CAT Tunnel

Instructions and Owner's Manual

1/20/2024

Thank you for choosing Bootstrap Farmer for your farm's equipment needs. Our All-Metal Caterpillar Tunnel 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

Table of Contents

CAT Tunnel **1**
- Recommended Tool List 3
- Cat Tunnel Placement 4
- Parts List 4
- Labeled CAD Drawings 6

Ground Posts 7
- Squaring Your Structure: 8
- Installing the Ground Posts 9

Hoops 10
- Connect and Install Hoops 12
- Installing Hoops to Ground Posts 13

Cross Connectors and Ridge Poles 14
- End Wall Cross Connectors 14
- Cross Connectors and Ridge Poles 15
- Install Ridge Pole and Connectors 16

Install Corner Braces 17
- Corner Brace Kit Standard on 20’ Wide (Optional on 14’) 17

Doors 18
- Drilling the hoops to make doors. 19
- Installing Door Brackets 20
- Installing Doors 21

Install Cleats 22

Attach lock channel to end walls and door hoops 23
- Installing Lock Channel 23

Install Greenhouse Plastic 24
- Install Greenhouse Plastic on the End Walls 25
- Install Batten Strapping 25
- Batten Strap Install Diagram 27

Install Plastic on Doors 28
- Diagrams for Plastic Pleating and Door Position 29
- Installing Second Door Panel 31
- Installing Batten Strap Gutter Line 32
- Using the doors on your CAT tunnel 33
- Sidewall Ventilation 33
- Maintenance 33

Recommended Tool List

For Your Safety: Take all necessary safety precautions with power tools and building equipment. Personal protective gear such as gloves, eye protection, ear plugs, and closed-toe shoes are recommended.

- Clamps
- Drill & Drill Bits (1/4" bit included)
  ****Impact driver not recommended for driving self-tap screws.****
- Extension Cord
- Levels (long, magnetic & string line)
- Roll of mason line
- Metal File
- Metal Saw (reciprocating, chop or hack saw)
- Grinder
- Slip joint pliers
- Scissors/blade
- Sledgehammer (double jack)
- Single jack (3-pound hammer)
- Center hole punch
- Socket set & Adjustable Wrench - (1/2" ratchet or nut driver)
- Spare Rope & tennis balls
- 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 20' kit has a center height of 9'4" which means you will have to work 10-12' from the ground. The 14' kit has a center height of 7'4". 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 building site, keep the lift level and on packed solid ground. **Do not operate in inclement weather.**

Scan **QR** for the Recommended Tools List or visit
https://youtu.be/wMiQLfUz4Bw?si=vTGG6Ee4lVV8v4xG&t=192

Cat Tunnel Placement

We recommend finding a flat area of land, clear of any trees and far enough away 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 watering. Make sure that 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 Tunnel **Orientation and Site Prep** or visit

https://www.bootstrapfarmer.com/blogs/building-a-greenhouse/ideal-location-for-a-greenhouse

Parts List

Uncrate shipment and check against the 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.

Scan **QR** for info on **Parts and Inventory** or visit

https://youtu.be/wMiQLfUz4Bw?si=VBG6rp70zigvWjl1&t=225

				
Cleat	Ball Bungee	Ground Post Driver	Clip (Carabiner)	Nylon Batten Strap

				
¼” x 2” Bolts	Hoop Spring	Post Spring	Greenhouse Plastic	Drill Guide Stickers

				
Door Hardware Kit	Door Brackets	Cross Connector 1.375	Endwall Cross Connector	75in Swaged Ridge Pole

				
36” x 1” Ground Posts	Lock Channel / Spring Wire	Bundled Hoop Packs	Tool Hardware Kit	Brace Band

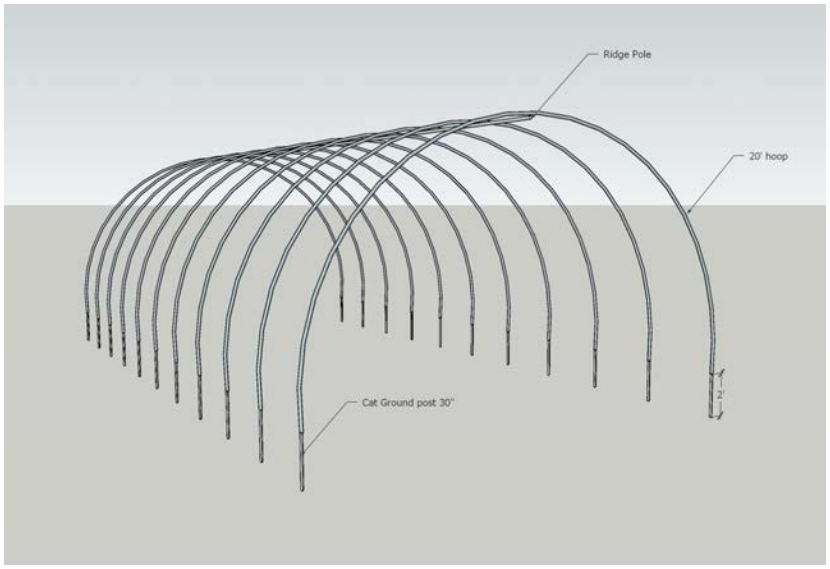
*Ground Post Pack Options

- 14/20- (12) 14/40- (22) 14/60- (32) 14/80- (42) 14/100- (52)
- 20/20- (12) 20/40- (22) 20/60- (32) 20/80- (42) 20/100- (52)

****Hoop Pack Options**

- 14' Hoop Pack (2) 96" Swaged & (1) 99" Pole
- 20' Hoop Pack (3) 96" Swaged & (1) 99" Pole

Labeled CAD Drawings



Ground Posts

Optional: Install landscape fabric before installing ground posts. It is recommended that you line the perimeter of the tunnel 1' inside and 3' along the outside with landscape fabric to prevent erosion from the water that the tunnel sheds. Also, you won't have to mow or trim next to your caterpillar tunnel, 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.

You will also need:

- Sledgehammer/double jack
- Single jack (a smaller sledgehammer with a handle under 2' in length)
- Tape measures; ideally, at least one that will measure the entire length of the diagonal between corner posts.
- Levels: a line & magnetic level.
- Mason line
- Stakes
- Pencil, paper, and a calculator

Parts

- Ground Posts* (36" x 1')
- Ground Post Driver

* Quantity of posts dependent on kit size.

- Ground Springs - Figure 8 springs for ground posts.
- Clips (carabiner style)

Squaring Your Structure:

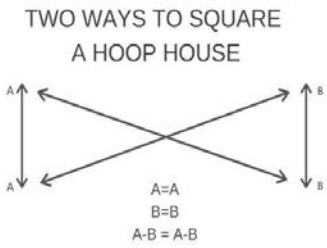
Ensuring that your first four corner posts are square will provide you with a base to work from to ensure the rest of the posts are easy to install plumb and level.

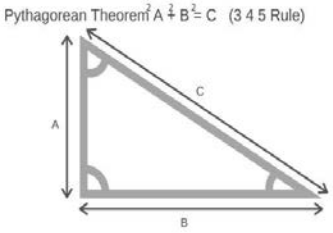
Using one of the following methods, set your corners.

Measure Method - First, measure length to length. Then mark the width; it should be 14’ or 20’, depending on your kit. 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 caterpillar tunnel 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 equal 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 plumb line from the second and third stakes to intersect at a right angle for the location of the final corner post. Check all measurements.





Scan **QR** for info on **Squaring the structure** Or visit

https://youtu.be/6EcDWr8tkq8?si=ZM0XckzvAlJ5iY9P

Installing the Ground Posts

Once your area is measured out with temporary stakes, install each corner ground post at the marked location from the previous step. Place your posts where you had previously marked the corners and begin driving those into the ground.

While driving the posts into the ground, you want to ensure the poles are plumb in all directions. As you drive the pole into the ground, check for levelness on the front and sides and adjust as needed.

After installing the corner ground posts, re-measure length, width, and diagonals one last time. If you make a mistake, it's not too late to fix it without too much work. Once you are satisfied, tie a string line around the outside of the corner posts as a plumb line.

The plumb line will help to keep all your ground posts in alignment so you don't get wavy hoops later on. Install ground posts every 4' on center following your line, keeping approximately 24'' into and 6'' above ground.

Scan **QR** for info on **Installing Ground Post Springs** or visit

https://youtu.be/wMiQLfUz4Bw?si=6Rsgd3SAc5i83fCZ&t=370

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

https://youtu.be/wMiQLfUz4Bw?si=USZuHHoYO0njYf6Z&t=279

Install Ground Post Springs- Put one Figure 8 spring onto each ground post with the larger ring slid around the ground post and the smaller ring facing up and to the outside before installing the hoops.

Put one clip on each smaller ring of the ground post spring. These are where you will attach the batten strap in later steps.

Hoops

The hoops will come bundled together, and you will need to construct them.

Tools

- Drill
- #8 Self Tap Screw

Parts

14' WIDE HOOP set contains:

- (2) 96” Swaged pole (bent)
- (1) 99” Pole (bent)

20' WIDE HOOP set contains:

- (3) 96” Swaged pole (bent)
- (1) 99” Pole (bent)

Springs

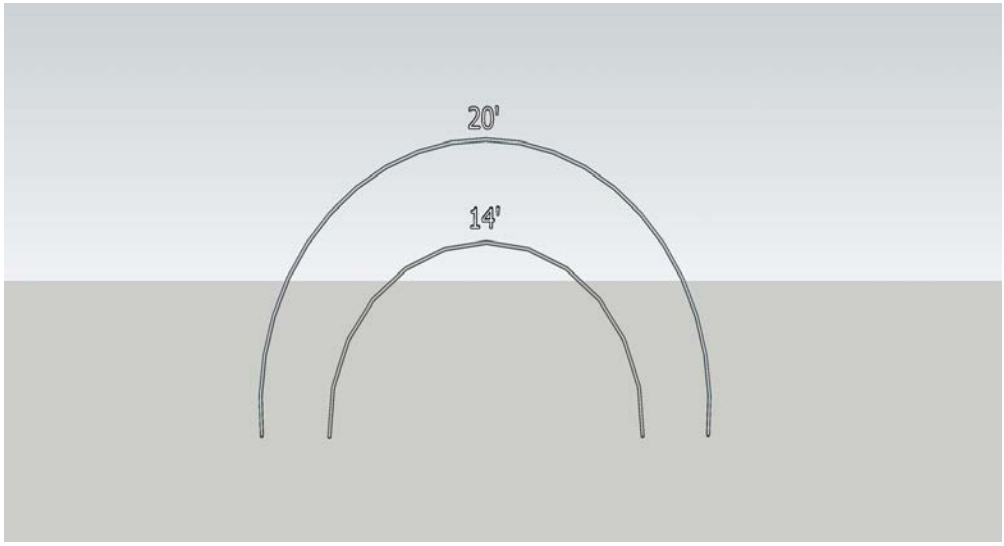
- Hoop Springs - springs for hoops.

Pole Layout for Hoops

Our pre-bent poles (96” swaged) come with one open end and one swaged end to decrease the diameter, similar to a pipe nipple. This enables you to connect poles without the use of fittings. The final hoop section (99” pole bent) is open on both ends. When properly constructed, the bottom of the hoops will be open to slide over the ground posts.

Scan **QR** for info on **Hoop Assembly** or visit

https://youtu.be/wMiQLfUz4Bw?si=Emkcfxo5h9hida6I&t=320



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.

Connect and Install Hoops

- Piece each hoop set together on a flat surface. Unbundle and construct only one hoop at a time. For consistency, assemble all your hoops in the same spot so they match.
- Using a #8 self-tap screw, connect the hoop pieces 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.
- When all hoops are connected, place them near the ground posts.
- **Install Hoop Springs - Start at one end wall, count three hoops from the end, and install a CAT tunnel hoop spring on both sides of that third hoop. The ears of the hoop spring will face inward and down toward the ground. You will turn them facing out after you install the plastic.**
- **Continue to install hoop springs on both sides of every third hoop.**
- With a partner, stand the hoops up, place one side onto a ground post, and then the other. You may need to pull on the hoops to spread them out to go over the ground posts. Slide the hoop all the way down to rest on the ground post spring that you installed in the previous section.

Scan **QR** for info on **Attaching Hoop Springs** or visit

https://youtu.be/wMiQLfUz4Bw?si=g_E7PmJZH-paQOyS&t=382

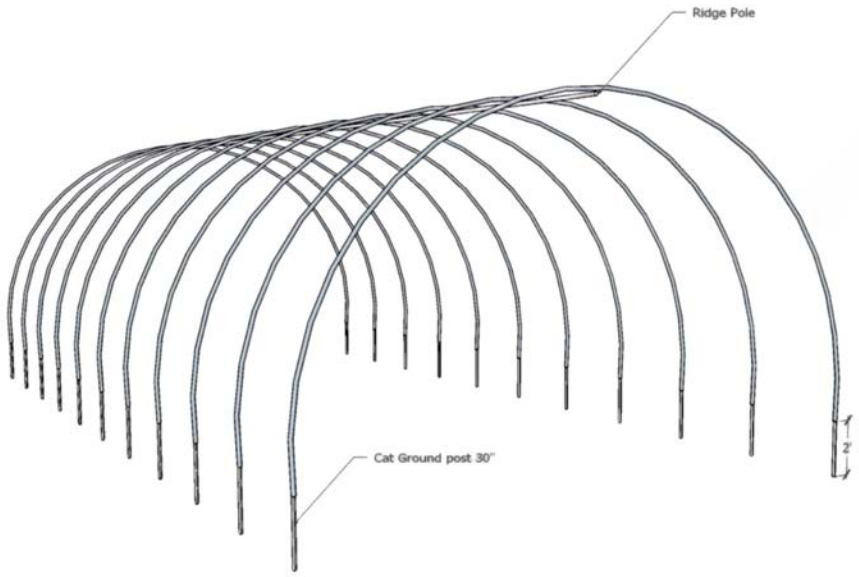
Installing Hoops to Ground Posts

Make sure all your springs are in place before moving on

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

https://youtu.be/wMiQLfUz4Bw?si=8NKHaqFp_KFQZmwC&t=405

1. Measure 3’’ above the ground and mark the side of the hoop
2. Use a center punch to mark your drilling location
3. Drill a 1/4" hole through the hoop and the ground post.
4. Secure with 1/4"x1 ¾” bolt, flat washers, lock washer, and 1/4" nut.



You will have two extra hoops at each end of your structure. These hoops work in conjunction with the end walls to construct the doors later on in the build process.

Cross Connectors and Ridge Poles

End Wall Cross Connectors

The end wall connector is manufactured in the OPEN position for easier installation over the hoops. End wall cross connectors help to keep the ridgepole from extending past the end hoops and poking the plastic end walls. We recommend adding a #8 self-tap screw to all brace bands and end wall cross connectors - but not the saddle-type cross connectors.

Scan **QR** for info on **End Wall Cross Connectors** or visit

https://youtu.be/cAYCGLnQqIU?si=5RSC_A_OqWy-5x2l

Note: Since each hoop will be connected to the first end wall, it should be carefully made plumb and held 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. Move the stakes slightly left or right to secure the hoop properly if you need to.

Tools / Parts

- Ladder
- Clamps
- Drill with 3/16” drill bit
- Hammer (16 oz)
- Slip joint pliers for installation
- End Wall Cross Connectors with hardware

Installing End Wall Cross Connectors

1. Place the Ridge Pole past the lower loop but not further than 1/2 way past the hoop, and tighten the gold nut and bolt supplied with the end wall cross connector.
2. Pre-drill on the side of the connector (see linked video above) with a 3/16” drill bit. These connectors are thicker metal, so be prepared to use extra force.
3. Use a clamp to press the ear facing the hoop house's inside with the pre-drilled holes against the hoop. Secure with #8 self-tap screws.
4. Use slip joint pliers and a 16 oz. hammer to curl the outside ears further around the end wall hoop. Making the end wall cross connector perfectly snug around the hoop is unnecessary.
5. Drill through the end wall cross connector and ridge pole. Insert a 2" bolt with a lock washer and nut (same as ground post nut/bolt).
6. When you install the lock channel over the ears, you can install self-tapping screws close to, **but not through**, the ears of the end wall cross connector to add tension.

Cross Connectors and Ridge Poles

Pictures on the following page.

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

Tools

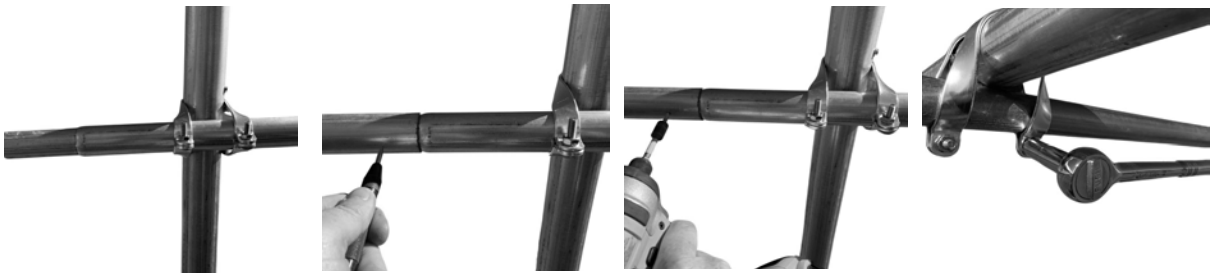
- Rope/ Stakes
- Step ladder
- Saw
- Ratchet & Sockets
- Tape measure
- Wrench

Parts (PER 20FT)

- Cross Connector 1.375
- 75in Swage Ridge Pole
- 36in Extension Ridge Pole
- End Wall Band Clamp 1.375”
- #8 self tap screw

Install Ridge Pole and Connectors

1. Loosely place a 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 #8 self-tap through from the bottom or 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 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 tunnel, you will use a 36” extension on the end of the ridge pole or a full 75” ridge pole and cut off the excess.



Scan **QR** for info on **Cross Connectors & Ridge Poles** or visit

https://youtu.be/wMiQLfUz4Bw?si=VaplppJ4WzdxFYGf&t=419

Install Corner Braces

Corner Brace Kit Standard on 20’ Wide (Optional on 14’)

Tools -

- Ladder
- Tape Measure
- Drill
- Saw
- Ratchet & Sockets

Parts - (hardware included)

- 2 - 1 ⅜” Brace Bands
- Flat Swage 36in Brace
- Flat Open 78in Brace

Installation of Corner Brace

1. Insert swaged end of 36’’ into the 78’’ and connect with a #8 screw. Make sure that the flats are in line with each other before screwing them together.

2. 1 ⅜” brace bands wrap around end wall hoops and secure with bolts through the brace band and hole in flat end of the brace pole.

3. The second brace band goes around the third hoop’s ground post and is secured with bolts through the brace band and the holes in the flat end of the brace pole.

4. Repeat steps 1-3 for each corner.

Doors

Tools

- Drill & ¼” bit
- Level
- Step ladder
- Tape measure
- Square

Parts

- # 10 self-tap screws
- ¼ x 2" Bolt (8)
- ¼ Nut (8)
- ¼ Split lock washer (8)
- ¼ Flat washer (16)
- 2 Hoops for each end
- Door Bracket 2 left and 2 right

The door is made up of two hoops plus the end wall hoop, on each end. The doors can be lifted to vent the Caterpillar tunnel or lowered to close and seal it. The hoops will need to be drilled at the base to accept a ¼” bolt. A bolt will go through the hole at the base of the hoop and attach it to the door brackets. There are two left-hand door brackets and two right-hand door brackets. The door brackets attach to the end wall hoop with two #10 self-tapping screws. They are installed with the lower part of the door brackets facing away from the tunnel. The lower section is what the doors will attach to.

Drilling the hoops to make doors.

1. Lay the hoop on a flat surface to mark it. Place a piece of plywood or scrap wood at least 12 inches long under the base of the hoop.



2. Find the centerline of the hoop and mark it. This is done with a square placed on the board and up against the hoop. It does not matter what side you mark, but be consistent and mark all 8 hoop ends on the same side.

3. Apply the drill guide stickers to the base of the hoop and wrap it around the tube. Start the sticker on one side at the mark you made with the square. The arrows on the sticker point to the bottom of the hoop. Line up the red line on the sticker to the bottom of the hoop.

Scan **QR** for **Drilling Guide or visit**

https://youtu.be/wMiQLfUz4Bw?si=08z8jTPOASuqgMPp&t=525

4. Use a center punch to mark the hole (center of red circle) that will be drilled on each side of the hoop. Do not drill all the way through the hoop. Drill each hole from the outside. This will ensure that the holes are lined up correctly.

5. Do this for each door hoop. This will be a total of 16 holes to drill.

Installing Door Brackets

1. Standing inside the tunnel, facing towards the door, is the correct orientation for placing the left and right door guides.
2. The right side guide goes on your right, and the left side guide goes on your left.
3. The shorter base section of each door guide points away from the tunnel. Install the door brackets with the longer side perpendicular to the ground and on the **outside** edge of the end wall hoop.
4. Use two #10 x 3/4'' screws to attach the door guide to the back of the end wall hoop.

Scan **QR** for info on **Installing Door Brackets** or visit

https://youtu.be/wMiQLfUz4Bw?si=cbRftu_0br3M1iqW&t=493

Installing Doors

It will take two people to install the door. One to hold the door hoops in place while the other does the fastening.

1. Working from the outside inward: Install a 2” x ¼” bolt through the side of the door guide into the hole closest to the end wall.
2. Guide the bolt through the hole you drilled into the base of the door hoop.
3. Fasten the bolt with a washer, lock washer, and nut. These will be on the inside of the door.
4. Do this for the other side of the door hoop.
5. Use a rope, clamp, or bungee strap to hold the first door hoop tightly to the end wall hoop so you can install the second door hoop.
6. Install the second door the same as the first door with a 2” bolt, washer, lock washer, and nut on each side.
7. Repeat steps 1 - 7 to install the doors on the other side of the caterpillar tunnel.

Scan **QR** for info on **Installing Doors** or visit

https://youtu.be/wMiQLfUz4Bw?si=bxkSI5c-jjN2H3Cf&t=550

Install Cleats

Tools -

- Drill with 5/16” bit
- Center punch
- Square (to measure 60° angle)
- Marker

Parts -

- Cleats
- Strapping
    - Cut four pieces at 8’ long each.

Installing Cleats

Cleats go between 5’ and 6’ from the ground. They are installed on the end wall hoop, and the bottom/second door hoop in line with each other when the hoops are vertical. The cleats are where you will tie up the doors when you open them, so set them at a comfortable working height.

1. Use your marker to mark where the holes will go for the cleats.
2. Use the center punch to place a pilot dent for each cleat screw.
3. Attach cleats to hoops using 1 ½ inch 5/16” self-tapping screws.
4. Lie the bottom/second hoop on the ground.
5. Thread a piece of strap through each cleat and tie the first/middle hoop of both doors at a 60° angle.

Scan **QR** for info on **Installing Cleats & Bungees** or visit

https://youtu.be/wMiQLfUz4Bw?si=zDowKl7R19dRUfYK&t=563

Attach lock channel to end walls and door hoops

Tools -

- Drill with bit
- Clamps
- Metal Saw (reciprocating, chop or hack saw)
- Metal file

Parts -

- Lock Channel
- #8 self-tapping screws

Installing Lock Channel

Lock channel will be installed on both of the end wall hoops and each door hoop. All lock channel should face skyward when the hoops are in the vertical position.

1. Using large clamps, secure all hoops into the vertical position.
2. Use smaller clamps to hold the lock channel in place. Starting at the top of the door bracket, attach the lock channel to the top of the end wall hoop facing the sky using #8 screws.
3. Continue attaching the lock channel along the hoop with screws every 12”-18” until you reach the top of the opposing door bracket. The lock channel will go over the brace band for the corner brace. Place a screw next to but not through the brace band.
4. Cut the lock channel even with the top of the door bracket and secure. File off any sharp edges.
5. Secure lock channel to door hoops from door bracket to door bracket. Place #8 screws every 12”-18”.
6. Cut off the final piece of lock channel even with the door bracket.
7. Repeat steps 1 - 6 for the opposite door.

Scan **QR** for info on **Installing Lock Channel** or visit

https://youtu.be/wMiQLfUz4Bw?si=oLufh-9_eoOV6ggU&t=700

Install Greenhouse Plastic

We strongly recommend you watch this section of the installation video before unfolding your plastic. There are MANY tips and tricks that are shown here.

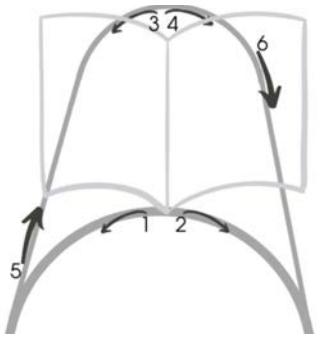
Scan **QR** for info on **Installing Plastic** or visit

https://youtu.be/wMiQLfUz4Bw?si=27I-gU68bbeyz7yX&t=735

Your kit will come with one large piece of plastic. You will use this to cover the top of the structure, ensuring an equal amount of plastic that overhangs both ends. Cut the remaining length off each end and use it to make both doors. 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 CAT tunnel.

Installing plastic can be the most intimidating part of your build. Still, 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. Grab your friends and step ladders, and let's go folks!

*



***This label 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. Ensure that all brace bands and cross connectors are tight and not sticking up, where they could snag the plastic.

Install Greenhouse Plastic on the End Walls

1. Drape plastic over all hoops so an even amount hangs over all around.
2. Install spring wire starting at the middle top of the hoop down to the top of the door bracket. Pull the plastic out and down at a diagonal to remove any creases as you go.
3. Spring wire from the top down on the other side of the hoop.
4. Pull the plastic tight on the opposite end wall and repeat steps 1-2.
5. 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.

Install Batten Strapping

The batten strapping will run the length of your CAT tunnel from one hoop to the next hoop by going up and over the structure. You will then go back down the structure tying down the plastic to the opposing hoops. This process creates an X pattern across the top in between each set of hoops.

It is easiest to do this with at least three people. Two will throw the rope back and forth, while the third helps feed slack and keep the line from tangling. (See diagram on next page.)

1. Begin by threading the rope through one of the installed clips (carabiner style) on one of the end wall hoops.
2. Attach a wiffle ball to the rope to add weight, ensuring it doesn't damage the plastic.

3. Throw the rope across the second hoop on the opposite side. Hook the strap through the clip. Pull through enough slack to throw the ball back over.
4. Crisscross the strap back over the opposite side, using a painter's pole to assist in grabbing it. Pull out slack.
5. Continue this process, running the rope down the length of the tunnel.
6. Start from the opposite side, tying a line to the end wall hoop.
7. Have one person throw the ball over while another catches it, running the strap through the opposite hoop carabiners until the end is reached.
8. Crisscross the rope, forming an "x" pattern near the ridge pole, and work down the length of the tunnel.
9. Tighten the slack from both ends and tie off the strapping to the final clip. Leave a decent length tail for future adjustments as the plastic stretches.

Scan **QR** for info on **Installing Batten Straps** or visit

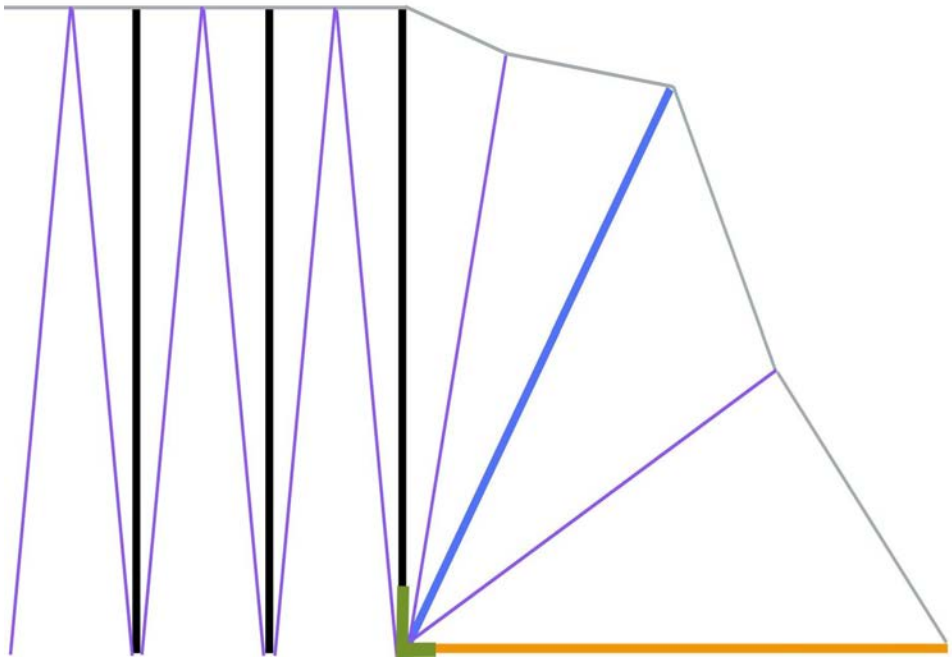
https://youtu.be/wMiQLfUz4Bw?si=dpXyB65RruTjo2a5&t=918

Batten Strap Install Diagram

Black = Hoops

Blue = 1st Door Hoop

Orange = 2nd Door Hoop on Ground



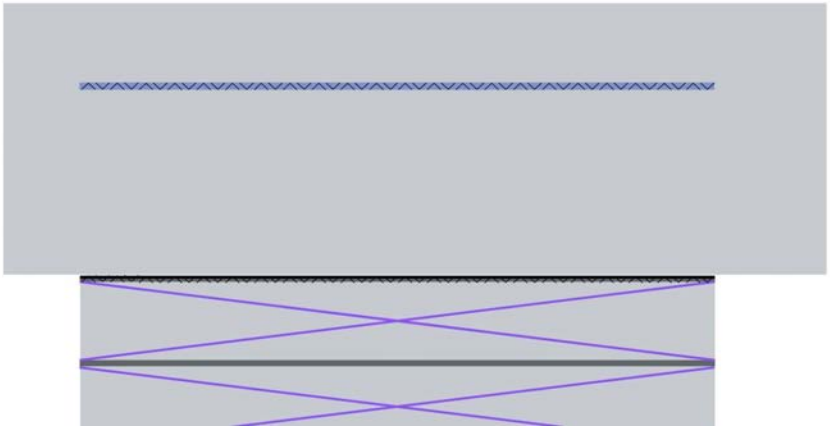
Green = Door Bracket

Purple = Batten Strap

Gray = Film outline once installed and doors closed

Install Plastic on Doors

1. Reset the 1st door hoop at the 60° you tied it off with the batten strap on the cleat earlier in the build process.

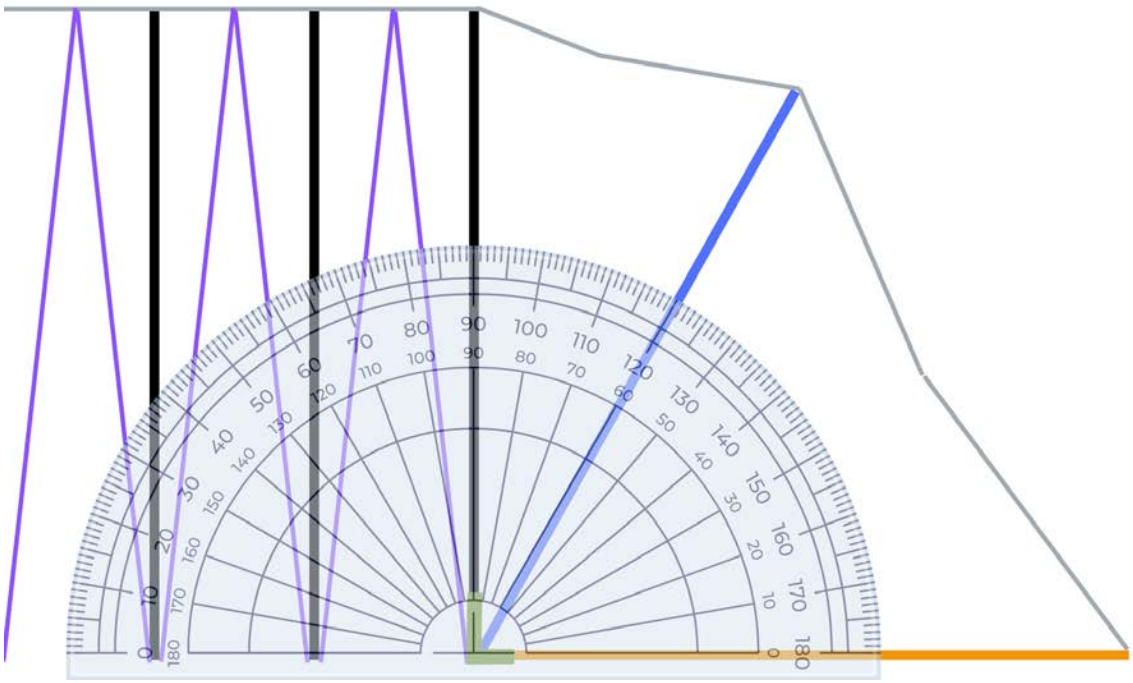


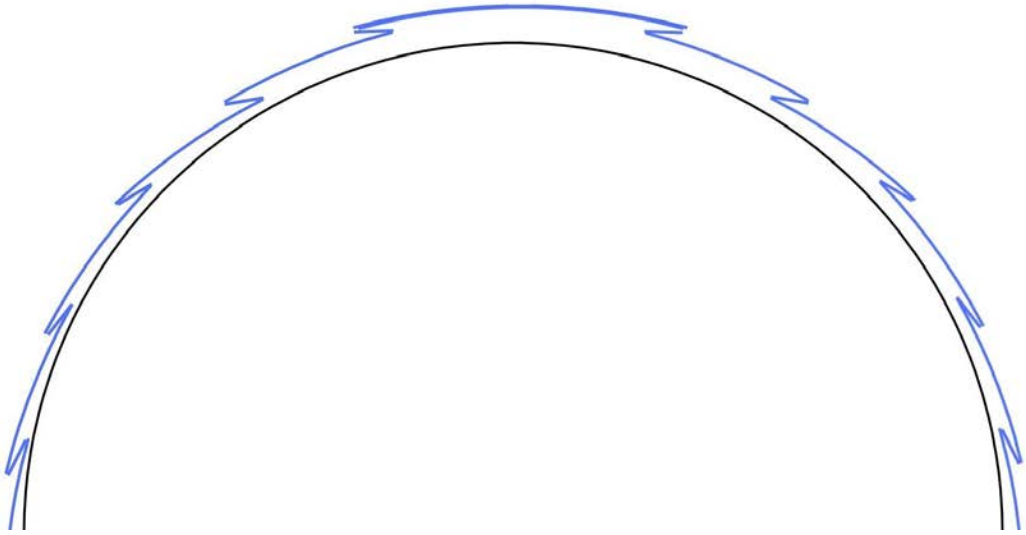
2. Install plastic on the end wall hoop from door bracket to door bracket, arching over the top of the hoop with spring wire into the end-wall hoop lock channel. It will go directly over the previously installed roof plastic.
3. At 1st door hoop (at 60°) beginning at the top (middle of the hoop). Pull the film tight and install 18”-24” of the film. You can now work left or right down to a green bracket, then return to the middle and work down to the opposite green bracket.
4. Fold your first pleat under itself so water drains over the top without getting caught in the pleats.
5. Creases naturally form as the plastic widens from the end wall hoop to the 1st door hoop. These naturally occurring creases in the plastic indicate where to form pleats. Pleats at the 1st and 2nd door hoop usually range from 4” to 6”.
6. Trim the plastic, creating a new starting point on the first door hoop for the next steps.

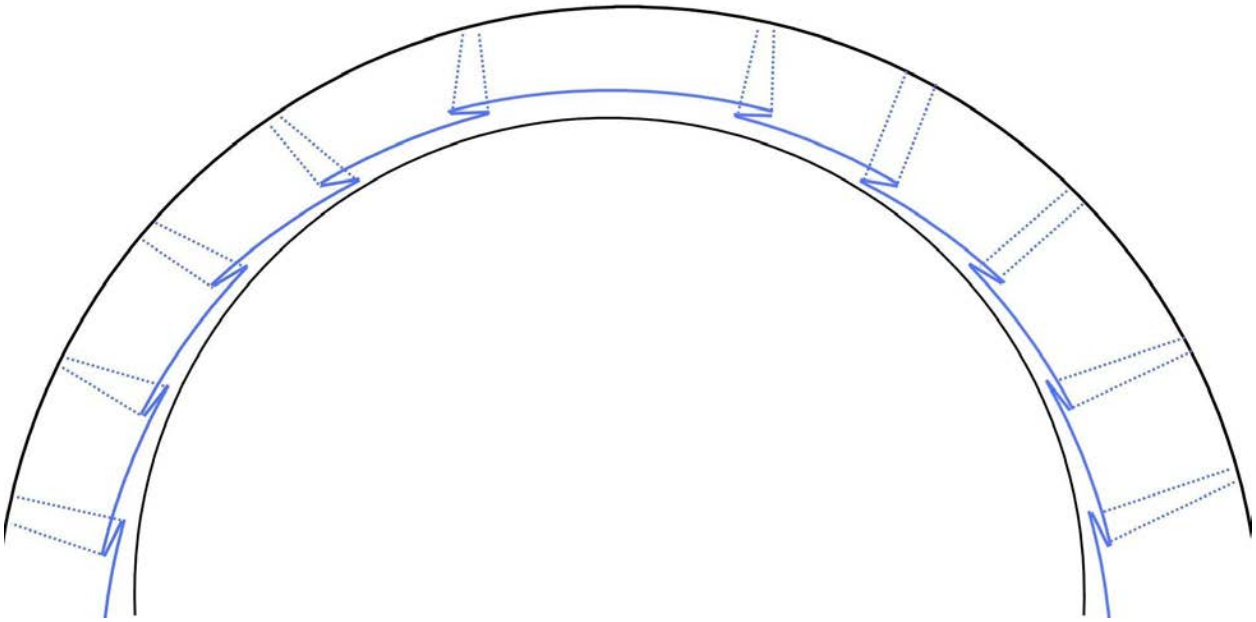
Scan **QR** for info on **Installing Plastic on Doors** or visit

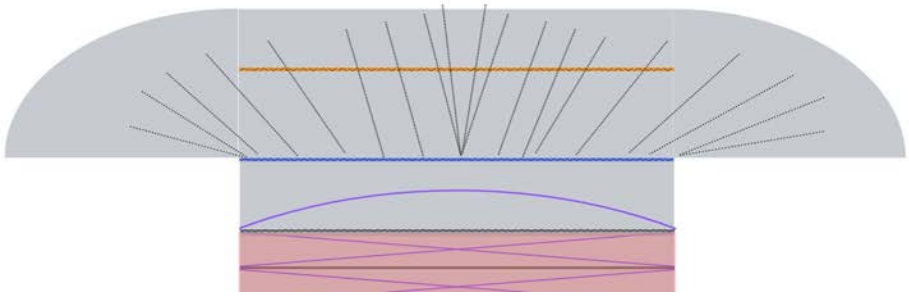
https://youtu.be/wMiQLfUz4Bw?si=vTs2Z0O3sHqy1IQq&t=970

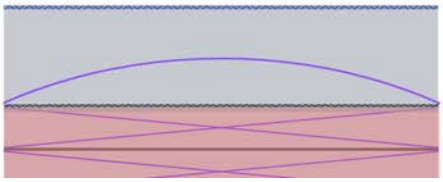
Diagrams for Plastic Pleating and Door Position











7. Once the plastic is secure, trim off the excess loose film.

Installing Second Door Panel

For the second door panel, attach the plastic in one straight line in the same channel you just installed the pleated end of the 1st door panel. It will fit.

1. At 2nd door, the hoop (on the ground at 90°) begin at the top (middle of the hoop. Pull the film tight and install 18-24” of the film. You can now work left or right down to a green bracket, then return to the middle and work down to the opposite green bracket.
2. Fold your first pleat under itself so water drains over the top without getting caught in the pleat.
3. Creases naturally form as the plastic widens from the end wall hoop to the 1st door hoop. These naturally occurring creases in the plastic indicate where to form pleats. Pleats at the 1st and 2nd door hoop usually range from 4” to 8”.
4. Secure the plastic in the channel with a lock spring into the pre-installed lock channel.

Installing Batten Strap Gutter Line

1. Attach the batten strap to the first end wall clip (carabiner style).
2. Attach a wiffle ball to the batten strap. Be sure to leave a long tale.
3. Throw the batten strap across the structure and directly through the center of the end wall hoop and first door hoop and connect the batten strap at the opposite end's end wall clip (carabiner style), creating a v-shape gutter.
4. Adjust the tension of the gutter line to ensure it forms a distinct V-shape, which will direct rainwater away effectively.
5. Next, attach another batten strap to the same end wall carabiner and run it centrally between the first and second door hoops, creating a v-shape gutter. Double-wrap the strapping to the opposite end wall carabiner, taking care to take the twist out of the line and that it is pulled tight. Loosely tie strapping to itself to secure, allowing for future adjustments.

Scan **QR** for info on **Installing Gutter Line**

https://youtu.be/wMiQLfUz4Bw?si=gpiyYEZXf8oxdE_b&t=1420

Scan **QR** for info on Second **Installing Gutter Line**

https://youtu.be/wMiQLfUz4Bw?si=OKBht5jKZA4ZbCQq&t=2057

Using the doors on your CAT tunnel

The doors fold up from the ground to the last/end wall hoop. You can lift up one or both of the last two hoops for ventilation. These can be secured open using the ball bungee on the dock cleat, or a rope can be used if you wish to have the doors open halfway. The doors can be closed, and the last hoop rests on the ground. The last hoop can be secured with a sandbag if necessary or in preparation for a storm.

Sidewall Ventilation

The hoop springs compress around the hoop to secure their position. By squeezing the ears on the spring, it will expand around the hoop and be moveable. You can turn the spring to the inside of the tunnel to allow the greenhouse plastic to go all the way to the ground.

When inclement weather is expected, it is recommended that you lower the sides to keep water out. The sides can also be secured with sandbags to prevent wind from getting inside the tunnel during a storm.

The spring can be positioned with the ears pointing to the outside of the tunnel to support and raise the plastic. The plastic can be raised on both sides of the tunnel to create cross-flow ventilation.

Maintenance

After the installation of the tunnel, it is advisable to check the tightness of the strapping that crosses over the plastic. Start at one end of the tunnel and work your way to the other end, pulling the slack out of the strapping material. This is similar to tightening the laces on a shoe. Alternate sides, tightening the strapping and working your way along the structure. This works better with two people, one person on each side of the tunnel.

Once a season, you should go through and check the tightness of the batten straps and resecure them if needed. Keep a role of greenhouse repair tape on hand to quickly fix any small holes or tears that form. This will significantly increase the life of your plastic.