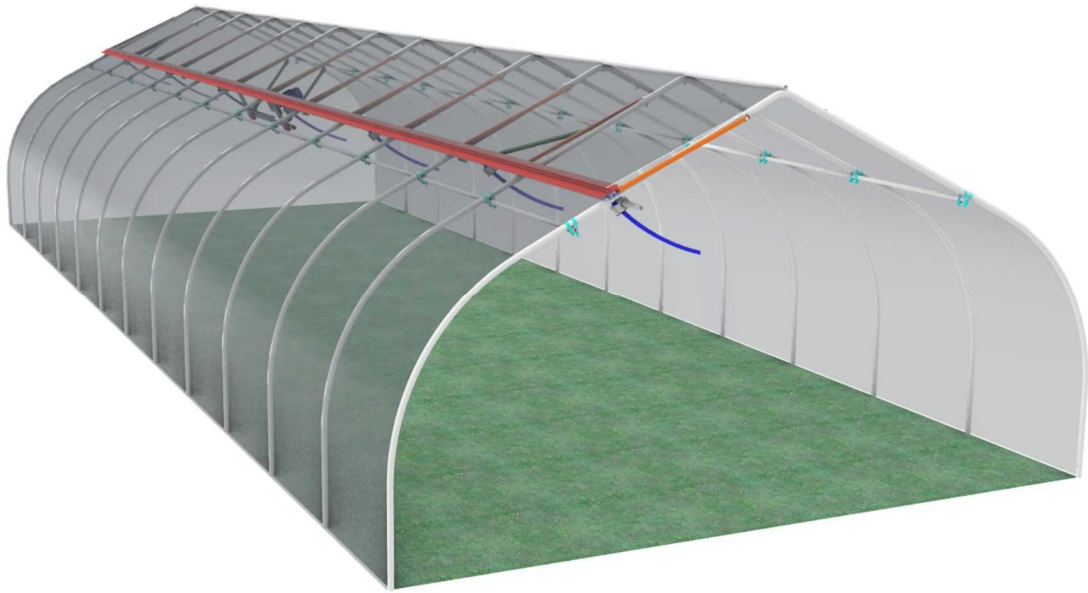


40 Londonderry Tpk., Hooksett, NH 03106 • Phone: 1-877-746-6544  
Email: [customerservice@rimol.com](mailto:customerservice@rimol.com) • Web Site: <https://www.rimolgreenhouses.com/>



## Materials Included

Refer to the separate “pick” list for details on part numbers and quantities.

## Additional Tools Recommended

- Cordless drill or impact driver
- 5/16” drill bit
- Deep drive socket or nut driver
- Circular or reciprocating saw
- 4’ level
- Utility knife
- Clamps
- Permanent markers
- Tall step ladders
- Tape measure

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DESCRIPTION	PART NUMBER
VENT BOTTOM RAIL EXTRUSION FOR POLY COVERING (12' 4")	AAPOLYBR+LAB
VENT HEADER EXTRUSION F POLY COVERING (12'4")	AAPOLYHDR+LAB
8' WIRE LOCK BASE	ADWL8+LAB
4 FT STAINLESS STEEL ZIGZAG WIRE LOCK	ADZZW4X20+LAB
EXTRUSION SPLICE (1" SQ)	BPZFBS+LH
1" X 1" X 36" FLAT STRIP WITH ADHESIVE	COEXFS+
1/4" X 1" HEX HEAD BOLT	FC110120304+LH
1/4" NYLON LOCK NUT	FC1137018#LH
3/8" NYLON LOCK NUT	FC1137020#LH
3/8" X 2 1/4" HEX BOLT	FC37C225BHC5Z#LH
3/8" X 2 3/4" HEX HEAD BOLT	FC13114#LH
3/8" X 4 1/2" HEX HEAD BOLT	FC13121#LH
3/8" FLAT WASHER	FC133008+LH
5/16" HEX NUT	FC163104+LH
1/4" X 1 3/4" CARRIAGE BOLT FOR CROSS CONNECTORS	FC21160+LH
5/16" X 1 1/2" CARRIAGE BOLT	FC21259+LH
5/16" X 2 1/2" CARRIAGE BOLT	FC21263+LH
1/4" X 3/4" MACHINE SCREW	FC29173#LH
#12 X 3/4" SELF DRILLING/SELF TAPPING TEK SCREW	FC31817+LH
#12 X 1" TEK w/ 1/2" SEALING WASHER	FC31981#LH
2" 2-HOLE PIPE STRAP	FC44614+LH
3/4" X 1/2" STEEL ZINC SPACER FOR 5/16" BOLT	
LAVANTURE HYBRID SEALANT TUBE	FCYLPLS250W+LH
1 5/8" BRACE BAND	HBB158+LH
EXTRUSION SPLICE FOR VENT BOTTOM RAIL & ROOF GUTTER SUPPORT	MEXTSPL(B/R)+MH
VENT EXTRUSION SPLICE FOR TOP RAIL & BOTTOM RAIL	MEXTSPL(T/B)+MH
RIDGE VENT BRACE	NPRVBRACE+LP
RIDGE VENT FLASHING (4"X4"X44": .090THK)	NPRVFLASHING+LP
RIDGE VENT MOTOR SUPPORT ASSEMBLY	NPRVMOTSUP+LP
19' 10" VENT DRIVE SHAFT 1.66" TUBE	RGS1910+LSB
TRUSS BRACE (25" LONG)	RGS26004+LP
9' 10" SHADE STRUCTURE OR VENT DRIVESHAFT TUBE W/ NO HOLES	RGSSS910+LSB
TRUSS BRACE FOR 30' NOREA WIND BRACE FOR 2' BOW SP (32" LONG)	RGSWB30+LP
1 5/8" DRIVE SHAFT COUPLING	WH2122+
36" CURVED RACK & PINION FOR 1 5/8" SHAFT	WM2936+
1 5/8" UNIVERSAL SHAFT HANGER	WS2808+

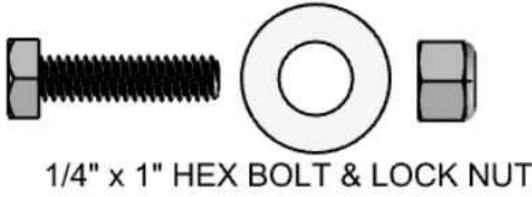
# HARDWARE



TEK #12 x  $\frac{3}{4}$ "



TEK #12 x 1"  
W/ SEALING WASHER



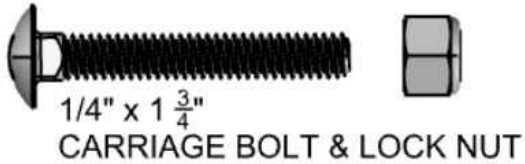
1/4" x 1" HEX BOLT & LOCK NUT



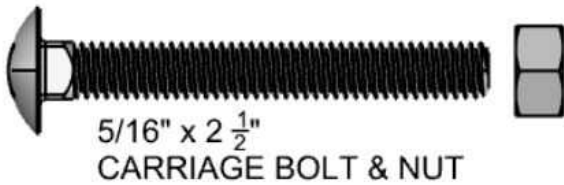
1/4" x  $\frac{3}{4}$ "  
MACHINE SCREW, WASHER & LOCK NUT



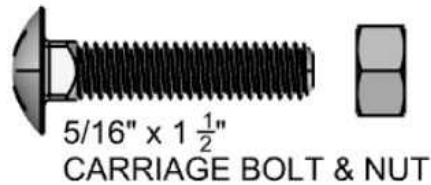
1/4" x 2  $\frac{1}{2}$ " HEX BOLT & NUT



1/4" x 1  $\frac{3}{4}$ "  
CARRIAGE BOLT & LOCK NUT



5/16" x 2  $\frac{1}{2}$ "  
CARRIAGE BOLT & NUT



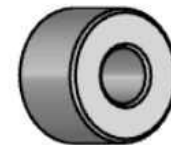
5/16" x 1  $\frac{1}{2}$ "  
CARRIAGE BOLT & NUT



5/16" x 4  $\frac{1}{4}$ " HEX BOLT, WASHER & LOCK NUT



3/8" x 2  $\frac{1}{4}$ " HEX BOLT, WASHER & LOCK NUT



3/4" x  $\frac{1}{2}$ " LONG  
STEEL SPACER  
FOR 5/16" BOLT



3/8" x 2  $\frac{3}{4}$ " HEX BOLT, WASHER & LOCK NUT



3/8" x 4  $\frac{1}{2}$ " HEX BOLT & NUT

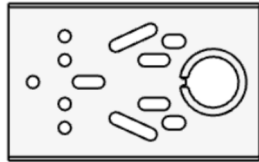


SCALE

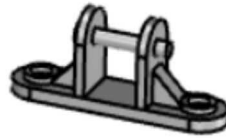
# HARDWARE



2 Hole Pipe Strap



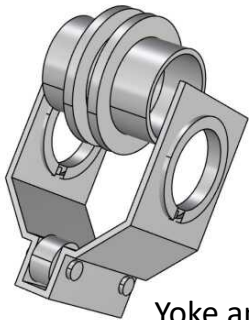
Universal Shaft Hanger



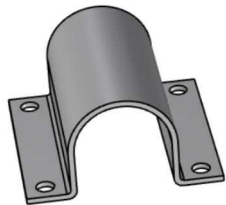
Sash Bracket



Steel Spacer



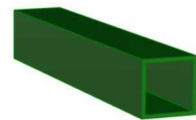
Yoke and Pinion Gear



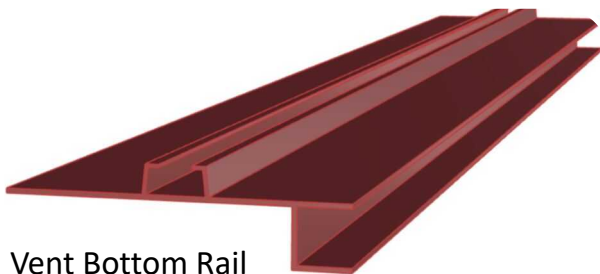
4-Bolt Clamp  
(1-5/8" Pipe)



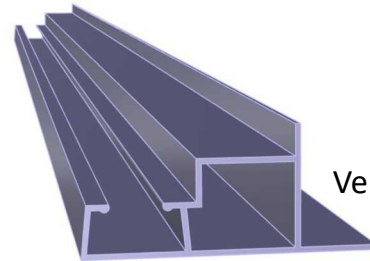
Brace Band



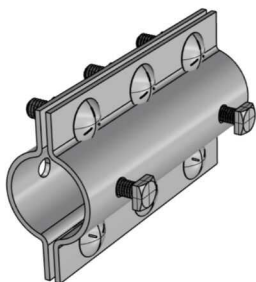
1" SQ. x 6"L  
Bottom Rail Splice



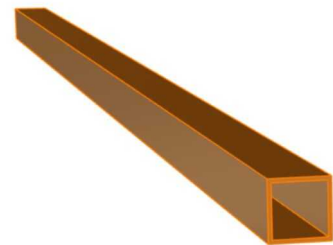
Vent Bottom Rail



Vent Header

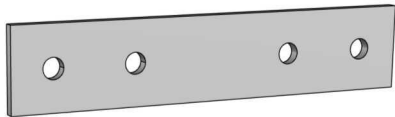


1-5/8" Vent Shaft Coupling

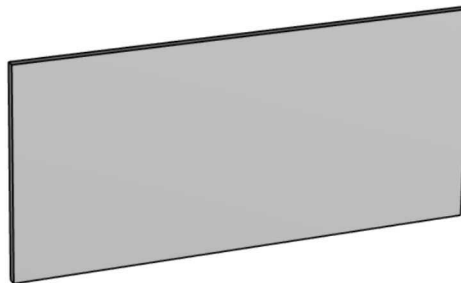


1" SQ. x 40"L  
Vent Brace

Note: False colors are used on some parts for visual aid in assembly and illustrations.



Header Splice  
1" X 5"



Bottom Rail Splice Plate  
2-1/4" X 5"



Sealant



1"x1"x36"  
Foam Strip With  
Adhesive



Diagonal Brace 27"L



Vent Diagonal Brace 32"L



Zigzag Wire Lock 4'



Vent Drive Shaft  
1.66"DIA, 19'10"L



Flashing

## ASSEMBLY INSTRUCTIONS

### *Parts needed for STEP 1*

*Angle Bracket 1-5/8" X 2-1/4"*

*Bolt 3/8" X 2"*

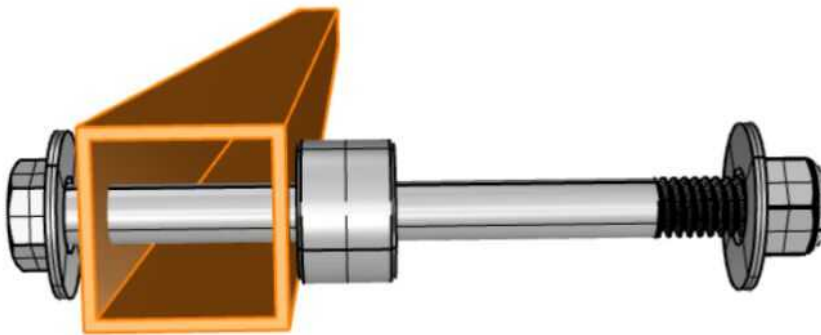
*Nylon Lock Nut*

*Flat Washers*

### STEP 1: PRE-ASSEMBLY *Vent braces to angle bracket assembly*

1.1 Pre-Assemble vent brace with 5/16"x 4-1/4" hex bolt, steel spacer, 5/16" nylon lock nut & flat washers. See "Figure 1".

NOTE: Do not over tighten Nylon lock nut. Leave approximately 1/16" gap so that brace swings freely.



*Figure 1*

*Parts needed for STEP 2*

*Vent Brace Assembly 1" SQ. X 40" L – from Step 1*

*End Bow Ridge Connector – See Figure 2*

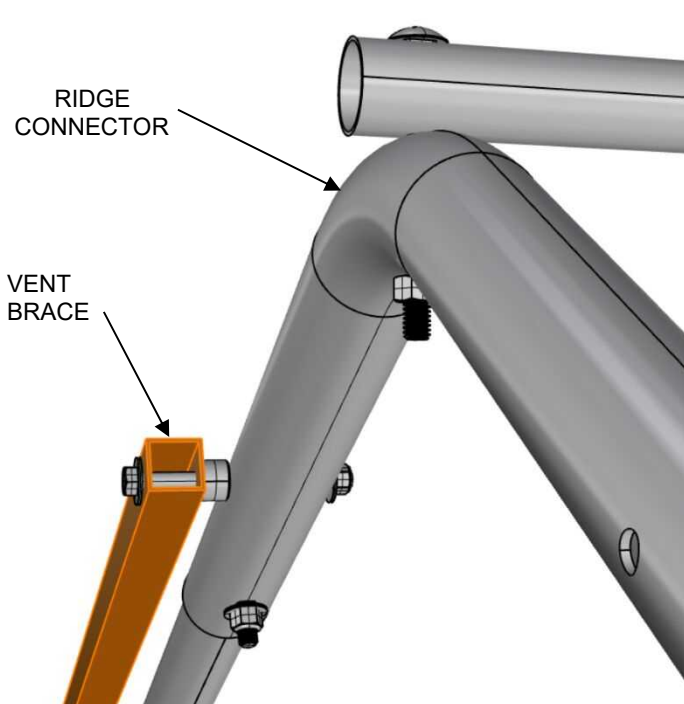
*5/16" Flat Washer*

*5/16" Nylon Lock Nut*

STEP 2: VENT BRACE ASSEMBLY

2.1 Attach vent brace assembly from step1 to end bow ridge connector using flat washer and nylon lock nut.

"Figure 2" starting at one end of the greenhouse.



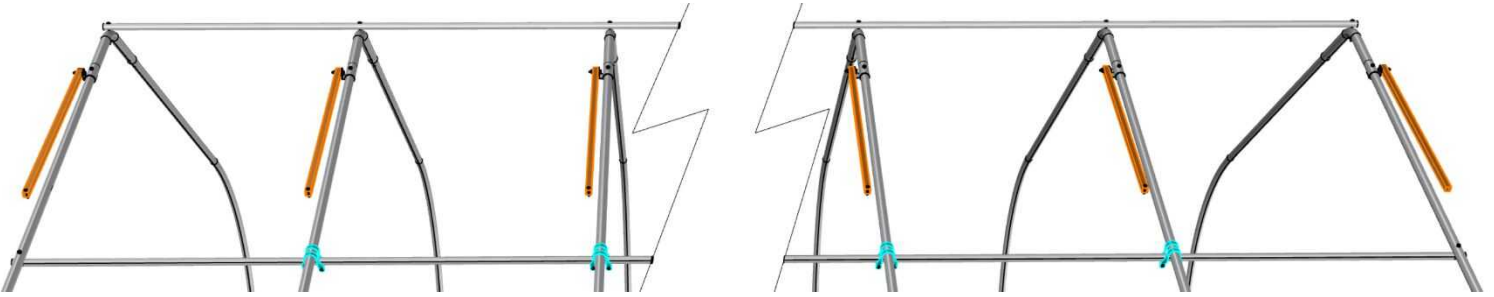
Note: Choose the vent side. There are holes in the ridge connector on both sides.

Figure 2:

Vent Brace assembly is shown attached to the outermost end bow ridge connector at both ends.



2.2 Attach vent brace assembly to all middle bows as illustrated in figure 2.2



*Figure 2.2*

NOTE: Vent brace assembly is attached on the outside of the end bows at greenhouse ends, and all others are attached to the middle bows. When possible, be consistent where the side vent brace to middle bow gets attached.

### Parts needed for STEP 3

Sash Bracket

Bottom Rail Extrusion

Nylon Lock Nut 1/4"

Hex Head Bolt 1/4" x 1"

Carriage Bolt 1/4" x 1 3/4"

Lock Nut 1/4"

LaVanture Sealant

Bottom Rail Splice plate

Bottom Rail

Vent Brace - from previous Steps

### STEP 3: ASSEMBLE SASH BRACKET TO BOTTOM RAIL EXTRUSIONS (AAPOLYBR)

3.1 Layout *Bottom Rail extrusions* end-to-end like they will be installed on the greenhouse. Install first sash bracket 1' from each end of vent, then space every 8' thereafter. See sash bracket layout *Figure 3.1* and *Figure 3.2*. Depending on the length of greenhouse the sash bracket may not layout on 8' centers and that is acceptable. Ideally the sash bracket should be 1' from the end of greenhouse.

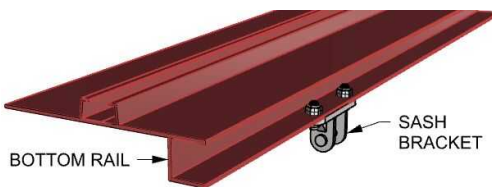


Figure 3.1

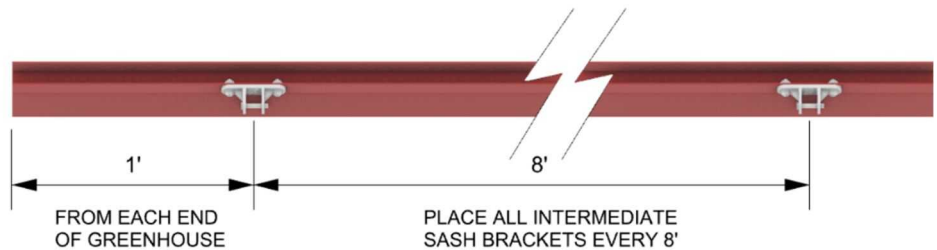


Figure 3.2

3.2 Match drill holes in bottom rail using a 5/16" drill bit at all layout locations. Ensure that sash bracket is flush with edge of the bottom rail. Install sash brackets to bottom rail using 1/4" x 1" hex head bolt and 1/4" nylon lock nut. See *Figure 3.2a*

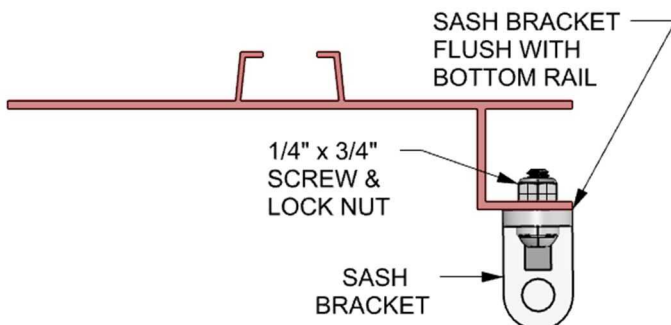


Figure 3.2a

3.3 Mark "X" locations of vent brace assemblies (previously assembled to frame) on the bottom rail. Working left-to-right, put first mark  $\frac{1}{2}$ " from the end. The vent braces will be 4' spaced equally, See Figure 3.3a, except for the ends which will be different. Note: Ensure the holes line up with the vent brace assemblies you put up previously. Use a  $\frac{5}{16}$ " drill bit to drill hole locations  $\frac{1}{2}$ " from bottom rail edge See Figure 3.3

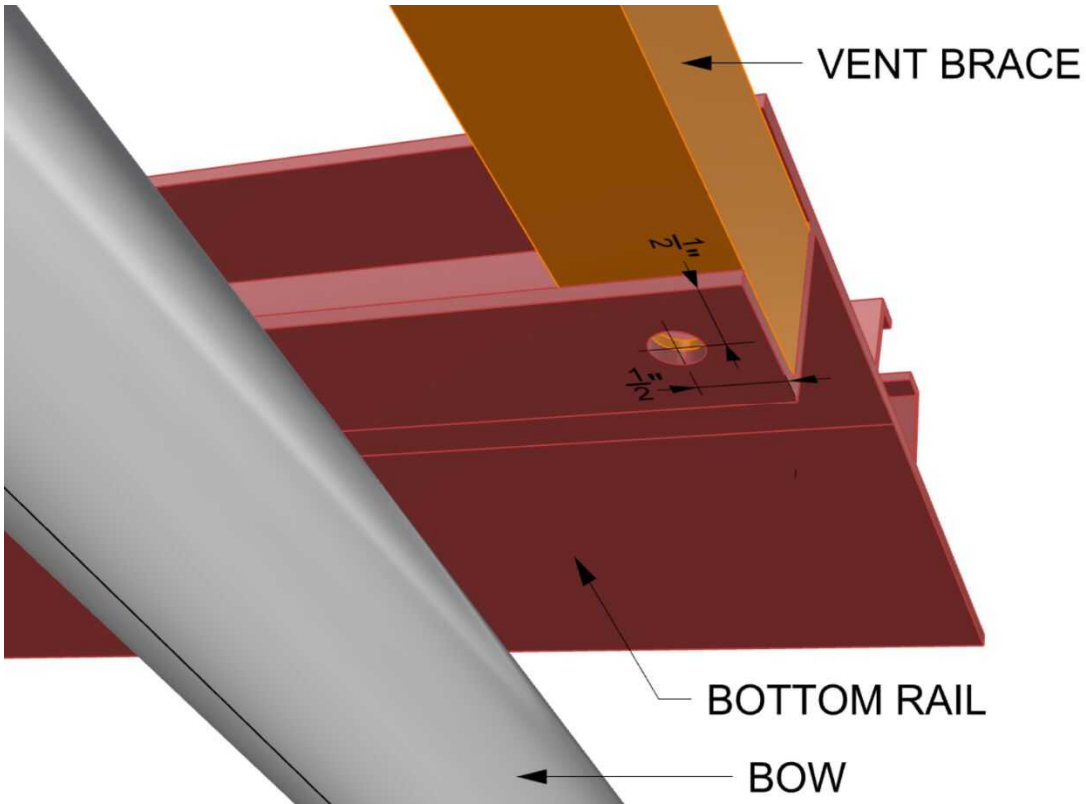


Figure 3.3

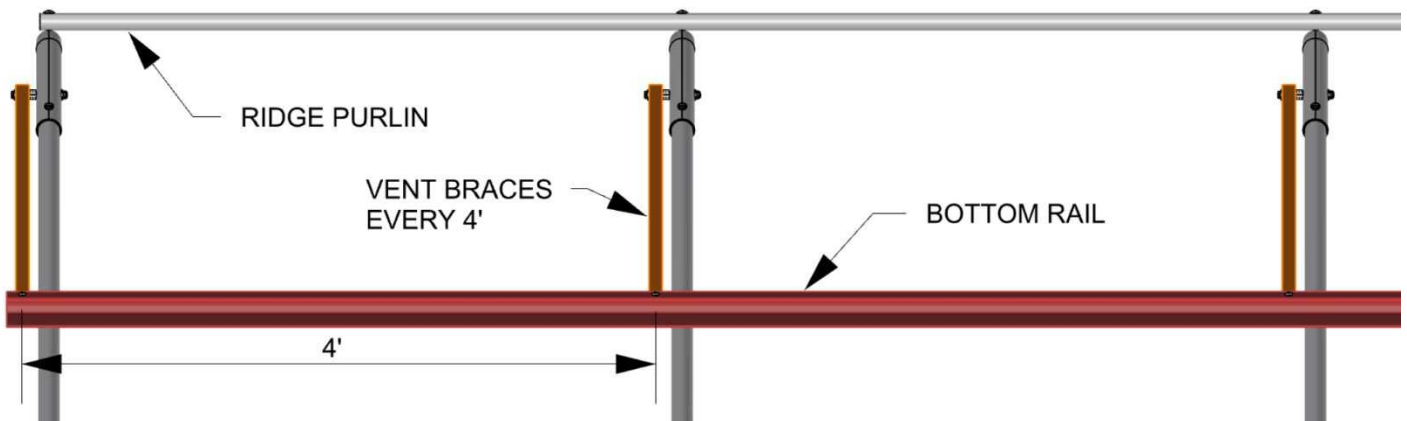
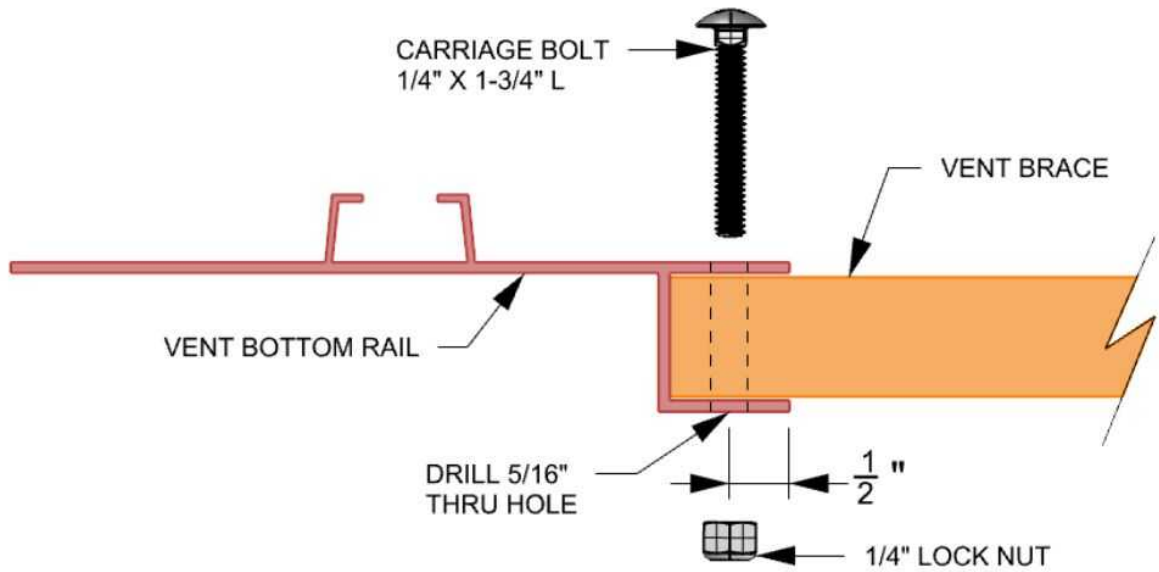


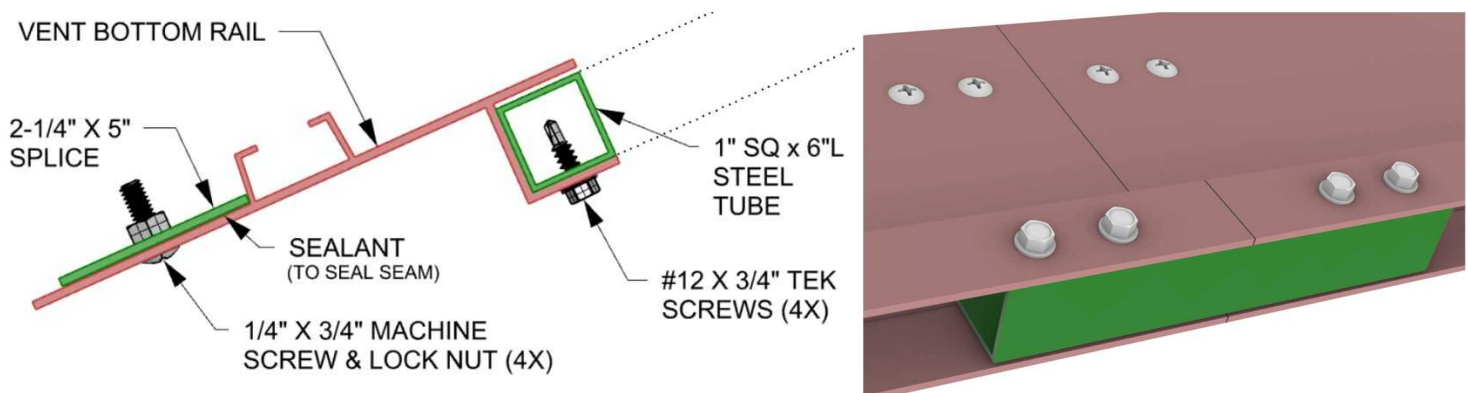
Figure 3.3a

3.4 Starting at one end of the greenhouse, attach first bottom rail to the vent brace assemblies using  $\frac{1}{4}$ " x  $1-\frac{3}{4}$ " carriage bolt and  $\frac{1}{4}$ " lock nut. Install all vent braces for the length of the greenhouse. See *Figure 3.4*



*Figure 3.4*

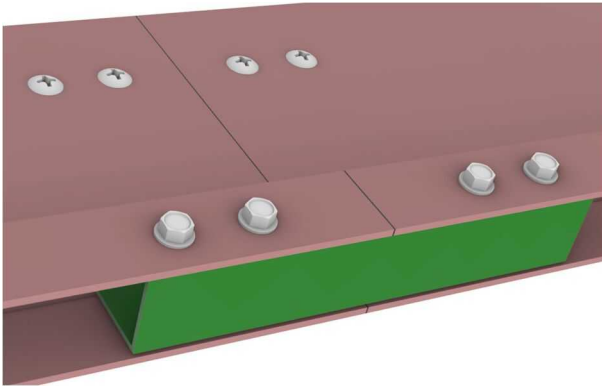
3.5 Splice the vent bottom rails by using  $2-\frac{1}{4}$  x 5" bottom rail splice plate and (4)  $\frac{1}{4}$ " x  $\frac{3}{4}$ " machine screws and 1" square steel splice tube (6" long). See *Figure 3.5* and *Figure 3.5a*



*Figure 3.5*

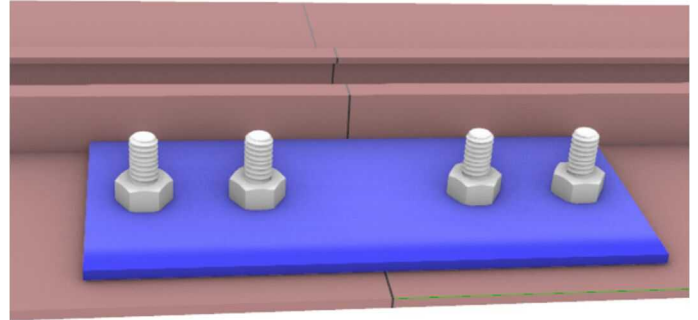
*Figure 3.5a*

Note: Install splices on the vent header. Ensure that the frame remains square (i.e., bottom rail perpendicular to the vent brace). See *Figure 4.4* When connecting one bottom rail to another bottom rail, you must use splices as shown, and you must seal the connection between both extrusions with the sealant supplied. See *Figures 4.4 and 4.4a*.



Bottom Rail Splice (1" SQ. tube)

*Figure 4.4*



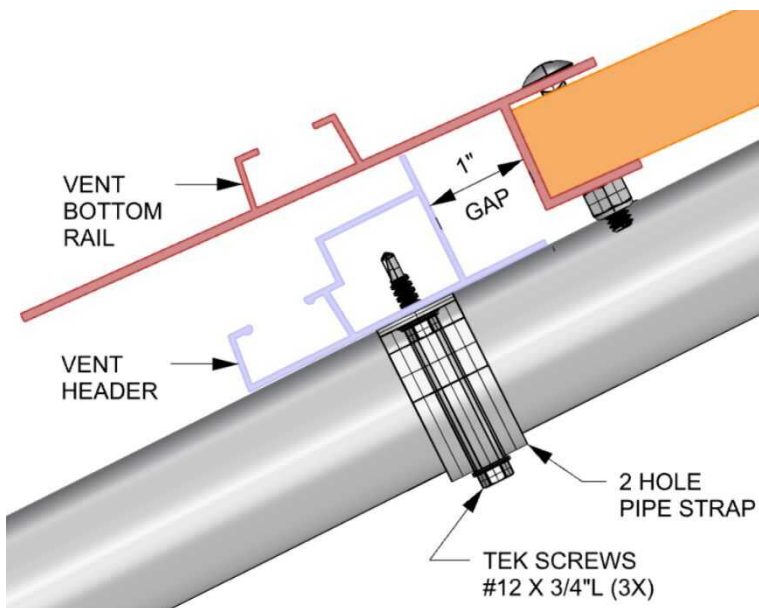
Other Splice on Bottom Rail (2-1/4"x 5" plate)

*Figure 4.4a*

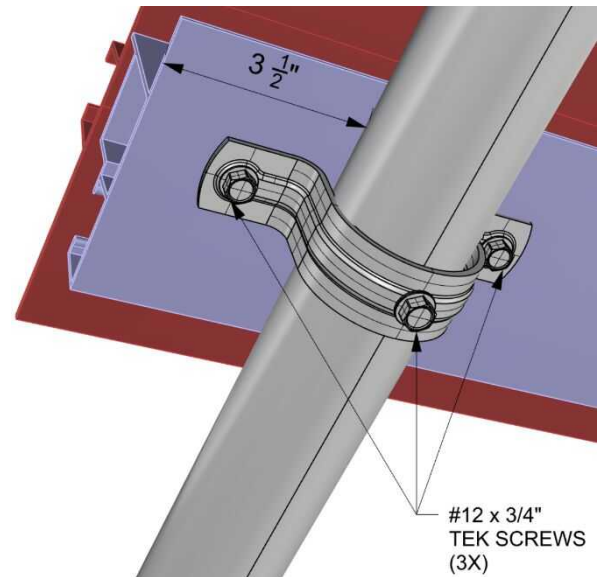
Parts needed for STEP 4  
 Vent Bottom Rail - from Step 3  
 Vent Header (AAPOLYHDR)  
 Pipe Strap 2 Hole  
 TEK Screws #12 x 3/4"  
 LaVanture Sealant  
 Header Splice

#### STEP 4: ASSEMBLE VENT HEADER TO BOWS

4.1 Assemble first vent header to bows See *Figure 4.0* and *4.1* below using two-hole pipe straps and (3) #12 x 3/4" TEK screws. Header should extend 3-1/2" beyond end bows, See *Figure 4.1*. Do not tighten TEK screws until you have bottom rail/header alignment See *Figure 4.1* Two TEK screws go into the header and one TEK screw into the bow through the pipe strap to keep the header in place. For ease of assembly refer to Pro Tip, See *Figure 4.1a*



Maintain 1" gap between vent bottom rail and rail header  
*Figure 4.0*

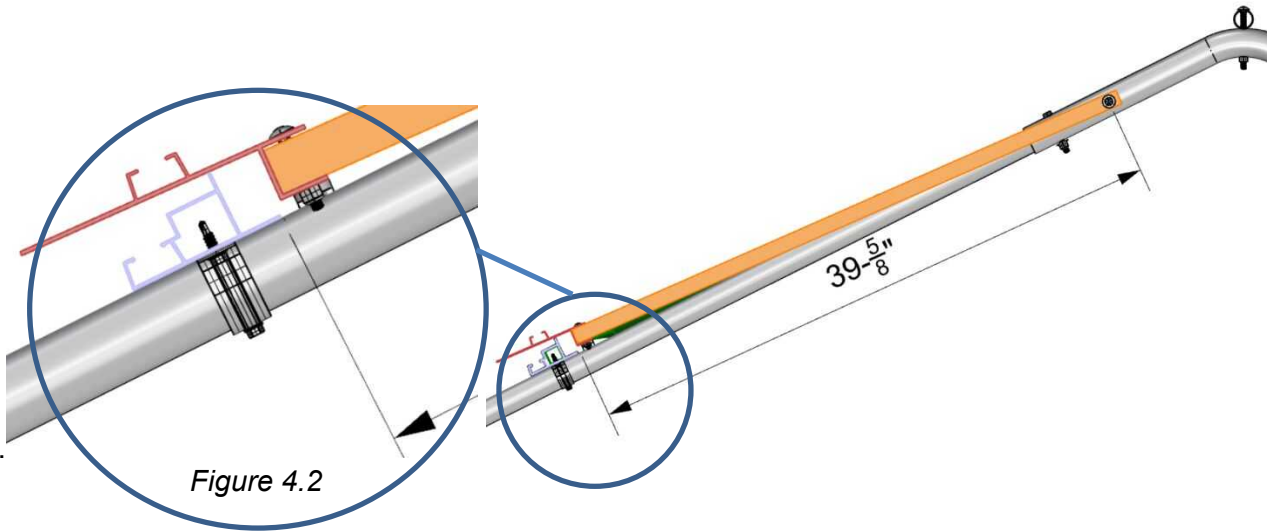


Two-hole pipe strap with 3 TEK screws  
*Figure 4.1*



*Figure 4.1a* Pro Tip! Use a 1" spacer and quick clamp to hold the vent header in place.

4.2 Lift the bottom rail and position header on the bottom rail/header profile as shown in Figure 4.2. Once positioned onto greenhouse, mark bows for remaining vent headers.



Side view of vent header and bottom rail

4.3 As you attach remaining vent headers, connect using header splices and apply sealant to splice. Splice the vent header sections using 1" x 5" header splice and (4) #12 x 3/4" TEK screws See Figure 4.3

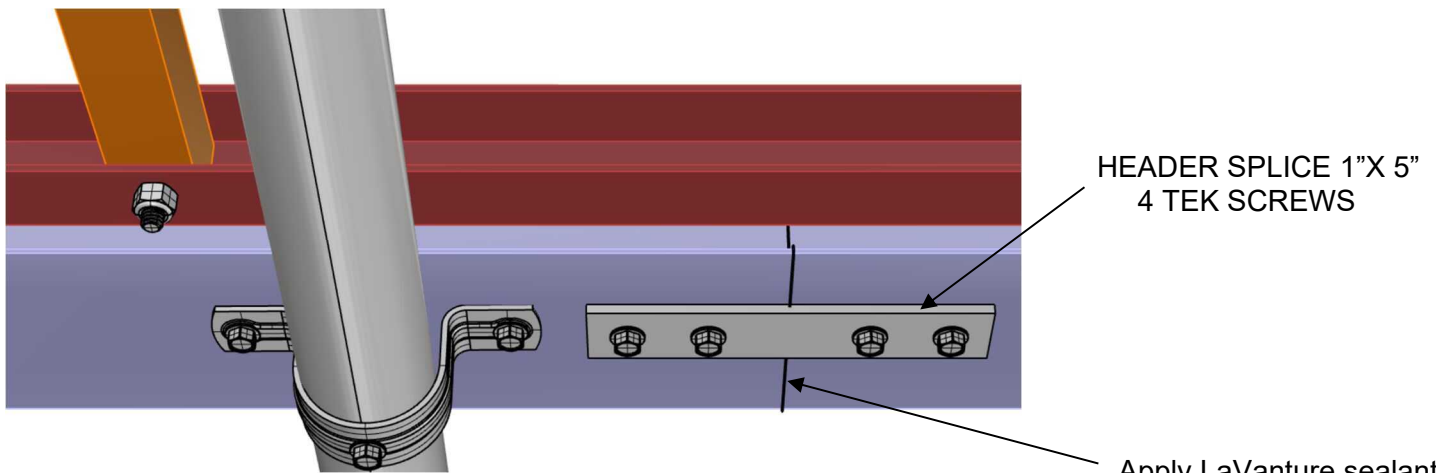


Figure 4.3 Vent header from inside of greenhouse

Apply LaVanture sealant between vent header sections where they splice together.

Note: Any missed areas are potential leak spots.

Parts needed for STEP 5

Foam Strip

Vent Flashing

ZIGZAG Wire Lock

#12 x 1" TEK Screw with Sealing Washer

STEP 5: ATTACH VENT FLASHING

5.1 Attach foam strip to underside of flashing where bottom rail contacts the header. You will have to cut a small piece to completely close this gap. See *Figures 5.1 and 5.1a*.

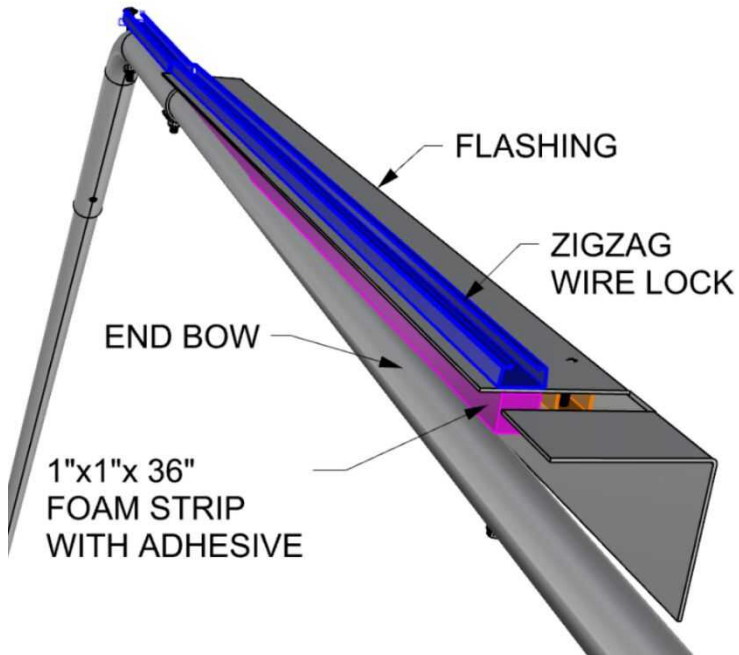


Figure 5.1

NOTE: For clarification, the bottom rail is not shown. The 1"x1"x36" foam strip should seal the area between the end bow and the flashing.

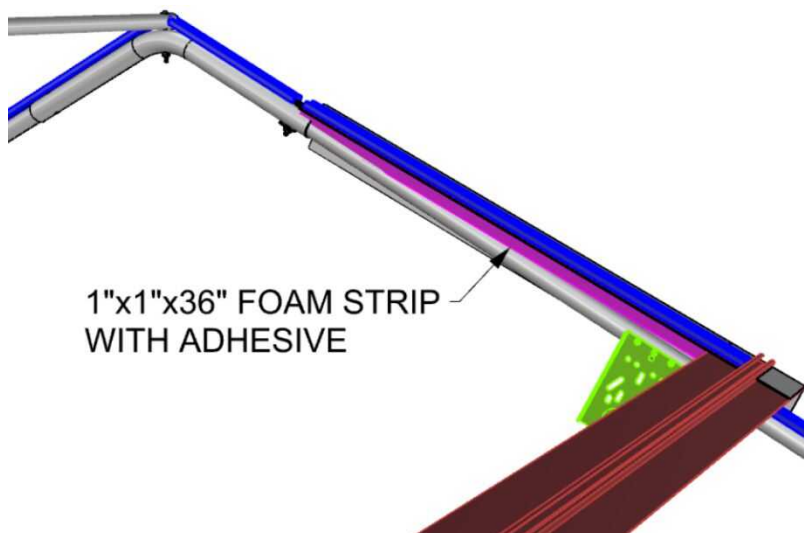
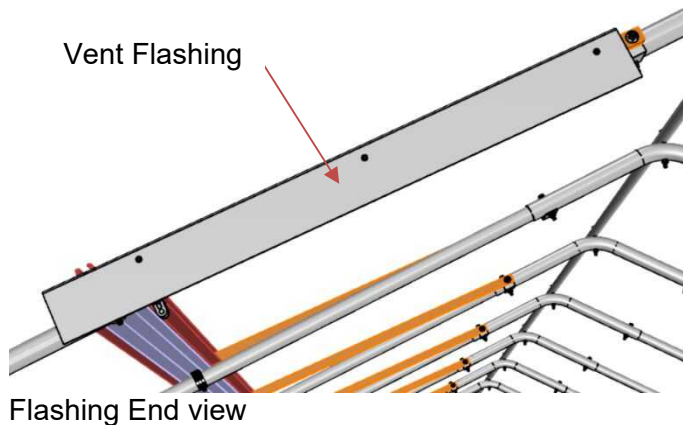


Figure 5.1a



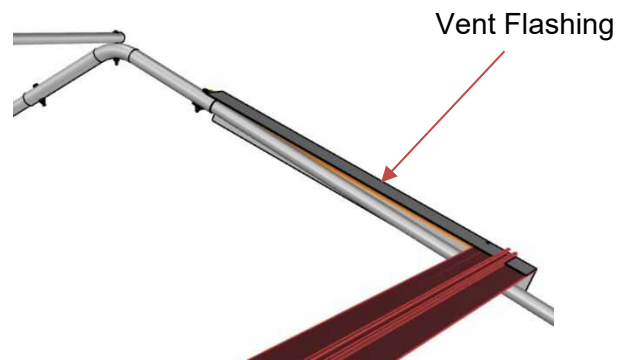
5.2 Attach vent flashing to end of vent brace so that flashing is parallel to end bow when vent is closed

See *Figure 5.2* and *Figure 5.2a*. Place over end of vent edge such that slot slides into ZIGZAG wire lock base profile on bottom rail.



Flashing End view

*Figure 5.2*



Flashing End view

*Figure 5.2a*

5.3 Press flashing against vent brace (there will be a slight gap), install wire lock base over flashing along outside edge See *Figure # 5.4* Insert a #12 x 1" TEK Screw with Sealing Washer into the ZIGZAG wire lock, through the flashing and into the end bow vent brace & bottom rail (3 places).

5.4 Attach wire lock base on the flashing with 1" TEK Screw with Sealing Washer so that you have a continuous line from the wire lock base used on the other side of the end bow, coming over the peak of the roof. Attach wire lock base from top of flashing to the bottom rail. You will have to cut the wire lock base to fit.

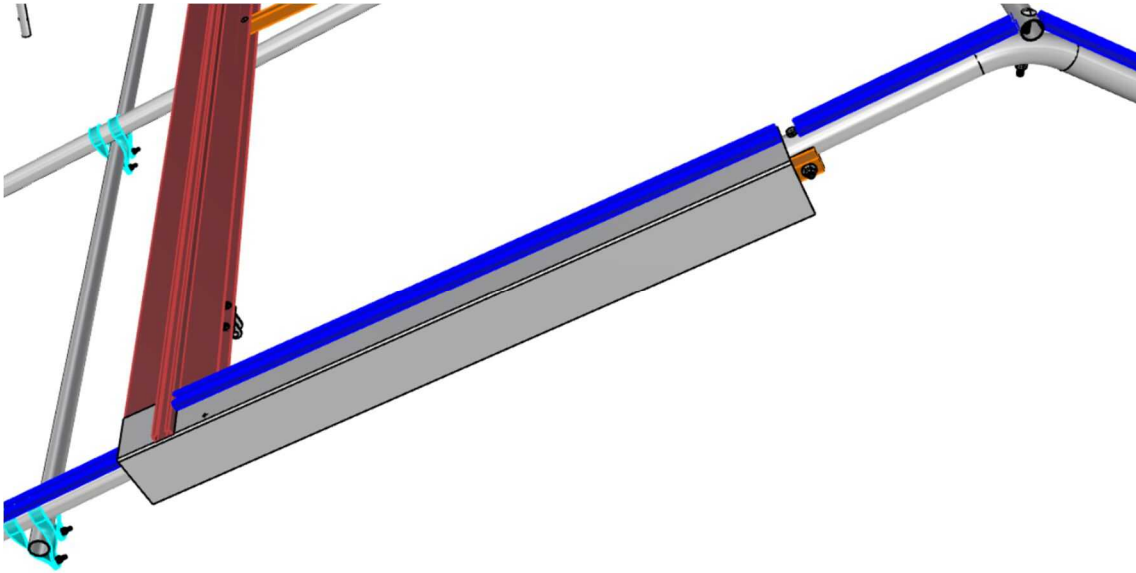
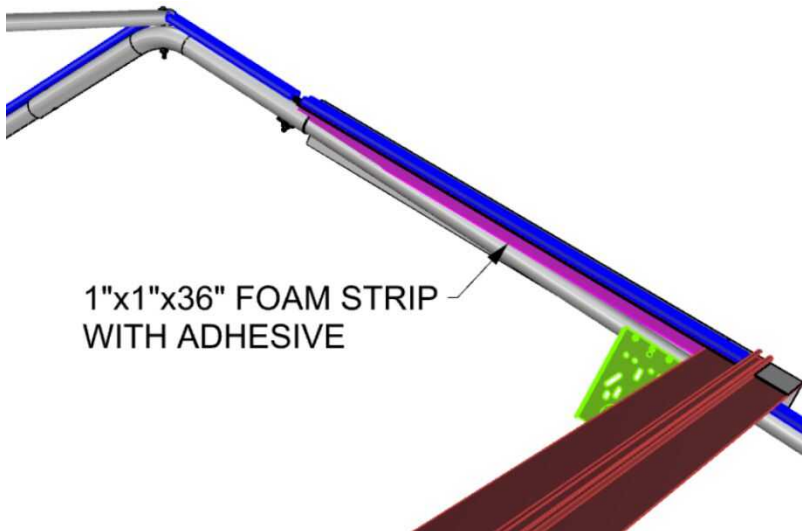
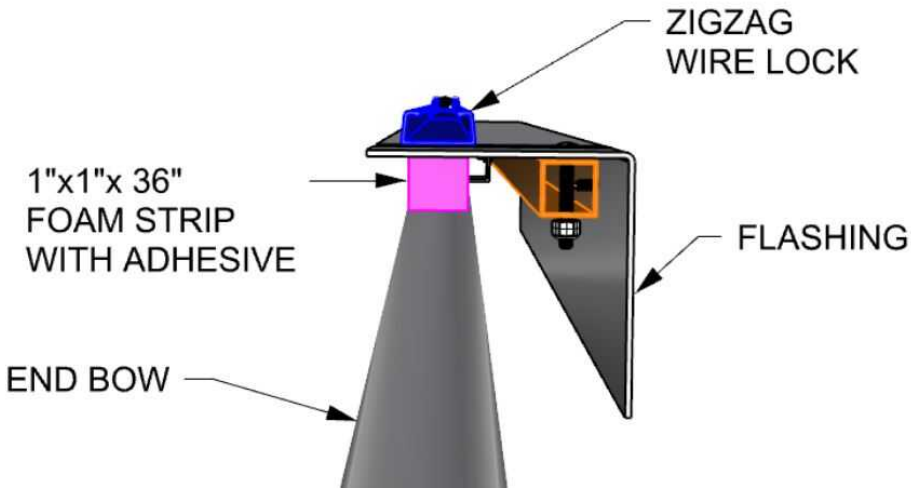
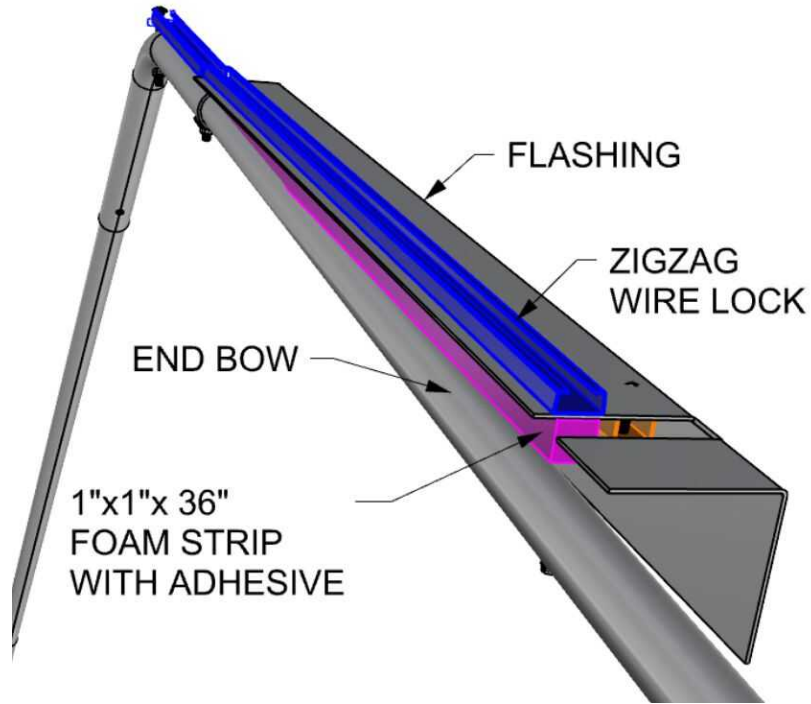


Figure 5.4





## Parts needed for STEP 6

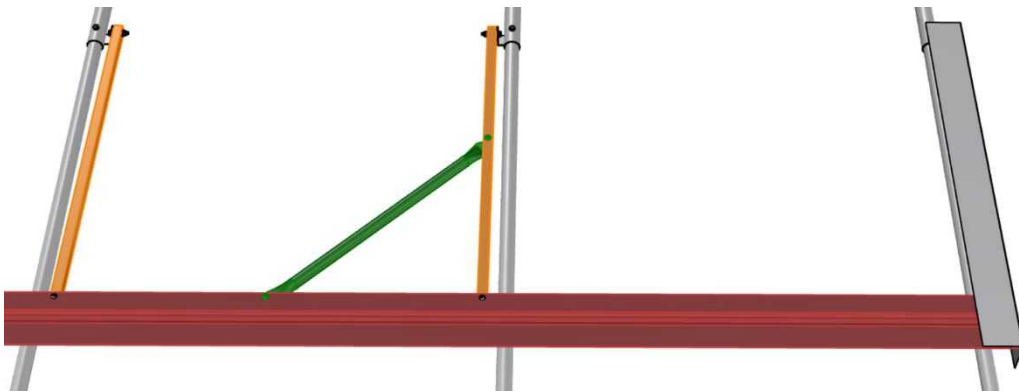
Vent Diagonal braces 32"L

5/16" x 1 1/2" carriage bolt and nut

5/16" x 2 1/2" carriage bolt and nut

### STEP 6: ASSEMBLE VENT DIAGONAL BRACES

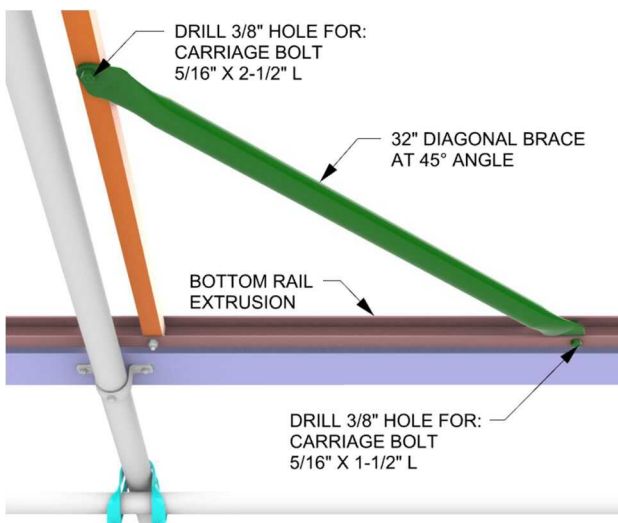
6.1 Assemble vent diagonal braces (shown as a 32" diagonal brace in illustration) in between the second and third vent brace See *Figure 6.1* at each end of the vent by installing vent diagonal brace to the vent brace at one end with 5/16" x 1 1/2" carriage bolt and nut and to the bottom rail with a 5/16" x 2 1/2" carriage bolt and nut at the other end. See *Figure 6.2*. Position the vent diagonal brace at a 45-degree angle.



Birdseye View shows the vent diagonal braces in between the second and third vent braces

*Figure 6.1*

6.2 When installing vent diagonal brace to bottom rail, vent diagonal brace is inserted into 1" slot at back of bottom rail for installation. Locate positions of holes on top & bottom of slot and drill holes using a 3/8" drill bit. Insert carriage bolt and nut to assemble



View from inside of greenhouse

*Figure 6.2*

Parts needed for STEP 7

*Motor Mount Assembly Kit (provided by vendor)*

18" motor support tube

3/8" x 4 1/2" hex bolt and nut

"U" Bolts

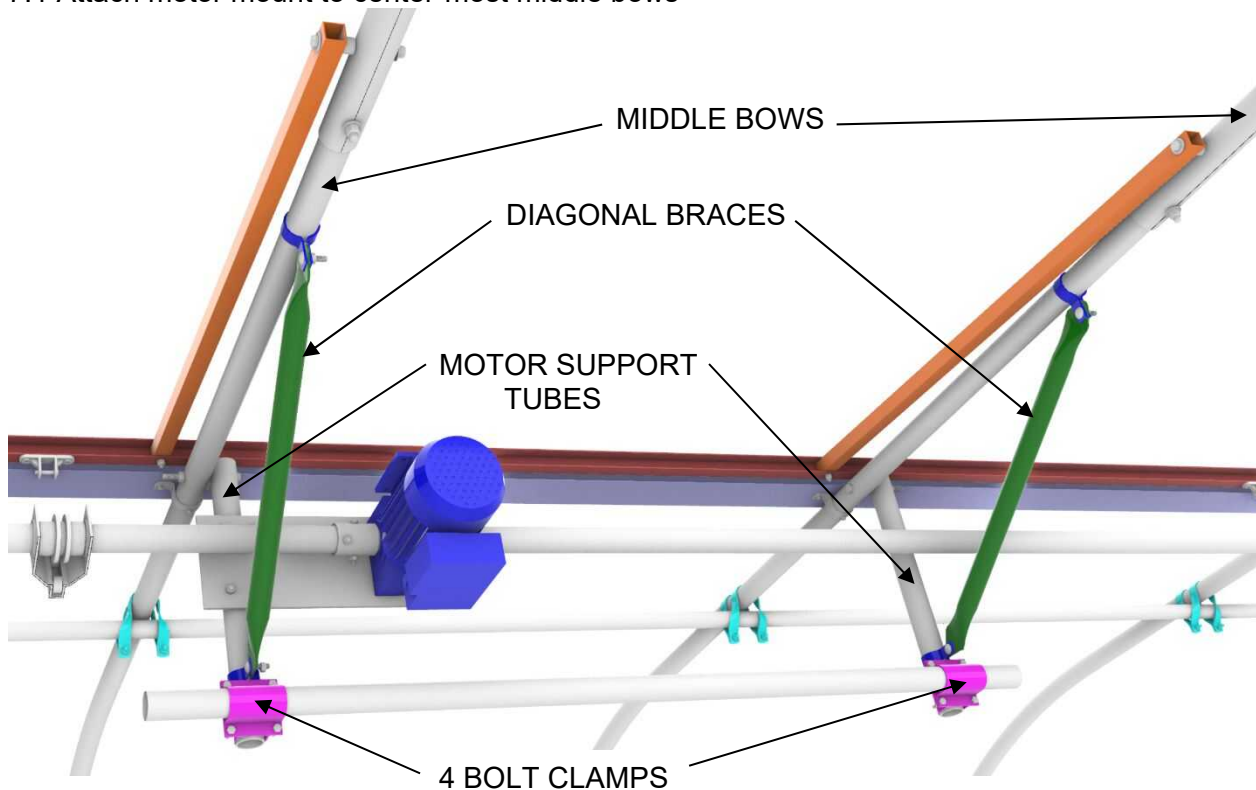
## STEP 7: ASSEMBLE MOTOR MOUNT

7.A Wadsworth Motor OR

7.B Advancing Alternatives LVM style motor OR

7.C Chain Wheel Operator

### 7.1 Attach motor mount to center-most middle bows

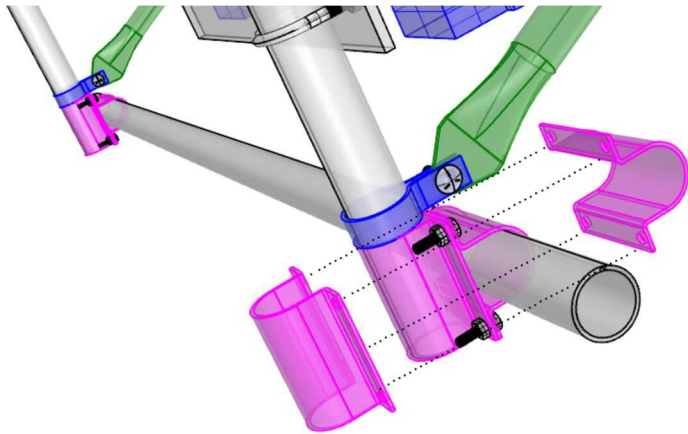
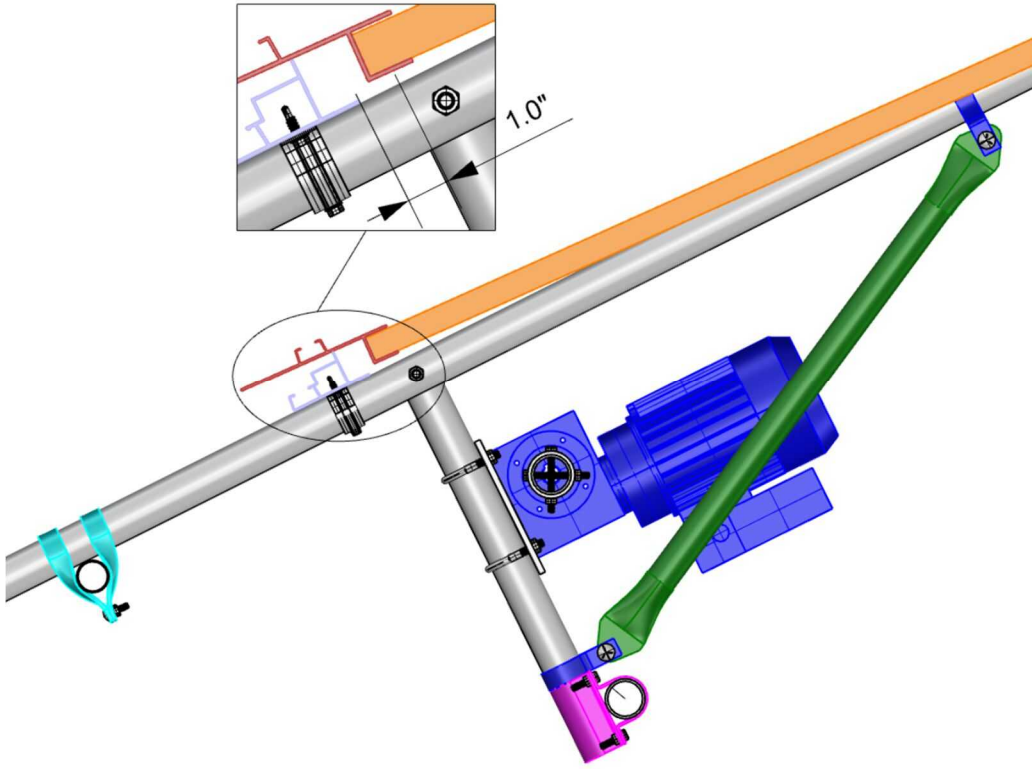


7.A

*This is for Wadsworth VC 100 or VC 2000 motors:*

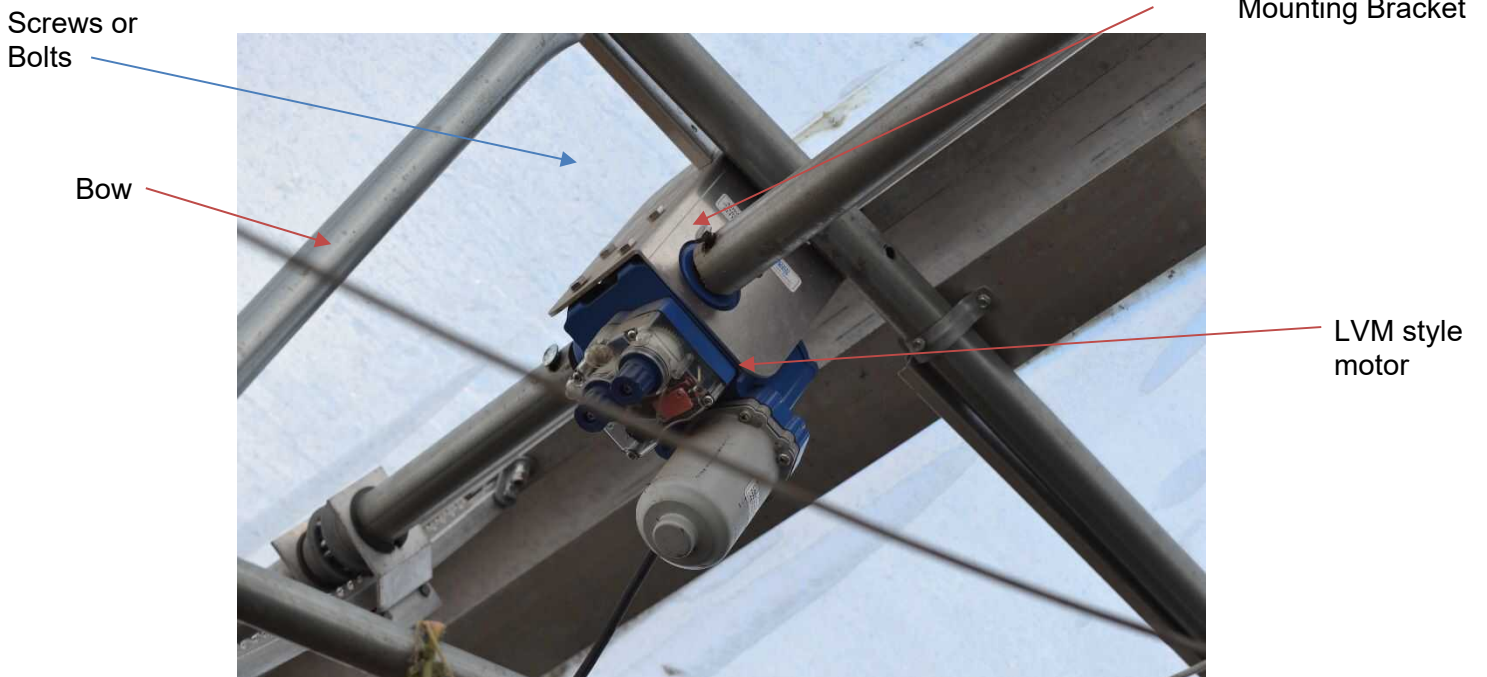
(See following pages if you have an Advancing Alternatives LVM style motor)

1. Assemble motor support tubing to greenhouse frame middle bows starting at the center-most middle bow.
2. Attach one vent 18" motor support tube to center-most middle bow where there is no vent brace assembly using one 3/8" x 4 1/2" hex bolt and nut. Field drill through bow.
3. Attach the other vent 18" motor support tube to middle bow to the immediate right of the other bow
4. Attach and install motor to support tube frame by having two people attaching motor and motor mounting plate to the 18" motor support on the center-most bow using two "U" Bolts from the motor kit. Also, refer to Wadsworth directions.



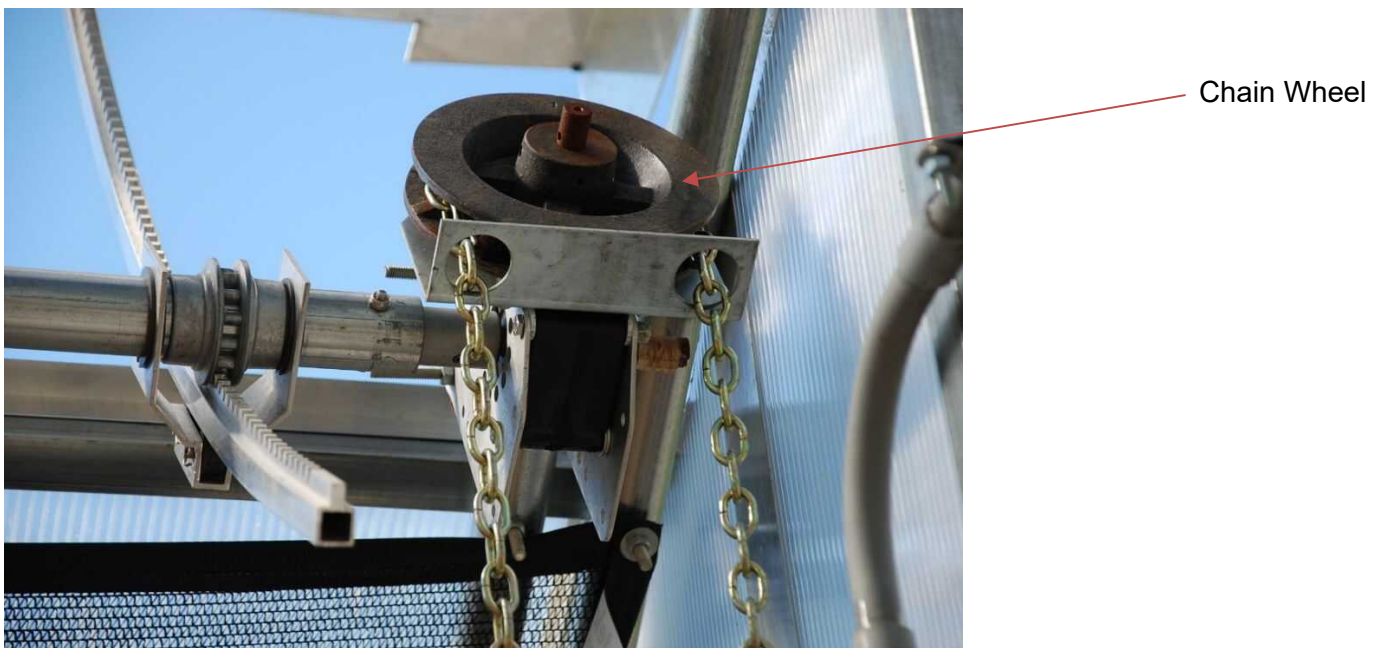
4-bolt clamp

7.B Advancing Alternatives LVM style motor; attach mounting bracket directly to the bow using either TEK screws or bolts with nuts (you will have to field drill through bow for this style of attachment.) See below photos for installation.



7.C Chain Wheel Operator for your roof vent; follow the manufacturer’s installation directions to attach it to the drive shaft at the end of the greenhouse.

The chain wheel operator will be attached after drive shaft installation. See photo below to leave adequate room for the installation of the chain wheel operator when installing the drive shaft. You will need about 12” of clearance from the end of the wall.



*Parts needed for STEP 8*

*Universal Shaft Hanger*

*Pinion Gear*

*Pinion Gear Yoke*

*Vent Drive Shaft*

*5/16" x? Bolt and Nut*

*TEK Screws*

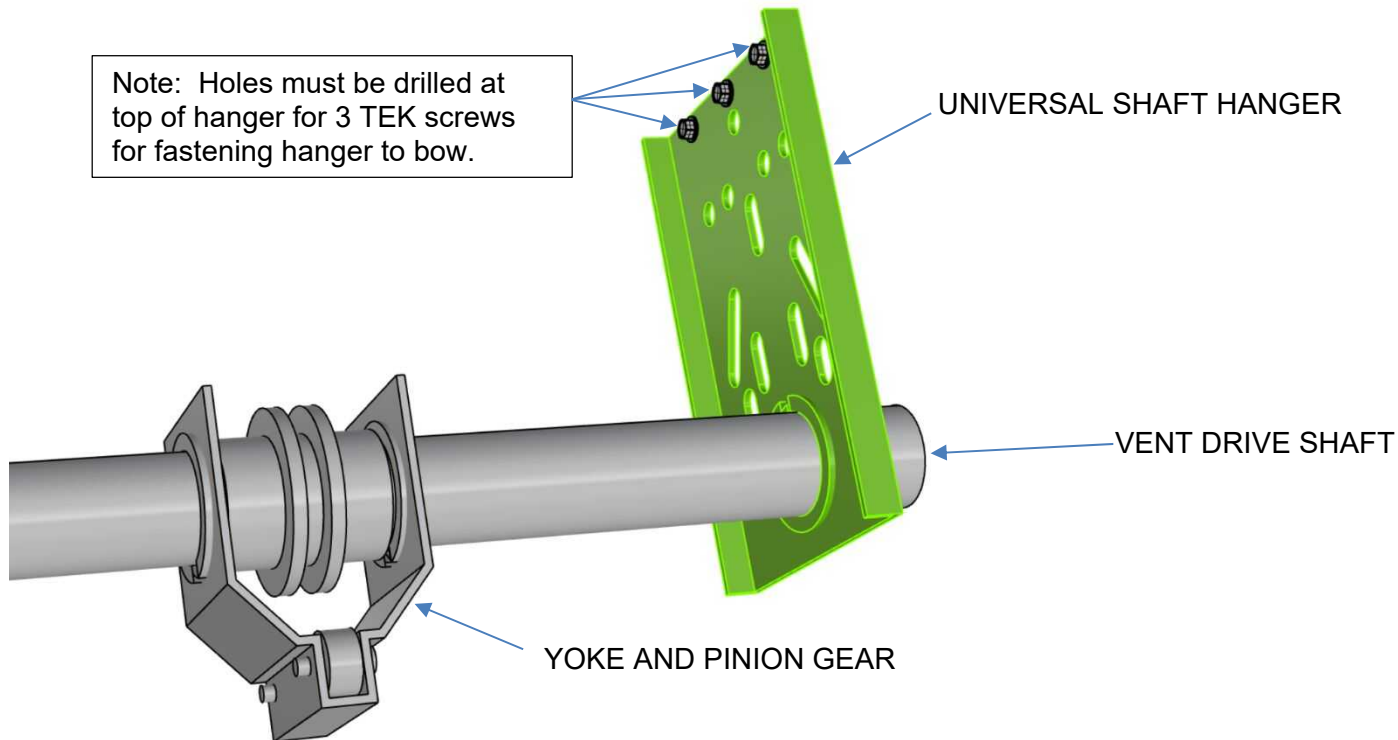
STEP 8: ASSEMBLE MOTOR SHAFT, HANGERS, AND PINION GEARS

8.1 Install shaft hangers and pinion gears by inserting onto first length of drive shaft tube (1.66" OD tube 19' 10" in length.)

Note: This prevents having to assemble these parts while in the air on ladders.

One shaft hanger on each end bow & every 8 ft. in between.

Number Of pinions is equal to number of sash brackets that are already mounted at that section.



Shaft hanger & Pinion gear assembly  
Figure 8.1

8.2 Install vent drive shafts:

While on the ground, drill 3/8" holes through the drive shaft to be able to attach drive shaft to one side of motor. You will do this for the other side of the motor with the first drive shaft.

Install the first drive shaft into motor by inserting it into motor coupling and fastening with 5/16" bolt and nut.

Adjust the motor mounting plate to ensure equal distance of both drive shafts on the bottom rail.



### 8.3 Attach Shaft Hangers using three TEK screws per shaft hanger.

Hangers are attached on each end bow and on every other middle bow (every 8') See *Figure 8.3*



Shaft hanger on opposite side bow than the vent brace with 3 TEK screws  
Figure 8.3

### 8.4 Locate shaft hangers 1" from edge of bottom rail so the drive shaft moves relatively free in shaft hanger (not bound tightly), and hangers are mounted on the side of the bow opposite the 1" square vent brace. See *Figure 8.4*

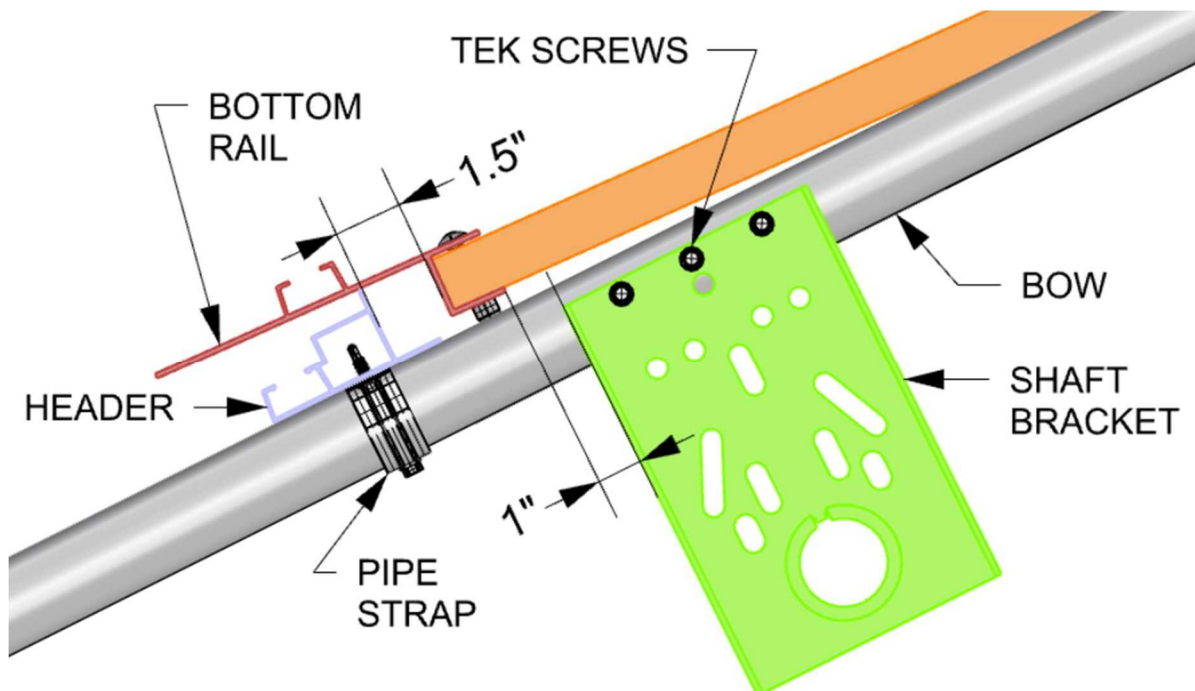


Figure 8.4

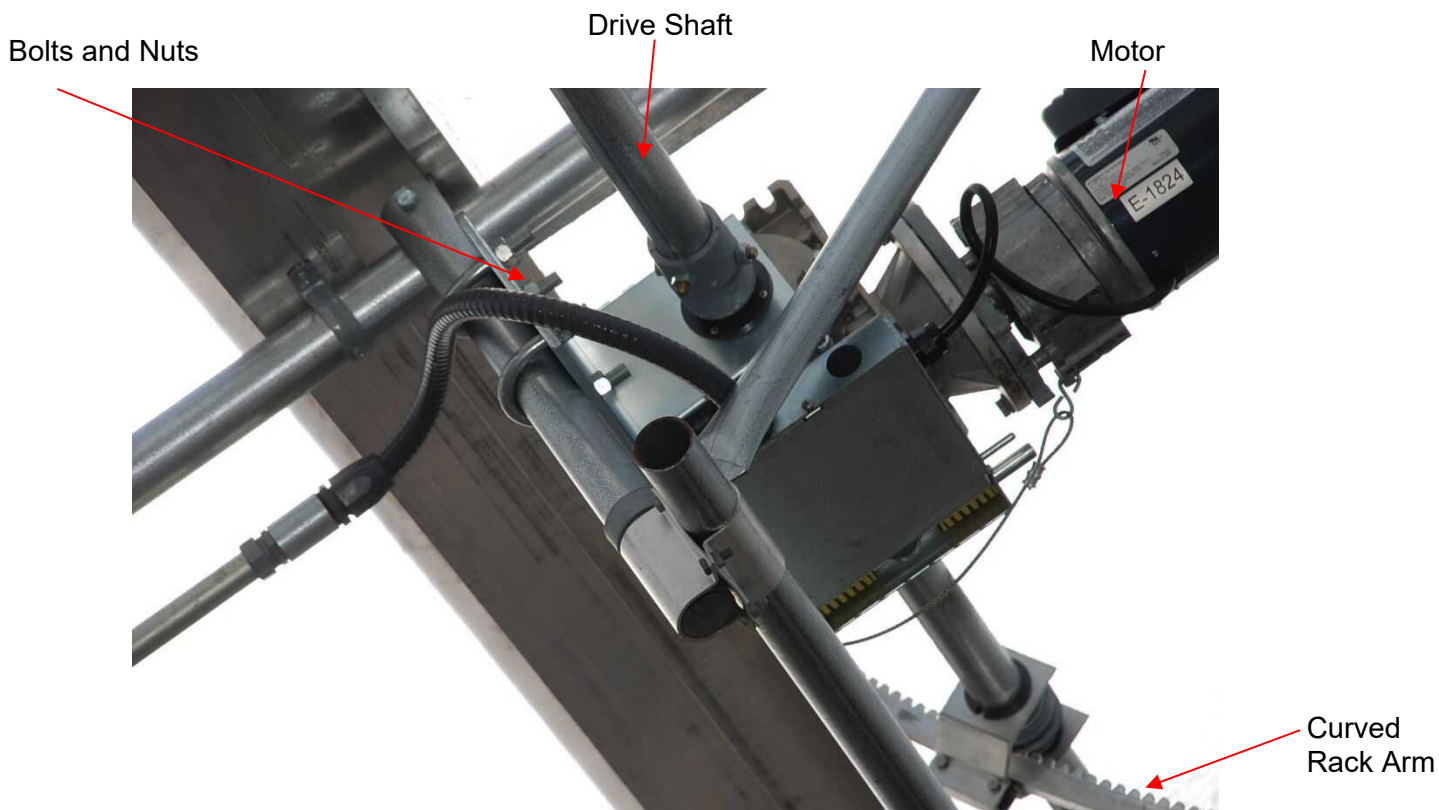


Figure 8.5

#### 8.5 Drive shaft connection into motor with bolts and nuts

Continue to install drive shafts to each end of the greenhouse. Cut final pieces of drive shaft to fit. Splice drive shafts with couplings.

8.6 Assemble vent rack arms to pinion gears and sash brackets by sliding curved rack arm (TEETH UP) through pinion gear (YOKE DOWN). Attach curved rack arm (end with hole) to sash bracket already mounted to bottom rail with clevis pin and bridge pin.

8.7 Once bridge pin is through clevis pin, bend back both arms of bridge pin.

8.8 Orient yoke of pinion gear straight down to the ground before tightening.

8.9 Tighten two set screws in pinion gear to secure to drive shaft using Allen wrench.

Note: Curved rack arm must float freely within yoke of pinion gear for proper movement of bridge pin and clevis pin.

## STEP 9: OPERATION OF MOTOR CONTROL

- 9.1 Test cycle vent with motor and control panel electrically connected as per manufacturer's installation/operating instructions, in the manual operation mode, to open and close vent.
- 9.2 Open vent to the fully open position, where vent is parallel with the ground to set open limits as shown in photo. Listen to vent when it opens and examine for any signs/noises indicating improper friction or mechanical stress. Make proper adjustments with pinion gears as needed.
- 9.3 Close vent to the fully closed position, where vent bottom rail rests flush to the header to adjust close limit for motor. The vent should be snug where no daylight gets through, but not too tight where vent motor "torques out". See Wadsworth instructions if vent motor torques out on closed position. Again, you can adjust by loosening and retightening the pinion gears to properly seat vent along entire greenhouse.
- 9.4 Program and test operate system if you have purchased an environmental controller. Refer to manufacturer's installation and operation instructions for programming and operation of that piece of equipment.
- 9.5 With a ridge vent, the following process is recommended when installing poly: (See poly installation manual).

## LIMITED WARRANTY

*Rimol Greenhouse Systems, LLC. (RGS) warrants to only the original purchaser ("Buyer") that the greenhouse frame(s) manufactured by RGS will be free of defects in materials and workmanship for a period of five (5) years. This limited warranty shall not be effective unless the Buyer's greenhouse is installed on level ground and there are no other objects or structures within ten (10) feet of the greenhouse, and the Buyer hereby waives any claims under this warranty in the event these two conditions are not satisfied.*

This warranty covers all defects in material and workmanship, EXCEPT:

1. Damage resulting from accident, misuse, abuse, neglect or from other than normal and ordinary use of the frame(s).
2. Damage resulting from failure to use the product in accordance with RGS specifications and instructions.
3. Damage resulting from repair or attempted repair by anyone other than RGS or an authorized repair contractor or facility.
4. Damage resulting from the use or installation of any other equipment or products used in the greenhouse.

This warranty applies only to the products being supplied by RGS and physically attached to the RGS products at the RGS factory. Defects in equipment installed with any RGS product, or defects in the installation of the RGS product, whether sold by RGS, are warranted, if at all, by the installers or manufacturers of such equipment, and are not covered by this warranty.

RGS makes no warranties other than those stated above and specifically does not warrant that any of the RGS frames, parts or products are of a merchantable quality or that they can be used for any particular purpose by the buyer.

RGS shall have the right to inspect any parts before taking corrective measures under this warranty.

RGS shall be notified of any warranty claim within 48 hours of damage. Proof of purchase must be furnished with any claim.

## Limitation of Liability

*In no event will RGS be liable for incidental, consequential, special or indirect damages, lost business profits, regardless of the form of action, whether in contract, tort (including negligence), breach of contract, breach of warranty or otherwise, even if RGS has been advised as to the possibility of same. Buyer's sole and exclusive remedy is repair or replacement, at RGS's option, of any defective parts or workmanship. In the event this exclusive remedy fails of its essential purpose, Buyer's exclusive remedy shall be refund of the defective part.*

## Jurisdiction

*Any disputes arising between RGS and Buyer shall be governed by New Hampshire law without regard to conflicts of law principles. Buyer hereby submits, and waives any objection, to the exclusive personal and subject matter jurisdiction by New Hampshire courts and submits, and waives any objection, to New Hampshire as the proper venue for any disputes.*