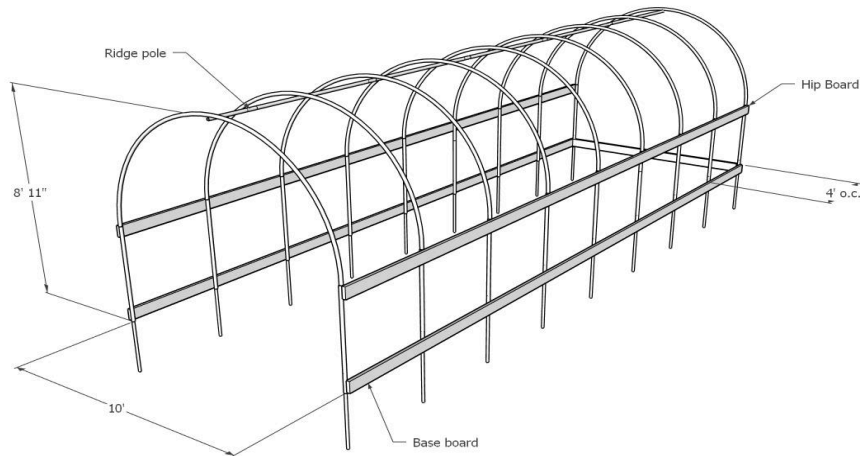


10' Essential Round High Tunnel Instructions & Owner's Manual

Please read ALL instructions before beginning your build. If you have elected to add optional upgrades to your kit, it is critical to review the section on that upgrade. Many upgrades must be installed before the plastic covering.

Rev. Date: 5/7/2026



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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.

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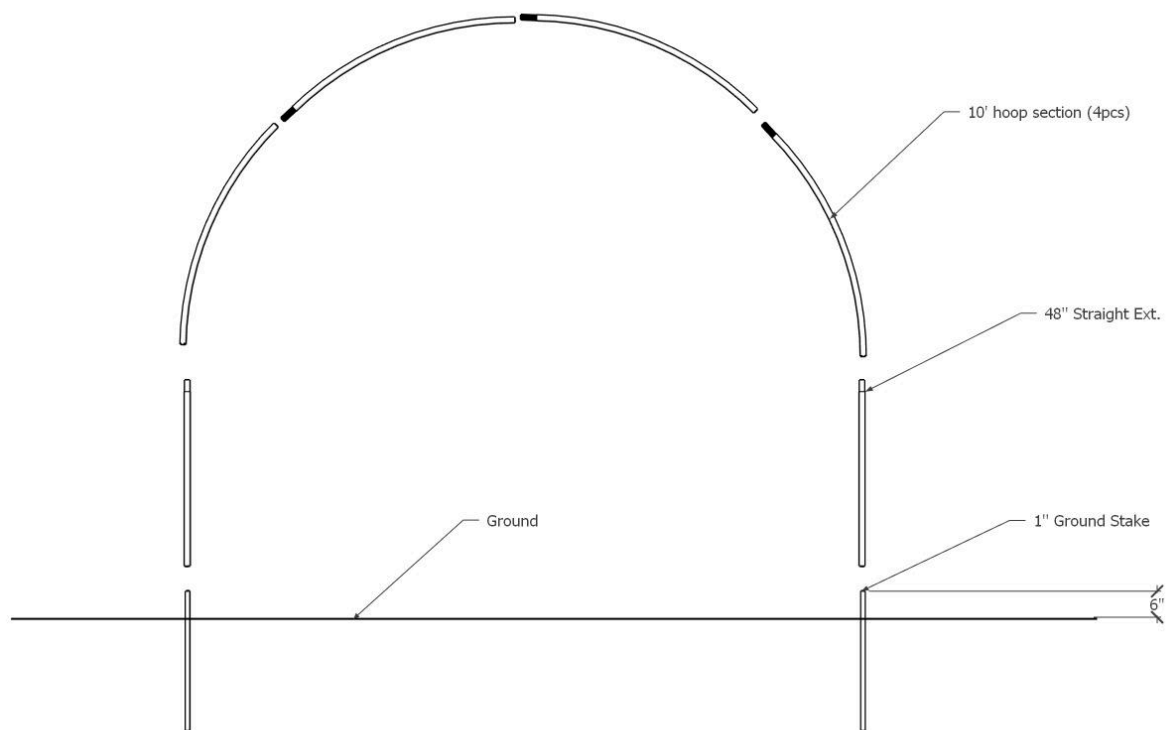
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Identifying Structure Components

Fig. 1 Hoop Structure Components.



Scan the **QR Code**. Watch the full build video before you begin.** This build video features our Hobby Greenhouse, so there may be slight differences compared to the 10' Essential High Tunnel Kit. Some components, measurements, assembly steps, and included features may vary between the two structures.

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 1 (888) 406-1982 EXT. 2

Recommended Tool List

For your safety: Follow all necessary safety precautions when using power tools and building equipment. Wearing personal protective gear, such as gloves, eye protection, earplugs, and closed-toe shoes, is recommended.

- Clamps (both bar and spring clamps are helpful)
- Drill & drill bits (1/4")
 - Impact driver not recommended for driving self-tapping screws.
- Extension cord
- Levels (long, magnetic, & string line)
- Roll of mason line
- Metal file
- Metal saw (reciprocating, chop, or hack saw)
- Slip joint pliers
- Scissors/razor knife
- Sledgehammer
- 3-pound hammer
- Center punch
- Socket set & adjustable wrench - (3/8' ratchet or nut driver)
- Stakes/markers
- Step ladders (at least one tall enough to reach the peak of your roof line).
- Tape measure
- Extendable painter's pole



Scan the **QR Code** for information on **tools**.

Location of Greenhouse

We recommend selecting 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. Additional groundwork may be required to divert runoff from regular greenhouse watering. Make sure you can 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.**



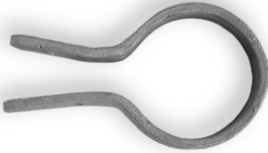
Scan **QR** for info on **Greenhouse Orientation and Site Prep before you build** or visit
<https://www.bootstrapfarmer.com/blogs/building-a-greenhouse/ideal-location-for-a-greenhouse>

Parts List - Kit Components

		
6 mil greenhouse plastic	Lock channel & spring wire	1" Ground stake driver

		
HGH bolt kit	End wall pipe strap 1.375	Ridge pole 1 3/8" x 75"

		
Pole 1 3/8" x 48"	Ground stake 1" x 36"	Cross Connector 1 3/8"

	
Hoop 1 $\frac{3}{8}$" x 10'	Brace band 1 $\frac{3}{8}$." (scissor door only)

		
Ridge pole adapter for scissor door 1 $\frac{3}{8}$" x 4 $\frac{1}{2}$"* *extra length if needed, or to attach to open end of the ridge pole.	Clam shell 1 $\frac{3}{8}$" (optional door frame)	Snap clamp $\frac{3}{4}$." (scissor door, roll-up sides)

Hardware in Bolt Packs

			
#8 x 3/4" Self-tapping screws	1/4" Lock washers	1/4" Nuts	#10 x 3/4" Self-tapping screws

			
2" x 1/4" HEX bolt (scissor door only)	1/4" x 3.5" Carriage bolt	1 1/4" x 5/16" Carriage bolt (scissor door only)	1 1/4" Phillips flathead wood screw



Scan the **QR Code** for
information on **hardware**.

Locally-Sourced Parts

			
2" x 6" x 12' boards for baseboards* 2" x 6" x 8 board- (optional end wall kit)	2" x 4" x 12' boards (if installing optional hip boards)	2" x 4" x 8' board 2" x 4" x 12' (optional end wall kit)	2" self-tapping screws (optional end wall door kit)

*Using a water-resistant wood like cedar, redwood, or treated pine is ideal. We also recommend coating the boards with latex paint. Baseboards will be in contact with the ground, so untreated wood should be painted with outdoor paint in advance.

The Build Process

Landscape Fabric

Optional: Install landscape fabric (4oz or heavier) before installing ground stakes. It is recommended that you line the perimeter of the greenhouse 1' inside and 3' along the outside with landscape fabric to prevent erosion from the water the greenhouse sheds. It will also keep you from having to mow or use a string trimmer next to your greenhouse. Accidentally throwing debris through your greenhouse plastic is a surefire way to get holes in it!

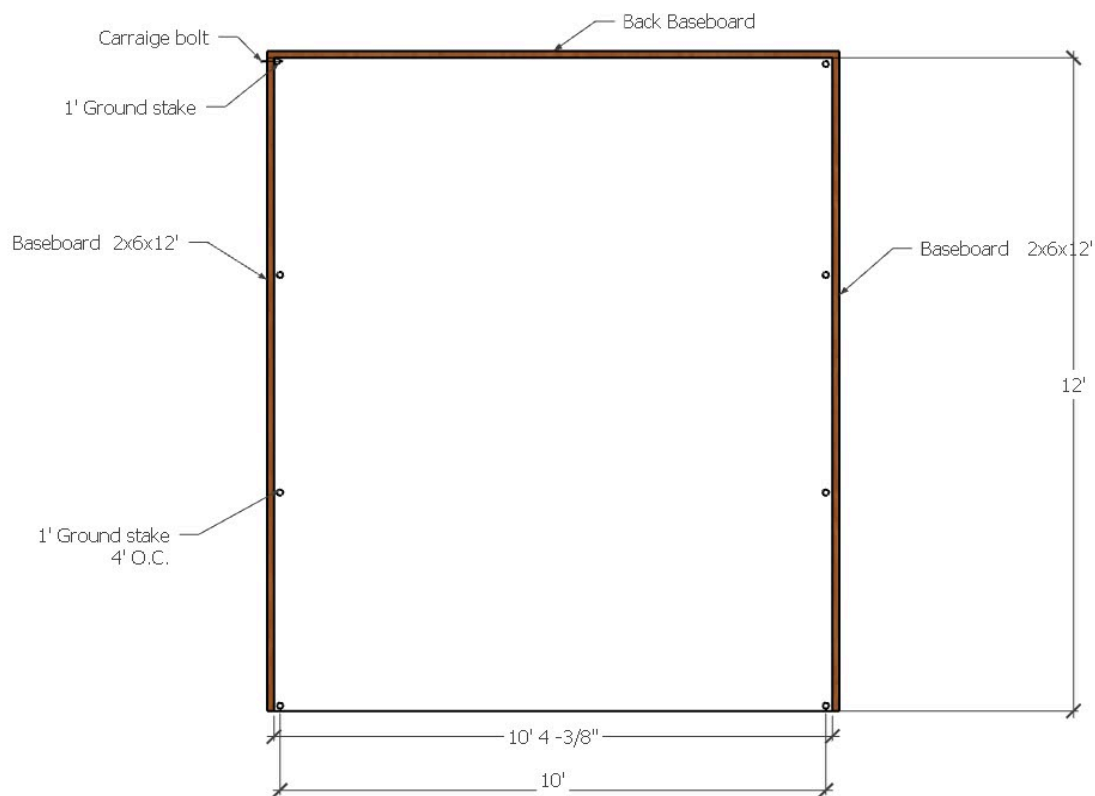


Scan the **QR Code** for information on [landscape fabric](#).

Installing the Ground Stakes

First, measure out your area with temporary stakes in a rectangle measuring 10' x Kit length. The example below is for a 10' x 12'.

Fig. 2 Overhead View of Ground Placement



**** Video Note-** Spacing between ground stakes for the 10' Essential Kit will be 4' instead of 2'.



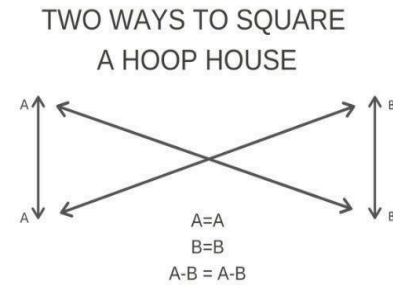
Scan the **QR Code** for information
on **marking footprint**.

Squaring the Structure

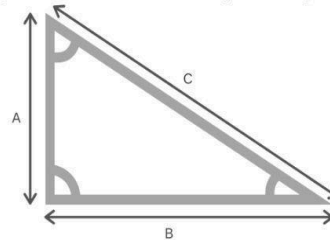
Making sure that your four corner stakes are square will provide a solid base to work from. This ensures the rest of the stakes are easy to install plumb and level.

Tools

- Sledgehammer
- Tape measure
- Bubble level
- String line
- Wooden stakes or marking flags
- Ground stake driver (included)



Pythagorean Theorem $A^2 + B^2 = C^2$ (3 4 5 Rule)



Set your corners using one of the following methods.

Measurement method - First, measure length to length. Then mark the width; it should be 10'. Then measure diagonally, ensuring the diagonal measurements are equal. Double-check that all length, width, and diagonal measurements are equal, and install wooden stakes or flags on each corner. This ensures your greenhouse will be square.

Pythagorean theorem method - Sink a marking stake starting at your first desired post location. 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.

You can extrapolate from this triangle to the desired length and width to sink your second and third stakes for the corners. Use a mason line from both the second and third stakes to intersect at a right angle for the location of the final corner stake. Check all measurements.

Driving the Ground Posts

Read each step thoroughly before driving the ground stakes.

1. **Position and install corner stakes:** Place the corner ground stakes at your pre-marked spots. Start driving these stakes into the ground, ensuring they're correctly positioned where you initially marked. Each stake should be roughly 30" in the ground and 6 inches out of the ground.
2. **Check for vertical alignment:** As each stake is driven into the ground, continuously check to ensure it's perfectly upright (plumb) from all angles using a level. Make adjustments as needed to keep the posts straight.
3. **Verify measurements:** Once the corner stakes are in place, re-measure the length, width, and diagonal distances to confirm accuracy. It's easier to correct any discrepancies at this point.
4. **Use a string line for alignment:** Tie a string line around the outer side of the corner stakes, positioning it 2 inches below the top. This string line will guide the installation of the remaining ground stakes, ensuring they are all at a uniform height.
5. **Install additional posts:** Following the string line as a guide, install the remaining ground stakes every 4 feet on center. Each stake should be roughly 30" in the ground and 6 inches out of the ground. (If your ground isn't level, adjust the depth of the ground stake so you have enough sticking out of the ground to bolt the hoop and base board to.)
6. **Maintain post orientation:** During installation, check each stake for levelness on the front and sides and adjust as necessary.



**** Video Note-** Spacing for the 10' Essential Kit will be 4' instead of 2'.



Scan the **QR Code** for information on **setting ground stakes.**

Installing Uprights to Ground Stakes

Install the 48" open to swage upright poles on the ground stakes with the swage end pointing up. Swaged poles have one end pressed smaller so it slides snugly into the open end of the next pole. Place the upright over the ground stake. Securing them will be covered in the next section.

Installing Baseboards

Use the 2" x 6" x 12' boards for your baseboards. These will be in contact with the ground, so using a durable wood like cedar, redwood, or treated pine is ideal. We also recommend coating the boards with latex paint.

1. For the first baseboard, we cut off the first foot so the board doesn't end on a ground post.
2. Line up the cut board with the front of the first 48" upright.
3. Clamp the board to the post and use your ¼" drill bit and drill through the wood and the ground post.
4. Insert a 3.5" x ¼" Carriage Bolt & tighten with a lock washer & nut on the outside.
5. Where two pieces of wood butt together, connect them with a scrap piece of 2" x 6" and attach with 2-½" wood screws (Phillips flat head #8).
6. Be sure not to overdrive these screws as you don't want the screw tip poking out the other side as it could pierce your greenhouse plastic.
7. Repeat for each hoop.
8. Add the baseboard to the other side by repeating steps 1-7.
9. Once the side baseboards are attached, install the baseboards on the rear wall. Cut a 2" x 6" x 12' board to fit the length of your end wall.
10. Drill holes higher or lower than the holes on the sides to avoid hitting the carriage bolt you installed in the side baseboard.
11. Use carriage bolts with lock washers and nuts to secure at both ends.

Note: It is optional to have a baseboard on both end walls. It is not necessary with scissor doors.



Scan **QR** for info on **installing**
baseboards

Connecting and Installing Hoops

Fig. 3, Hoop Piece Layout



1. Piece your hoop set (4 pieces) together on a flat surface. For consistency, assemble all your hoops in the same spot so they match.
2. Using two #8 self-tapping screws at each connection point, connect the hoop sections to prevent twisting and separation. Screw straight down while the hoop is lying flat to ensure the screw is parallel to the ground once you raise the hoop.
3. When all of the hoops are connected, place them near the ground stakes.
4. With a partner, stand the hoops up, place one side onto an upright, then the other. Using two #8 self-tapping screws, connect the hoop sections to the 48" uprights. Screw into the side of the hoop parallel to the other screws so the screw heads do not interfere with the plastic.



Scan **QR** for info on **Setting Hoops**.

Ridge Pole

The Ridge pole and pipe straps work together to connect and stabilize the hoops.

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 the rope 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.

**** Video Note-** Spacing for the 10' Essential Kit will be 4' instead of 2'. The middle hoops will connect with cross connectors.



Scan **QR** for info on **installing the ridge pole**.

Tools/Parts

- Ladder
- Clamps
- 5/16" nut driver
- Drill
- #10 self-tapping screws
- Pipe strap 1.375
- Cross connectors

Optional Purlin Kit

If installing the optional purlin kit.

1. Measure 24" from the ridge on each side of the ridge pole and mark on both endwall hoops.
2. Remove the swages from two of the purlin poles. It won't matter which endwall option you choose; the swages will need to be removed for the purlins.

Then follow the instructions for the ridge pole installation below in steps 2-8.



Scan **QR** for info on **installing the purlins**.

Installing Ridge Pole

Starting at the rear end wall, carefully check that it remains plumb.

1. If using a scissor door, determine which end wall you will install it on. This first pipe strap is installed on the opposite end wall from the scissor door. It will hold the open end of the pipe.
2. Secure the pipe strap to the underside of the end wall hoop at the center. Secure it to the hoop with (2) #10 self-tapping screws. Do not tighten all the way at this point.
3. Connect the ridge poles by inserting one of the swaged ends into the open end of the other ridge pole.
 - 3.1. **If you are building the scissor door, do not cut the ridge pole.**
 - 3.2. If you are building an end wall door frame, this is a good time to cut the swage off one of the ridge poles. Measure and mark your combined ridge poles at 12' before cutting. You don't want your ridgepole ending up short!
4. Using (2) #8 self-tapping screws, secure the two pieces of ridgepole together.
5. Insert the pole into the end wall pipe strap as outlined above, and then raise it up to line up with the center of the hoop house. Use a clamp or a friend to hold it in place at the next hoop.
6. Make sure the ridgepole open end is flush with the end wall hoop. Tighten the two pre-installed screws to secure the pipe strap. Install the third screw in the pipe strap to lock the ridgepole in place.



7. Measure 4' on the outside edge from the 1st tightened pipe strap to the outside edge of the next hoop and place the cross connectors.

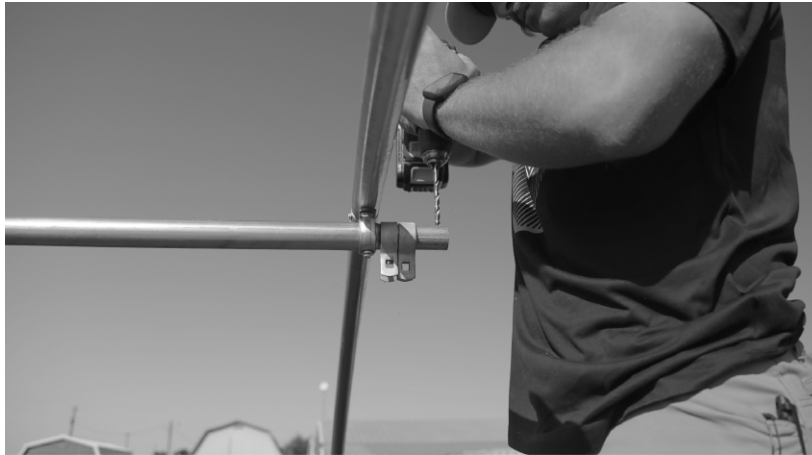
Cross Connectors

8. Loosely place a cross connector on the top of each of the rest of the hoops except the final hoop.
9. Starting at one end wall, carefully ensure that the end wall is still plumb.
10. Connect the ridge poles together with #8 self-tap through from the bottom or on the side at the swaged connection. Insert the pole into the end wall pipe strap as outlined above, and the next hoop cross connector. Continue adding ridge poles until the other end wall is reached.
11. 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.
12. Measure 4' on center from 1st tightened connector to the next connector and secure at that point.
13. Repeat this process for each hoop as you make final plumb adjustments while keeping cross-connectors 4' apart.
14. Depending on the length of your greenhouse, use a 36" extension on the end of the ridge pole or a 75" ridge pole, then cut off the excess. from the final ridge pole before installing the end wall pipe strap.
15. If you are adding purlins, install them the same way, about halfway between your hip boards and ridge pole.



Final Hoop Pipe Strap

16. Install the final end wall pipe strap on the last hoop. After installing the ridge pole, the end with the swage should be sticking out past the first hoop. This is the front of the hoop house where your scissor door will be installed.
17. For the end wall door frame kit, the end of the ridge pole should be cut flush with the final hoop.



Installing Hip Boards (For Optional Roll-up Sides)

Install the hip board on the sides above the baseboards on the exterior of the structure.

Note: If you are NOT using roll-up sidewalls but you still want to install hip boards for stability, they get mounted on the INSIDE with the carriage bolt head flush with the OUTSIDE, so it doesn't interfere with the plastic. Extra carriage bolts are not included in the regular kit.

1. Measure 46" from the top of your baseboard and mark the exterior of your hoops at this point. The 2" x 4" x 12' for your hip board will be installed below this line.
2. Clamp the board at the line or have a helper hold it in place.
3. Drill a 1/4" hole through the center of the hip board and then through the hoop.
4. Place a 3.5" x 1/4" carriage bolt through the wood and attach it with a lock washer and nut on the inside of the hoop.



Installing Lock Channel

Lock channels will be installed on both end wall hoops and the baseboards. If using a roll-up side kit, install the lock channel to the hipboards instead of the baseboards on the long sides.

If you elected to purchase insect netting to go under the roll-up sides, you will have purchased additional lock channel and spring wire. For roll-up sides with insect netting, install the lock channel on the hip boards and baseboards.

Tools	Parts
• Drill & drill bits • Clamps • Metal saw • Bubble level	• #8 Self-tapping screws • Lock channel

1. Use clamps to hold the lock channel in place when installing.
2. Install #8 Phillips screws every 12"-15" along the lock channel.
3. Be sure the lock channel is installed level from one piece to the next. If the lock channel is not straight, it can create sharp corners where the pieces join, which can cause the plastic to snag.
4. Start at one end of the baseboard and install a single piece of lock channel.
5. Place the second piece and mark the end that is hanging off.
6. Cut off the excess before installing the second piece.
7. Repeat for the other baseboard
 - 7.1. **If installing the roll-up side kit:** Attach the lock channel to the hip boards on both sides.



Scan **QR** for info on **installing the lock channel**.

End Wall Hoops Lock Channel

Install lock channel on the end wall hoops. If installing an end wall door frame, install the tension bands and the door frame uprights before installing the lock channel. **Refer to “Installing the End Wall Door Kit” on page 33 at this point. You will need to complete steps 1-9 in that section before continuing.**

1. Use #8 self-tapping screws to install the lock channel to the metal hoops.
2. Starting at the top of your baseboard, run the lock channel along the entire hoop, without overlapping the hip board. It should face the sky/outward.
 - 2.1. Mark and cut the lock channel before installing to bypass the hip board.
3. Use clamps to secure the lock channel during installation.
4. Install #8 Phillips screws every 12”-15” along the lock channel.
5. Be sure the lock channel is installed evenly from one piece to the next. If the lock channel is not straight, it can create sharp corners where the pieces join, which can cause the plastic to snag.
6. Use more clamps to help keep the channel in place while you bend it along the curve.
7. Mark and cut the lock channel to reach the top of the opposite baseboard before installing the final piece.

Your lock channel will easily bend to the curvature of your hoops. Do not kink or bend the channel before installing it.

Optional Insect Netting

If you are adding roll-up sides with insect netting, you must install the insect netting before the plastic. The sidewall insect netting will protect your crops from pests when the roll-up sides are open.

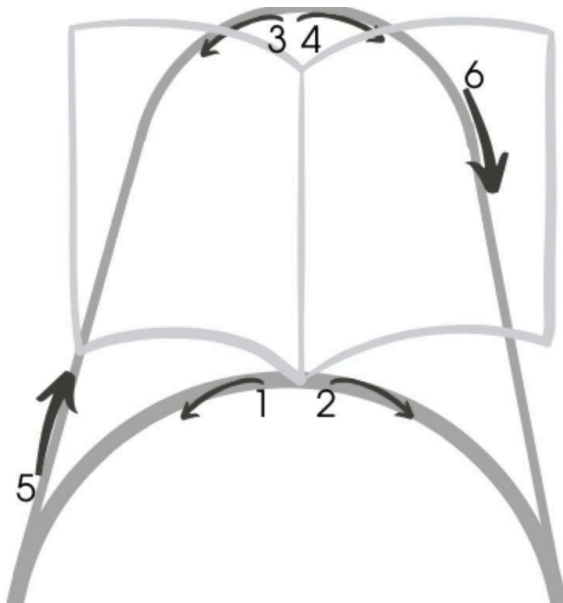
1. Hold the insect net against the exterior walls and secure it with the lock channel and spring wire. Install your insect netting BEFORE the plastic layer.
2. Work along the hip board, securing into the lock channel with spring wire.
3. Secure in the lock channel down the end walls and across the baseboard.
4. Cut off excess netting a few inches away from the lock channel.
5. Repeat on the other side using the remainder of your insect netting.

Installing Greenhouse Plastic

Installing plastic can be the most intimidating part of your build, but once you get started, you will find it pretty straightforward. Make sure you finish securing the plastic before you stop for the day, so it doesn't blow away.

Having 2-4 people will make the job go faster and easier. Pick a time when there is little to 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 new plastic.

Fig. 4 Unfolding and Installing Plastic



Install the plastic in the following order: Main hoop area, baseboards (or hip boards), then end walls. Grab your friends and step ladders, and let's go!

***The writing should be on the inside of your structure.**

Before you begin, look for sharp edges on cut pieces of lock channel and file them down. Make sure that all tension bands and cross connectors are tight and not sticking up, where they could snag the plastic.

Installing: Main Hoop Area

NOTE: You receive one piece of plastic with your kit. The plastic cut from the main tunnel will be used for both end walls, so handle it gently to avoid damage.

Before pulling your plastic onto the hoop house, make sure it is laid out with the 28' side as the width and the 32' side as the length. This will ensure a proper fit and won't leave you short at the last endwall.

1. Start pulling the plastic over the end wall without the swage sticking out. Pull the plastic lengthwise over the structure, stopping a foot past the opposite end wall. (Note: If you are not installing a scissor door, it does not matter what end wall you start at.)
2. Install spring wire from the center of the top of the end wall hoop, working your way down to the hip board. If you're not using roll-up sides, go all the way down to the baseboard.
3. Install spring wire from the top down on the opposite side of the end wall hoop in the same manner.
4. On the opposite end wall, pull the plastic tight and repeat steps 2 and 3.
5. Trim the plastic now to clear the excess and ensure the remaining plastic on your endwalls is not damaged. The excess will be roughly 18-20ft. Use a sharp pair of scissors or a box cutter with a new blade.
6. Leave a 1-foot allowance beyond the end wall on both sides to facilitate adjustment and tightening.
7. You may need to remove the spring wire from one end wall and tighten the plastic, or get out any wrinkles. This is normal.
8. Pull the plastic tight and attach it with spring wire along the baseboards, one side at a time.
9. Attach to the hip boards if using roll-up sides.
10. There will be excess plastic past the baseboards. It will get trimmed after all the plastic is installed.
11. Once the end walls are covered, you will cut the plastic along the baseboard 3-4 inches from the lock channel. (For roll-up sides, you will leave at least 12" excess past the baseboard.)



Scan **QR** for info on **installing plastic**.

Installing End Wall Plastic

1. Drape a section of plastic over the end wall opposite your door side, starting at the top. Overlap the hoop by at least 6”.
2. Install spring wire from the center of the top of the end wall hoop, working your way down to the baseboard. More than 1 piece of spring wire fits in the same lock channel.
3. Install spring wire from the top down on the opposite side of the end wall hoop in the same manner.
4. Pull tight and attach the plastic with the spring wire along the baseboards of the end wall. Try to remove all the wrinkles. Trim the plastic 3-4 inches away from the lock channel on the end wall.
5. Once the end walls are covered, cut the plastic along the baseboard, 3-4 inches from the lock channel, on the long side of the structure. (For roll-up sides, you will leave at least 12” excess past the baseboard.)
6. Review the section on your chosen door before installing plastic on the other side.

For areas with severe winters or hurricanes: If you will be removing the plastic during the winter, leave 6-12” of plastic all the way around to make reinstallation easier.

Optional Components:

Scissor Door

Tools

- Drill & drill bits
- Metal saw
- 5/16" nut driver
- Ground stake driver
- Sledge hammer
- Diagonal cutters/fencing pliers
- Tape measure
- Center punch
- Step ladder
- Socket set or adjustable wrench
- Razor knife or scissors
- Ground stake 1" x 36"

Parts

- Ridge pole adapter 1 $\frac{3}{8}$ " x 4 $\frac{1}{2}$ "*
- Snap clamp $\frac{3}{4}$ "
- #8 x $\frac{3}{4}$ " self-tapping screws
- 1 $\frac{1}{4}$ " x 5/16" carriage bolt
- $\frac{1}{4}$ " nuts
- 2" x $\frac{1}{4}$ " hex bolt
- 2 brace bands 1 $\frac{3}{8}$ "
- $\frac{3}{4}$ " pipe x 78" (swage - open)
- $\frac{3}{4}$ " pipe x 18" (flat - open)
- 8" piece of spring wire (2)
- White strapping 3' cut in half

*Ridgepole adapter attaches to the ridge pole to provide swage end if the ridge pole ends on an open end, or if installing on both sides.

Fig. 5 Open Scissor Door



Installing Scissor Door

The front of your hoop house should have the swage end of the ridge pole sticking out past the first hoop, as stated in the ridge pole installation.

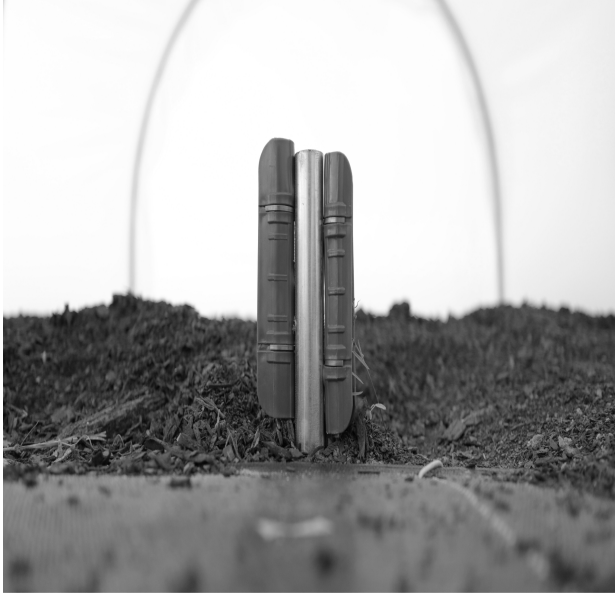
1. Lay out the (2) 18" pieces of $\frac{3}{4}$ " pipes that are "flat w/hole" on one side. The 2 pieces of $\frac{3}{4}$ " pipe that are "swaged and open" on opposite ends.
2. Using (2) #8 TEK screws, install the 6' long $\frac{3}{4}$ " pipe with the swage into the 18" piece on the open end, opposite the flat end.
3. Install the brace bands on flat ends of $\frac{3}{4}$ " pipe, with a $\frac{5}{16}$ " x $1\frac{1}{4}$ " carriage bolt.



The $\frac{3}{4}$ " pipe mounts to the swaged end of the ridgepole. It will need to be trimmed to hang freely from the ridgepole.

1. Measure from the ground to the bottom of the swage on the ridgepole.
2. Transfer this measurement to the $\frac{3}{4}$ " pole, starting from the flat end of the pole. Subtract 1 $\frac{1}{2}$ " from this distance, so there is a 1-2" gap at the bottom between the pole and the ground.
3. Mark and cut the pipe.
4. When hanging the door uprights from the ridge pole, the inside upright will be hung so that the square corner faces the inside of the hoop house.
5. The second upright will be installed opposite the first, placing the brace bands side by side. (These will swing freely and should not be tight on the swage)
6. Mark the top of the swage a $\frac{1}{2}$ " from the end and drill a $\frac{1}{4}$ " hole perpendicular to the ground. Install a $\frac{1}{4}$ " x 2" bolt with a lock washer and nut. This will prevent the scissor door's uprights from sliding off.
7. Following the uprights to the ground, mark the ground directly below the uprights.
8. Install one ground stake at the marked location, leaving roughly 6 inches above ground.

9. Using (2) #8 TEK screws, attach a snap clamp to each side of the ground stake. These will be mounted opposite each other on either side of the ground stake. Make sure to offset the screws so they don't hit each other.
10. Snap the scissor door uprights into the snap clamps on the ground stake.



11. Use the remaining piece of plastic to cover the scissor doors. Raise the plastic 6 inches above the end wall. Starting at the center of the top of the hoop, right above the scissor door, start installing the spring wire into the lock channel.
12. Install the plastic with spring wire about ½ way down each side.
13. Starting above the ridgepole in the center, start cutting the plastic. Cut straight down the center to the ground.
14. Take the piece of plastic on your left, attach it to the upright on your right using (4) snap clamps. Wrap from the outside in.
15. Take the piece of plastic on your right, attach it to the upright on the left using (4) snap clamps, again, wrapping the upright with the plastic from the outside in. This ensures the doors overlap when closed.
16. Return to the hoop and continue working the plastic down, securing it with spring wire in the lock channel.
17. Take an 18" piece of strapping and secure it on the hoop with an 8" piece of spring wire at the point where the upright swings out and hits the hoop when opening the scissor door. This loop will hold the door open during use. Do this on both sides of the door.



Scan **QR** for info on **installing the scissor door**.

End Wall Door Frame Kit

This kit is designed to create a rigid metal frame for attaching to wood, allowing you to install a conventional 32' to 36" screen/storm door. (Storm door not included)

Fig. 6 End Wall With Door Frame and Door



Scan **QR** for info on **installing the end wall door frame kit.**

Tools and Parts

- Drill & drill bits
- Metal saw
- 5/16" nut driver
- 3/8" nut driver
- Ground stake driver
- Sledgehammer
- Diagonal cutters/fencing pliers
- Tape measure
- Center punch
- Step ladder
- Socket set or adjustable wrench
- Razor knife or scissors
- Pole 1 3/8" x 36"
- Pole 1 3/8" x 75"
- Ground stake 1" x 36"
- Lock channel
- Spring wire
- Tension bands 1 3/8"
- #10x3/4" Self-tapping screws
- #8x3/4" Self-tapping screws
- 3.5" x 1/4" carriage bolt
- 1/4" nuts
- 1/4" lock washers
- Storm door (locally-sourced)
- 2"x4"x8' (locally-sourced)
- 2"x4"x12' (locally-sourced)
- Bolts/screws for 2"x4" boards (locally-sourced)
- Clam shell 1 3/8"
- 6 mil plastic

The kit consists of the following:

Two vertical uprights that attach to the end wall hoop with tension bands, and to the ground with ground stakes.

A horizontal bar that ties the two verticals together with clamshell fittings. The horizontal bar creates the header for the door frame. We attached 2x4s to the metal frame with 2" self-tapping screws to make a wood frame for our door.

Installing the End Wall Door Kit



1. Measure the distance between the baseboards on each side and find the center of the end wall. Mark this spot.
2. Depending on the door you choose, the measurements will be specific to your application. Determine the “rough in” measurements and add the thickness of the wood used to construct the frame.
3. In our case, the “rough in” is 36”. We used 39” as our measurement, since we used 2x4s for the frame, and their combined thickness is 3 inches.
4. Once you have this measurement, divide it in half and measure the distance on both sides from the center mark you already made. This will determine the outer edges of your door opening.
5. Install ground stakes on either side of the opening you have marked, and keep them in line with the end hoop's stakes. Leave approximately 6 inches of the ground stake sticking out.

6. Measure from the ground level at the ground stake straight up to the hoop.



7. Subtract 6' from this measurement. Transfer that measurement to a 36" pole. Cut this off the 36" pipe and install that on the swage end of the 6' pole using (2) #8 self-tapping screws.
8. Slide the complete upright over the ground stake you measured from and attach it to the tension band that you installed. Screw down with a #10 self-tapping screw. Use a level while doing this to make sure the upright is plumb.
9. Repeat steps 5-7 for the other upright.
10. Make sure the distance between the top of the uprights matches the base of the uprights at ground level.
11. Mark your uprights for the up-and-down rough-in measurements, plus the thickness of the header board. This is where the crossbar will be installed.
12. Collect all four of the clamshell pieces and a 36" pole. These will be used to create the crossbar.
13. If the distance between the uprights is less than 36", cut the 36" pole down to fit the installed clamshells.

14. Use a 2 ½ " carriage bolt to secure the clamshells around the cross bar and uprights. When installing these on the uprights, install one at a time and loosely assemble them until the crossbar is installed.



15. Tighten the carriage bolt until it is snug, then repeat on the other side.
16. Position the crossbar where you marked the uprights, then tighten the carriage bolts.
17. Measure, cut, and install the baseboards to the bottom of the end wall.
 - 17.1. Measure from the outside edge of the left baseboard to the inside of the left door upright. This is the length of the left baseboard.
 - 17.2. Measure from the outside edge of the right baseboard to the inside of the right door upright.
 - 17.3. Make sure to measure both sides before cutting, as the measurements may differ.
18. Using a clamp to hold the wood in place, drill a ¼" hole through the wood and the bottom of the hoop and door frame upright.
19. Install a 3 ½" by ¼" carriage bolt to secure the board to the base of the uprights.
20. The material used to rough in the door will dictate how you connect those materials to the uprights and crossbar. We recommend 2x4" material.
21. Install a lock channel along the baseboard on both sides of the door, along the uprights, and on the crossbar around the door.
22. Install the end wall plastic in the lock channel with spring wire.
23. Cut the plastic off the area around the door frame.
24. Install the door.

Roll-Up Sides

Tools and Parts List

- 2 Sidewall Hand Cranks
- Snap clamps
- 90 degree $\frac{3}{4}$ " pipe
- #8 screws
- Black 2" webbing - 38" long
- Flat washers
- Wood screws
- Drill
- $\frac{5}{16}$ " nut driver
- Drill bits
- Phillips screwdriver
- Pliers

Installing Roll-up Sides

1. Pull the plastic at the baseboard and lay it flat on the ground. There should be at least 6 inches or more of excess plastic.
2. Connect $\frac{3}{4}$ " pipes together and secure at each connection point with (2) #8 self-tapping screws. This creates your roll-up bar. The swage end should point toward the back of the structure.
3. Install the roll-up bar parallel to the baseboard. Slide the roll-up bar under the excess plastic on the ground.
4. Tuck the plastic a few inches under the roll-up bar and install a snap clamp on the end. Install snap clamps every 18 inches, keeping the roll-up bar parallel to the baseboard as you go.
5. Temporarily roll the sidewall inward to prevent water from entering the rolled-up plastic.
6. Take a roughly 12-inch long piece of spring wire and secure one end of the 36" black webbing into the lock channel on the hip board, around 18 inches from each end wall.
7. In areas with high winds, install the strapping closer to the end wall to prevent wind from infiltrating when the sides are rolled down.

8. Pull the webbing snug against the roll-up side and secure it to the baseboard using a wood screw and fender washer. The screw will go through the webbing.
9. Repeat steps 9 & 10 for each corner.

Scan to Watch Video



Scan **QR** for info on **rollup**
sides.

Shade Cloth Installation

1. Unfold and orient the shade cloth to match the hoop house.
2. Slide the shade cloth up and over the hoop house and center it.
3. Secure the shade cloth using either pieces of spring wire or shade cloth clips
4. Securing the Shade Cloth
 - 4.1. **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).
 - 4.2. **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>