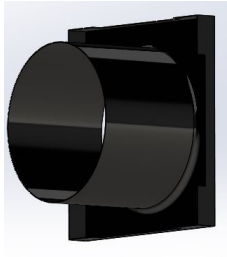


## FLAP DUCT® INSTALLATION INSTRUCTIONS

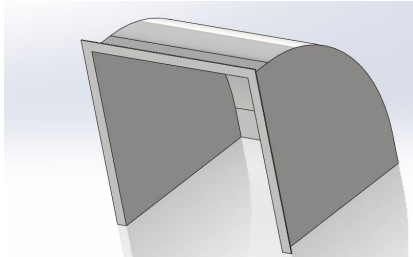


Thank you for your FLAP DUCT® purchase!  
These instructions will show you how to install your new ventilation system.

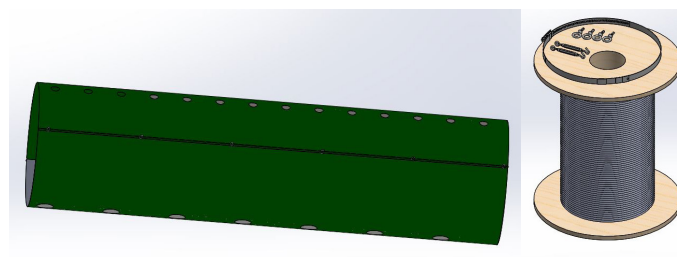
**First, please review your equipment. For each FLAP DUCT® system you should have:**



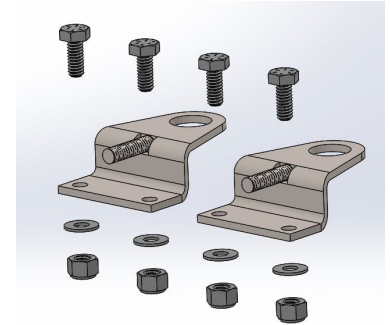
A fan



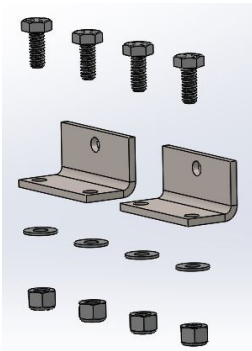
Weather hood



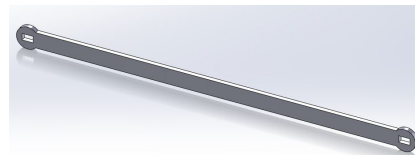
FLAP DUCT® fabric tube with cable and  
mounting hardware



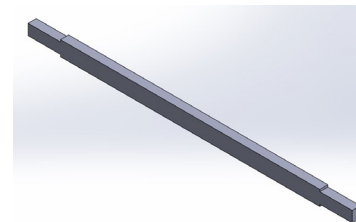
(2) stainless steel pivot brackets  
with bolts, washers and nuts



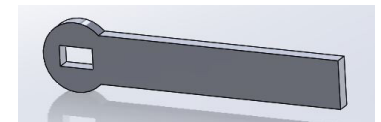
(2) stainless steel angle brackets  
with bolts, washers and nuts



(1) membrane arm



(1) pivot rod



And (1) handle

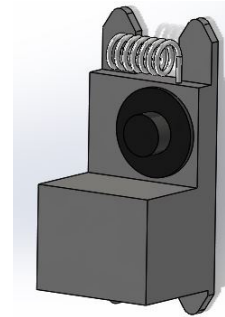
Optional equipment includes:



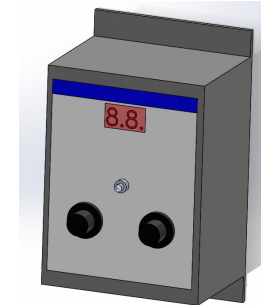
Actuator



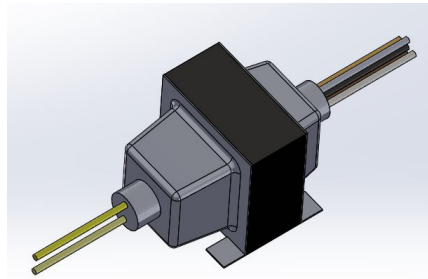
Actuator bracket



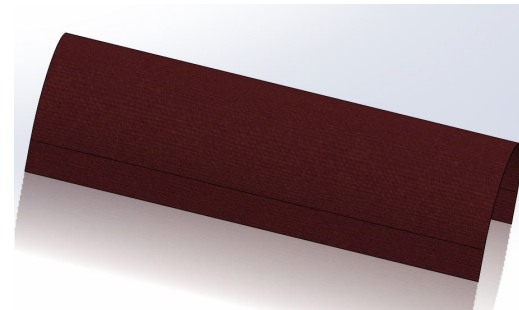
Thermostat



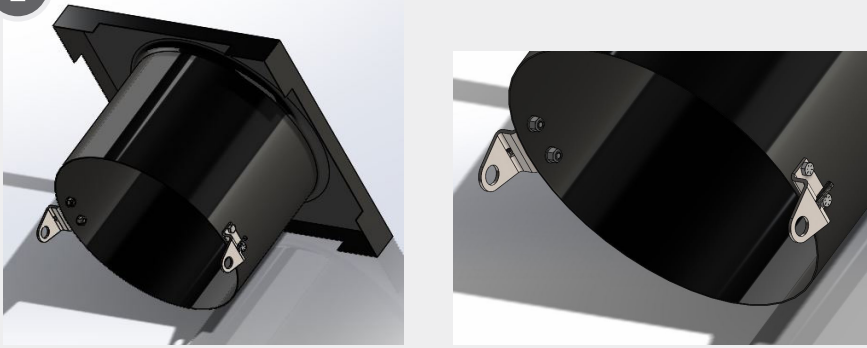
Variable speed  
controller



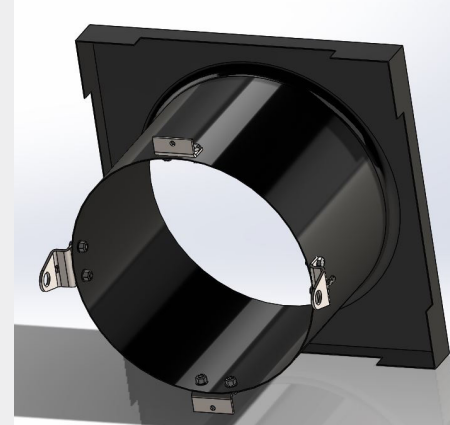
Transformer



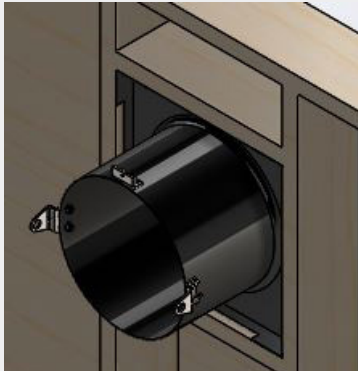
Rotation limiters  
Or airflow DEFLECTOR SHIELD™

**1**


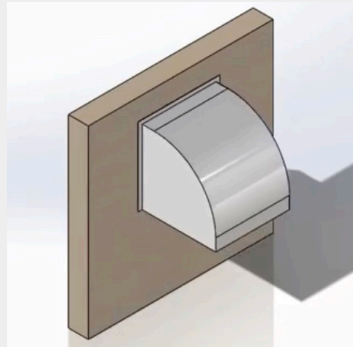
Begin by mounting the two pivot brackets to the fan shroud, centered at three and nine o'clock. Use a level to ensure the brackets are mounted evenly. Use a 1/4 inch drill bit to make all holes in the fan shroud.

**2**


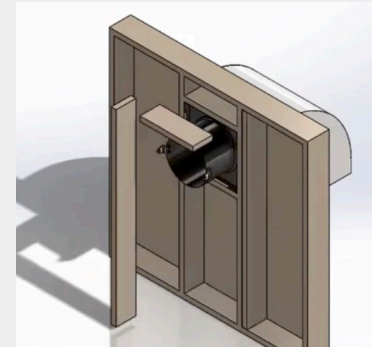
Next, mount the two angle brackets, centered at twelve and six o'clock flush with the front of the fan shroud.

**3**


Mount the fan to the wall, making sure the square housing bracket is flush with the inside of the barn wall. The fan shroud will stick out into the building.

**4**


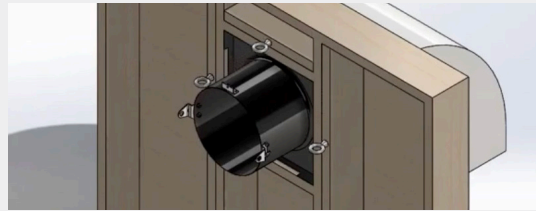
Mount the protective weather hood on the outside of the barn.

**5**


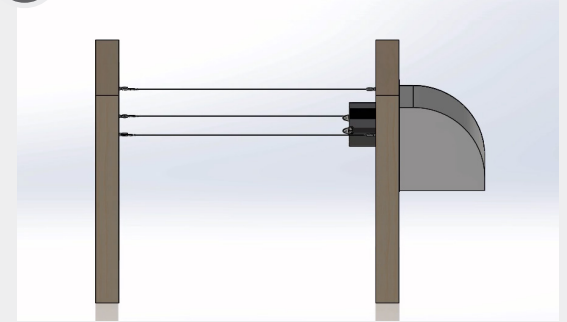
Add additional supports around the fan.

**6**

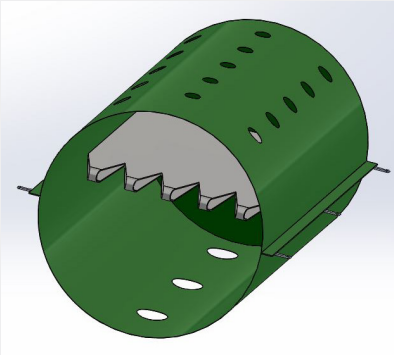

Place eye bolts into the barn wall at three and nine o'clock, outside the fan housing. Consult the cable spacing guide to determine how far apart the eye bolts should be placed for your FLAP DUCT® system.

**7**


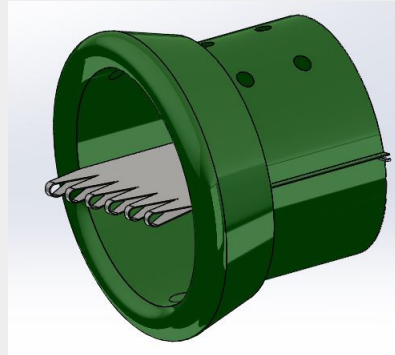
Some FLAP DUCT® systems come with a third suspension cable at twelve o'clock.

**8**


String the suspension cables between the eye bolts. Tighten cables using the turnbuckles. Some sag will remain in the cable. This is normal and will be addressed later by installing vertical supports.

**9**


With the FLAP DUCT® still on the ground, identify the open end of the tube. Located eight inches inside the tube is the internal membrane. This membrane has a sleeve sewn on the end.

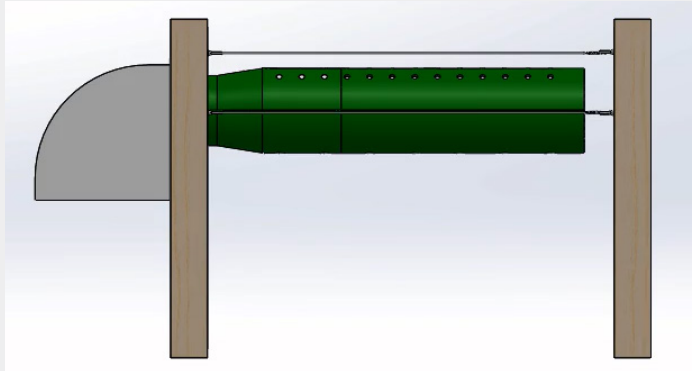
**10**


Roll the outer material of the tube backward to expose the internal membrane and its sleeve.

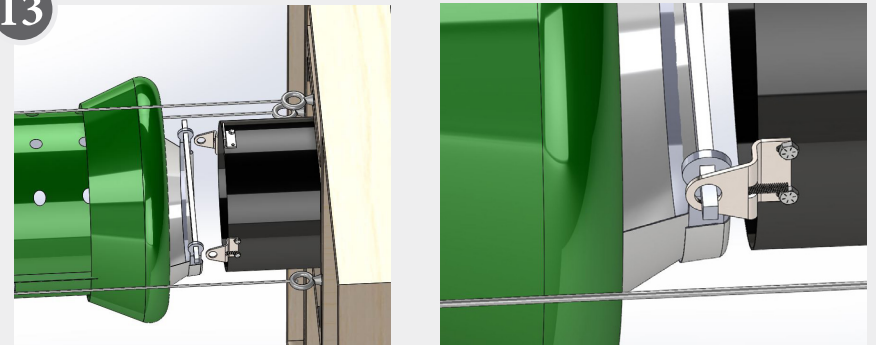
**11**


Thread the membrane arm through the sleeve of the internal membrane.

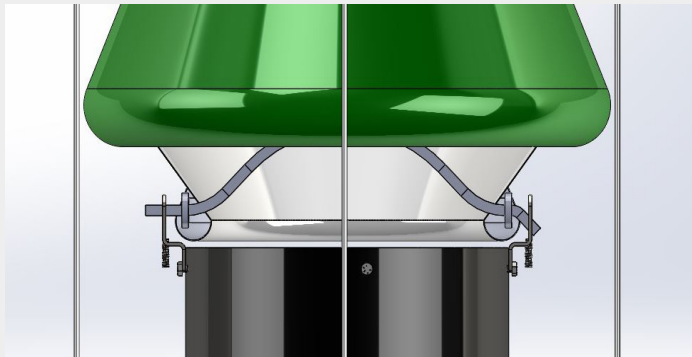


**12**


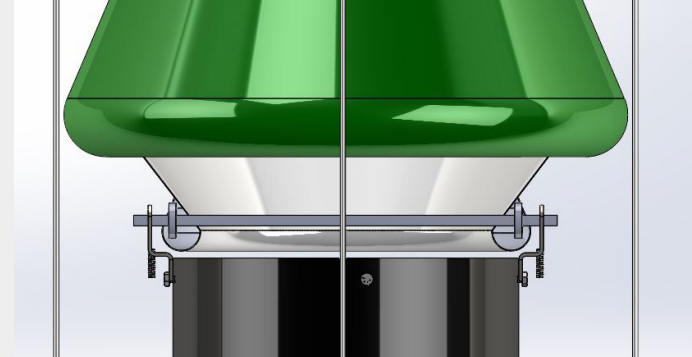
Next, hang the FLAP DUCT® onto the suspension cables at three and nine o'clock using the clips sewn onto the tube. Typically, the side with the larger holes is positioned facing downwards. Some FLAP DUCT® models come with additional clips at twelve o'clock for an associated twelve o'clock suspension cable.

**13**


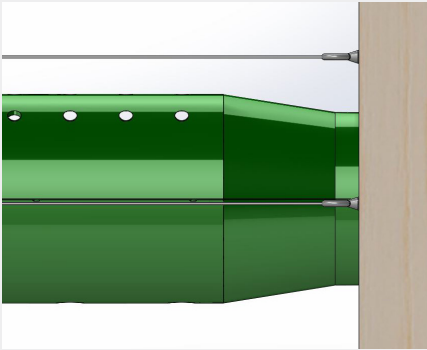
Go to the end of the tube that connects to the fan. With the front material of the tube still reflected backward, grasp the pivot rod and insert one end through the hole in the three o'clock pivot bracket.

**14**


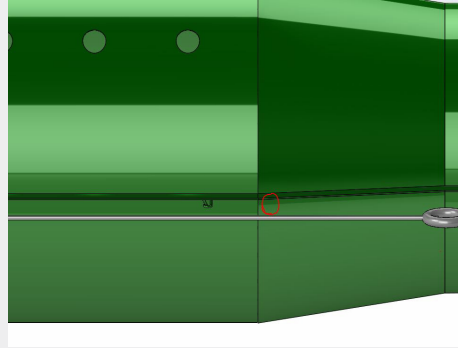
Next, grasp the pivot rod in the center with your right hand and gently pull toward yourself, while simultaneously using your left hand to push the pivot rod toward the hole in the nine o'clock pivot bracket.

**14a**


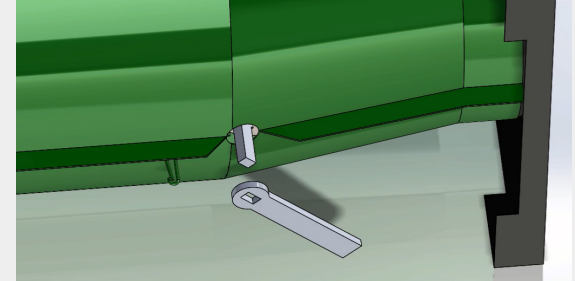
Both ends of the pivot rod can be passed through the holes in the pivot brackets.

**15**


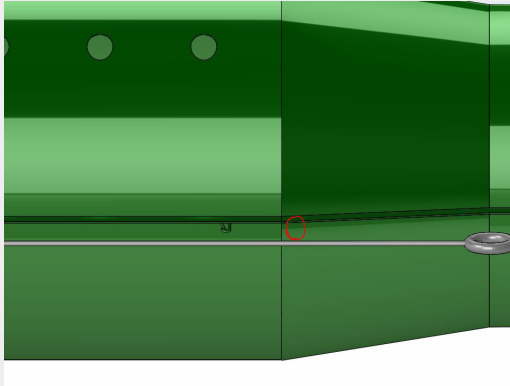
Unroll the front tube material back to its normal position, covering the fan shroud. This will obscure both the pivot brackets and angle brackets.

**16**


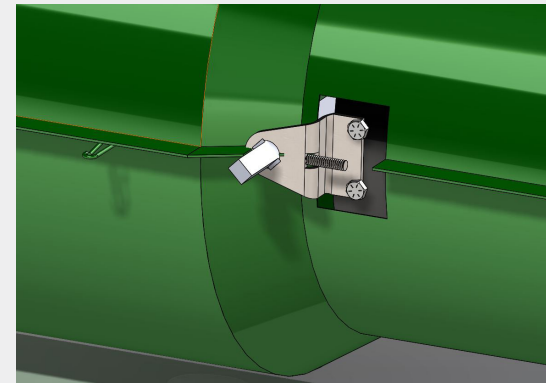
If you have the manual handle system, feel around to identify one of the ends of the pivot rod through the tube material.

**17**


Cut a small hole into the side of the tube to expose the end of the pivot rod. Push the handle onto the end of the pivot rod.  
*\*If you did not purchase the optional automation kit, skip to slide 24.*

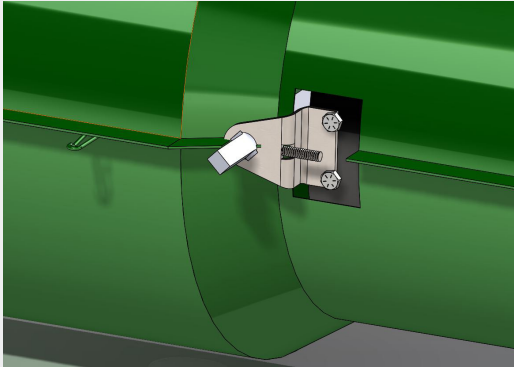
**18**


If you have the optional automated system, feel around to identify one of the ends of the pivot rod through the tube material.

**19**


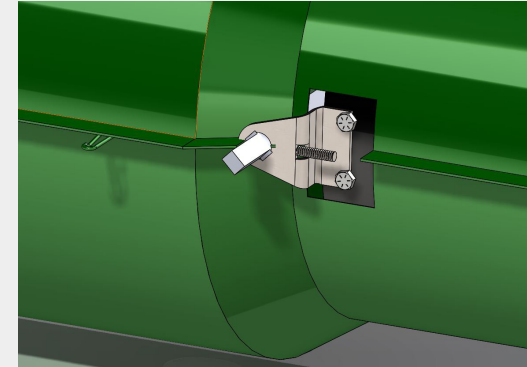
Cut a small hole into the side of the tube to expose the end of the pivot rod AND the threaded rod protruding from the back of the pivot bracket. Most holes are about 2 inches tall by 2 inches long. Keep this hole as small as possible.

20



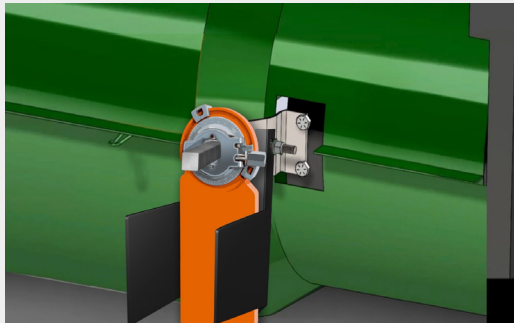
Mount the actuator bracket onto the pivot bracket. Slide the actuator bracket's flange onto the threaded rod of the pivot bracket.

21



A small part of the tube's seam material may need to be cut away to allow the actuator bracket to attach flush to the pivot bracket.

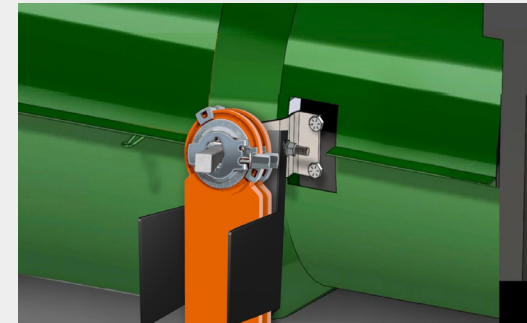
22



Thread the square end of the pivot rod into the square hole in the actuator.

Tighten the actuator bracket with the washer and nut provided.

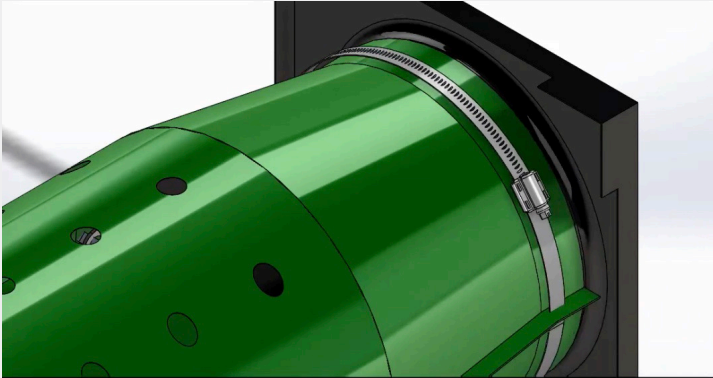
23



Some systems may need two actuators per fan. Slide the actuators onto the pivot rod so that they fit in between the tabs of this bracket.

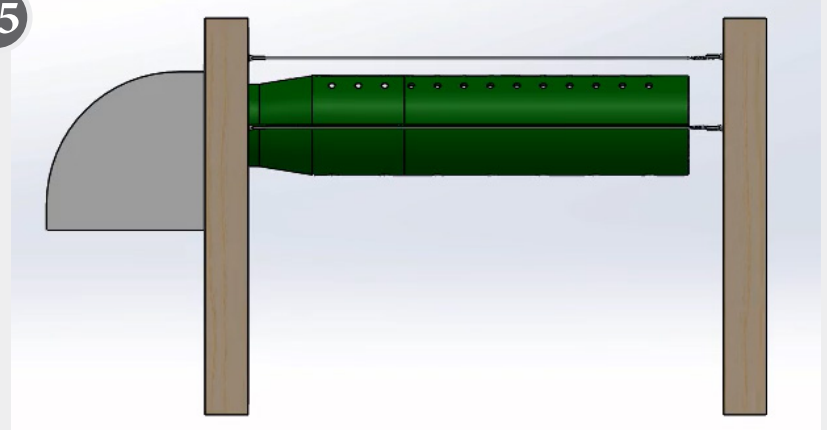


24



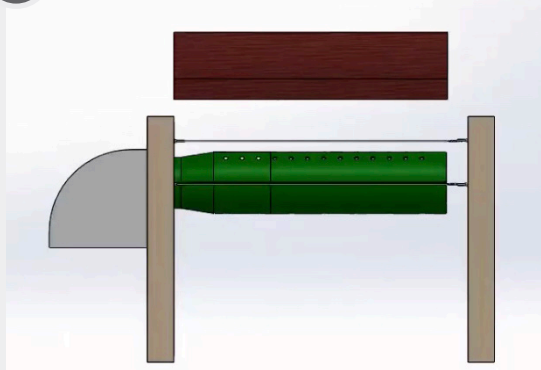
Secure the tube to the fan shroud with the hose clamp provided.  
Place the hose clamp roughly 2 inches behind the pivot brackets.

25



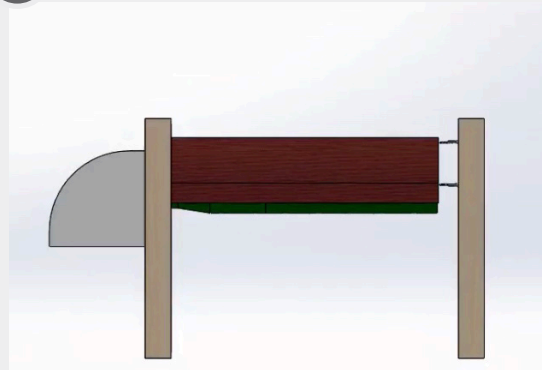
Gently pull the FLAP DUCT® away from the fan, stretching it out along the support cables. Turn on the fan and inflate the tube.

26

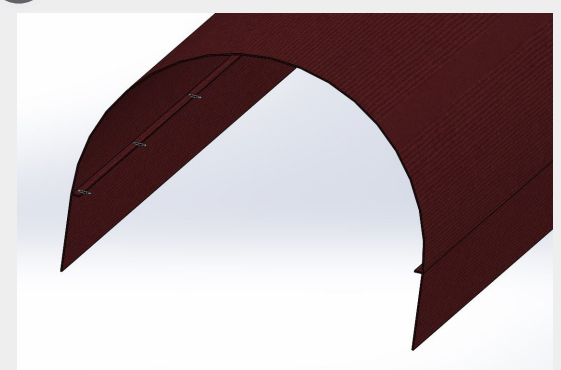


If you have the optional airflow deflector DEFLECTOR SHIELD™, drape it overtop of the FLAP DUCT® and horizontal support cables.

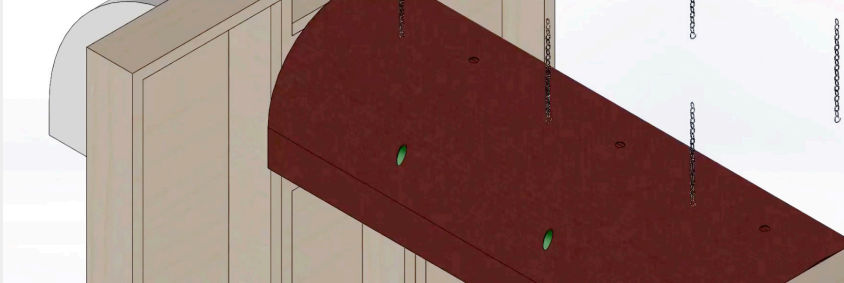
26a



27

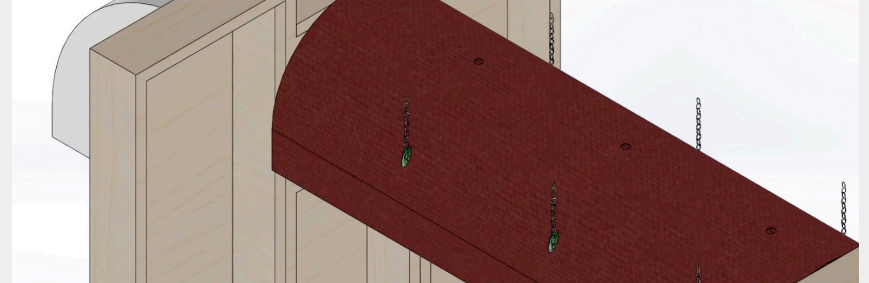


Snap hooks sewn on the inside of the airflow DEFLECTOR SHIELD™ secure it to the cables at three and nine o'clock.

**28**


Lastly, install the vertical supports. This helps take the sag out of the horizontal cables. Typical spacing between vertical supports is 20 to 30 feet.

If your system has the airflow DEFLECTOR SHIELD™, the horizontal cables will be covered.

**29**


Pre-cut holes in the DEFLECTOR SHIELD™ align overtop of the horizontal cables.

These holes allow the vertical supports to pass through the DEFLECTOR SHIELD™ and attach to the horizontal cables below.

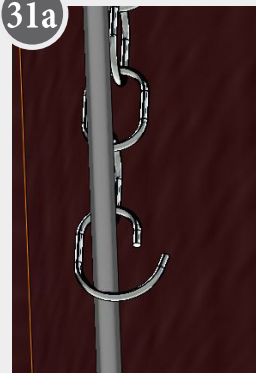
**30**


The vertical supports can be made with leftover cable or you can purchase a light-gauge chain.

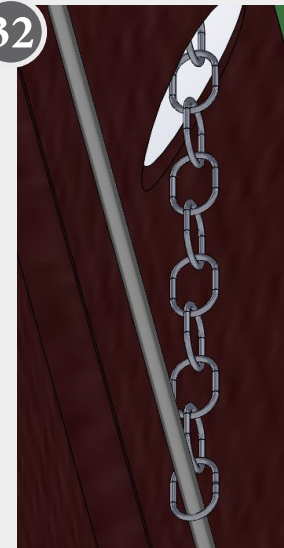
If using light-gauge chain, take a wire snips and cut one side of a link.

**31**

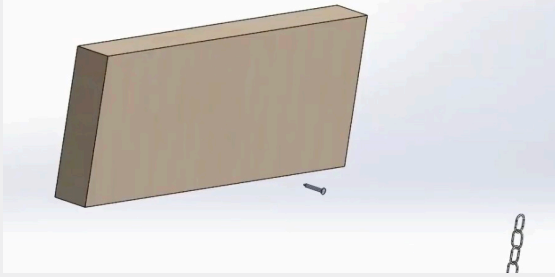

Use a pliers to pry the link open.

**31a**


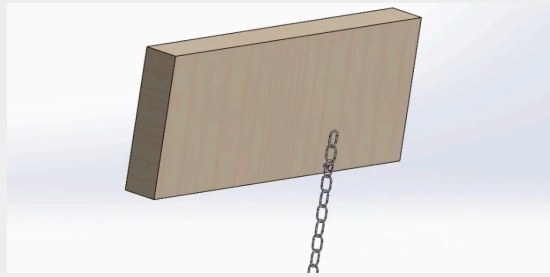
Slip the opened link onto the horizontal cable.

**32**


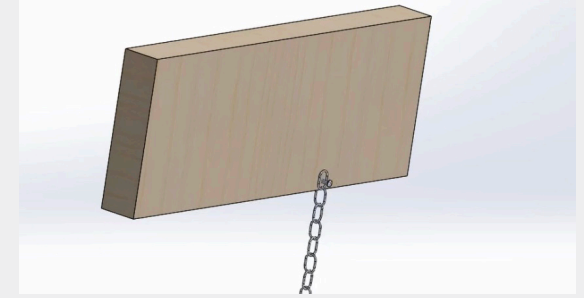
Pinch the link shut with a pliers, closing it onto the cable.

**33**

Drive a nail into a rafter, leaving at least one inch of nail sticking out from the rafter.

**34**

Hook the chain on the nail.

**35**

To adjust the horizontal cable, move the chain links up or down and re-hook onto the nail.

**Congratulations! Your FLAP DUCT® installation is complete.**



**888-376-6777**

Additional information such as wiring schematics, cable spacing diagrams and controller set-up instructions can be found at [www.crystalcreeknatural.com](http://www.crystalcreeknatural.com). Remember to always use a licensed electrician and follow all applicable wiring codes.