How to Attach a Greenhouse Cover

Greenhouse Plastic can be purchased from your Farmer's Co-Op, a Greenhouse supply store, or from Farmtek at www.farmtek.com

Recommended Greenhouse Covering Sizes:

Dome Size:	Covering Size:
10' Dome (5' tall)	20' x 20'
13' Dome (6' 6" tall)	24' x 24'
16' Dome (8' tall)	30' x 30'
25' 3/8 Dome (10' tall)	40' x 40'
25' 5/8 Dome (14' tall)	48' x 48'

Preparing the Dome for the Covering:

Before attaching a greenhouse covering, the zip ties must be trimmed so that they do not extend past the edges of the hub and into the covering. Use a pair of wire cutters or snips to cut the ends off the zip ties inside the hubs.

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Painting or Taping the Dome to
Separate the PVC from the Greenhouse Plastic

PVC pipe will slowly produce chlorine gas, which may destroy the UV light stabilizers in polyethylene greenhouse film. This chlorine gas from PVC pipe will cause certain types of 4 year greenhouse plastic to have holes and tears after the first year.

For this reason, your greenhouse plastic warranty may be voided if your greenhouse plastic comes in direct contact with PVC. Contact the greenhouse plastic manufacturer for details.

Greenhouse plastic can also be damaged by oil based paints, wood preservatives, chlorine based disinfectants, and certain pesticides, especially those containing sulfur or copper. This problem is not specific to our geodesic domes, but is evident in any type of PVC greenhouse structure.

Solution: Acrylic Latex Paint

To extend the life of your greenhouse plastic, before you attach your greenhouse plastic, use a white acrylic latex paint and paint any PVC struts and hubs that will come in direct contact with your plastic.

Alternate Solution: Clear Packing Tape

Another technique is to cover the hubs and struts with a non-PVC tape, such as clear packing tape. Applying tape over the hubs helps to smooth any rough edges that might rub against the plastic sheet.
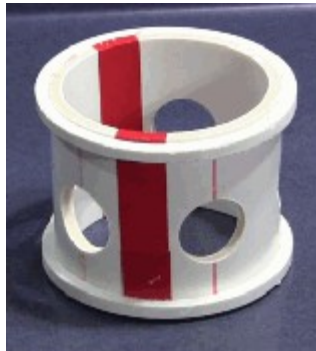
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Raising the Cover over the Dome:

For the larger domes, you may want to tie a rope on the center of the leading edge of the covering to hoist the center of the cover over the dome.

Method 1: Using the Dual Covering Hubs:

The Dual Covering Hubs have an extra ridge at the edge of the hub that allows you to attach the greenhouse plastic to the hub by cinching the zip ties over the plastic above the ridge, which secures the plastic to the hub.
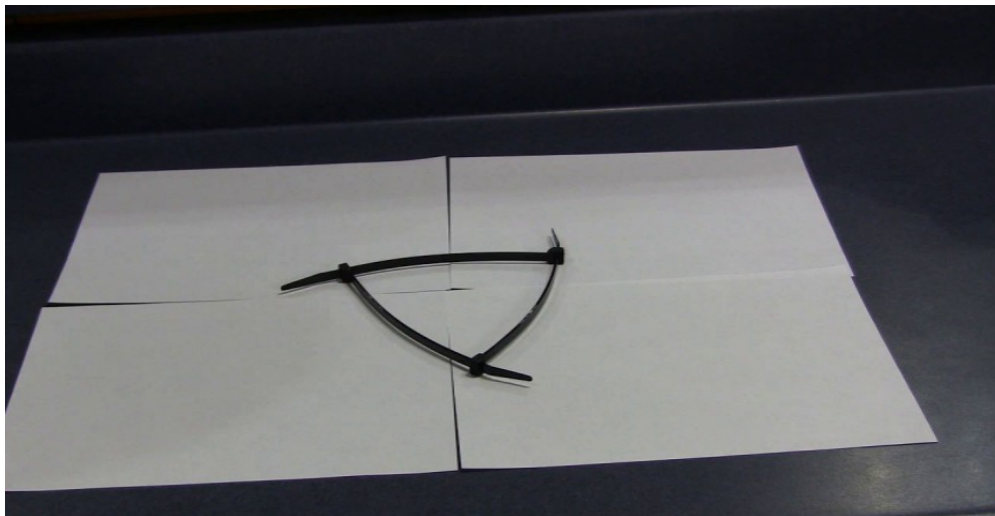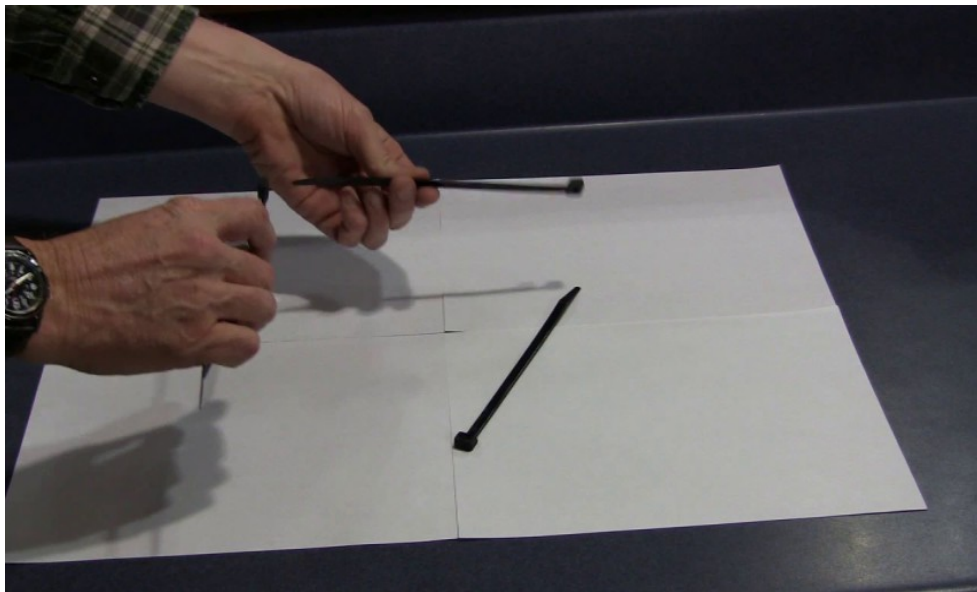
The design of the Dual Covering Hubs allow you to attach two layers of greenhouse covering to the dome, one on the inside, and one on the outside. This creates a "dead air

space" insulation pocket, and increases the greenhouse's ability to hold heat during the nighttime hours.

To attach the greenhouse covering to a Dual Covering Hub:

Connect 3 Heavy Duty 8" Zip Ties together in a "daisy chain" circle, with each of the Zip Tie Ratchet Knobs on the outside of the circle.

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Attach the plastic to the dome by wrapping the plastic over the hub, and secure the plastic by cinching the 3 Zip Ties down over the plastic on the hub between the edge of the struts and the ridge on the outside of the hub.

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It is easier to attach two layers to the dome if you start with the covering on the inside of the dome. To do this, you will need to find the exact center of your covering material, so that it can be attached to the center, or top, of the inside of the dome.

Take the covering and fold it twice, once in each direction.

Find where the double fold is, and make a large, visible mark with an ink marker to

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mark the center of the covering.

Put a step ladder inside the dome. Take the covering and put the marked center over the top of the step ladder.

Get under the covering and place the marked center of the covering over the hub at the top of the dome. Have 3 zip ties in a daisy chain ready to cinch down the covering over the hub. You may need one or more people to help you do this.

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Lift the covering up over the hub, and secure it to the center top hub with zip ties.

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Pull the covering to the next hub, and take up any slack in the covering between the hubs. Secure the covering to all of the hubs in the interior of the dome.

Pull the outside covering over the outside of the dome. Use Zip Ties to secure the outside covering to the hubs on the sides and on the bottom of the dome.

Method 2: Using the Standard Economy Hubs

The Standard Economy Hubs do not have a ridge on the edge of the hubs for attaching two layers of greenhouse covering. With the Standard Economy Hubs, only one layer of greenhouse covering can be attached to the outside of the dome using Test Cap Covers and Greenhouse Clips.

For an overview, please see our video at www.ZipTieDomes.com "How to Attach A Cover with Test Caps and Pleats."

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The Greenhouse Clips are for attaching the greenhouse covering to the 1.315" OD PVC pipe, and can be purchased from FarmTek or a Greenhouse Supply store.

After the greenhouse covering has been placed on the outside of the dome, secure the covering to bottom struts of the dome using the 1.315" greenhouse clips.

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Using the Test Caps and Carriage Bolts.

The 4" Test Caps can be purchased from Lowes or Home Depot in the plumbing section of the store.

For the 3v 24' dome, you will need:

30 Test Caps
15 carriage bolts that are 5" long,
and 15 nuts and washers for the bolts.

For the 2v 16' dome, you will need:

20 Test Caps
10 carriage bolts 5" long
10 nuts and washers for the bolts.

A hole needs to be drilled in the center of each Test Cap slightly larger than the diameter of the carriage bolt, so that the carriage bolt can be inserted. Assemble the Test Caps with the carriage bolts inserted.

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The Test Caps and carriage bolts will be used on the hubs at the top of the first tier of the dome. Fold any excess greenhouse covering over the hubs on the top of the first tier to make a pleat. Insert the carriage bolt through the pleat, and through the center ring of the hub.

Push the Test Cap into the hub opening, securing the greenhouse covering to the hub.

On the inside of the dome, thread a Test Cap over the carriage bolt, and secure with a washer and nut.