

Multi-wall Polycarbonate Installation Instructions

Multi-wall polycarbonate sheet can be used on both gable and arched style greenhouses. These easy to install panels can be attached directly to the greenhouse frame using one of several suggested fastener methods.

Multi-wall polycarbonate sheets can replace existing greenhouse coverings including double polyethylene, fiberglass or glass. The following information provides an overview of the proper installation procedure.

Bending/Burying

Multi-wall Polycarbonate is sufficiently flexible to allow moderate curves. The minimum cold forming radius is 24" for 6 mm thickness, 31" for 8 mm thickness and 94" for 16 mm thick material. Flexing or installing a sheet to the point of buckling can cause rapid deterioration in highly stressed areas.

For added strength and rodent control, sheets at ground level may be buried 4" to 6".

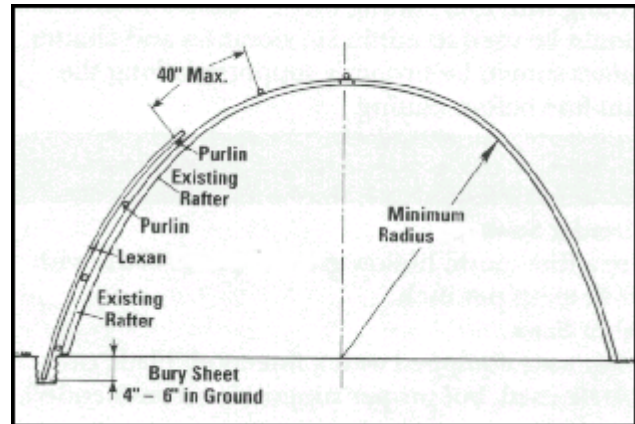
Positioning

Sheets must be installed with the ribs running vertically and the bottom edge unsealed to assist condensed water vapor drainage. This allows moisture to escape freely and prevents algae growth.

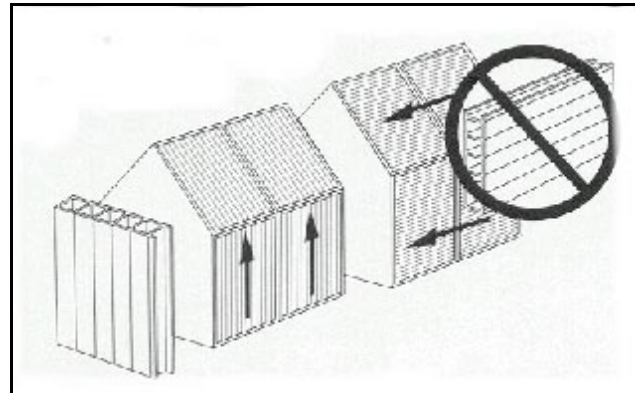
Sealing

Always seal top of Multi-wall polycarbonate sheet to protect dirt and dust from entering the channels. Use 1" wide foil tape to seal channels.

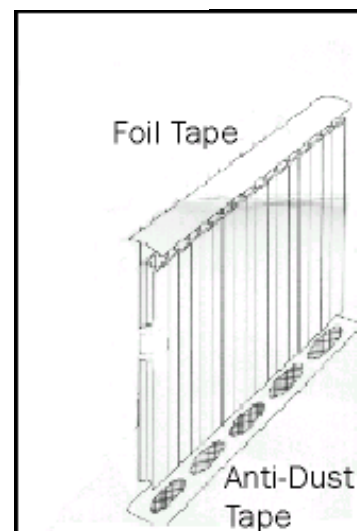
Always seal bottom of Multi-wall polycarbonate sheet to protect dirt, dust and insects from entering the channels. Use special 1" anti-dust tape which allows channels to breathe.



Bending/Burying



Positioning



Sealing

Cutting

Multi-wall polycarbonate sheet can be cut with a variety of common hand-held and table-mounted equipment. In general, sharp tooling with fine cutting teeth should be used to minimize vibration and chatter. Sheets should be properly supported along the trim line before cutting.

Circular Saws

Use a fine-tooth, hollow ground panel blade with 10-12 teeth per inch.

Saber Saws

Saber saws equipped with a fine-tooth blade can also be used, but proper support is recommended.

Drilling

Drill with a high-speed steel or carbide tipped twist drill. Drill holes slightly larger than the fastener to allow for expansion and contraction. (e.g., drill a 1/4" hole for a 3/16" screw). Place holes at twice the fastener diameter or 1/2" from the edge of the sheet, whichever is greater.

Accessories

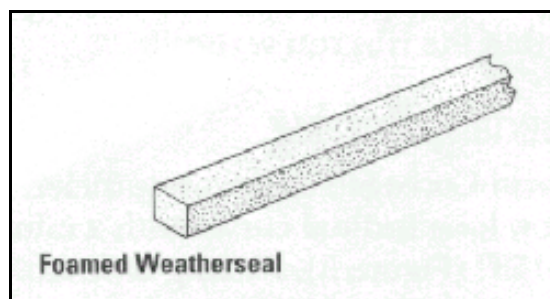
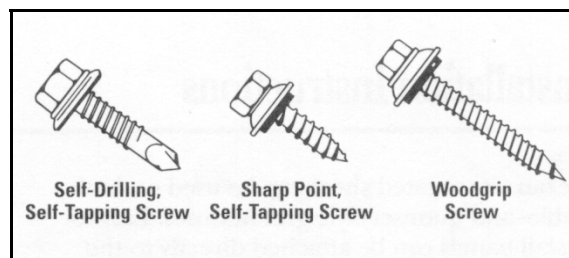
A number of different accessories are available to simplify the installation of Multi-wall polycarbonate sheeting. Self-drilling, self-tapping screws with neoprene washers are for aluminum or steel substructures; woodgrip screws are for wood substructures.

Sealing

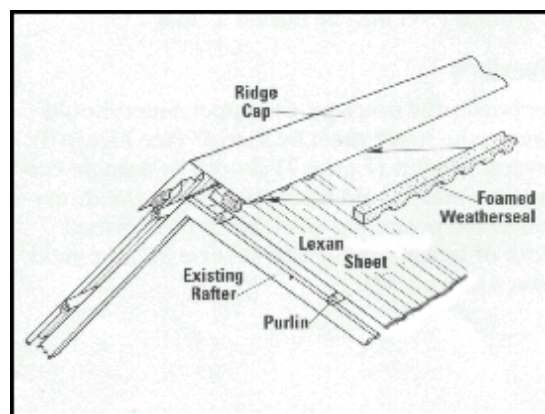
To seal the pitched roof ridge from the elements, a ridge cap may be formed from aluminum or other suitable material. The ridge cap should be sealed with foam weatherseal.

It is recommended that a minimum 3:12 pitch roof be maintained.

Foamed closures may be used at the ridge peak and other locations to seal the greenhouse. Closures should have a profile and be made of materials compatible with Corrugated Polycarbonate Sheet. Use a high quality, compatible sealant such as silicone rubber to seal holes or overlaps.



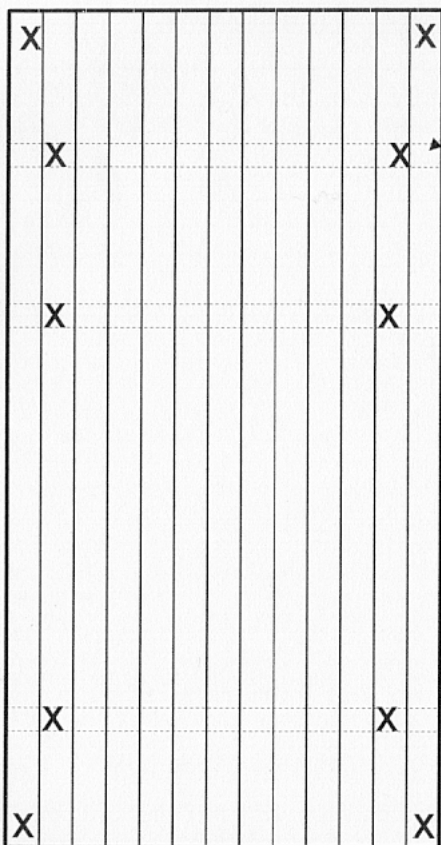
Available Accessories



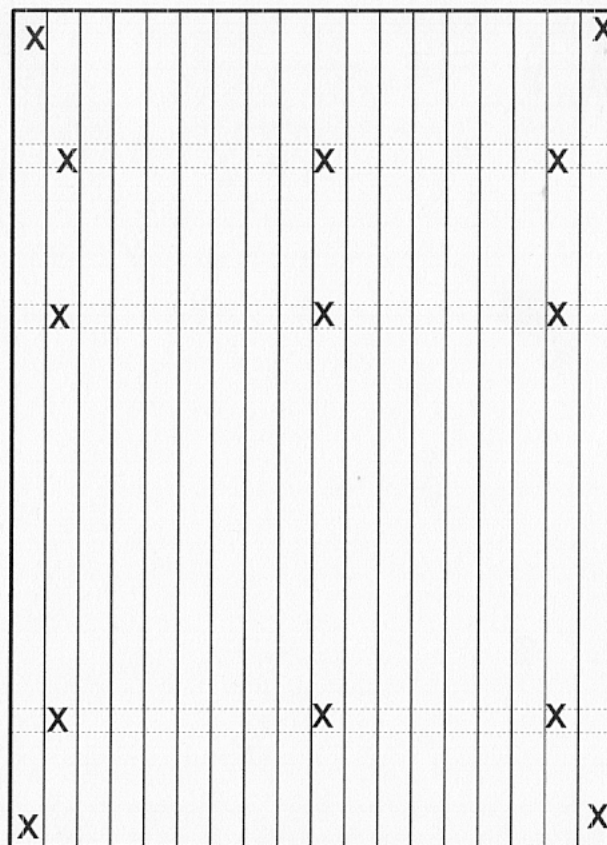
Ridge Sealing

Thermal Expansion

Allow for thermal expansion during installation at a rate of 1/8" per 3 feet at 100 F. temperature. Allow for this difference in both width and length of sheet. Glazing system should not inhibit the expansion of polycarbonate panel in either direction.



Deflection
Supports
(Below Panels)



48" Width Panel

48 inch wide sheets should be fastened to building structure at all four corners and at points 6" in from the edges at deflection supports

72" Width Panel

72 inch wide sheets should be fastened to building structure at all four corners and at points 6" in from the edges at deflection supports and at the center of deflection supports.

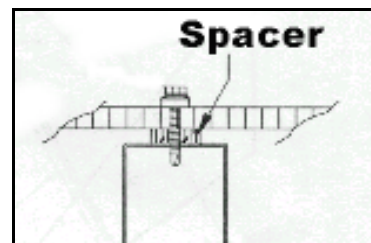
Point Fastening

Multi-wall polycarbonate should be fastened to the greenhouse substructure in accordance with the spacing shown in the diagrams above.

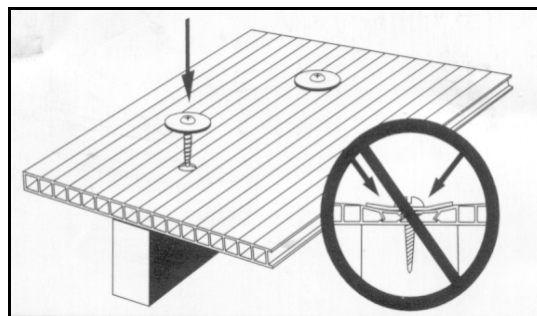
Multi-wall Polycarbonate can be fastened directly to a wooden or metal greenhouse substructure.

The screws used to fasten Multi-wall Polycarbonate should have neoprene or EPDM washers. Ensure that the washer does not crush the polycarbonate panel.

It is recommended to use a no-drip spacer washer made of neoprene positioned between the Multi-wall Polycarbonate sheet and the building structure.



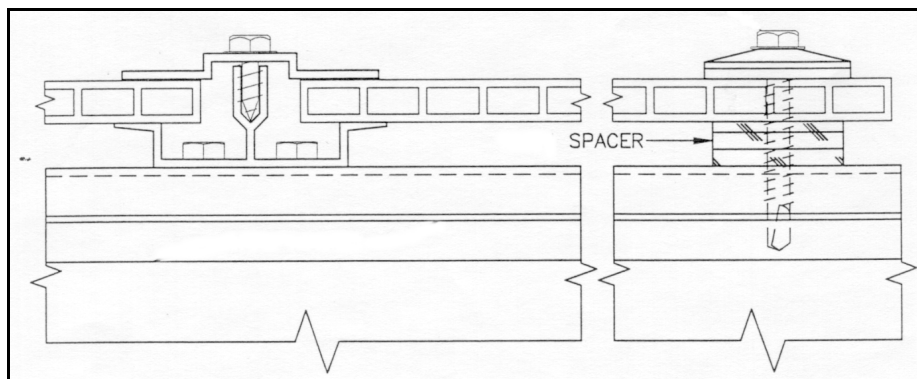
Spacer Washer



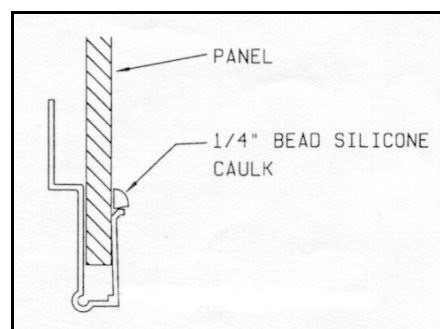
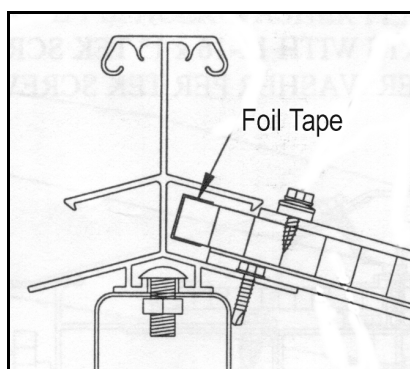
Fastening to Building Structure

Aluminum Glazing System

Multi-wall polycarbonate can be fastened to the greenhouse and joined to adjoining panels by utilizing an aluminum glazing system. The individual components work as a unit to secure the panel to the structure and to seal the structure from the elements.

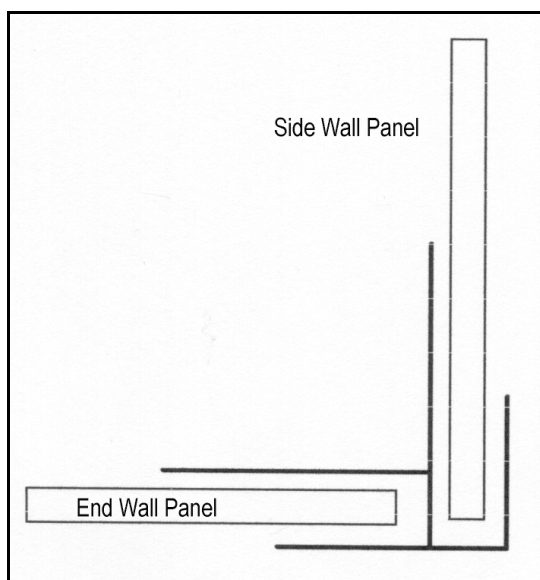


Bar and Cap—Used to join adjacent panels.

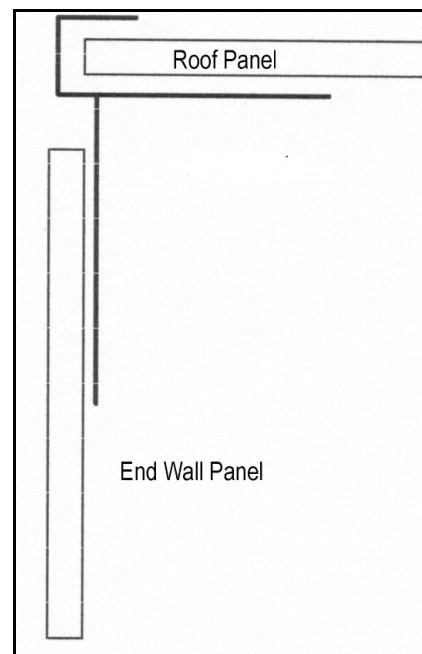


End Cap—Used to seal tops, bottoms and sides of panels.

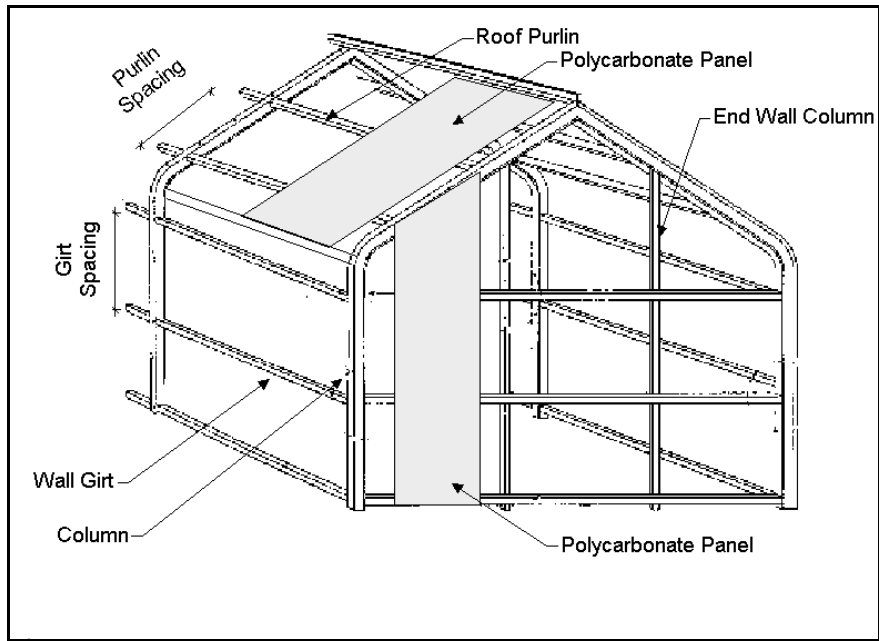
Ridge Extrusion—Used at peak of gable style roof.



Corner Extrusion—Used to join side wall & end wall panels at corner



Gable Extrusion—Used to join roof & end wall panels at gable.



Purlin & Girt Spacing

Recommended Loading (Maximum Purlin Spacing) 1" Deflection

MATERIAL	15 PSF LOADING	30 PSF LOADING	45 PSF LOADING
8mm x 6' Wide	36	26	12
16mm x 6' Wide	60	40	36
8mm x 4' Wide	38	28	18



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