability. It will not tear or fade for many years, and can be used for roll up sides or end wall covering. Please contact us for pricing.

## Two-Hole Pipe Strap

Secures hipboard of roll-up side to bows. Use 1" woodmate screws to fasten to hipboard and use one tek screw per bow to attach two-hole strap to bow. This prevents the strap from sliding down the bow.

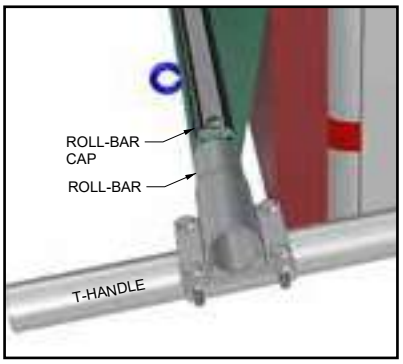
| Part # | Size | Price Each |
|---|---|---|
| **TWO-HOLE PIPE STRAP (50/box)** | | |
| FC44612 | fits 1 ⅜" tube | $0.60 |
| FC44613 | fits 1 ⅝" tube | 0.75 |
| FC44614 | fits 2" tube | 1.00 |
| **NYLON CURTAIN ROPE** | | |
| ADRP1/4"X125 | 125' rope | $19 |
| **FASTENERS (100/bag)** | | |
| FC31123 | #12 x 1" woodmate screw | $0.13 |
| FC31818 | #12 x 1" tek screw | 0.16 |
| **SWAGED TUBING** | | |
| RGSSPSW123 | 1.315" 17 ga. x 12'3" | $27 |
| **T-HANDLE KIT** | | |
| RGSTHK | one pair | $30 |
| **ROLL-BAR CURTAIN CAP** | | |
| ADRBC12 | 12' *(tek screws not included)* | $17 |

## T-Handle Kit

The T-Handle Kit is a simple, cheap and easy way to attach a handle to a roller bar.

## Swaged Tubing

Swaged tubing is used for the roller bar. Connect each pipe with swaged end into non-swaged end with 2 tek screws or with bolt and nut.




## Roll-Bar Curtain Cap

Attach to the roller bar with tek screws to hold poly (curtain) to roller bars. Much better than curtain clips because poly does not tear.

# Operators for Roll-Up Sides

STEP 6

## Gear Box Operators

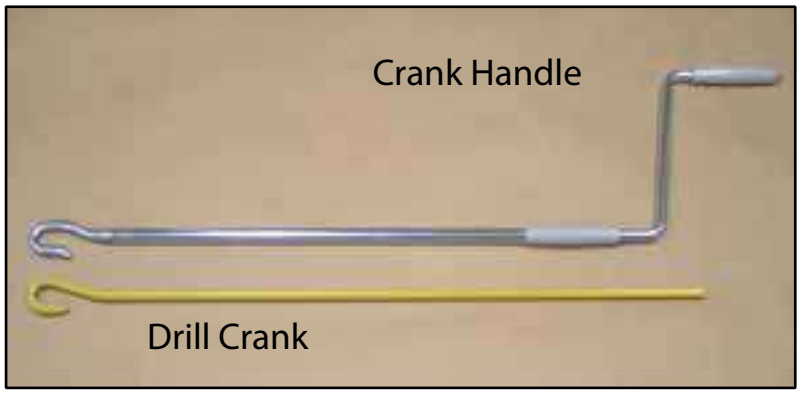
- Gear box operators have internal brakes holding the roll-up sides in place very easily
- Super easy to roll up and down
- Drill brace adapter can be used with cordless drill to roll sides up and down
- Easy to install and very reliable
- All gear box kits include 2 operators, 2 roll bar adapters, 2 (7 ft.) guide pipes, all hardware and 30 ft. hand brace for rolling sides up and down

### Rope Hook

Used at top of roll-up sides to hold rope.

### Rope

A strong, weather resistant polyester rope for securing roll-up curtains.




| Item # | Description | Price Each |
|---|---|---|
| AD65RBA1213 | Roll bar adapter for 1.315 pipe | $37.00 |
| RGSGP7RUC | 7' guide pipe for rol-up curtain | 18.00 |
| AD71GPHO | Gear guide pipe hardware | 16.00 |
| AD63GC131 | 13:1 gear box | 200.00 |
| AD64CH2 | 24" crank handle | 34.00 |
| AD64CH4 | 48" crank handle | 45.00 |
| AD64DC2 | 24" drill crank for use w/ cordless drills | 32.00 |
| ADRP1/4"X125 | 125' rope | 19.00 |
| ADSNAP | Rope hook | 1.50 |

### Gear Box Kits for (1) Pair of Roll-Up Sides

For curtains 60 ft. or less.

**RGSGB2460** **$377**

For curtains 72 ft. to 96 ft.

**RGSGB7296** **$475**

STEP 6

# Evaporative Cooling Systems

## Evaporative Cooling in Concept

To counter periods of extreme temperatures that affect in-house environments and therefore production, Coolair Evaporative Cooling Pad Systems are used with outstanding success. When large quantities of air are pulled through Evaporative Cooling Pads that are saturated with water, a substantial cooling effect is realized due to the evaporation of that water. Used in conjunction with Coolair fans, a temperature reduction of 10-25 degrees is commonplace. Suited for virtually all geographic locations, the Coolair Evaporative Cooling System delivers the greatest economic benefits to areas where higher temperatures during longer periods of time are normal.

## The Evaporative Cooling Pad

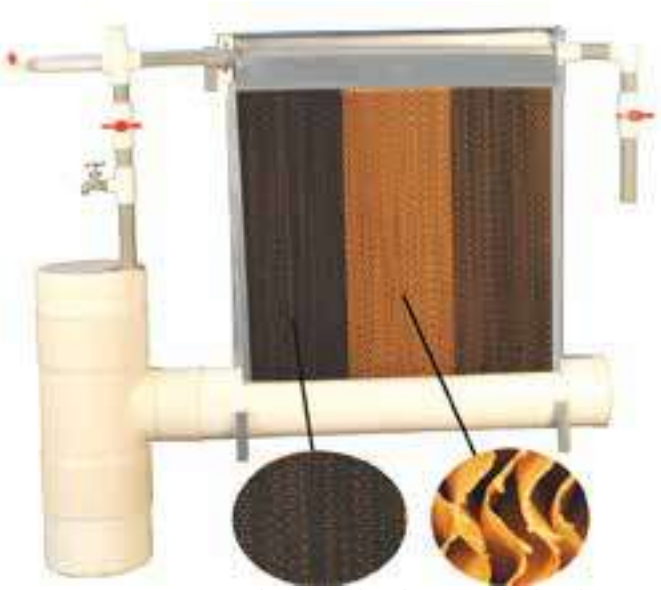
Evaporative Cooling Pads (Evap Pads) are a product developed for horticultural and agricultural cooling applications. Evap Pads are made of a specially formulated cellulose paper, impregnated with insoluble anti-rot salts, stiffening saturants and wetting agents. Evap Pads have a cross-fluted configuration that provides maximum cooling when warm air passes through the wet Evap Pad material.

- Evap Pads will not sag, rot, or develop holes.
- With proper care and maintenance, Evap Pads will last for five years or more.
- There is no carry-over of water droplets to enter the house.
- Aesthetic appearance of Evap Pads compliments modern buildings.

Evap Pads are 4 in. or 6 in. thick, and 12 in. or 24 in. wide with height increments every 12 in. from 24 in. to 72 in. The Evap Pads are positioned adjacent to each other to form a continuous surface of the required height and length. In addition to the standard Evap Pad, edge-coated pads, which help reduce algae growth or build-up, are also available.

## Features of Evaporative Cooling Pads

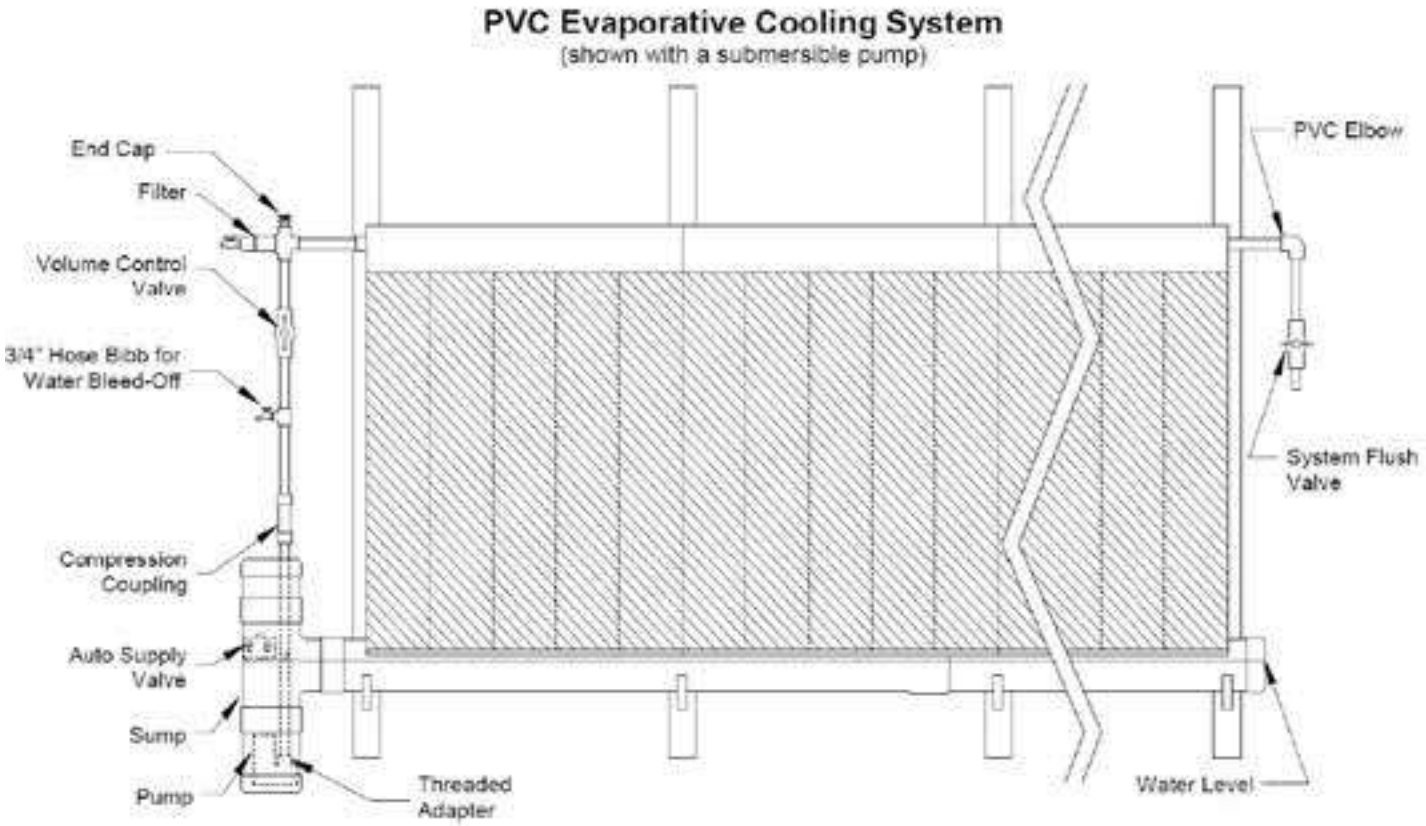
- Evap Pads will not sag, rot or develop holes.
- With proper care and maintenance, Evap Pads will last for five years or more.
- There is no carry-over of water droplets to enter the house.
- The neat appearance of Evap Pads complements modern buildings.




All 6 in. Evap Pads and 4 in. Evap Pads up to 48 in. tall are self-supporting, and do not require wire baskets or other supporting materials. The pads are held in place by component parts of the system. Tall pad supports are required on 4 in. pad systems over 4 in. tall. Standard Evaporative Cooling Systems are available from 2 ft. to 6 ft. tall in lengths up to 110 ft. Systems up to 12 ft. tall are available with American Coolair's "Doublestack" Evap Pad Cooling System.

## Water Distribution System

The water distribution systems for the PVC, Aluminum and Doublestack designs feature PVC pipe with metered outlet holes, water return trough, water filter, an automatic supply valve, and a volume control valve. All systems also include top and bottom pad support material, water distribution pipe cover (except for Open Top systems), and all necessary fasteners.



STEP 6

# Ten Ways to Save on Your Energy Costs

1. **Upgrade Your Environmental Controls.** Even if you are small grower, you can upgrade your environmental controls very easily and inexpensively. With environmental controls, you will have more accurate temperature readings and you can set day and night temperatures. You do not need to have advanced technical skills or knowledge to operate environmental controls – they are designed for ease of use by any grower.
2. **Use IR Greenhouse Poly.** By using IR greenhouse poly on the inner layer of your greenhouse coverings, you can save money with a quick payback of the added cost of the poly. The poly also contains an anticondensate additive that will improve drip control in the colder months when condensation builds up on the poly overnight.
3. **Insulate With an Energy Curtain.** Think about investing in an energy curtain for shade in the summer and heat retention in the winter when you construct your new Matterhorn greenhouse. In just two years, you can pay off your investment with an additional blanket for your greenhouse.
4. **Install A Hydronic Heating System.** There is a wide array of hot water heating products that can reduce heating costs and help you grow a better plant. Put the heat where it belongs with a hydronic heating system.
5. **Use Fuel-Efficient Unit Heaters.** Today high-efficiency gas heaters offer tremendously improved greenhouse heating. There are power-vented gas unit heaters and separated combustion heaters that can perform more efficiently than the older gas heaters. There may be tax benefits and/or funding available for upgrading your heaters.
6. **Use Natural Ventilation.** Natural ventilation with roof vents, side vents or roll-up sides will save you money in electricity.
7. **Install Wire Lock and Inflate Your Poly.** A well-sealed greenhouse with good inflation can reduce drafts and increase your insulation with the air in between the poly. Check your blowers and wire lock to see how they are performing.
8. **Use Polycarbonate End Walls.** Adding polycarbonate to end walls to improve insulation by sealing out air gaps around doors and equipment on the ends. Polycarbonate ends are more efficient than wood or poly ends and require no maintenance.
9. **Add HAF Fans.** Horizontal air circulation in greenhouses disperses the heat more evenly and improves the growing environment.
10. **Get An Energy Rebate.** See what programs your state has to offer.

**NRCS Funding Can Help You Make Energy Upgrades to Your Greenhouse!**

Visit our NRCS Resource Center to learn more, or call us to speak with our experts about NRCS cost share programs for greenhouse energy upgrades.

Step 7

# Heating Systems

STEP 7

# How to Size a Greenhouse Heating System

Sizing a heating system for a greenhouse is not an enormously difficult task requiring complex calculations. True, there are as many formulas as there are growers, but the basic principle remains the same – to warm the greenhouse in the most efficient manner.

## Here is our methodology for sizing heating systems:

1. Determine the total exterior surface area; for example, let's use a 22 ft. wide, 96 ft. long peaked free-standing house.
2. Start by calculating end wall surface area: 22 ft. (width) x 8 ft. (average wall height) = 176 ft. (one end) x 2 = 352 ft. (both ends).
3. Finally, calculate roof surface area. In our example, the roof uses 36 ft. wide poly. 36 ft. x 96 ft. = 3,456.
4. Multiply sq. ft. by the "U" Factor (see chart). In this example, the house is covered with 8 mm polycarbonate on the ends, which has a U Factor of .58, so 352 x .58 = 204.
5. The roof is covered with double poly, which has a U Factor of .7, so 3,456 x .7 = 2,419.
6. Next, add up the numbers. 204 + 2,419 = 2,623
7. Next multiply 2,606 by "Delta-T." Delta-T is an expression of heat loss over the length of the house. We use a Delta-T of 70, the highest, to insure plenty of heat. So, 2,623 x 70 = 183,619. Since most heaters are 80% efficient, 183,610 divided by .8 = 229,513, the amount of BTUH's needed to heat the house with a heater.
8. So, we need a heater with an input of 229,513 BTUH for gas heat.

| U Factors | |
|---|---|
| Single Layer Glass | 1.13 |
| Single Layer Poly | 1.15 |
| Double Layer Poly | .7 |
| Corrugated Polycarb | 1.00 |
| 8 mm Polycarbonate (2-wall) | .58 |
| 1" Thick Insulation | .14 |

# Reznor UDXC: High Efficiency Propane or Natural Gas Heaters

STEP 7


## Standard Features

- 82–83% thermal efficient
- Can be field-converted to separated combustion
- Integrated circuit board with seven-segment display
- Easily-viewed status-indicating LED
- Hinged access door panel with quarter-turn latch
- Improved cabinet design with removable front face
- Painted galvanized-steel cabinet with two-toned black and white glossy, scratch-resistant paint scheme
- Patented single-burner combustion system
- TCORE2® titanium-stabilized aluminized-steel heat exchanger
- External terminal strip for 24V wiring
- Built in disconnect switch
- Four-point suspension standard on all unit sizes

## Reznor Heater Pricing for UDXC Series

| Model Number | BTU Input | Vent Size | Price Each Natural Gas | Price Each LP (Propane)* |
|---|---|---|---|---|
| REZUDXC75 | 75,000 | 4" | $1,622 | $210 |
| REZUDXC100 | 100,000 | 4" | 1,870 | 210 |
| REZUDXC125 | 125,000 | 4" | 2,090 | 210 |
| REZUDXC150 | 150,000 | 5" | 2,226 | 210 |
| REZUDXC175 | 175,000 | 5" | 2,475 | 210 |
| REZUDXC200 | 200,000 | 5" | 2,651 | 210 |
| REZUDXC225 | 225,000 | 5" | 3,152 | 210 |
| REZUDXC250 | 250,000 | 5" | 3,080 | 210 |
| REZUDXC300 | 300,000 | 6" | 3,686 | 210 |
| REZUDXC350 | 350,000 | 6" | 4,610 | 210 |
| REZUDXC400 | 400,000 | 6" | 4,960 | 210 |

| | Part # | Vent Size | Price Each |
|---|---|---|---|
| VENT PIPE KITS | RGSVP1760 | 4" | $178 |
| | RGSVP1770 | 5" | 189 |
| | RGSVP1780 | 6" | 198 |
| HEATER HANGER KITS | NPHHKIT | Northpoint/ Nor'Easter | 75 |
| | EPHHKIT | Eastpoint | 110 |
| THERMOSTATS | TSTAT1STAGE | Single-Stage | 82 |

All UD Series vent pipe is double walled galvanized steel. Each kit includes:

- (1) 4 ft. section of "B" vent
- (1) wall thimble
- (1) cap
- (1) draft hood adapter

STEP 7

# Reznor UEZ: Super High Efficiency Separated Combustion Heaters

Reznor Model UEZ High Efficiency Condensing Unit Heaters combine efficiency, aesthetics, durability and cleanliness. The UEZ condensing unit heater is up to 93% efficient and built tough with reliable, long-lasting construction and components.


## Standard Features

- 91–93% thermal efficiency achieved through secondary heat exchanger
- TCORE3™ 409 stainless steel primary heat exchanger
- MacroChannel® design on secondary heat exchanger for models
- Sealed control compartment houses all electrical components
- Integrated circuit board with seven-segment display and external status LED
- Removable front face and three-tone scratch-resistant paint on cabinet
- Hinged access door panel with quarter-turn latch
- External terminal strip for 24V wiring and built-in disconnect switch
- Four-point suspension standard
- Patented single burner combustion system including one-piece burner assembly

***Please contact us for the most current pricing!***

# Horizontal Air-Flow (HAF) Fans

STEP 7

## Supporting Even Heat Distribution and Disease Suppression

HAF fans make greenhouse heating and cooling more effective by evening out temperatures throughout the structure.

It is done with gentle but high volume air circulation to eliminate hot and cold spots. The objective is a smooth flowing mass of air circulating throughout your greenhouse.

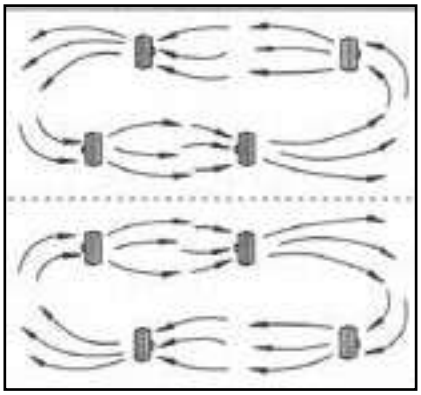
As a guideline, one fan is required every 50 feet.

### Features

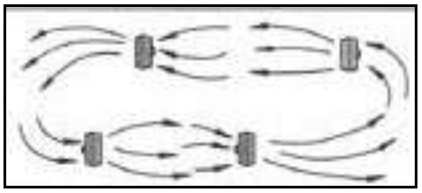
- Totally enclosed, ultra high efficiency motor with built-in thermal protection and selfaligning sleeve bearings
- Quiet and maintenance free
- OSHA approved
- 2 year warranty
- Mounting brackets included

12" variable speed fan recommended for greenhouses that need more control with air flow.

Multi-Bay Greenhouse



Single Greenhouse



| Model | Size | CFMs | Volts | Amps | Price |
|---|---|---|---|---|---|
| JDVBG12 | 12" | 2,600 | 115/230 | 1.12/.56 | $185 |
| JDVDB20G | 20" | 5,080 | 115/230 | 3.64/1.82 | 175 |
| JDMV1 | Variable Speed Controller for Fans | | | | 360 |
| TSTAT1STAGE | Single Stage Thermostat for Fan | | | | 82 |

20" fan recommended for larger greenhouses and for maximum air circulation.

# BioTherm ROLL'N GROW™ HEATING MATS

**BioTherm Roll 'N Grow™** is the perfect way to apply Root Zone Heating (RZH) to growing beds or benches! Your growing surfaces can now be covered like a carpet with growth-enhancing gentle heat in a fraction of the time it used to take. The benefits of this type of heating are well documented: reduced fuel costs, increased production, more compact plants, and fewer disease problems.

Give your plants the root zone heating they thrive on with less hassle and more versatility than ever. Produced with 2" or 3" tube spacing in 6'-0" or 12'-0" mat widths, it is in stock and ready to be cut to your required length. We offer the flexibility to choose from two backing materials, three tube sizes, and a wide range of tube spacing to accommodate your precise heating needs!

Our proprietary one-of-a-kind machine bonds various types of heating tubes to weedbarrier (black or white) or to open mesh (for bench applications). The master rolls are up to 12' wide, but we can provide custom widths to match your floor or bench needs. Simply roll the mat out on the surface, connect the manifolds, along with the supply and return lines, to a hot water source and pump. A thermostat with a probe controls the system based on media temperature.

*Roll' N Grow MCX*

## Tube Material - LLDPE

Durable tubing that can be laid on the floor and withstand carts and equipment traffic.

## Tube Size

Choose the correct tube size for the length of your desired heated area.

## Tube Spacing

Choose closer spacing to deliver a more uniform heat for smaller units such as plug trays. Larger containers like pots can utilize wider tube spacing to reduce overall material costs.

## Mat Size

Choose the correct mat length and width to fit your growing surface area.

## Backing Material

Choose from 16 x 16 mm mesh or weed barrier mat (black or white).

*Roll' N Grow Mesh with Manifold*

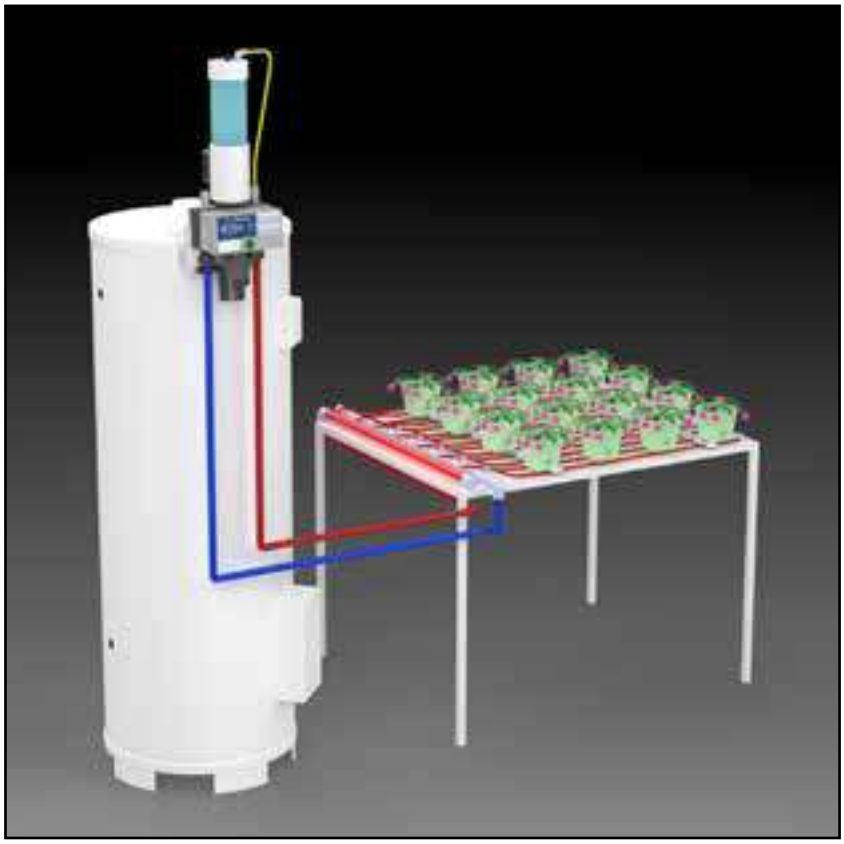
*Roll' N Grow MTX*

# BioTherm RZH™ ROOT ZONE HEATING SYSTEM

Stop using unreliable electric heating mats! BioTherm's RZH-1 is an entry level, low cost, plug-n-play system to provide bottom heat up to 500 sq ft @ 60 BTU/sq.ft.

The RZH-1 module is attached to a standard water heater, purchased locally. Hot water is pumped through BioTherm's Roll'N Grow Mat. Plants are placed directly on the mat. The RZH can heat up to 500 sq.ft.of growing area.

Bottom heat is essential for seed germination, propagation and temperature-sensitive crops, as they all need warm soil to thrive.



## Features & Benefits

- Easy installation
- Plug & play
- Entry-level, reliable root zone heating
- Enhanced root growth
- Cost-effective over electric heating mats
- Ideal for propagation and seed germination

# BioTherm DUOFIN™ & STARFIN™ FIN PIPE

**BioTherm DuoFin™** is our lowest heat output finned pipe commonly used for under bench, perimeter, and in-crop heating. Its unique tapered vertical fin delivers a combination of convective and radiant heating quietly and efficiently. Having only two fins means you'll never have to clean debris from between the fins. Also available with shorter fins, DuoFin Lite is designed for areas requiring less heat. New and improved DuoFin features a ridged surface, increasing heat performance by up to 10.5%.

**BioTherm StarFin™** is our high heat output finned pipe commonly used for bench, perimeter, top, and gutter heating. Its tapered six fin design provides maximum heat output while producing a soft, gentle heat. StarFin's large surface area decreases the amount of pipe needed, reducing shadowing, installation time and labor. Our StarFin Plus delivers the same heat over greater distances. 12-foot sections are joined with O-ring fittings: no tools or welding required. New and improved StarFin features a ridged surface, increasing heat performance by up to 10.5%.

STEP 8

# Understanding an Environmental Control System

If you are still controlling your greenhouse environment with thermostats, or even manually, energy prices warrant that these days must come to a close. Although the initial cost of a thermostat is very low, the increased cost to have a thermostat operating your greenhouse equipment will astound you. Using a computer control system will save you valuable time and money in the long run.

The control system you choose does not have to be an expensive and complicated computer system. There are many products on the market starting at under $1,000 that will let you control your heating and cooling costs very well. The new digital controls will let you have separate day and night settings for heating and cooling. You can utilize DIF in your plant growth program. You can even record high and low temperature readings for later recall. The payback of installing a digital environmental control can be realized in just a couple of months, depending on the size of your range.

### How does a computer control the greenhouse?

The word computer can be very intimidating. Actually, "a computer" really refers to a small microprocessor chip no larger than the width of your two fingers. Like virtually all industries that use control methods, the microprocessor allows the control to monitor many sensors at one time and make "intelligent" decisions on what to do and when to do it.

### What should the grower look for?

The grower should look for the features that they need, the reliability that is a must, and a price that they can afford. If a grower does not have the time and the manpower to devote to a large, complicated system, then a small system would be in order. Some companies will stress the need for a major, all-inclusive system, but the reality is that all growers are not ready for these. It is not necessary to spend tens of thousands of dollars in order to have reliable, efficient, computer-based control.

If a grower is just converting over from a thermostat or a manual system, they should start slow—do one range, try it out, and then proceed.

### How can the investment pay off?

The major payoff will be in energy savings. Simply overheating a greenhouse by a single degree can cost thousands of dollars in wasted energy. With some of the algorithms available, we can adjust temperatures based on solar gain, outdoor temperature, time of day, energy demand period and other factors. For instance, on a hot water system, why fire the boiler to a very high temperature on a fairly mild evening? This investment can also pay off in the reduction of labor costs. Obviously, having a reliable machine performing these tasks instead of a compensated employee is also a plus.


# Environmental Controls

STEP 8

ADVANCING ALTERNATIVES

## AEGIS Tec Touchscreen Controller

### Features

- User-friendly touchscreen interface
- Single growing zone design
- Easy set-up for various heating and cooling schemes
- Simple to program set points, vent drive run times, and sensor reading intervals
- Provides power for up to three 24VDC vent motors
- Controls motors, fans, heaters, HAF's, CO2 generators, dehumidifiers, etc.
- Wind, rain, and humidity sensor and override options
- DIF growing and light deprivation ready
- Independent manual override
- Resettable circuit breaker for motor protection
- Includes temperature sensor with 100 ft. of cable (150 ft. cable option available)
- Solar power option



## AEGIS Tec Plus Touchscreen Controller

### Features

- User-friendly touchscreen interface
- Single or dual growing zone design
- Easy set-up for various heating and cooling schemes
- Simple to program set points, vent drive run times,
- and sensor reading intervals
- All-in-one design provides power for up to four
- 24VDC vent motors
- Controls motors, fans, heaters, HAF's, CO2 generators, dehumidifiers, etc.
- Wind, rain, and humidity sensor options
- DIF growing and light deprivation ready
- Independent manual override
- Resettable circuit breaker for motor protection
- Expandable to multiple system configuration schemes
- Upgrade to remote access with AdvanSync
- Solar power option

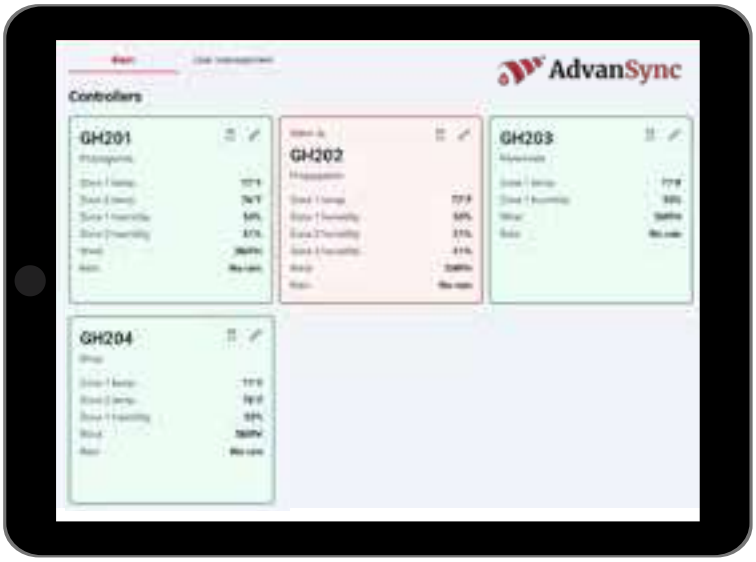
# AdvanSync

AN ONLINE INTERFACE TO ADVANCE YOUR CONTROL

## PRECISION CONTROL FOR THE PERFECT ENVIRONMENT

An online environmental control platform featuring real-time monitoring, asset control, setpoint adjustment, and data tracking.

**ACCESS FROM ANY INTERNET-CONNECTED DEVICE**




Advancing Alternatives' AdvanSync is an online controls platform enabling remote agricultural environment management. The platform's user-friendly interface allows for easy monitoring and adjustment of environmental conditions, including temperature and humidity. AdvanSync facilitates efficient operation of agricultural systems from any location, ensuring optimal plant growth.

## FEATURES

- Long-range wireless connectivity from multiple controllers to Gateway Hub
- Intuitive user online interface allows for both a broad view of multiple zones and a narrow view of a single zone.
- Create custom alarms based on grower's preferred climate
- Build an employee hierarchy of staff, manager, and admin-level users with different permissions and alarm settings for each level
- Track data from every controller

Real-Time Monitoring

Data Tracking

Asset Control

ADVANCING ALTERNATIVES

STEP 8

# ClimateBoss

**Easy to use environmental control. We help you grow.**


### Precision Climate Control
Manage temperature, humidity, and supplemental lighting with pinpoint accuracy.

### Intuitive Interface
Set up, monitor and grow with ease. Clear, on-screen instructions and real-time data, you'll always be in control.

### Remote Access
Grow anywhere in the world. The ClimateBoss supports remote monitoring and adjustments giving you peace of mind even when you're away.

### Customizable Settings
The ClimateBoss can be programmed to suit the specific needs of different plants or growth stages.

### Analytics & Data
Analyze trends, identify issues, and make data-driven decisions to enhance your growing strategy..

### Alerts
Instant notifications of critical environmental changes or issues.ensures you can take immediate action to protect your plants.

## Benefits

### Energy Efficiency
Designed with sustainability in mind, the ClimateBoss optimizes energy use to lower your operational costs while maintaining optimal growing conditions.

### Peace of Mind
Our Headgrower app and platform provides remote access and analytics allowing you to be confident in your growing anywhere in the world.

### Save Time
The ClimateBoss allows you to automate repetitive tasks, freeing up valuable time, boosting efficiency, and standardizing your processes

The ClimateBoss pairs well with other products from Bartlett Instrument Company to advance your environmental control capabilities. Read more about the additional products available to you to complete your greenhouse environmental control package.

# Other Products

## WeatherBoss

A weather station pairs nicely with the ClimateBoss to automate closing roof vents or side walls during weather events. It can also provide light and humidity information for multiple houses, saving you money.

- Outdoor conditions alarms
- Wind speed sensor
- Rain sensor
- Outdoor temperature sensor
- Headgrower compatible
- Optional sensors:
  - Light Levels (DLI)
  - Humidity
  - Wind Direction

## VentBoss

Our power supply boxes designed to control two motors. We can help you pick the model you need based on your equipment. Use these by themselves or pair with a ClimateBoss for full automation benefits.

- VentBoss - Two, 5A Motors
- BigBoss - Two, 10A Motors
- ARBAM - Two, 120 VAC or Two, 240 VAC motors
- All:
  - Manual & Automatic Mode
  - Resettable Circuit Breakers
  - 24VDC Power Supply
  - 120 VAC Input Connections

## TimeBoss

The TimeBoss is a lighting and irrigation controller equipped with our sophisticated, two-stage timer functionality. Supplemental lighting, misting and/or shade control can compliment your ClimateBoss controller.

- Up to 10 2-stage timers
- 1 Shade control timer
- Easy, intuitive programming
- Automatic adjustments based on light level
- Works with Headgrower

## Headgrower

Our Headgrower platform allows users to monitor, analyze and control their greenhouses remotely. This platform can be viewed as an app on your phone, on a tablet or on your computer. It builds on to the core ClimateBoss capabilities on top of the remote access. Users say adding Headgrower is an easy choice and provdes them peace of mind knowing their greenhouse is operating as intended.

- Customizable alerts
- Reports sent to your email
- User levels for need-to-know access
- Audit trail of changes
- Graphing & tabular data for diving into growing conditions and configuration
- Multiple site configuration

STEP 8

# PEARL

Horticultural Environmental Control System www.link4controls.com

Link4 CORPORATION

## UNLEASH THE POWER OF MODULARITY

The Pearl is easy to install, expand, and maintain due to its building-block design. Control modules allow growers to customize the controller based on their specific needs. When the Link4 Cloud software is connected to the Pearl everything in the greenhouse can be monitored from anywhere. All systems are backed by Link4's industry-leading technical support team.

### Scalable and Flexible

Buy what you need today, expand later

### Powerful Controls

Supports all standard cultivation equipment with flexible AUX controls.

### Large Scale Systems

256 outputs, 128 inputs, 128 user-defined controls. The Pearl can handle large and complex grow zones.

### Modular Design

Snap-in control blocks that can be installed in seconds.

### Manual Override Switches

Actual switch positions are remotely detected for possible issues.

### Isolated Communication

Tolerates harsh, high temperature, noisy electrical environments

### Cloud Software

Local keypad with bright display. Powerful cloud access with native mobile apps.

## MAKE GROWING EASIER

### Advanced Serial Communication

- 5 isolated Modbus RTU ports
- Field replaceable
- Ethernet, USB, Wi-Fi, 4G*

*check for availability

### Efficient Link4 Bus System

- Use standard DIN rails
- Automatically connect power and communication
- Hot swappable modules

### Versatile Equipment Support

- All standard grow equipment
- Irrigation
- Lighting controls
- and many more

**INTELLIGENT CLOUD-BASED CONTROL SOLUTIONS**

# PEARL PROTECT

PEARL G-SERIES

Link4 CORPORATION

## EFFECTIVE MONITOR AND PROTECTION FOR YOUR ENVIRONMENT

Link4's Pearl Protect offers precise environmental monitoring and alerts with real-time data, all accessible through our cloud platform.

- **Digital Temperature and Humidity sensor** measuring temperature and humidity with 3ft cable (can be extended to 25 ft).
- Wall plug **24V** power supply included, with 3ft cable (can be extended, power outlet required).
- Weather resistant **enclosure (IP65)**.
- Quick and easy installation.
- Data collection and alarm notifications.
  CLOUD SUBSCRIPTION REQUIRED

### Making Growing Easier!

The Pearl is easy to set up. All systems purchased from Link4 can be equipped with custom drawings, videos, and documents to guide installers and end users.

The integrated cloud makes system setup easy, with advanced features such as group programming, and settings save and restore.

Deployable as a single, large UL electrical panel, or multiple panels to minimize wire runs and installation costs.

### Other Options

Many configurations available with WiFi and cellular.
Private label and OEM versions are available to various distributors and manufacturers.

### Cloud Connectivity

More than just a hardware interface, our cloud is secure, industry leading design offers real-time alarm management, full audit log, context-based multimedia grow journal, advanced graphing, task management, documentation tracking, user-controlled dashboard, advanced third-party access, context-sensitive help, and much more!

**Contact Link4 For Pricing Today**
**sales@link4controls.com**

# Drive Units

*Take advantage of Wadsworth's 40 plus years of experience in automating vents. Our drive units set the standard for powerful performance, smooth operation and reliability.*


## Gusto Vent Drive

### FEATURES

- Gear motor: 120V / 1PH / 1/5HP; 60Hz; 2.5 amps - TEFC (Totally Enclosed Fan Cooled)
- Ball bearing motor with copper windings - Class B insulation
- Gear reducer: total reduction 1350:1; 1.2 or 2.68 RPM final output
- Output torque 1500 in-lbs torque
- Lifts up to 325' of 4' polycarbonate roof ridge vent or 400' of 4' polycarbonate side vent
- Continuous duty
- 1-3/8"O.D. or 1-5/8"O.D. output coupling shaft

### DRIVE UNITS BENEFITS

- Thermal overload protection – automatic reset – continuous duty
- Quick reversing
- Worm gear with tapered roller bearings on dual output shafts immersed in synthetic oil
- Dual output shaft
- Sealed for life; limited or no maintenance required
- Superior heat dissipation through fin & casting design

## VC 100A Vent Drive

### FEATURES

- Gear motor: 1/20 HP - 115V; 60Hz; 0.68 amps - TENV
- Ball bearing motor with copper windings - Class B insulation
- Gear reducer: total gear reduction 1900:1; .85 final output
- Output torque 500 inch lb / 56 Nm
- Lifts up to 75' of 4' polycarbonate roof ridge vent or 125' of 4' polycarbonate side vent

## VC 2000 Vent Drive

### FEATURES

- Gear motor: 1/5 HP - 115V; 60Hz; 2.5 amps - TEFC
- Ball bearing motor with copper windings - Class B insulation
- Gear reducer: total reduction 1350:1; 1.2 and 3 RPM final output
- Output torque 1500 inch lb / 169 Nm
- Lifts up to 325' of 4' polycarbonate roof ridge vent or 400' of 4' polycarbonate side vent

# juniper

*Introducing juniper, a climate control designed to provide value and accessibility, juniper manages the essentials while offering app and Cloud options. With an intuitive interface that moves seamlessly between platforms, juniper keeps it simple.*

## BENEFITS

- Equipment management
  - 2 heating stages, 4 cooling stages
  - 3 configurable setpoint periods with split heating/cooling targets and ramping
  - 2 modulating outputs for vents or curtains
    - Vents can be set to specific positions based on staging or modulate based on temperature
    - Curtains can cover for cooling and heat retention
    - Equipment pulsing to synchronize position
- Protection
  - User authentication and change log
  - Alarm output
  - Notification when toggle switches are not in auto
  - Backup diagnostic screen and buttons
  - Automatically resumes management of equipment after timed override using software
- Accessibility
  - Mobile and desktop app option (Windows, MacOS, iOS, Android, Linux)
  - Remote access option with Wadsworth.Cloud subscription
  - Easy-to-use touchscreen with intuitive interface
  - Choice of time and date formats, Imperial or metric units
  - Select light or dark mode for each platform
  - Accessibility settings for scaling, layout, and theme
- Informational
  - Graphing data points and equipment run times
  - History for 30 days. Unlimited history option with Wadsworth.Cloud subscription
  - Snapshots and data exporting for external backups and analysis
- Upgrade and expansion
  - Easily upgrade from existing control
  - Ability to expand and upgrade as your needs change

# Seed

*A sophisticated touchscreen climate control so intuitive it makes managing multiple zones a snap. Our most capable control to date.*

## BENEFITS

- Highly intuitive operation – the easiest control you'll ever operate!
- Design accommodates both beginners and high knowledgeable growers
- Apple and Android phone app
- Highly responsive touchscreen technology
- Customize your home screen to make it your own
- Configure alarms and notification communications
- Define equipment responses address your specific environment
- Extensive information at a glance
  - Equipment Status lists current conditions
  - Why Code displays explanation for equipment status
  - Graph data tracks all or selected equipment and sensors
  - View equipment settings, overrides, lockout and setpoints from a single screen
  - Tracks Vapor Pressure Deficit and Daily Light Integral in a variety of units
- Cloud connection
- Compatible with HE Anderson fertigation (J+ Advanced Hybrid)
- Sphere companion software increases accessibility, capability and storage. Compatible with both PC & Macs
- Predictive Weather provides forecasting that allows Seed to anticipate needed equipment responses to keep your structure and crop safe
- Soil Analyzer reads soil temperature, moisture, and electrical conductivity (EC) to allow for specific alarms, watering schedules, and data analysis
- Create calculated sensor values using Sensor Pools


WADSWORTH
Control Systems

# PowerPull™ Energy Screens

***We've got you covered***

*With four decades of experience, we know energy curtains. Our PowerPull™ Energy Screen systems are individually engineered to provide the perfect solution for your needs. You can reduce energy costs by up to 40%, improve crop quality and lower water usage all at the same time.*

## FEATURES

- We are the only manufacturer to offer a complete system, including the drive unit and control box
- Your system is custom engineered
- Positive drive rack and pinion system means no cables to adjust
- Fabric glides between stationary stainless steel lines
- Built-in safety limits protect your system
- Durable fabric resists UV, heat and chemicals
- Small bundle size ensures minimal shade when the system is open
- Fully sealed around perimeter when covered

## BENEFITS

- Highly durable and virtually maintenance free
- Up to 40% in energy savings
- More uniform temperatures enhance temperature, humidity and light control
- Improves crop quality
- Cools 10º to 15º F
- Shading provides comfort for customers and staff
- Retains heat at night when 80% of heating occurs

WADSWORTH
Control Systems

# Solar Power for High Tunnels

STEP 8

Turn the same energy that warms your greenhouse into the energy that cools it.


Harness the sun's rays to power your roll-up sides or roof vent with low voltage motors (LVM). For greenhouses that have no access to conventional electricity or those wanting the highest level of energy efficiency, Advancing Alternatives Solar Kits combine all that you will need to power your low voltage ventilation drives.

- Control up to 4 LVMs and 2 individual dry contact devices per system.
- Quick and easy programming via touchscreen or LED status and temp display. Programming held in power disruption.
- Includes Solar Panel/12V Battery/Climate Controller/ Charge Controller/Wiring.
- Manual override open/closed.
- Incremental opening/closing.
- Interfaces via solar charger controller to 12 volt source.
- Can also include powering gable shutter motors.
- Proven to work in northern climates with low solar periods during winter months.
- Solar powered inflation blowers also available to use with this system.

ADVANCING ALTERNATIVES

***Please contact us for pricing!***

STEP 8

# NRCS Funding is Available for Greenhouse Energy Upgrades

Most people know that NRCS funding can support the purchase of a new high tunnel. Now with new funding opportunities, you can also apply for a cost share contract for greenhouse energy upgrades. While programs differ by state, here are a few of the upgrades that may qualify for NRCS funding:

## High Efficiency Heaters

If your exisiting propane or natural gas heater is operating below 90% thermal efficiency, you may qualify for assistance to purchase a high-efficiency Reznor UEZ heater.

## Ridge Vents

An automated ventilation solution that offers more energy-efficient temperature and humidity control. A ridge vent can be retrofit onto your existing greenhouse.

## Environmental Controllers

If you are still controlling your greenhouse environment with thermostats or even manually, you may be eligible for NRCS funding to purchase an environmental control system for your greenhouse.

### Rimol's NRCS Resource Center

Rimol will be your trusted partner to help you secure NRCS funding. We have experience working with NRCS agencies throughout the U.S. Visit our website or give us a call to learn more!

Step 9

# Design & Order Your Greenhouse

**North Hampton School |** North Hampton, NH

STEP 9

# Terms and Conditions

## Shipping Information

We ship your orders using the most common shipping methods: UPS, less-than-truckload (LTL), and special carrier (dedicated tractor-trailer, box truck, or flatbed).

We reserve the right to select the most reliable carriers; if you require special shipping instructions, please let us know. We normally ship the most economical way unless otherwise instructed.

## Freight Shipments

The original (driver's) Bill of Lading indicates that the material shipped has now become your property and is an acknowledgement by the transportation company of the receipt of the property in good condition. Safe delivery of the shipment is the responsibility of the carrier. Please examine your shipment carefully before signing the BOL. NOTE ANY DAMAGE ON THE DRIVER'S BOL AND TAKE A PICTURE OF IT. We will assist in recovery of lost merchandise.

## Damage or Shortage

DO NOT accept the shipment without shortage or damage notated on the driver's copy of the BOL. Failure to do so may jeopardize your recovery. If any concealed damage or shortage is discovered when unpacking, leave the material and the packing as is, and notify Rimol. When checking shipments, compare what was received with the packing lists, typically provided in the front of the instruction manual that comes with your order.

Claims with freight companies must be made promptly.

## United Parcel Service

We cannot ship all materials via UPS. There is a maximum weight per package of 150 pounds, a maximum length of 108" and a maximum size of 165" in length and girth combined. All UPS shipments require a street address and a zip code.

## UPS-Damaged Shipments

If you see that a shipment is damaged upon receipt from UPS, refuse shipment. UPS will return the shipment to us and we will file the claim and send a new shipment to you. If after opening the package you find concealed damage, call us at once. We will instruct UPS to pick up the package and return it to us for a claim. We will reship your order.

## Payments

We accept payment in the form of cash, check, credit card or wire transfer.

## Offerings

Offerings listed are made subject to being available. We will not be held responsible for delays in shipment caused by conditions beyond our control. Applicable substitutes will be made when necessary.

## Terms

Terms are prepayment with orders. Terms of Net 30 days will be considered upon submission and review of credit application.

# Terms and Conditions



## Returns

No merchandise may be returned without authorization from our office. Merchandise must be returned within 60 days of purchase. Invoice number and date of purchase is required for any/all returns. A restocking charge of 20% is charged on all returns unless merchandise is defective. ITEMS THAT ARE SPECIAL ORDERED, MADE TO CUSTOMER SPECIFICATIONS, NON-INVENTORY, OR NON-STOCK CANNOT BE RETURNED FOR ANY CREDIT DUE TO THEIR SPECIAL NATURE.

## Sales Tax

Appropriate state tax will be charged on all items unless we have a copy of your tax-exempt certificate on file.

**If you pick up your order in person at our warehouse in Hooksett, NH, you are not obligated to pay sales tax!**

## Recommendations

We are not responsible for damage or failure due to recommendations provided by Rimol Greenhouses or our vendors.

## Notice to the Purchaser

The following is made in lieu of all warranties expressed or implied. Seller's and manufacturer's only obligation shall be to replace the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss, or damage, direct or consequential, arising out of the use or the inability to use the product. Before using, user shall determine the suitability of the product for his intended use, and user assumes all risk and liability whatsoever in connection therewith. The foregoing may not be changed except by an agreement signed by officers of seller and manufacturer.

**WE ARE HERE TO HELP!**

If something goes wrong, please contact us immediately so we can help fix the problem.

**(603) 629-9004**

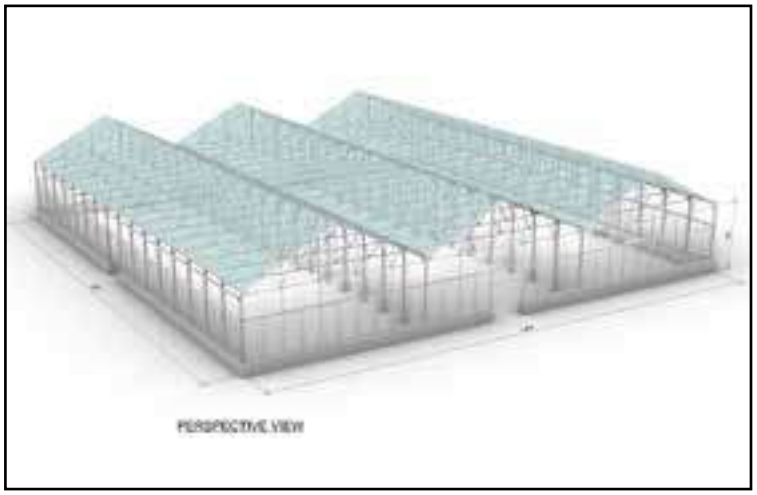
RIMOL
Greenhouse Systems

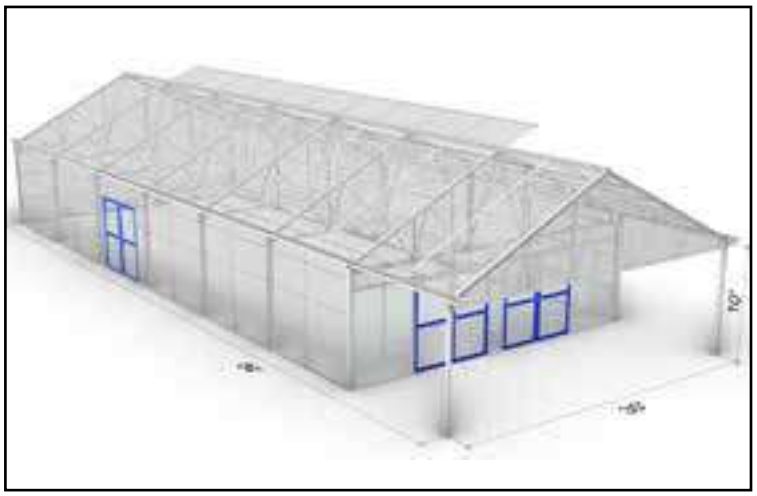
40 Londonderry Turnpike #2D, Hooksett, NH 03106

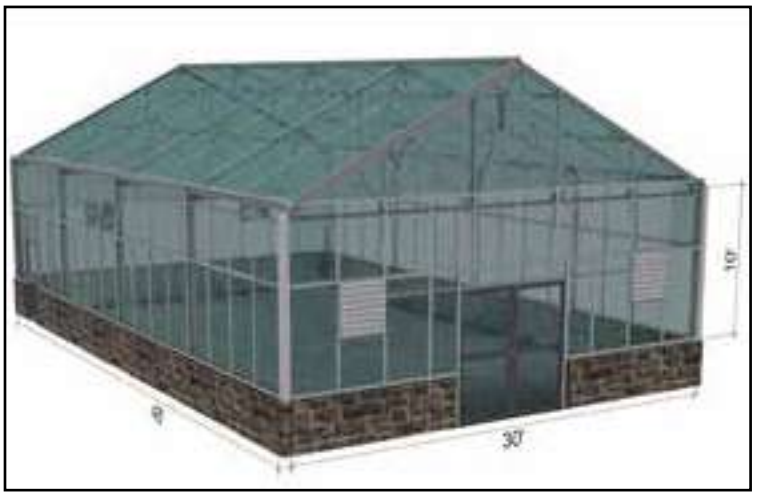
STEP 9

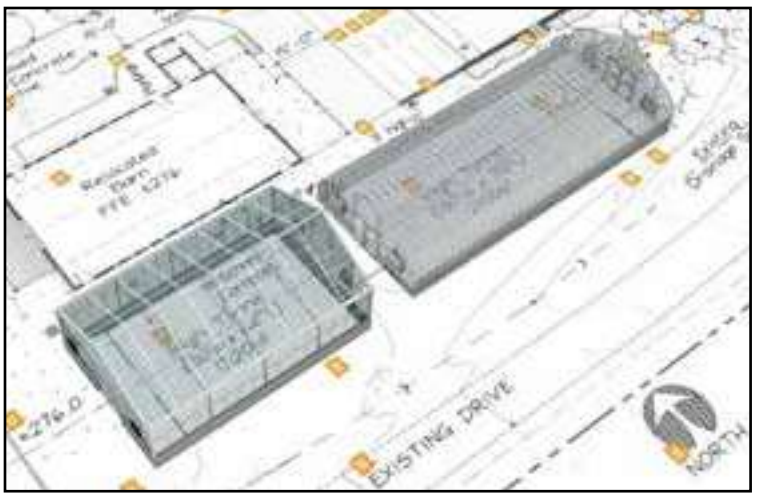
# From Concept to Design

These are examples of greenhouse concept drawings. Our on-staff CAD technician will create customized drawings to help you envision your greenhouse on your property. Let RGS work with you to bring your greenhouse dreams to life – our knowledge and experience will bring you excellent service and great results!





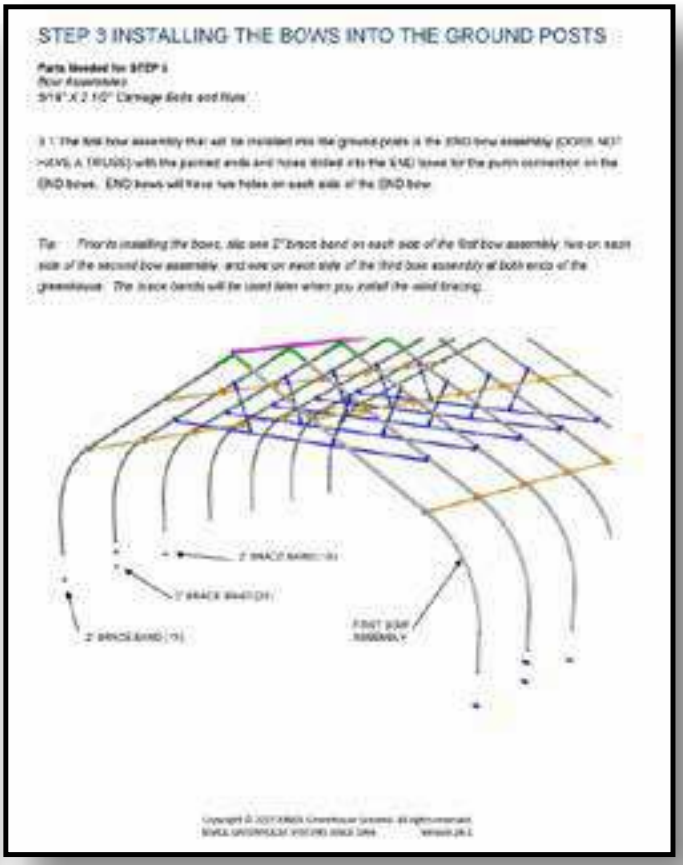



Step 10

# Build Your Greenhouse

STEP 10


Nor'Easter 34' Greenhouse
Assembly Instruction Manual


STEP 3 INSTALLING THE BOWS INTO THE GROUND POSTS

# Constructing Your Greenhouse

Our newly updated instruction manuals include step-by-step directions with photos and color-coded drawings to ensure your greenhouse construction process goes smoothly. If you have questions or just want to make sure you're on the right track, give us a call – our knowledgable team is always available to help!

**CONTACT US**

**(603) 629-9004**

customerservice@rimol.com

***Download A Free Copy of Our Greenhouse Instruction Manuals!***

Visit our website to download a free copy of our instruction manuals. It will put your mind at ease when you see how simple we make it to build your Rimol Greenhouse!

# How to Obtain a Building Permit

STEP 10

Obtaining a building permit can be a long and strenuous process, but by being prepared and knowing what is needed, this task can be faster and simpler.

### Draw a detailed plan of the greenhouse

The drawing should include the location on the property, the dimensions of the greenhouse, and the distances from the property lines of the site. Bring an instruction manual that shows how the greenhouse is assembled and a brochure or photo of what the greenhouse will look like.

### Visit your local or county government

Depending on what state you are located within, you will either visit your local or county government. Bring a notepad with you. The building department may require one or more of the following:

- Zoning approval
- Site plan approval
- Variances from abutting neighbors if the greenhouse encroaches past required setbacks
- Sealed engineering plans – these are a set of stamped plans certifying the greenhouse for snow and wind loads according to the requirements of the International Building Code. If these are required, you must get these requirements from the building department.
- Electrical plans showing equipment location, power requirements, and operation manuals on the equipment
- Plumbing diagram
- Architectural drawings of the complete project
- Flame rating information for certain components within the greenhouse, such as polycarbonate or shade curtains
- Structural calculations or reaction information for the sealed plans

### Fully complete all applications

Remember to keep copies of everything for future references.

### Submit all applications and all necessary items as required

Remember to ask for a timeline of when to expect an approval.

## Rimol Greenhouse Systems' Tips for Success:

- You should file your application significantly in advance of your scheduled starting date. Obtaining a building permit can take months to complete, and sometimes longer than a year. Be sure to allow plenty of time for this process.
- Some municipalities hire outside firms to review "unconventional" building permit applications. These outside firms will pick apart every aspect of your application. Be prepared as much as possible, and if the application is denied be sure to ask for all requests from them in writing.
- For larger projects, you may want to consider hiring an engineering firm, lawyer, or Permit-Package Preparation Company. Although these firms are expensive, they will save you a great deal of money and aggravation in the long run.
- And lastly, no matter how aggravated and frustrated you become when dealing with your building department, keep your cool, remain calm and try to be rational with explanations or questions.

# Connect with Rimol on Social Media

We love connecting with our customers on Instagram, Facebook and YouTube. Give us a follow, and be sure to tag us when sharing photos of your Rimol Greenhouses – nothing beats seeing our customers' success in action!








## Tag us in your social media posts to be featured on our page!

We'd love to see what you have growing. Tag us on any social media platform, or email us at marketing@rimol.com to share your best shots.

@rimolgreenhouse

@rimolgreenhouses

@rimolgreenhouse

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