

Residential Lean-To Greenhouse

"Direct and Easy Access to Your Plants"



Building their own greenhouse was something Ken Southworth and his wife had talked about for years but just never got around to doing it. (Sound familiar?) But with the increasing cost and decreasing availability of fresh, healthy produce, Ken finally decided to get serious about his backyard project.

After doing a lot of research last winter on types of greenhouses, kit options, and contractor costs, Ken

choose to design and build one himself. "I wanted to build a greenhouse that would be attached to our house so that we could have direct and easy access to it in all weather conditions without having to go outside," Ken said. "Our house style, property layout, and solar orientation made a lean-to greenhouse the best solution for us."

Typically, a lower cost alternative to a freestanding greenhouse, a lean-to greenhouse attaches directly to the exterior wall of an existing structure, such as a home or garage. This style greenhouse saves money on building materials as well as provides easier access to electricity, water, and heating sources. Ken explained it like this: "Since we heat our house with a wood boiler system, that made it easy to install a radiator/heat exchanger unit out there and tie it into our home system so that we will not have to rely solely on solar features."



One of the critical decisions in building a greenhouse is choosing the right structure. The frame of Ken's lean-to greenhouse is a custom steel kit designed and created by Worldwide Steel Buildings. Ken felt a steel frame would best suit his needs. "The end result is that I think our greenhouse can stand up to just about anything and will probably outlast us. We are very pleased with the results and glad that we went the route that we did."

The other important building material consideration was the exterior covering. The three main types of greenhouse glazings are films, plastics, and glass with polycarbonate being considered one of the best options. Multiwall polycarbonate panels will maintain their high clarity and provide an outstanding balance of impact strength, and stiffness, excellent thermal insulation, UV protection, flame and condensation control, and long-term high light transmission.



"Multi-layered polycarbonate panels are cheaper, lighter, stronger, more thermally efficient, and easier to build with than glass, and will far outlast plastic films." Ken said. "Unless you have an unlimited budget, multi-layered



polycarbonate panels are really the only way to go for something that will be strong and good looking enough to attach to your house, especially for a DIY build.”



Because he was looking for a thermally efficient panel with light diffusing properties, Ken selected LEXAN™ THERMOCLEAR™ 15 Softlite 16mm polycarbonate for his greenhouse covering. The 100% diffusion feature of this high-performance panel is ideal for greenhouse applications. Plants benefit from high levels of light for growth while being protected from harsh, intense sunlight. The scattering of the

light reaches both the top and bottom leaves resulting in faster, uniform growth, virtual elimination of shadows, brighter colors, and more usable energy to the plants.

Ken incorporated south-facing ‘window’ views using solid polycarbonate sheets that were the same thickness and width as the 16mm multiwall panels. “This allowed me to use the same H-channels that I used everywhere else. It also saved me from the extra work of framing in the windows and trying to make them weatherproof. We are very pleased with how they turned out. Everyone’s commented on how clear and nice the front windows are.”

Building your own greenhouse is a rewarding DIY project but does require some basic constructions skills. “It’s not brain surgery but depending on your design, materials, and location it can be challenging without additional help or building experience.” Ken went on to say the panels’ light weight made them easy to handle and work with. “I was able to build our greenhouse all by myself with only occasional assistance from my wife when I needed an extra set of hands to hold something.”



A lean-to greenhouse is not just a place for growing veggies and flowers but an extension of one’s living space. It’s more like a garden sanctuary, doubling as a sunroom, an ‘outdoor’ dining area, or just a quiet place to relax and unwind. “We can’t wait to sit out there on cold, snowy winter days and be warm, surrounded by green and growing plants,” Ken said.

Are you considering building your own greenhouse? Here are a few of Ken’s tips: Do your research. Read everything you can find on greenhouses — styles, construction considerations, and materials. Then let your budget, your health, and your motivation dictate your choices.

Featured Product

LEXAN™ Multiwall Polycarbonate Sheet

A well-established brand for over 40 years, LEXAN™ multiwall polycarbonate sheets are extruded from LEXAN™ resin, a high-quality thermoplastic with superior mechanical, optical, and thermal properties.

This lightweight, high-performance sheet offers high light transmission, remarkable impact resistance, and long-term weather resistance. In addition, the sheet’s multiwall construction provides outstanding thermal insulation and structural strength.

The versatility of the LEXAN™ multiwall polycarbonate sheet makes it an ideal material choice for a wide range of glazing applications



Available in many colors, structures, coatings, and finishes, LEXAN™ multiwall polycarbonate

including greenhouses, pool enclosures, canopies, gazebos, wall partitions, carports, pergolas, sunrooms, and covered walkways.

sheets are stocked in clear, opal, white, and bronze.

[Visit Product Page](#)

DIY Tip of the Month

Why Not Cover It?

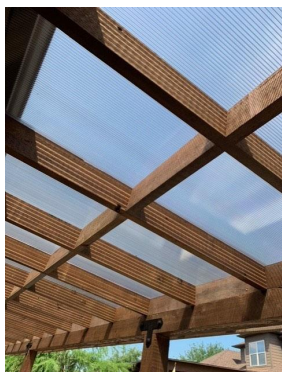
Patios are wonderful places to spend time with family and friends. They're also gathering spots that are exposed to



nature's untimely elements. Covering your patio will allow you to enjoy your outdoor living space regardless of weather – rain or shine!

Advantages of a covered patio:

- More living space
- Shelter from rain
- Shade from sun
- Better resale value
- Increase curb appeal



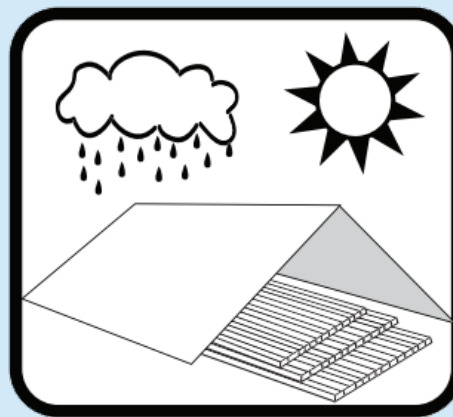
Durable yet lightweight, multiwall polycarbonate is an ideal patio roof covering that is easy to cut, install, and maintain.

Polycarbonate panels also block harmful UV rays, which will help protect you from sunburn and your

outdoor furnishings from fading.

If you would like advice on the best polycarbonate panel to cover your patio, please contact us at 888-602-4441 or send an email to info@amerilux.com.

Winter Storage



Q: How to store and handle Polycarbonate and PVC panels during the winter months?

A. Polycarbonate and PVC panels can be stored outside temporarily in the rain or snow. Stack sheets on a raised platform protected from the wind. Even though the sun's strength decreases during the winter, do not expose stacked sheets to direct sunlight. Cover with an opaque, protective material. Covering the polycarbonate sheets will also prevent dirt and debris from entering the flutes. Ideally, panels should be stored in a dry, well-ventilated, shaded area. Prior to installation, bring the Polycarbonate and/or PVC panels inside, lay flat (uncovered), and allow the sheets to acclimate to the temperature of the room where they will be installed or in a room with the same climate conditions for a period of at least 48 hours.

[More FAQs](#)

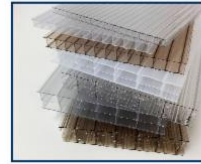
The Fundamentals of Light Transmission

WHAT IS LIGHT TRANSMISSION?

Light transmission is measured by the degree of light passing through a polycarbonate sheet without being absorbed or reflected. AmeriLux offers a variety of polycarbonate sheets with different percentages of light transmission. These high-performance sheets are perfect for a variety of indoor and outdoor glazing applications.

The structure, color, and thickness of a polycarbonate sheet will affect its light transmission. Make sure to choose the correct sheet for your specific application.

What features affect the light transmission of a multiwall sheet?



Structure

Twin Wall
Triple Wall
5X Wall

Thickness

6mm	16mm	20mm	32mm
8mm	10mm	25mm	40mm

Color

Clear - Direct Light	SoftLite - Soft Diffused Light
Opal - Ample Light	Bronze - Least Amount of Light



Links of Interest

- [Located in the Hunan Province of China, the Pingtan Book House features polycarbonate façade panels, allowing sunlight to filter in and provide exterior views of the village.](#)
- [Featuring polycarbonate roofs, underground greenhouses are being built as a way to obtain food security in rural communities like the Pine Ridge Reservation in South Dakota.](#)
- [The front yard, back yard, and interior buffer space of a renovated Vietnam home are covered with clear polycarbonate, allowing natural light to pour in from above.](#)

Company Highlights

Meet the A-Team

Employee Spotlight | Jamie Hurley

While working as a registered dietitian and food service director, Jamie discovered her true passion for business and business strategy, including supply chain management. Looking for an opportunity to further her professional business career, she joined the supply chain team at AmeriLux International in November of 2022.

Jamie says she enjoys the variety in her role as a Project Analyst. "I am involved in supply chain forecasts, as well as specific project-based tasks. Projects range from indirect supply sourcing and analysis to operations inventory design as well as a little financial analysis."

When asked which of the AmeriLux culture statements she relates to the most, Jamie said "Win-Win". She went on to explain why. "An example in my role is creating material forecasts that meet all customer's needs, while also meeting the needs of AmeriLux for successful inventory management and cost control."



"I enjoy finding solutions that are a win-win for all involved."

Northeast Regional

World Dairy Expo

Carwash Convention

The 33rd annual Northeast Regional Carwash Convention (NRCC) will showcase a wide variety of exhibits featuring the latest in industry products, equipment, and technology. International award-winning leadership expert Mark Denton is this year's must-see keynote speaker.

- **When:** October 2nd - 4th
- **Where:** Atlantic City Convention Center, Atlantic City, New Jersey
- **Booth Number:** 848

For show details, please visit <https://nrccshow.com/>



The World Dairy Expo is the largest dairy-focused tradeshow in the world and will feature more than 650 companies this year, bringing together the latest in innovation and technology. This is a must-attend event for everyone in the global dairy industry.

- **When:** October 3rd - 6th
- **Where:** Alliant Energy Center, Madison, Wisconsin
- **Booth Number:** TC522-523

For show details, please visit <https://worlddairyexpo.com/>

We look forward to seeing you at our booth at these upcoming shows. Stop by and meet the team. Whether it's new or retrofit construction, we'd love to discuss your next building project.

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