

Derecho 24'

Gothic Hoop House

INSTRUCTION & OWNER'S MANUAL

Rev. Date 10/01/2026

Thank you for choosing Bootstrap Farmer for your farm's equipment needs. Our 24' Derecho Gothic Kit is manufactured with 100% American-made steel and aluminum for maximum strength and durability.

Our team strives to provide quality products that are built to last. From all of us at Bootstrap Farmer, we thank you for putting your trust in us.

If you have any questions, please reach out. We are available 7 days a week by phone, email, and chat.

1(888)-406-1982 contact@bootstrapfarmer.com www.bootstrapfarmer.com

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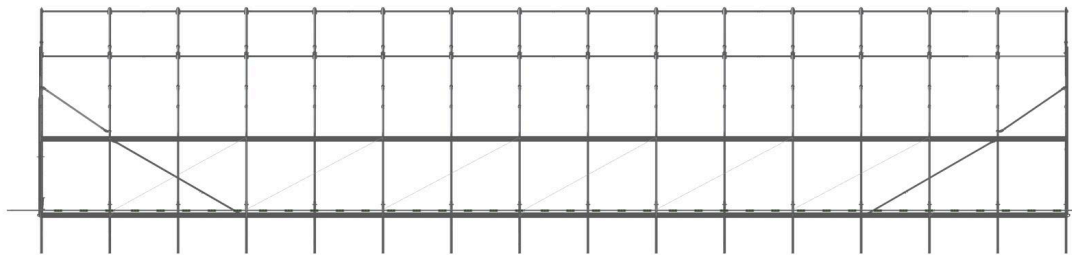
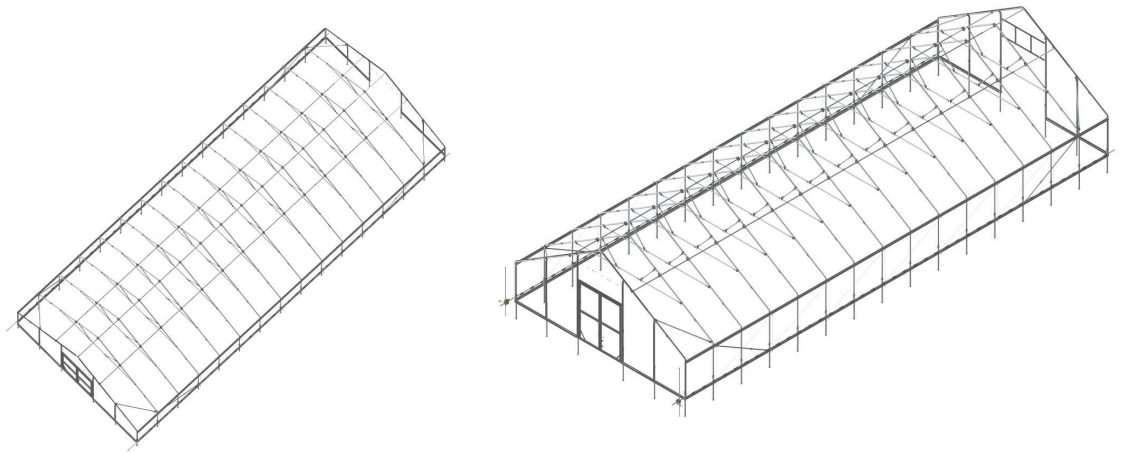
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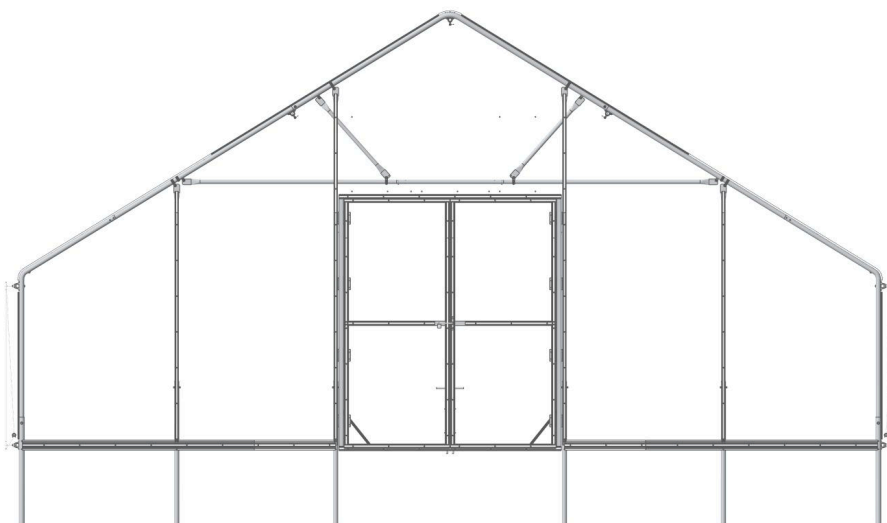
Getting Started

BEFORE BEGINNING INSTALLATION, PLEASE CAREFULLY READ THROUGH ALL INSTRUCTIONS. CONTACT OUR TECH TEAM WITH ANY QUESTIONS YOU HAVE BEFORE BEGINNING YOUR BUILD. WE ARE AVAILABLE VIA EMAIL, CHAT, OR PHONE 7 DAYS A WEEK 888-406-1982 EXT. 1

CAD DRAWINGS



Side View



Front View

Recommended Tool List

For Your Safety: Take all necessary precautions when using power tools and building equipment. Personal protective gear such as: gloves, eye protection, earplugs, and closed toe shoes are recommended.

- Clamps
- Drill & Drill Bits (1/4"/5/16" bits included) ** **Impact driver not recommended for driving self-tap screws.**
- Ground Post Driver (included)
- Levels (long, magnetic & string line)
- Roll of mason line
- Metal File
- Metal Saw (reciprocating, chop, or hack saw)
- Slip joint pliers
- Scissors/blade
- Sledgehammer
- Center punch
- Socket set & Adjustable Wrench - (1/2" ratchet or nut driver)
- Rope
- Stakes / Markers
- Step Ladders (at least one tall enough to reach the peak of your roof line, see height warning.)
- Tape measure
- Extendable painter's pole



HEIGHT WARNING: The 24' kit has a center height of 12'4". BOOTSTRAP FARMER cannot be held liable for unsafe work practices. Installers and Farm Owners are encouraged to rent a lift from your local equipment rental company. Refer to their safety equipment recommendations and best practices for the unit you rent during use, loading, unloading, and transport. On the build site, keep the lift level and on packed solid ground. **Do not operate in inclement weather.**

Greenhouse Placement

We recommend finding a flat area of land, free of trees, and far enough from existing structures to avoid runoff and snow drifts. Pay attention to the drainage in the area. Extra groundwork may be required to divert water runoff caused by regular greenhouse waterings. Make sure that you are able to access the area with water.

****Always call 811 before you dig or install ground posts to have gas and utility lines marked or check your site map.**



Scan QR for info on **Greenhouse Orientation and Site Prep before you build** or visit <https://www.bootstrapfarmer.com/blogs/building-a-greenhouse/ideal-location-for-a-greenhouse>

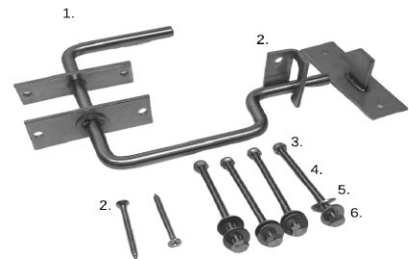
Parts List

Uncrate shipment and check against packing list to ensure that all materials have been included. If any discrepancies are noted, please notify us immediately at (888) 406-1982 so we can get parts to you as soon as possible.

Door Hardware

Door Latch Kit

1. Handle (1 per frame) *latch plate/ 2 attachment plates
2. Strike plate w/ 2 screws
3. ¼ nut galv. (8)
4. ¼ x 3" bolt galv. (8)
5. ¼ split lock washer gal. (8)
6. ¼ flat washer galvanized (16)



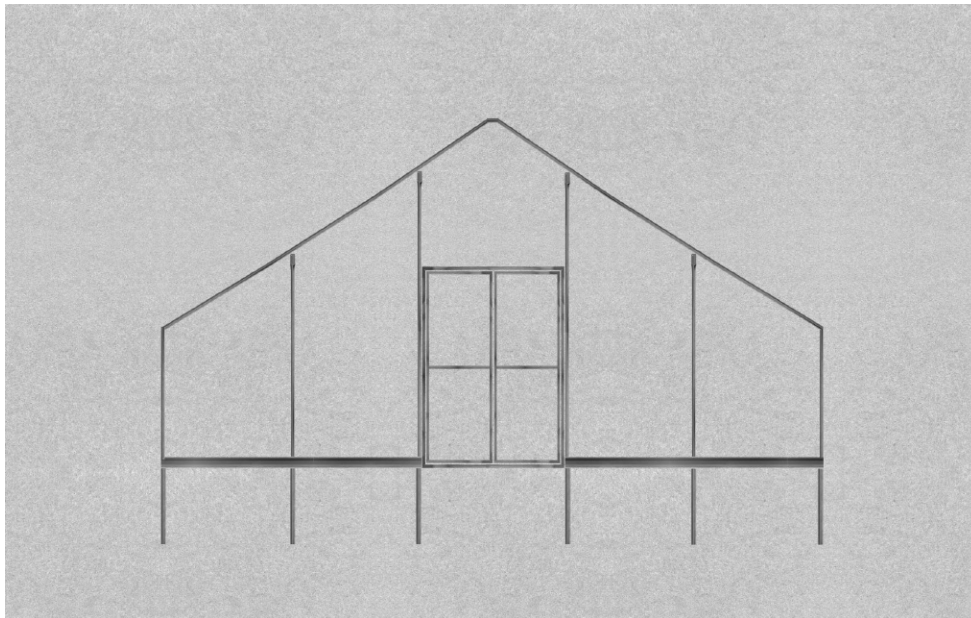
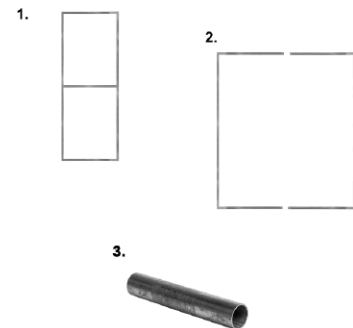
Door Frame Hardware

- 7. Cane Bolt (1 per door)
- 8. Spring (1 per door)
- 9. Door Mounting Kit
- 10. Hinges (4 per door)



Double Door Frame

- 1. (2)GH Door
- 2. (2)Door Frame Half
- 3. (2)1- $\frac{3}{8}$ " x 8" Door Frame Joiner Splice



End walls

End Wall Hardware

1. Kit with tools (in zipper bag)- (2) 1/4" drill bit, (2) 5/16" drill bit (1), 1" hole saw, nut drivers for #8 & #10 self-tap
2. #8 x 3/4 zinc self-tap (700)
3. #10 x 3/4 zinc self-tap (50)
4. 1/4 x 2" bolt galvanized (8)
5. 1/4 nut galvanized (8)
6. 1/4 split lock washer galv. (8)
7. 1/4 flat washer (8)



End Wall Frame Hardware

1. Brace Band Clamp 1.66 (4)
2. Brace Band Clamp 1.9 (4)
3. Pipe Strap 1.375 (2)



Frame Hardware Kit

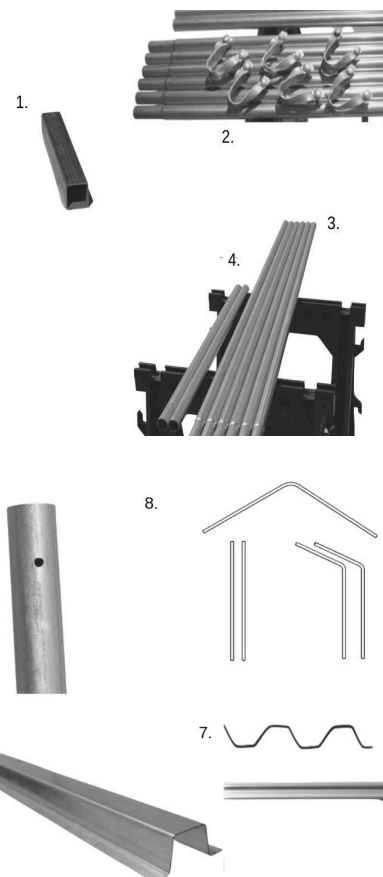
** Check "Pick-list" as hardware/part quantities are dependent on kit size.

1. 5/16 x 2.5" bolt galv.
2. 5/16 nut galv.
3. 5/16 lock washer galv.
4. #8 x 3/4 zinc self-tap
5. #10 x 3/4 zinc self-tap
6. #12 x 3/4" self-tap
7. Sidewall hardware kit



Hoop House Frame Parts

1. 10in splice channel
2. Cross connector 1.66" & 1.9"
3. 75in swaged ridge pole
4. 36in extension ridge pole
5. 36in 1.90" drilled ground post*
6. 78in hat channel
7. Lock channel & spring wire
8. Hoop Assembly**

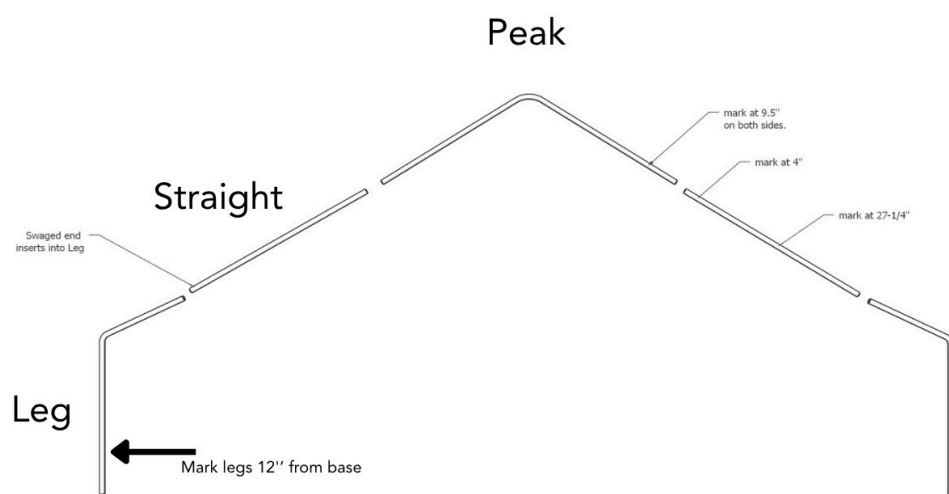


*Ground Posts

20'- (20) 40'- (30) 60'- (40) 80'- (50) 100'- (60)

**Hoop Assembly

20'/24' Wide Hoop Assembly- (2) 75" 1.66' Pole w\Swage,
(1) Peak 1.9", (2) Legs 1.66", (2) 36" Ground Posts 1.9"



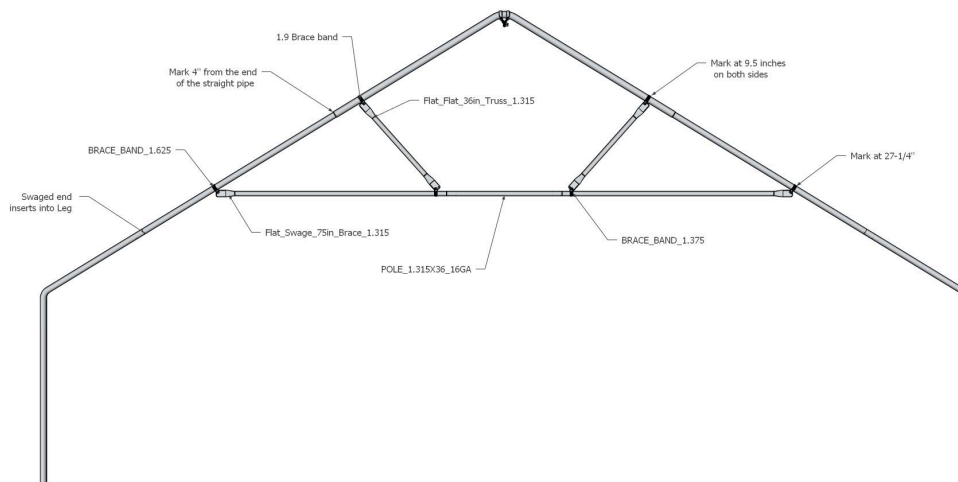
Corner Brace Kit

1. Flat open 75in brace 1.315 (4)
2. Flat swage 36in brace 1.315 (4)
3. Flat to Flat 75in brace 1.315 (4)
4. #8 Hex self-tap screws
5. 1 5/8" brace band for hoops (12)
6. 1 7/8" brace band for ground posts (4)



Purlin Kit

- Cross connector 1.66 (2 per hoop)
- 75in swaged ridge pole (# dependent on length of kit)
- 36in extension ridge pole (# dependent on length of kit)
- Endwall pipe straps



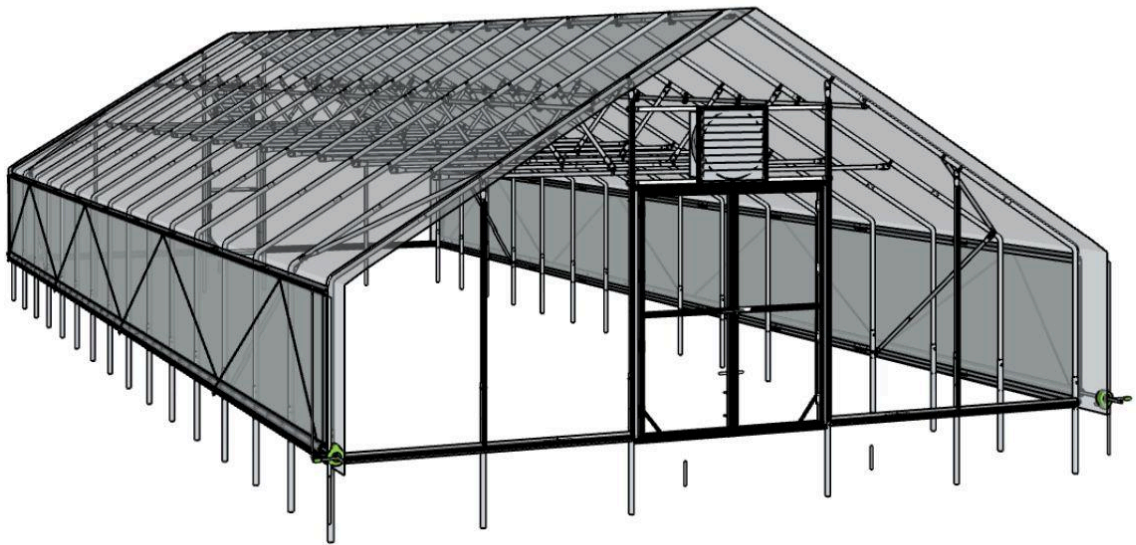
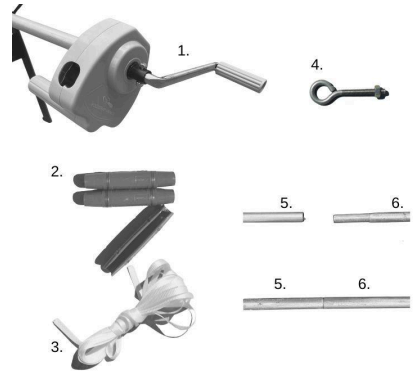
Truss Kit

- (2) 1.66" Brace bands
- (2) 1.9" Brace Bands
- (2) 1 3/8" Brace bands
- (6) 5/16"x 1.25" Carriage bolt and nut
- 75-inch flat to swage (2)
- 36-inch pole Open_Open (1)
- 36-inch flat to flat (2)

Optional Upgrade Parts

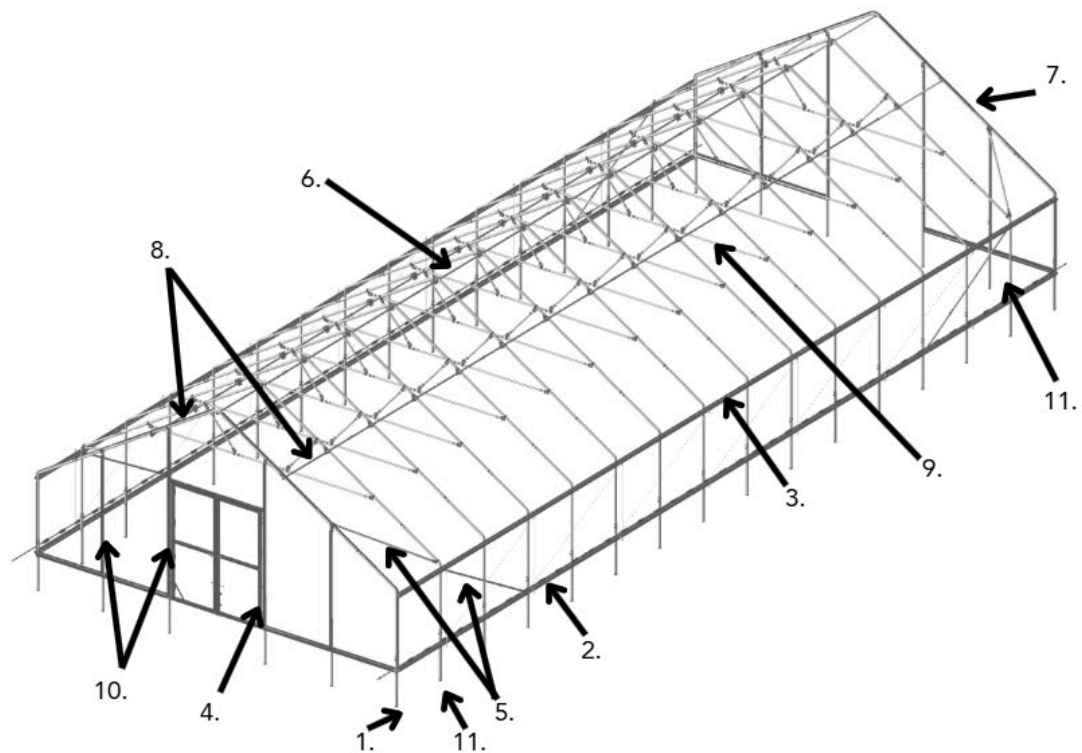
Roll-up Sidewalls

1. Sidewall Hand Crank (2)
2. Snap Clamps
3. Strapping
4. Eye Bolts
5. EMT 0.5in 2ft
6. 78in 0.922 EMT Pole with swaged End



Labeled CAD Drawings

1. 36" 1.9 drilled ground post
2. Baseboard (hat channel)
3. Hipboard (hat channel)
4. door frame
5. Corner brace
6. Ridgepole
7. End wall hoop
8. Purlins
9. Truss
10. Vertical uprights
11. "2nd Hoops"



Ground Posts

Optional: Install landscape fabric prior to installing ground posts. It is recommended that you line the perimeter of the greenhouse 1' inside and 3' along the outside with landscape fabric. This will prevent erosion from the water the greenhouse sheds, and you won't have to mow or string trim next to your greenhouse! Accidentally throwing debris through your greenhouse plastic!



Scan **QR Code** for information on
Landscape Fabric or visit

<https://youtu.be/spzkFIPTOWE>

Tools

Every kit we sell comes with a specialized tool called a ground post driver. It is placed on the top of the post to keep it from mushrooming when you hit it with a sledgehammer. This kit includes two different sizes. 1-⁵/₈" for the smaller ground posts on the endwalls and 1.9" for the larger.



You will also need:

- Sledgehammer
- Tape measures; ideally, at least one that measures the entire length of the diagonal between the corner posts.
- Levels: a line level and a magnetic level.
- Mason line
- Stakes
- Pencil, paper, and a calculator

Parts

- 36in 1.9 Drilled Ground Posts

The quantity of posts is dependent on kit size.

Squaring Your Structure

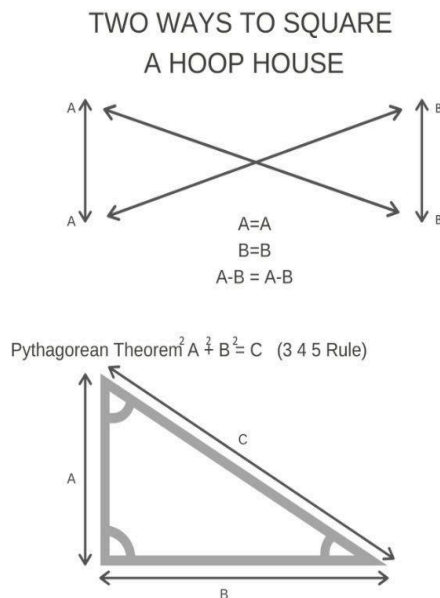
Making sure that your first four corner posts are squared will provide a solid base to work from. This ensures the rest of the stakes are easy to install plumb and level.

Using one of the following methods, set your corners.

Measure Method - First measure length to length. Then mark the width at 24'. Then measure diagonally, making sure the diagonal measurements are equal to each other. Double check that all length, width and diagonal measurements are equal and install stakes. This ensures your greenhouse will be square.

Pythagorean Theorem method - Starting at your first desired post location, sink a marking stake. Use your tape measure to measure and mark a line at 3 feet and a second line at 4 feet perpendicular to the first. Then place a line directly across both marks. The third line should measure 5 feet and give you a square corner.

From this triangle, you can extrapolate out to the desired length and width to sink your second and third stakes for the corners. Use a plumb line from the second and third stakes to intersect at a right angle for the location for the final corner post. Check all measurements.



X

Installing the Ground Posts

Once your area is measured out with temporary stakes in place, install each corner ground post from the previous step. Place your posts where you previously marked the corners, then drive them into the ground.

While driving the posts into the ground you want to make sure the poles are plumb in all directions.

As you are driving the pole into the ground check for levelness on the front and sides and adjust as needed. The hole should be facing parallel to the length of the hoop house.

After the corner ground posts are installed, re-measure length, width and diagonals one last time. If you made a mistake, it's not too late to fix it with minimal effort. Once you are satisfied, tie a string line around the outside of the corner posts.

This will help to keep all your ground posts aligned so you don't get wavy hoops later on. Install ground posts every 4' on center following your line keeping approximately 2' into and 1' above ground. Temporarily Install a 1.9 Brace band without a bolt onto the 4th ground post away from each corner. These will be used later in the build.



Scan **QR** for info on
Installing Ground Posts or visit

<https://youtu.be/S0iSPnsYVi0>

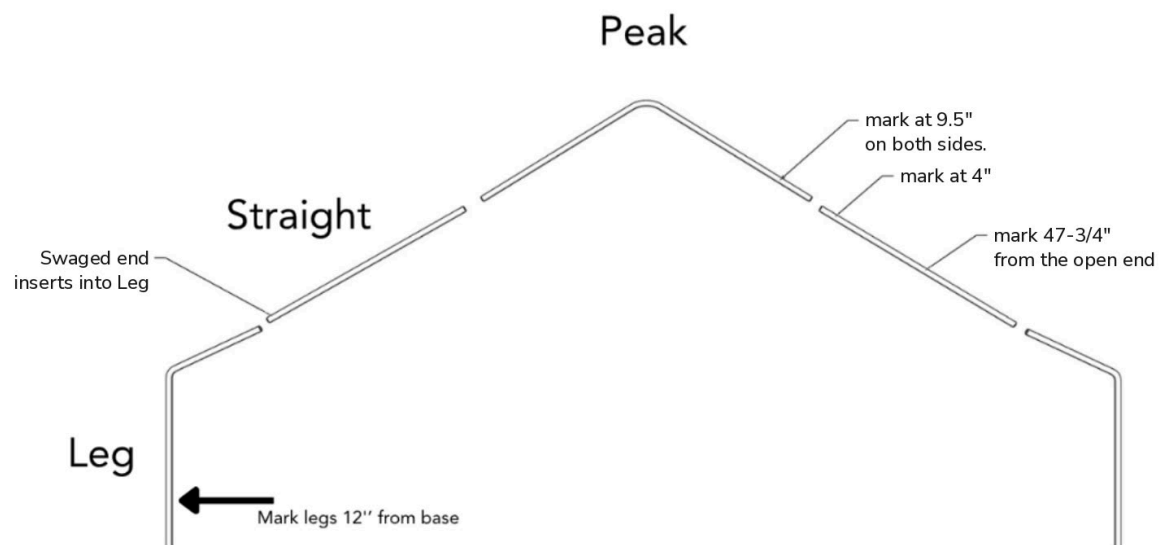
Hoops

The hoop is made of multiple parts you will need to construct them.

Tools	Parts
• Drill • $\frac{3}{8}$" Drill bit • $\frac{5}{16}$" Drill bit • $\frac{5}{16}$" Nut driver • Level • Wrenches	• 20'/24' Wide Hoop Assembly • (2) Legs 1.66" • (2) Straight pole 75"x1.66" w/swage • (1) Peak 1.9" • (2) 36" ground posts • #12 Self-tap screw • 2.5"x $\frac{5}{16}$" bolt and nuts

Pole Layout for Hoops

Our straight 1.66" poles come with swaged ends to decrease the diameter, similar to a



pipe nipple. This enables you to connect poles without using fittings.

****Always drill on the side of the hoop so that the screw will end up parallel to the ground when the hoop is placed upright to protect the plastic from damage.****

*****Mark the following before assembling the hoops.**

- 9.5" from the end of both sides of the peak (1.9" Brace band)
- 4" and 47-¾" from the "Open" end of the straight piece (1.66 Brace band at 47-¾")
- 12" from the base of the long side. (Depth of Leg inserted into Ground post)
- These will be the attachment points for the truss.



*****All brace band installs at this point are temporary. You will add fasteners when you add the truss parts, vertical uprights, or corner bracing.**

Scan **QR** for video on **Hoops**

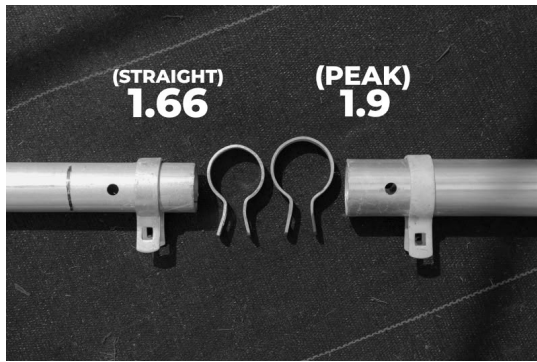


Scan **QR** for **Hoop Layouts**.

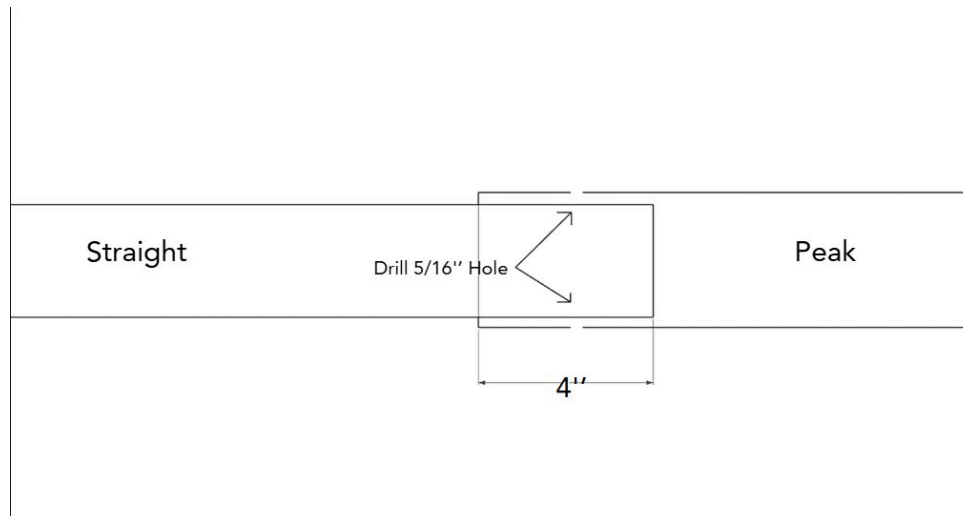


Connect and Install Endwall Hoops

1. Piece your hoop set together on a flat surface. For consistency, assemble all your hoops in the same spot, so they match.
2. The first 2 hoops you assemble will be the “Endwall” hoops. Slide one 1.9” brace band on each side of the peak. These will be used later when installing uprights.



3. Install the open end of each 1.66” straight pipe 4” into the peak up to the mark you made earlier. Put a clamp on the joint or have someone hold it in place. Drill a 5/16” hole through the 1.66” pipes. Temporarily install a 5/16” bolt in the holes to keep the holes lined up. Flip the peak over and drill out the other two 5/16” holes into the straight pipes. Disassemble this for the next step.



4. Drill through the 5/16” holes on one side of the peak with a 3/8” drill bit. We are enlarging it for the square section of the carriage bolt.
5. Install the straight pipe back into the peak. Install a 5/16” carriage bolt through the connection and secure it with a lock washer and nut. The smooth head of the carriage bolts should be on the same side of the peak. They will face out on the endwalls.

6. Install 2qty- 1.66" brace bands onto each straight piece. (You will use a total of (4)1.66 brace bands in this step, for each endwall hoop. This is for corner bracing and vertical uprights, later in the build.)
7. Install the legs onto the swaged ends of the assembly you have created. You need to make sure the legs and the peak are level before moving to the next step, or your hoops will end up with a slight twist in them.
8. Put two #12 self-tap screws at each leg junction, 4 per hoop. Connect the hoop sections together to prevent twisting and separation. Screwing straight down while the hoop is lying flat will ensure the screw is parallel to the ground once you raise the hoop.

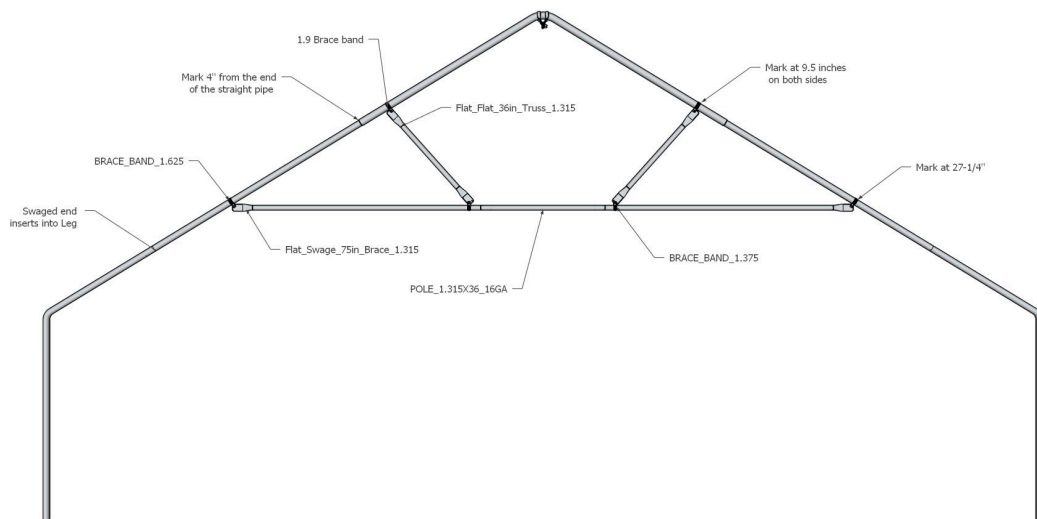


9. Before installing the hoop in the next step, make sure that the smooth end of the carriage bolt will face outside the hoop house.
10. With a partner, stand the hoop up and insert one leg into a ground post, down to the 12" mark you made earlier. Clamp the leg just about the ground post to hold it there.
11. Insert the opposite leg into the ground post to the 12" mark and clamp it.
12. Drill a 5/16" hole through the hoop at the pre punched hole in the ground post. Secure with a 5/16"x 2.5" bolt, lock washer, and 5/16" nut. Do the same on the other side of the hoop.



Connect and Install “2nd Hoops”

1. Piece your hoop set together on a flat surface. For consistency, assemble all your hoops in the same spot, so they match.
2. The next (2) hoops you assemble will be the “2nd hoops”. Slide a 1.9” brace band on each side of the peak.
3. Install the open end of the 1.66” straight pipe 4” into the peak. (This is the mark you made earlier) Put a clamp on the joint or have someone hold it in place. Drill a 5/16” hole through the 1.66” pipe. Temporarily install a 5/16” bolt in the holes to keep the holes lined up. Flip the peak over and drill out the other two 5/16” holes into the straight pipes. Disassemble this for the next step.
4. Install the straight pipe back into the peak. Install a 5/16”x 2.5” bolt through the connection and secure it with a lock washer and nut.
5. Install 3 qty- 1.66” brace bands onto each straight piece. Two will slide up to the 47-¾” mark for your horizontal cross bar. (You will use a total of (6) 1.66 brace bands in this step, for each “2nd hoop”. This is for corner bracing, later in the build.)
6. Install the legs onto the swaged ends of the assembly you have created. You need to make sure the legs and the peak are level before moving to the next step, or your hoops will end up with a slight twist in them.
7. Use two #12 self-tap screws at the leg junction. Connect the hoop sections together to prevent twisting and separation. Screwing straight down while the hoop is lying flat will ensure the screw is parallel to the ground once you raise the hoop.
8. Use (2) Flat to Swage 75” pieces and a 36” open_open pipe. Install the swaged end of each 75” piece into the open end of the 36” pipe. Make sure the flats on each side are lined up to each other before securing each joint with (2) #8 self tapping screws.
9. Slide (2) 1.315 Brace bands onto the horizontal bar.



10. Attach the horizontal bar with 5/16"x1.25" carriage bolts and 5/16" nuts to the 1.66" brace band located at the 47-3/4" mark.
11. Install (2) 36" Flat_Flat braces. They attach from the peak to the horizontal bar. Use (4) 5/16"x1.25 carriage bolts to secure to the 1.9 brace band at the 9.5" mark on the peak to the 1.315 brace band on the horizontal bar. The 1.315 brace band should fall into the same place on each horizontal bar.
12. These hoops install into the second set of ground posts from each endwall.
13. With a partner, stand the hoops up and insert one leg into a ground post up to the 12" mark (made earlier). Use a clamp on the leg to secure it at the mark above the ground post.
14. Insert the opposite leg up to the 12" mark and clamp.
15. Drill a 5/16" hole through the hoop at the hole in the ground post. Secure with a 5/16"x 2.5" bolt, lock washer, and 5/16" nut. Do the same on the other side of the hoop.

Connect and Install Remaining Hoops.

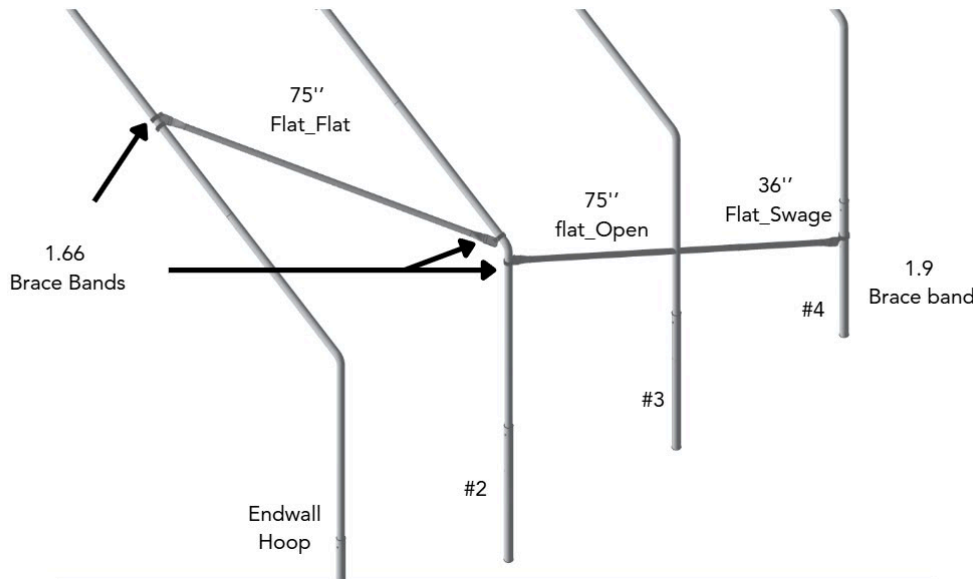
1. Piece your hoop set together on a flat surface. For consistency, assemble all your hoops in the same spot, so they match.
2. The rest of the hoops you assemble will be the same. Slide a 1.9" brace band on each side of the peak.
3. Install the open end of the 1.66" straight pipe 4" into the peak. (This is the mark you made earlier) Put a clamp on the joint or have someone hold it in place. Drill a 5/16" hole through the 1.66" pipe. Temporarily install a 5/16" bolt in the holes to keep the holes lined up. Flip the peak over and drill out the other two 5/16" holes into the straight pipes. Disassemble this for the next step.

4. Install the straight pipe back into the peak. Install a 5/16"x 2.5" bolt through the connection and secure it with a lock washer and nut.
5. Install 1 qty- 1.66" brace bands onto each straight piece. One will slide up to the 47-3/4" mark for your horizontal cross bar. (You will use a total of (2)1.66 brace bands in this step, for each hoop.
6. Install the legs onto the swaged ends of the assembly you have created. You need to make sure the legs and the peak are level before moving to the next step, or your hoops will end up with a slight twist in them.
7. Use two #12 self-tap screws at the leg junction. Connect the hoop sections together to prevent twisting and separation. Screwing straight down while the hoop is lying flat will ensure the screw is parallel to the ground once you raise the hoop.
8. Use (2) Flat to Swage 75" pieces and a 36" open_open pipe. Install the swaged end of each 75" piece into the open end of the 36" pipe. Make sure the flats on each side are lined up to each other before securing each joint with (2) #8 self tapping screws.
9. Slide (2) 1.315 Brace bands onto the horizontal bar.
10. Attach the horizontal bar with 5/16"x1.25" carriage bolts and 5/16" nuts to the 1.66" brace band located at the 47-3/4" mark.
11. Install (2) 36" Flat_Flat braces. They attach from the peak to the horizontal bar. Use (4) 5/16"x1.25 carriage bolts to secure to the 1.9 brace band at the 9.5" mark on the peak to the 1.315 brace band on the horizontal bar. The 1.315 brace band should fall into the same place on each horizontal bar.
12. These hoops install into the remaining ground posts
13. With a partner, stand the hoops up and insert one leg into a ground post up to the 12" mark (made earlier). Use a clamp on the leg to secure it at the mark above the ground post.
14. Insert the opposite leg up to the 12" mark and clamp.
15. Drill a 5/16" hole through the hoop at the hole in the ground post. Secure with a 5/16"x 2.5" bolt, lock washer, and 5/16" nut. Do the same on the other side of the hoop.

As long as your ground posts were installed level to each other, the height of the hoops and peaks will line up!

Corner Brace Kit

<u>Tools</u>	<u>Parts</u> - (hardware included)
• Ladder • Tape Measure • Drill • Ratchet & Sockets • 1/4" nut driver	• 1.66" brace band • Flat_Swage 36" Brace • Flat_Open 75" Brace • Flat_Flat 75" Brace • 1.9" Brace band • 5/16"x 1 1/4" carriage bolts and nuts



**Carriage bolt threads will be situated toward the inside of the hoop house.

Corner Brace Installation

1. Insert the swaged end of 36" into the 75"
2. (2) 1.66' 'brace bands wrap around the second hoop and secure with bolts through the brace band and the hole in the flat end of the brace pole. (lower brace)
3. 1.9" brace bands go around the fourth hoop's ground post and are secured with bolts through the brace band and the hole in the flat end of the brace pole. Install the brace you created in step 1. Once in place use two #8 self tapping screws to secure the joint in the brace.

4. The 75" Flat to Flat installs from the second hoop to the end wall with 1.66" brace bands (upper brace)
5. Repeat steps for each corner.

Ridge Poles

End Wall Pipe Strap

The end wall pipe strap helps to keep the ridgepole from extending past the end hoops and poking the plastic end walls.

Note: Since each hoop will be connected to the first end wall, it should be carefully made plumb and held that way as you make the connections. You can do this easily using stakes and rope. Wrap a rope up and around the hoop. Using a magnetic level, stake the rope securely on either side of the hoop with the hoop directly perpendicular to the ground. If needed, move the stakes slightly left or right to secure the hoop in the proper position.

Tools / Parts

- Ladder
- Clamps
- 5/16" Nut driver
- Drill
- #10 self-tapping screws
- Pipe Strap 1.375 (2)

Installing End Wall Pipe Straps

1. Secure the pipe strap to the underside center of the end wall hoop by pre-drilling and loosely securing it with #10 self-tapping screws.
2. Insert the ridge pole through the strap until it is about 1/8 inch short of the outside edge of the end hoop. This is to prevent the end of the ridge pole from sticking out past the last hoop.
3. Pre-drill and screw the pipe clamp into the hoop using the center hole on the pipe strap using #10 self-tapping screws.

4. Tighten all three screws until they are secure. *This step will be repeated for the final hoop.

Cross Connectors and Ridge Poles

Pictures on the following page.

Ridge poles and cross connectors work together to connect and stabilize the hoops.

Purlins and additional cross connectors further stabilize and are installed the same way.

Tools	Parts (PER 20FT)
• Rope / Stakes • Drill w/ ¼" bit • Step ladder • Saw • Ratchet & Sockets • Tape measure	• ¼ x 2" bolt galv. (15) • ¼ nut galv. (15) • ¼ split lock washer galv. (15) • ¼ flat washer galv.(30) • Cross Connector 1.9 x 1.375 • 75in Swage Ridge Pole • 36in Extension Ridge Pole • 1.315 Pipe strap • #10 self-tap screw

Install Ridge Pole and Connectors

1. Loosely place cross connector on the top of the rest of the hoops.
2. Starting at one end wall, carefully ensure that the end wall is still plumb.
3. Connect the ridge poles with two #8 self-tapping screws at each junction, driven from the bottom or from the side at the swaged connection. Insert the pole into the end wall cross connector and the next hoop cross connector. Continue adding ridge poles until the other end wall is reached.
4. Center the loose assembly on the very top and center of the hoop, double-check the plumb of the end wall, and tighten the bolt on the connector using a ratchet.
5. Measure 4' on center from 1st tightened connector to the next connector and secure at that point.
6. Repeat this process for each hoop as you make final plumb adjustments while keeping cross connectors 4' apart. Depending on the length of your greenhouse, use a 36" extension on the end of the ridge pole, or a full 75" ridge pole, and cut off the excess. *Repeat the end wall pipe strap installation for the final hoop.



Scan **QR** for info on **Ridge Poles** or visit

<https://youtu.be/AfTKTvcqw20>

Purlin Kit

****The Purlin Kit is installed the same way as the ridge poles.****

Tools	Parts
• Drill w/ 1/4" bit • Step ladder • Saw • Ratchet & Sockets	• Cross connector 1.66" x 1.375" (2 per hoop) • 75in swaged ridge pole (# dependent on length of kit) • 36in extension ridge pole (2) • End wall pipe straps

Installing Purlins

The purlins will install on the 1.66 pipe below where it inserts into the 1.9" peak. This can be 4"-6" away from this connection.

Of Note: *The placement of the poles can be subjective and has some flexibility if there are other considerations, like trellising or fan installation.*

Depending on your end wall option, it may or may not fall in line with vertical end wall supports. This is okay as they are not dependent on each other. You may notice the hoops may still need adjusting as you work your way down. Use a clamp to help pull the Purlin to the hoop so you can install the cross connectors.

Hip & Base Braces

All Metal Kits use 16-gauge hat channel. Hat channel is made of the same material for both the hip board and baseboards, where lumber would typically be used.

The hip and base braces are made exactly the same way, using a layering process between hat channel, hat splice, and lock channel.

These steps are not complicated, but they do require an understanding of the process before you start. Please read all steps in this section, view pictures, and consult our

video on the build process. Hat splice seams will get close but not fall directly on hoops. When you are assembling, slide the next hat channel into the space between the hat splice and lock channel as you butt it up to the previously installed hat channel. Begin with the base and then the hip brace. Keep the base brace as close to the ground and level as possible.

Tools	Parts
• Drill & Drill Bits • Clamps • Metal Saw • Bubble Level	• #8 self-tap • #10 self-tap • lock channel • 78" hat channel • 10" hat splice

*Save time by laying out the lock channel, hat channel and splice ahead of beginning installation

Installing the Hip and Base Brace

1. Begin on the same end you installed the ridge pole. Using #10 self-tap screws, attach the base hat channel level and even with the end wall hoop as you secure to the second hoop.

***Note:** you do not need a splice on the end wall hoops.

2. Cut a piece of lock channel to 2' and secure it to the hat channel on the outside face of the first hat channel nearest the end wall with #8 self-tap screws. This allows seams to stagger.
3. Using a clamp secure a hat splice spaced evenly (5 in.) between the butt joints of the hat while sandwiching a full (6 '6") piece of lock channel. Secure all three pieces (lock channel/hat channel/and hat splice) with #8 self-tap screws.

Note: that you are only securing half of the hat splice. (Pre drilling through the lock channel and hat channel can make this easier and prevent breaking screws)

4. Next, slide a new piece of hat channel between the space left by the previous half hat splice and the lock channel. Secure seam with #8 self-tap screws (no washer) through the lock channel/hat channel/ and hat splice.

5. Secure a new hat channel to the next hoop (using #10 self-tap screws) and repeat the process until the end.
6. Cut off excess hat and channel at the end of the hoop house flush with the end wall.
7. The very bottom of the hat may be difficult to reach when installing bottom #10 self-tap. Use an extension or dig out a little hole to get the screw in.



Scan QR for info on
Installing Hip and Base Braces or visit

<https://www.bootstrapfarmer.com/blogs/building-a-greenhouse/installing-hip-and-baseboards-on-a-hoop-house>

Note On Installing the Hip Brace-

Begin on the same end you installed the ridge pole.

The hip brace will be installed between 3-½' and 5' above the base brace. Mark this height on each of your end walls and run a line level to guide your hip board installation.

If your line is not level, move your lower side up until you find the level line.

This will give your roll-up sides a large opening to cross ventilate and will also work with the optional Insect Netting and the appropriately sized shade cloth for your structure.

Keep the hip board level and check hoops for plumb as you go.

End Walls

Pictures on the next page.

Tools	Parts
• Ladder • Mason Line • Drill • Ground Post Driver 1-$\frac{5}{8}$" • Bubble Level • Tape Measure • Clamp	• 1.66" Ground Post • Lock Channel • 75" flat to swaged pole • 36" Pole • End wall Hardware Kit • 1.66 Brace Bands • 5/16"x1.25" carriage bolt and nut • $\frac{1}{4}$"x2" bolt, washer, lock washer, and nut

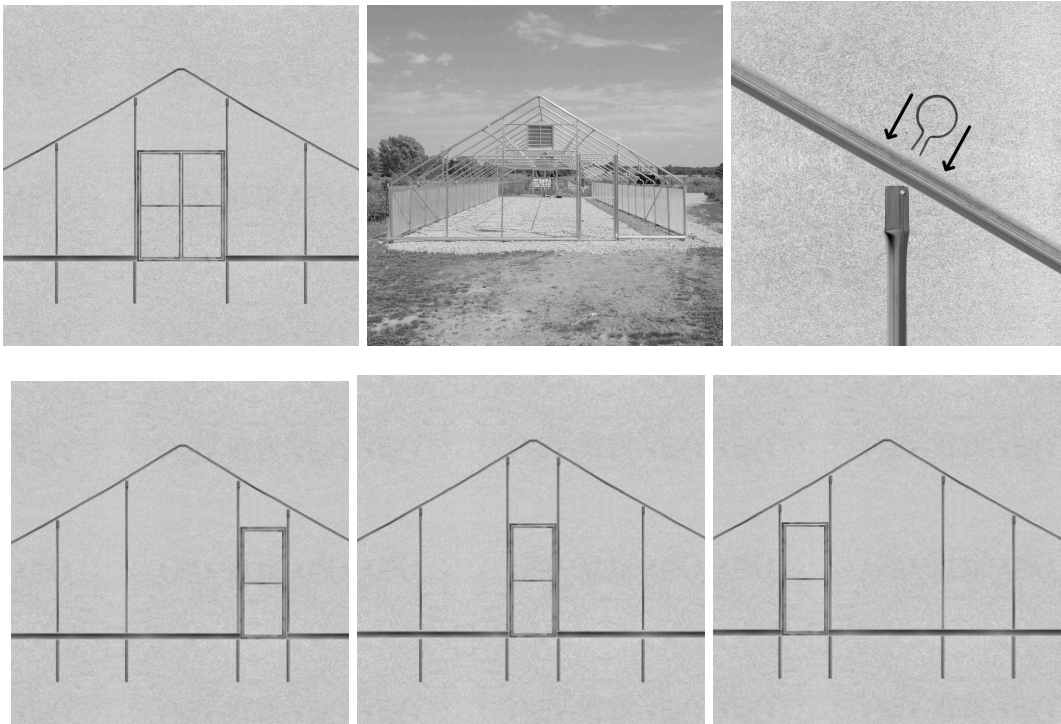
Installation of End Wall

1. Run a mason line across the end hoop on the outside of the building.
2. Center door frame in the middle of the hoop. On the double door you must build the frame before installing uprights.
3. Install ground post inline with end wall hoop and immediately to the left and right of the door frame - 2' in ground / 2' above.
4. Center additional vertical supports 1/2 way between the hoop and the door, and install ground posts.
5. Attach the hat channel as the baseboard with #10 self-tap screws level along ground to all ground posts - cut off excess. There will be no baseboard across where the door frame is to be installed in the next section.

6. A. Insert 36" poles into newly installed ground posts .

B. Insert 75' flat to swage onto 36" pole (door uprights only) and secure with #8 self-tapping screw, through the side of the swaged connection.
7. This attaches to a brace band previously installed on the end wall hoop. Slide the assembled pole up to the bottom of the hoop and secure with a 5/16x1.25 carriage bolt w/nut through the brace band.
8. Drill through the pole with 1/4" drill bit at the 2 holes located in the ground post. Secure with a 1/4"x2" bolt, washer,lock washer, and nut.

If building an end wall without a planned door, place supports the same way that you did for the side with the door.



*Single end-wall doors can be moved according to preference.

End Wall Lock Channel

For the hoops

On the end walls, install the lock channel from baseboard to baseboard going over the outside/top of the hoop.

The channel will bend with the curve of the peak with **ZERO modifications, Do Not Notch the Channel.**

Keep your clamps at the ready to assist with bending and holding the channel as you use the #8 self-tap screws, every 16"-18", directly in the center of the channel. (Use the grooves in the Lock Channel to keep your screws centered)

At the hip brace, cut off the lock channel and continue on the other side of the hip brace to the bottom base brace on both sides.

For the end wall uprights

Attach the lock channel to all vertical end wall supports from the base brace up to 12" below the top of your hoops. Mount onto the top of the hoop facing up.



Doors

Tools	Parts
• Drill • Level • Step ladder • Tape measure	• ¼ x 2" Bolt (8) • ¼ Nut (8) • ¼ Split lock washer (8) • ¼ Flat washer (16) • Door frame half (2) • Door GH (2)

Double Door Frame

The frame for the double door ships in two halves. You will join the two halves together to make a single large frame.

1. Find a flat surface to assemble the door frame on.
2. Pre-drill (4) quantity 3/16" holes into the door frame. (See drawing for details). All holes will be drilled into the same side of the door frame. Four are predrilled for you.
3. Mark a line on the center of the 8" round door frame joiner splice. Install the splice into one side of the door frame, up to the centerline.
4. Install four quantity #12 self-tapping screws through the 3/16" holes, into the splice. Do this for both sides of the same half door frame.
5. Install the other half of the door frame onto the splices and clamp the two halves together.
6. Install four quantity #12 self-tapping screws through the last four - 3/16"holes into the door frame joiner splice, joining both halves of the door frames together.



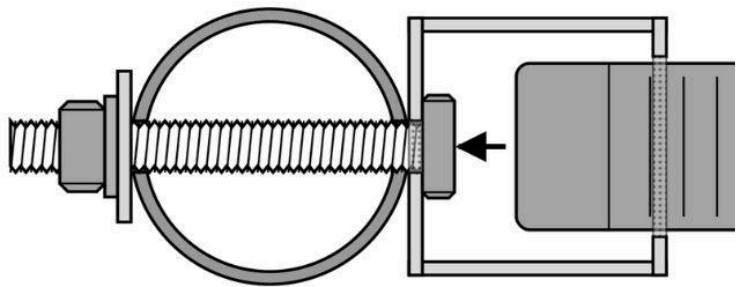
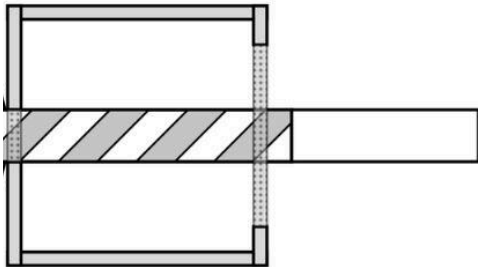
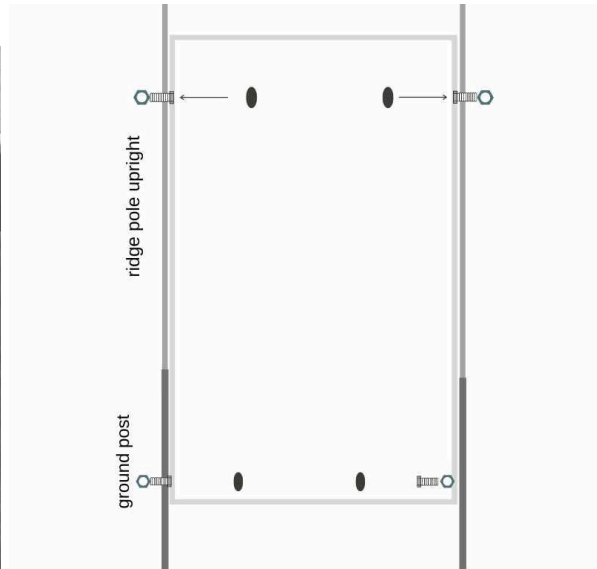
Door Frame Installation

1. Once the verticals (ground posts, ridge poles, ridge pole extensions, brace bands) have been secured with #10 self-tap, stand the door frame up and temporarily hold it to the verticals with clamps.
2. Confirm plumb along door verticals and level along door frame horizontals. Use shims or scrap wood to adjust the door frame until it is plumb, level and secure.
3. Drill a ¼" hole through the ridge pole uprights from inside of the door frame using the ¼" hole on the outside of the door frame (and up against the upright). (Picture marked Step 1)
4. Secure with a ¼" X 2" bolt, lock washer, flat washer and ¼" nut placed on both sides of the frame. Most ½" deep sockets will fit in the larger hole in the door frame. (Picture marked Step 2)



Scan **QR** for info on **Building Double Doors** or visit

<https://youtu.be/b2n0s7Ua7PQ?si=07TCIHGYix6kd9nd>



Door Hanging and Latch Installation

NOTE: YOU WILL DRILL THE 1" HOLE FOR THE LATCH BEFORE HANGING THE DOOR. THEN HANG THE DOORS AND ATTACH ALL LOCK CHANNEL. AFTER ALL OF THE PLASTIC IS IN PLACE COVERING THE ENTIRE HOOP HOUSE, YOU WILL COME BACK AND INSTALL THE LATCH. (Future kits will have this hole already drilled for you in the door crossbar. On your second door, you can cover the hole with lock channel)

Tools

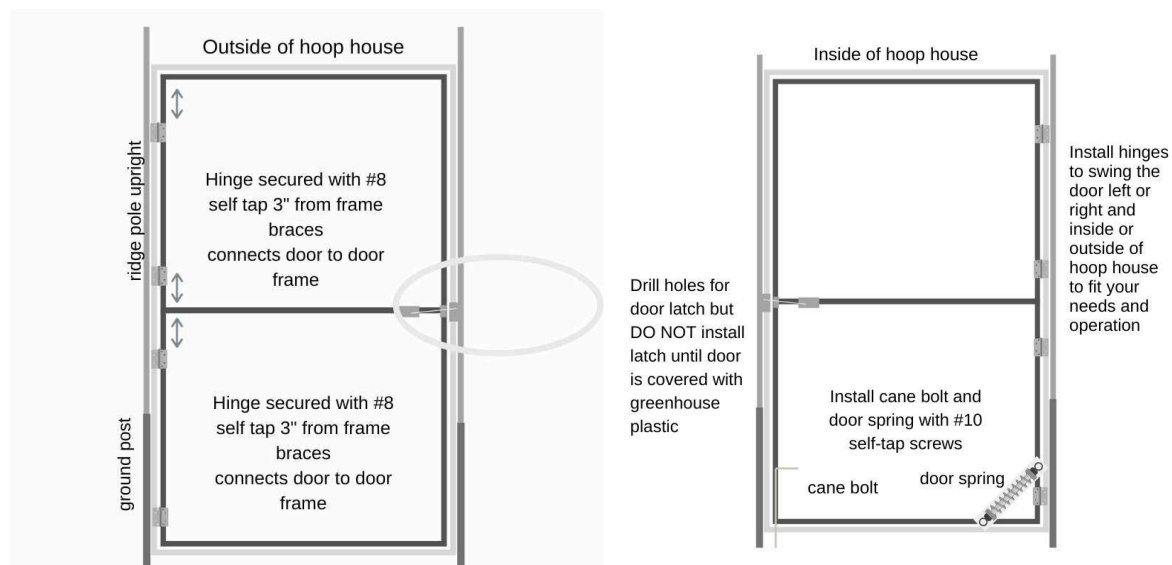
- ¼" drill bit
- ⅛" drill bit
- 1" hole saw (included with hardware pack)
- 7/16" sockets or adjustable wrench (you will need two)
- ¼" driver for #8 self-tap
- Shims

Parts

- Hinges (4 per door)
 - Cane bolt (1 per door)
 - Spring (1 per door)
 - Latch (1 per frame)
 - ¼" x 3" bolts
 - Nuts
 - Lock channel and spring wire bundle
1. With the door flat on a hard surface, drill a 1-inch hole 5 inches from the door edge, centered on the door frame's. (This is part of the door latch but the rest of the door latch installation takes place after plastic installation.)
 2. Decide if you want the doors to swing towards the interior or exterior of the house. If using a single door, decide whether you want it to open to the left or right.

3. Using the hinge as a guide mark and drill guide holes in the door frame using the $\frac{1}{8}$ " bit. Each hinge should be placed 3 inches away from the closest horizontal cross piece of the frame.
4. Attach all hinges to the frame using the #8 screws.
5. Using shims and clamps, place the door so that it has space to swing freely once attached.
6. Attach all hinges using #8 self-tapping screws—drill guide holes for ease of installation.
7. Completing door latch installation: These steps will be completed after you finish installing the plastic.
 - a. Cut a small hole through the plastic over the 1 inch hole that you drilled back in step 1.
 - b. Thread the latch through the hole and align the plate horizontally.
 - c. Secure front and back latch mounting plates with #8 self-tapping screws.
 - d. Mount the door latch receiving plate with #8 self-tap screws against the door frame edge so that the latch lies flat. (For double doors this goes on the other door.)
 - e. The guide plate can be used to limit latch mobility.

NOTE: Some hardware from the kit will not be used. These parts (guide plate, 3" bolts) are included in case you will be customizing your door.

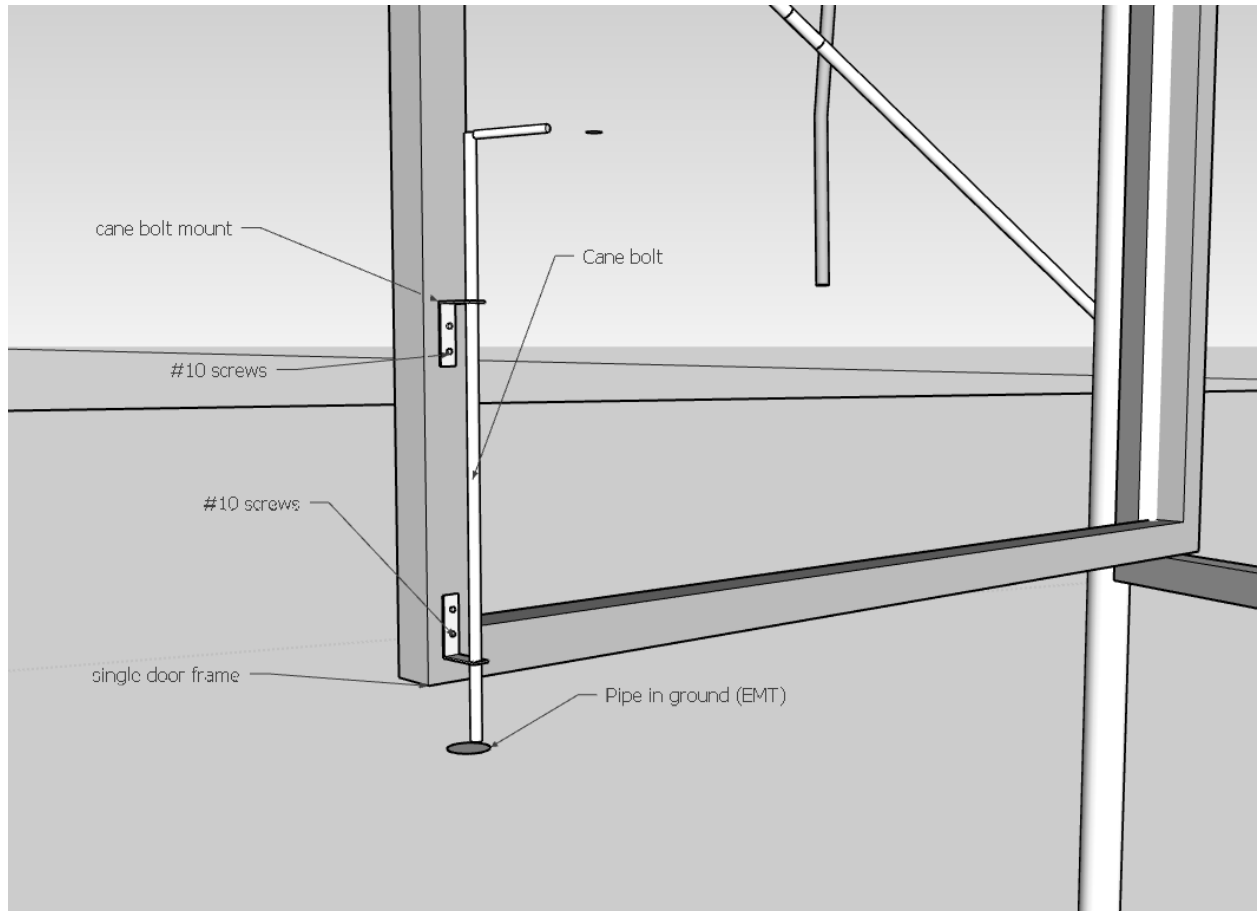
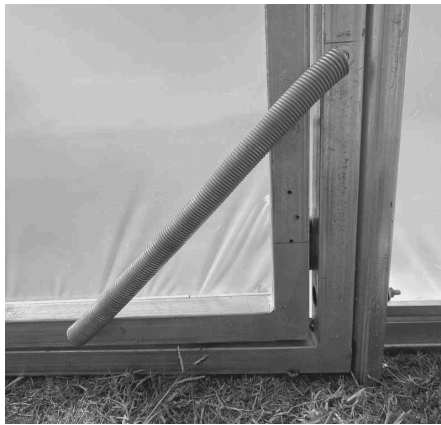


Attaching Spring and Cane Bolt

A cane bolt allows you to secure a single door in the open position or one section of a double door in the closed position. The spring will close the door if left open but given the tightness of the latch, the latch will need to be secured by hand. Remove the cane bolt to close the door and store it close by. Install it in the door brackets to keep the door open.

1. Attach the top of the spring to the inside of the door frame with #10 self-tap.
2. Attach the bottom of the spring to the door with a #10 self-tap.
3. The cane bolt is installed on the inside of the door.
4. Line up your cane bolt brackets at least 1/2" above the bottom of the door and directly in line with the vertical part of the door. .
5. Install the second cane bolt bracket above the first, so that you are able to guide the cane bolt into the pipe at least 2" below ground. If installed too high, the cane bolt will not drop down enough to protrude into the ground.
6. Secure cane bolt brackets with #10 self-tap screws as pictured below.
7. Install a small piece of scrap pipe or EMT into the ground 4-8" deep below the cane bolt, where the door is in your preferred open position. Inserting the cane bolt into the brackets and into the pipe will hold the door in an open position.

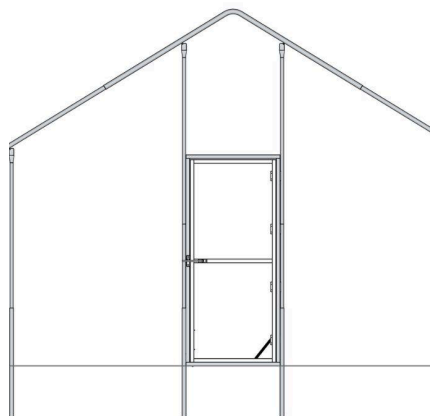
NOTE: Wood screws will be used to install on customized doors.



Door Lock Channel

Install the lock channel OVER the hinges on both the door and the frame. The lock channel you installed on the vertical supports in the previous step will act to secure the outside edge of the plastic.

1. Cut the lock channel to fit across the top of the door frame, door top, door bottom, and the cross bar support from the inside edge to the beginning of the latch mounting plate. (Verticals will need to be comprised of at least two pieces of lock channel.)
2. Attach the lock channel to the door frame across the top edge.
3. Install lock channel across the top and bottom of the door(s).
4. Install vertical door lock channel on both sides, but do not install it over the latch mounting plates.
5. Install cross bar lock channel.
6. When installing plastic you will insert spring wire into all lock channels and then cut around the edge between the door and the frame.



Before installing your covering, use a broom or shop vacuum to remove any metal filings from lock channel installation.

Installing Greenhouse Plastic

If you have elected to add insect netting to your roll-up sides, skip to page 44 before continuing with the plastic installation. It is also best to install the optional trellis bar kit on page 45 before covering your structure, although it can be installed later.

Your kit will come with two pieces of plastic. The larger one will be used to cover the top of your structure, and the smaller one will be used to cover the end walls.

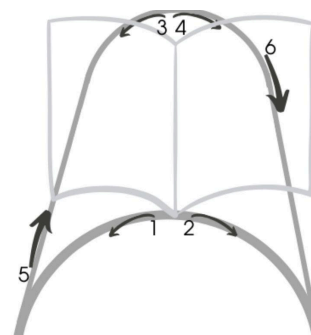
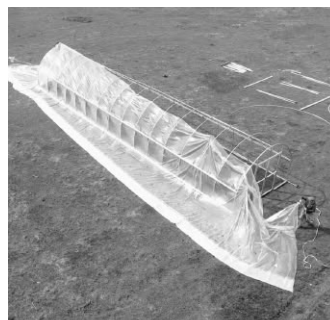
Make sure you can finish securing the plastic before you stop for the day, so it doesn't blow away on you. Roll the plastic out and drape over the length of the greenhouse. Ensure there is an equal amount of plastic that overhangs both ends.



Installing plastic can be the most intimidating part of your build, but once you get going, you will find it to be pretty straightforward. Having 2-4 people will make the job go faster and easier. Pick a time when there is little or no wind to interfere with installation. Keep a rounded broom handle or painter's pole handy to help gently push the plastic over hoops in the middle. Use a tennis ball or tape to round any sharp edges on your pole so you do not puncture the plastic. Grab your friends and step ladders and let's go folks!



*



***This label should be on the inside of your structure.**

The optimum temperature to install the plastic is above 70 degrees Fahrenheit. Leave 6-12" of plastic around the perimeter when cutting/trimming. If you need to tighten it, this will leave sufficient area to grab a hold of. Ideally you want the plastic as tight as a drum. You should pull all wrinkles and sags out. It is not uncommon to have to take out the spring wire in areas to stretch and tighten the plastic. Over time, you may need to tighten your plastic to maintain the proper tightness. Tight plastic does not get beat up by the wind or slide on hoops and metal parts.

Installation

A Wiffle ball has been included in your kit. It will be used to help with pulling the plastic over the structure. At the corner of your plastic that you will be pulling to the opposite end of your greenhouse, put the Wiffle ball in the plastic about 12" from each end in the corner you will pull over the structure. Wrap the plastic over the ball, similar to how a wrapper is put over a candy sucker. You can then tie a piece of rope around the base of the Wiffle ball. This provides a large surface area for the rope to pull against. This will prevent the rope from putting stress marks in the plastic. The rope can now be thrown over the structure and be pulled to assist in covering your structure with plastic.

1. Install spring wire starting at the middle top of the hoop down to the hip brace.
2. Spring wire from the top down on the other side of the hoop.
3. On the opposite end wall, pull plastic tight and repeat step 1 and 2
4. Pull the plastic tight and attach with spring wire along the hip braces one side at a time. (*See Note Below)
5. Attach to end wall hoops from hip brace to the baseboard.
6. Pull tight and attach plastic with the spring wire along the baseboards of the hoop house.
7. Cut the plastic 3-4 inches away from the lock channel on both end walls. ~For areas with severe winters or hurricanes: If you will be removing the plastic during the winter, leave 6-12 inches of plastic all the way around to make reinstallation easier.~
8. Cut the plastic all the way along the baseboard 3-4 inches from the lock channel. (For roll up sides, leave at least 6" past the baseboard.)

* Note: If you have rollup sides you will not do steps 6 and 7, but will need to cut the plastic as described in steps 8 and 9.

Over time, you may need to retighten the plastic to maintain proper tightness. Tight plastic resists damage from wind and from sliding on hoops and metal parts.

Scan **QR** for info on **Installing Plastic** or visit
<https://youtu.be/qxApDmKXYyo>

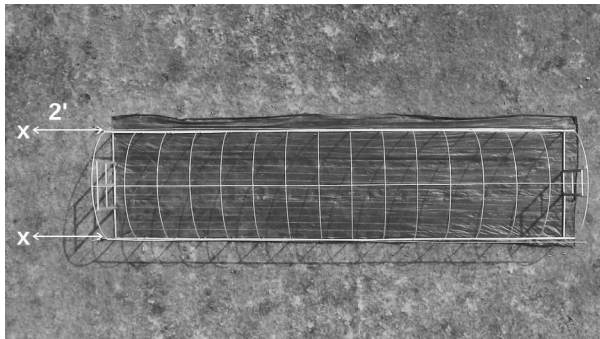


Roll Up Sides

1. Drive 1/2 x 2' EMT into the ground 2' from the house on the x to help secure the 3/4 hand crank guide rod. (One for each side)

NOTE: Instructions in the hand crank box ask you to put the crank less than 2', however we have had better performance 2' away from the building.

2. Place 3/4 x 5' EMT on the 1/2" and gently drive into the ground until the top reaches your hip board height.
3. Connect your EMT pieces together and secure at each connection point with a #8 self-tap screw.
4. Place your snap clamps next to your long EMT sections to use during the covering process.
5. Following instructions in the box install the hand crank on 3/4 EMT.



Scan to Watch Video



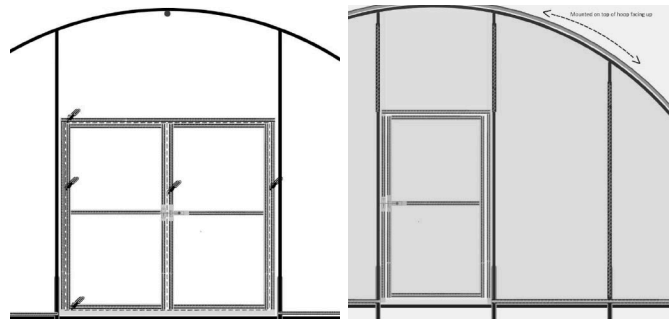
Scan **QR** for info on
Rollup Sides or
visit

https://youtu.be/zdIP_L-fAYg

Installing End Wall Plastic

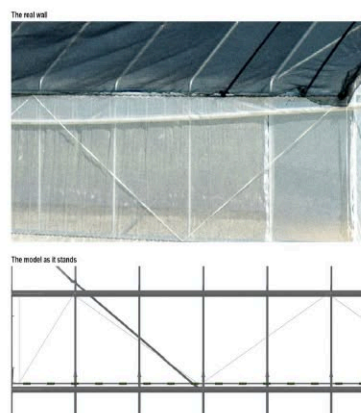
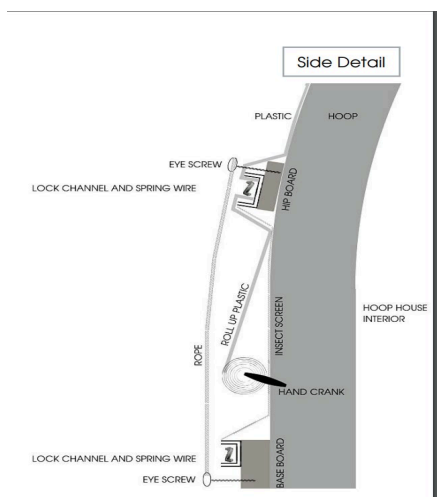
Once the top/long sides are covered, and you have cut the excess plastic off of the hoop at the lock channel, you can begin the end wall installation.

1. While making sure the "inside" label is facing the inside of the house, install spring wire along your baseboard while keeping the plastic stretched left & right.
2. Next, stretch the plastic up and work from the top of the hoop to one side. You will keep pressure by pulling up and out. You will install this spring wire into the same lock channel that you secured the top plastic into.
3. Now repeat for the other side.
4. Install spring wire to attach the plastic to the uprights.
5. Install spring wire into all door lock channels.
6. Cut the plastic 3-4 inches away from the lock channel along the hoop. The remaining piece will be used to cover the other end wall.
7. Carefully cut the seam between door and door frame to allow access. Cut out door access only AFTER all plastic is secured with spring wire in all vertical and horizontal lock channels.
8. Follow instructions for door latch on page 31 and install over plastic.
9. Repeat steps 1-8 for the opposite end wall if you have doors on both ends.
Repeat steps 1-4 for an end wall with no door.



Roll-Up Sides Installation

1. Roll the end of the plastic onto the EMT pipe you made earlier. Make sure you roll it under the pipe, as shown in the diagram, so the rolled plastic does not collect rainwater.
2. Install eyebolts on every other hoop. These will serve as attachment points for the strapping material.
3. Install snap clamps every 1 inch or so, with the ends slightly closer together. The first time you slowly roll it up, it will likely not roll up evenly. As you roll it up and down, pull down on the higher parts to tighten up your roll.
4. Roll it up and down a few times during this process, and it will work out the loose sections and become straighter.
5. Repeat the process on the opposite side.



Optional Upgrades

If you did not order any of the additional upgrades you can skip to this section. Many upgrades are installed before the plastic or this affects the installation steps.

Insect Netting (Optional)

Insect netting is installed after the frame is completely built but prior to installing the plastic. The sidewall insect netting will be your protection from pests when the roll up sides are open.

Installation

1. Hold up the insect net against the outside side walls and attach using the lock channel and spring wire. Install your insect netting **BEFORE** the plastic layer.
2. Work along the hip board, securing into the lock channel with spring wire.
3. Secure in the lock channel down the end wall and across the base board.
4. Cut off excess netting a few inches away from the lock channel.



Scan **QR** for info on **Installing Insect Netting** or visit

<https://youtu.be/V8VKpNeF7BA>

Trellis Bar Kit (Optional)

Trellis bars can be installed after the plastic has been installed. It is the final step in construction. It will be easier if installed before the plastic. **It is recommended at minimum, you have a truss for every 20' span, to support the trellis cable. (i.e. one truss for a 20' long green house, 2 truss for a 40' long green house.

Before installing your Wire Trellis Kits, determine where your beds will be located. The most common way to trellis for a bed is a single line in the middle of each bed. Common bed spacing width-wise is 2 to 3 feet from the edge of the sidewalls and 3 feet between rows.

1. Horizontal Bar

Included Parts

14' & Under - (5) 72" x 1½" horizontal bar, (4) 8" x 1-3/8" round splice, (25) #10 Self Tap Screws, (8) ¾" x 3½" Hex Bolt with Nut & Washer

20' - (7) 72" x 1½" horizontal bar, (6) 8" x 1-3/8" round splice, (35) #10 Self Tap Screws, (8) ¾" x 3½" Hex Bolt with Nut & Washer

30' - (10) 72" x 1 ½' horizontal bar (8) 8" x 1-3/8" round splice, (40) #10 Self Tap (20) ¾" x 3 ½" Hex Bolt with Nut & Washer

2. Determine Horizontal Bar Sizing



This kit is installed onto end wall vertical uprights. This allows independent placement of wire trellis anywhere along the width of the structure (not just where vertical supports are located.) You will need a tape measure, level, and marker/center punch for this step.

Height

Stand flat-footed in a comfortable working stance. Determine the height at which you can easily squeeze roller hooks during lower and lean operations. The trellis

bar should be 4"-6" above this measurement. It is common for this height to be within 10" of the top of the door frame.

*The horizontal bar must be placed above the door frame at a minimum. Measure and mark desired height with center punch or marker.

Width

Using your marked height, measure the width from the outer edges of the hoop. Use a bubble level to ensure the bar will be installed level.

The trellis bar should span the width of the hoop house, ending just shy of touching the end wall hoops on the top corners.

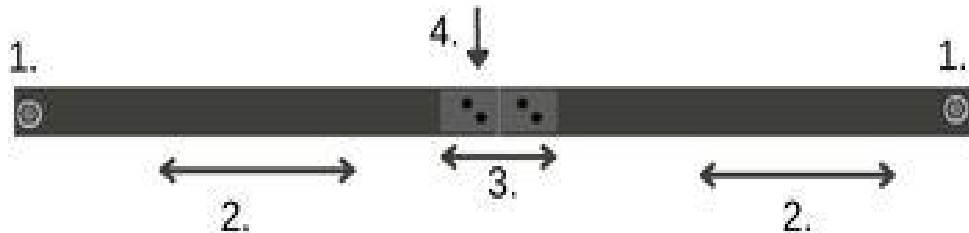
3. Installing Horizontal Bar to Endwall

After determining the desired length, the horizontal bar kit can be attached to the end wall using your marks from the previous step.

Tools Needed: Bubble Level, Drill, $\frac{3}{8}$ " Drill Bit, $\frac{1}{2}$ " Drill Bit, Ratchet Wrench & Sockets, Tape Measure, Metal Saw, Safety Goggles & Gloves, Clamps, Step Stool, Center Punch, String line at least the length of your hoop house and hanging level.

Parts Needed: #10 Self-tap screws, $\frac{3}{8}$ " x $3\frac{1}{2}$ " hex bolt with washer & nut, $1\frac{1}{2}$ " x 72" endwall trellis bar, 1.25" x 6" trellis bar joiner

Horizontal Bar Assembly



Pictured: 1. 1/2" Access holes, 2. horizontal bar, 3. Round trellis bar joiner, 4. #10 self-tap screws

1. Slide the Endwall Trellis Bars 3" into the Trellis Bar Joiner from each end and secure with (4) #10 Self Tap in the pattern pictured above. (install all screws on the same side of the bar)
2. Continue the process until you make a bar longer than needed.
3. Cut down to desired length from the previous step with a metal saw. Be sure to only cut the open side to adjust length for desired height.
4. Drill a 1/2" access hole on either end of the assembled bar 1/2" from each end. Drill on the inside face of the bar through one wall of the bar but not both. This will be the guide hole for attaching the bar to the hoop in the next step.



Horizontal Bar Attachment

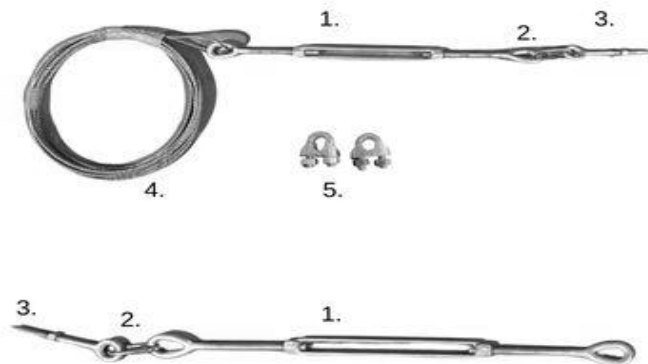
1. Clamp Horizontal Bar into place inside your house using your marks as a guide. (screws on the splice should face the plastic)
2. Secure the bar to vertical uprights with $\frac{3}{8}$ x 3 $\frac{1}{2}$ " hex bolts by drilling holes through the middle of the existing lock channel and vertical supports on the outside of end wall. (Drilled and installed outside to inside)
3. Secure end of bar to the hoop with #10 Self Tap through the $\frac{1}{2}$ " access hole.
4. Repeat the entire process for the opposite side of the hoop house ensuring that the two bars are installed at the same height.

Trellis Bar Layout

1. 20' endwall hoop
2. Trellis bar joiner
3. 78" ridgepole
4. Optional purlin
5. Horizontal trellis bar

Wire Trellis Kit (Optional)

Upon receiving your kit, get started by checking your parts list. If anything is missing, reach out to our customer service department for assistance.



Included Parts for Each Row

1. 9" Turnbuckle (2)
2. Quick link (2)
3. $\frac{3}{8}$ " x 4" Eye bolts with nut & washer (2)
4. $\frac{1}{4}$ " 7x19 CABLE 304 Galvanized SS pre-cut to your specified length. (barrel crimp on one end)
5. $\frac{1}{4}$ " Wire Crimps (2)

Determining Trellis Wire Row Spacing

Trellis can be placed anywhere beds are required along the width of the hoop house.

Once the center of the rows is determined, drill a $\frac{3}{8}$ " hole through the face of the Trellis Bar along the center of the bar through both side walls.

*If your $\frac{3}{8}$ " drill bit is over 3" long, use a backer board to avoid puncturing your greenhouse plastic.

Repeat for each row and again on the opposite end wall.

Installing Trellis Wire Turnbuckles

Tools Needed: Drill, $\frac{3}{8}$ " Drill Bit, $\frac{1}{2}$ " Drill Bit, Wrenches, Ratchet & Sockets,

1. Turn all turnbuckles to fully open before installation.
2. Place the eye bolt through the trellis bar and secure the nut between the greenhouse plastic and the trellis bar.
3. Carefully uncoil the wire rope to the opposite side.
4. Install the eye bolt of the second turnbuckle into the horizontal bar on the opposite side as you did on the first side.
5. Coil loose wire through turnbuckle. Pull as tight as possible to remove slack in the cable.
6. Use two wire clamps to secure the wire rope, one near the turnbuckle and the other to secure additional cable out of the way. Turn one side's turnbuckle until the wire is tight. Once all lines are installed, adjust for even tightness. Wrap the ends of the wire with electrical tape to avoid scratching.



As the season progresses and plants are trellised, growing, and bearing fruit you can adjust for weight and slack in the wire by tightening the turnbuckles.

Installing Ventilation

These steps cover installing either a powered ventilation fan or an intake shutter on a hoop house end wall using an installation rail kit. The goal is to create a solid horizontal mounting surface and a clean opening for airflow while maintaining plastic tension on the end wall.

This installation creates two horizontal rails:

- One upper rail for the fan or shutter to rest on
- One lower rail to provide a solid surface for fastening

Lock channel is then installed around the opening so the plastic can be secured tightly and cut cleanly after installation.

Tools	Parts
• Metal cutting tool • Drill with 5/16" nut driver • Level, preferably magnetic • Two clamps • Ladder • Ratchet with 1/2" drive • Multiple tape measures • Tape or zip ties for cable management if installing a powered fan	Shutter Exhaust fan hardware kit • (8) Rail Clamps • (4) 1/4" x 2.5 Carriage Bolts • (4) 1/4" Nuts

1. Choose the location

Install the fan or shutter as high as possible on the end wall to improve airflow.

2. Measure the opening width

Measure between the vertical end wall posts. Cut one horizontal pipe to this length for the top rail.

3. Install the top rail

Attach end rail clamps to each vertical post. Insert the pipe, level it, and tighten the clamps. Keep carriage bolts on the inside of the structure.

4. Mark the lower rail height

Measure down from the top rail the height of your fan or shutter. Add about 1/8

inch for clearance and mark both sides.

5. Install the lower rail

Attach end rail clamps at your marks. Insert the second horizontal pipe, level it, and tighten the clamps.

6. Mount the fan or shutter

Center the unit between the rails. Clamp it in place, then secure it with self tapping screws. Make sure shutters open freely.

7. Install lock channel

Add lock channel along the top, bottom, and sides of the opening so the plastic can be secured tightly.

8. Final check

Confirm everything is level and tight. Lubricate moving shutter parts as needed. After the plastic is installed, cut out the opening inside the lock channel.



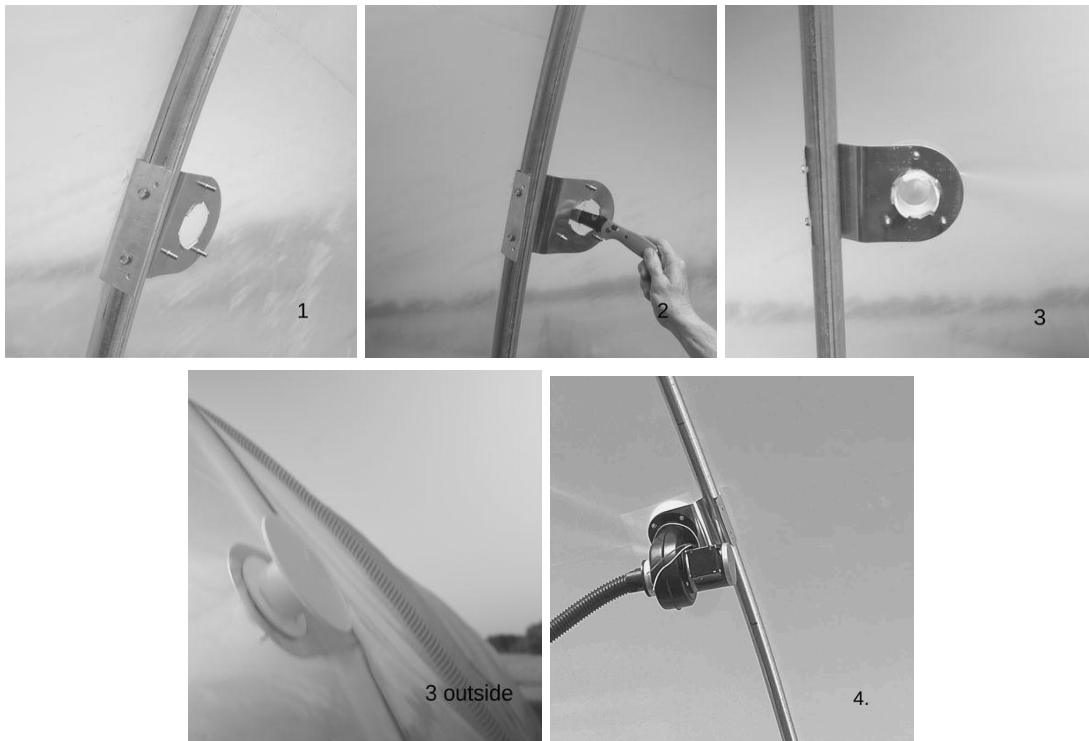
Scan **QR** for info on **Installing Ventilation** or visit
https://youtu.be/AefXohJZ8H0?si=tr_oyce8vIrBZlyq



Double Layer Inflation Kit (Optional)

We recommend pulling outside fresh air with the inflation fan. If you draw the air from inside of the hoop house itself to inflate your double layers, all of that excess moisture from the humidity will end up between your plastic layers.

Step 1: Attach the Mounting Bracket and Fan



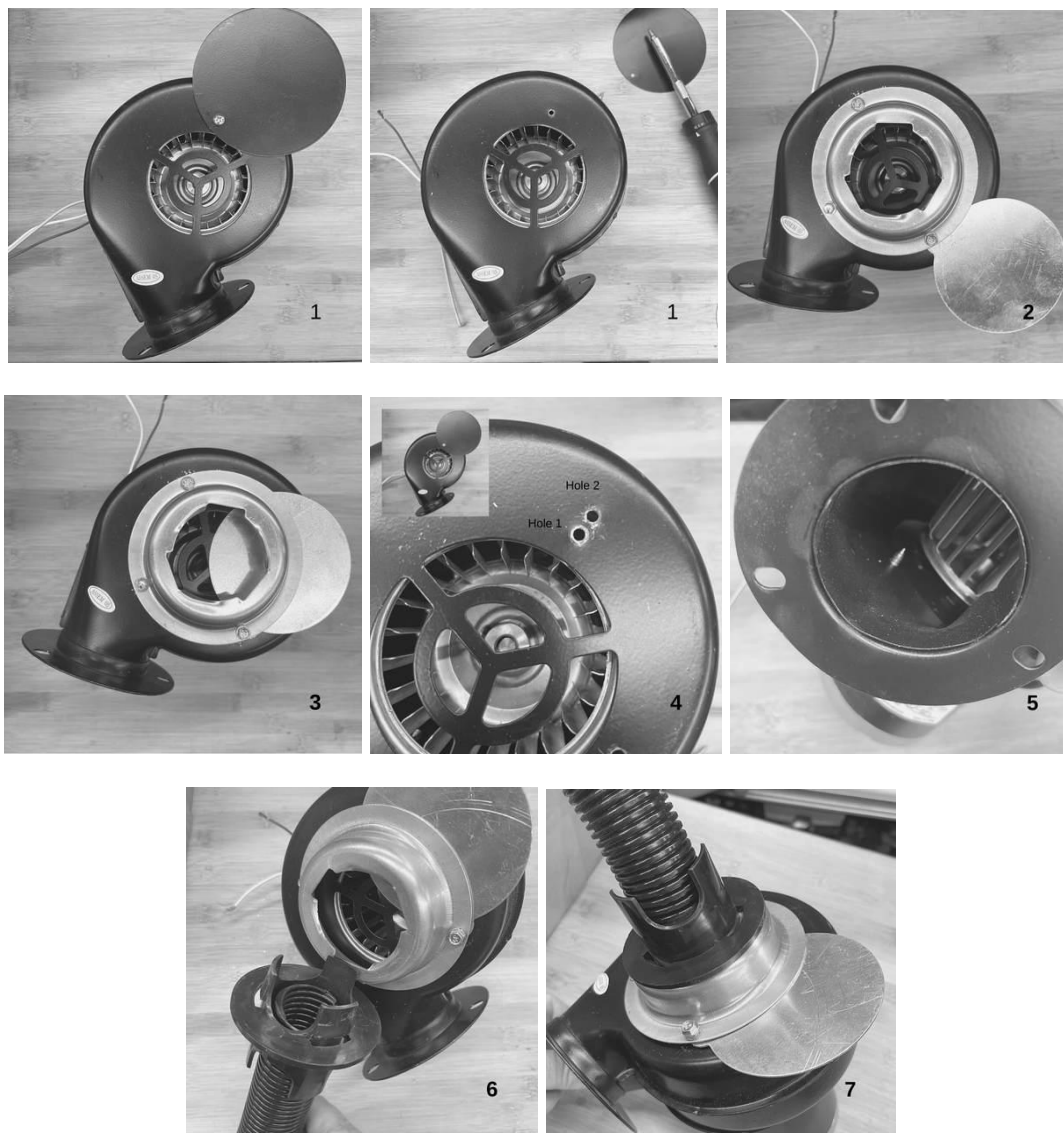
1. Attach the bracket to the first hoop (not the end wall) on the inside of the structure.
2. Gently cut out the film from the center of the hole.
3. Place the plastic dome from the outside into the bracket and turn to the right
4. Install the fan onto the bolt studs with nuts.

Wiring Notes

There are two ways to wire the fan.

- Add a three-prong cord long enough to reach the nearest 110V outlet with a GFCI.
- Wired directly to an outlet box. Refer to local building codes and consult a licensed electrician if in doubt about electrical work.

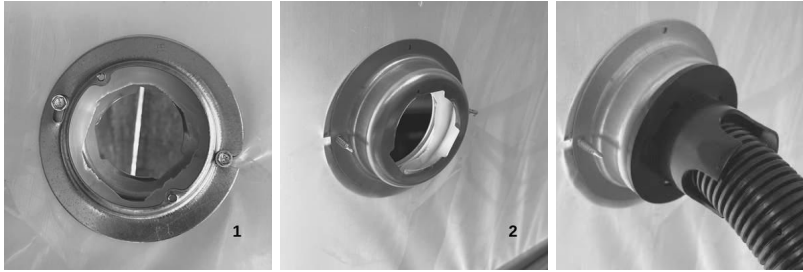
Step 2: Installing Hose Hook Up to Motor



1. Remove Baffle Cover
2. Install the metal ring to the motor with #8 self-tap Screws. Note the New Baffle position.
3. Adjust the screw tightness to open/close the new baffle, being careful not to over-tighten.
4. Hole 1 is the original baffle cover hole. Hole 2 is where the ring spacing will be. Note: this IS NOT where the mounting will occur. This is just an example of how far to space the ring so the screws do not interfere with the squirrel cage inside. See picture 4.
5. Location of correctly spaced self-tap screws.

6. Once the motor is installed inside of the house, in the previously installed bracket, insert hose tips into the bracket and twist.

Step 3: Installing Hose to End Wall Flange



1. Sandwich the Flange Plate (on the inside) and Flat Plate (on the outside) between the end wall film in line with the mounted fan on the next hoop from the end wall. Secure with #8 self-tap screws.
2. Gently cut plastic from the hole.
3. Attach the air hose from the motor to the end wall flange and twist.

Step 4: Installing the Second Layer of Plastic

Install the Inflation Blowers before installing the 2nd layer of greenhouse plastic.

Double-layer greenhouse film is put on exactly like the first layer. The only thing to keep in mind is that the double layer is inflating only from end wall to end wall and hip brace to hip brace. The spring wire will fit into the end wall hoops that already have the two springs and two layers that make up the 1st film piece and end wall piece.

Note: When first inflating your double layer start with the baffle wide open and adjust if necessary.

Gothic Inflation Jumper Hose (Optional)

If you are adding double-layer film with inflation, we recommend adding a second tube to your order. Gothic peaks are at a tight angle and while it is doubtful the second layer will be installed tight enough to impede the airflow, the second jumper tube will certainly add additional airflow for even inflation on both sides of the house.

Installing the Jumper Tube

Note: This step is done after the 1st layer is installed and BEFORE the second layer.

1. Install the second tube between the first and second hoops near enough to the top so the hose is not too loose and is out of the way of future work
2. Using the supplied collars to secure it onto the plastic without the need for a metal fresh air baffle or metal exterior plate as it is not exterior facing.
3. From the inside of the hoop house, simply press the 3 tabs of the house and cut an X pattern in the center of the tube location.
4. From the outside of the film, align the three tabs and twist. You can now install the second layer of plastic knowing you will have even air flow.



Shade Cloth (Optional)

Installation

- Unfold and orient the shade cloth to match the hoop house.
- Slide the shade cloth up and over the hoop house and center it.
- Secure the shade cloth using either pieces of spring wire or shade cloth clips
- Securing the Shade Cloth
 - **Spring Wire and Lock Channels (the preferred method)** - Center the shade cloth over your structure and secure it with short lengths of spring wire at intervals of every few feet. Use the same lock channel as your plastic on the end walls and hipboards (or baseboards if you have roll-up sides).
 - **Shade Cloth Clips** - A plastic clamshell with spikes that grip the shade cloth with a loop to strap it down with a polyethylene rope. This method works best if your shade cloth doesn't reach your hipboards. Install clips at least every 24 inches, and extra at the corners. When using clips, you can just secure the sides. Tie the securing rope to stakes in the ground or to eyebolts (not included) on your baseboards.



Scan **QR** for info on
Shade Cloth or visit

<https://youtu.be/KIJ0sz6FJJE>

Maintenance

Once installed, hoop houses are a low-maintenance option for season extension. This does not mean they have no maintenance, though.

- Here are a few things you will need to do to keep your house in good working order and extend its life: an intentional walk around your hoop house to look for any problems. Do this monthly and after any major weather events. This is one of those times that an ounce of prevention is worth a pound of cure.
- Look for any rips or holes in the plastic, clogged drainage ditches, loosening of the plastic, and anything near your house that has the potential to cause damage, ie. fallen branches, tools leaning on the side of the house, etc.
- Keep your plastic tight. Lock channel and spring wire make it easy to tighten individual sections as needed. Loose plastic is more likely to tear during inclement weather. Do not allow unpainted PVC to come into contact with plastic. PVC reacts with the plastic, and contact between the two will void your warranty.
- Keep chemical sprays away from the plastic. If you need to spray your plants, try to limit overspray by using a more directed stream instead of misting. Turn off circulation fans while you spray. If chemicals do get on the plastic, clean them off with mild soap and lots of water ASAP. **This is particularly important for sulfur and chlorine, as both can damage the plastic and may void your warranty.** If you live near a large farm or vineyard that regularly sprays its crops, ask them to notify you so you can rinse your hoop house afterward.

Hoop houses are a major investment. Doing these simple tasks will ensure that you get the most from your investment. Although most coverings have a 4-year warranty, well-maintained plastic can last far longer.

Repairing Holes

Keep a roll of repair tape on hand at all times. Taping up a small hole when it happens will save you a big tear the next time the wind picks up.

When repairing a tear or small hole, prepare the area by washing both sides of the plastic with mild soap and water. Rinse and completely dry the plastic before attaching tape. Place a piece of tape large enough to extend a few inches beyond the damage on both the inside and outside of the plastic. Make sure the tape sticks to itself through the hole for a more secure repair. Taped repairs should be checked every 6-8 months to ensure the tape is not coming loose.

Seasonal Considerations

Once a season, run through this list to head off eventual problems.

1. Tighten bolts and screws.
2. Oil hinges and moving parts.
3. Tighten batten tape and roll-up side ropes as needed.
4. Tighten any sways in your plastic.
5. Keep any drainage trenches and lines clear of debris.
6. Re-dig trenches if necessary, particularly in late fall once rain begins.

Special Weather Conditions

During weather events:

1. Brush off any snow buildup during storms.
2. During heavy rainfall, check for puddling on your plastic and tighten as needed.
3. Clear storm debris from ditches.
4. Brush off fallen leaves and branches.
5. If hurricane-force winds are predicted for your area, remove the plastic to avoid damage to your structure.