

Thank you for purchasing your **EnviroPro Single Span polytunnel**

Before you begin:

- · Check that all parts are present
- Read the instructions

Your safety matters

Please take care during construction and follow all guidance provided.

Need help?



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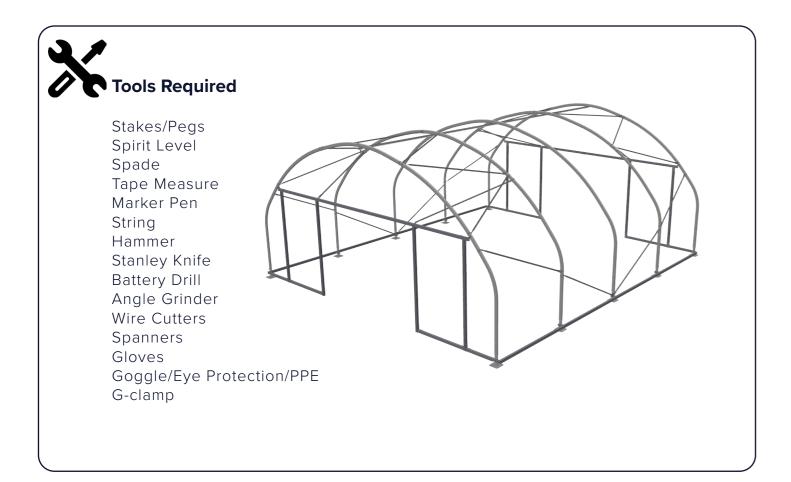
Important

Failure to follow these instructions may compromise the structural integrity of your polytunnel.

NP Structures Ltd accepts no liability for damage resulting from misuse or failure to follow instructions.



Drawings are not to scale.



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Tools needed: tape measure, string, spirit level, markers/canes

Planning Foundations

Use the diagram on the next page to lay out your foundations accurately

Choose a level, even site where possible. Avoid stony ground, especially if trenching in the polythene, as this may cause damage. Allow at least 1 metre of working space around the structure.

To mark out the site

- Use string (thin polypropylene twine) and pegs to plan out your foundation positions
- Use the table provided to check the diagonal and hoop spacing measurements this ensures your layout is square.
- Mark the stringline at each hoop position and place a ground tube at each mark.



The diagram is for illustrative purposes only. Repeat the layout process according to the number of hoops you have ordered.

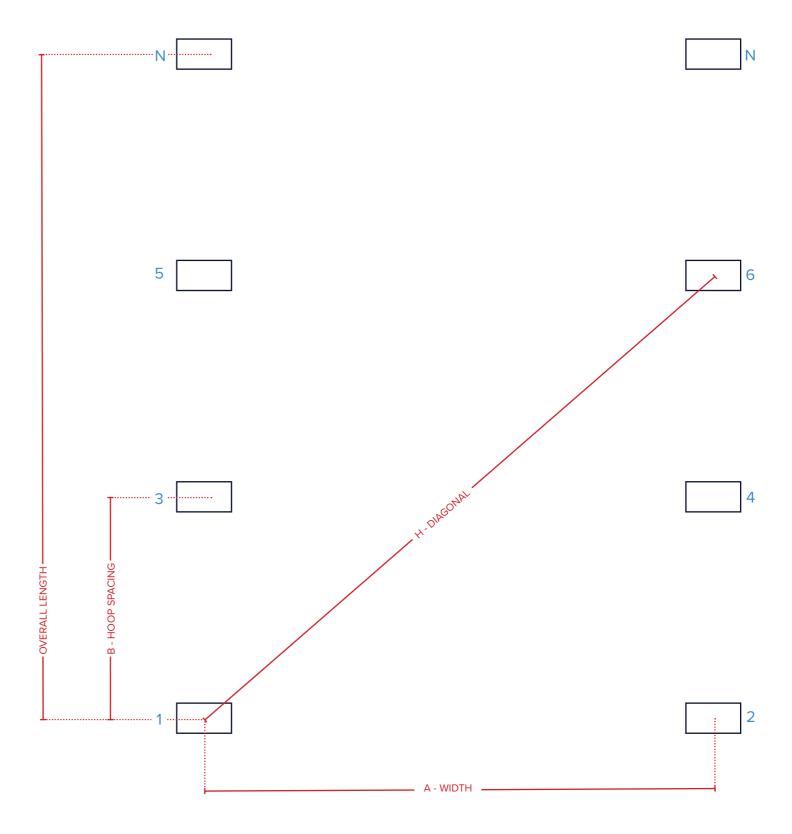


All measurements are taken from the centre of the foundation.

Foundation Measurements

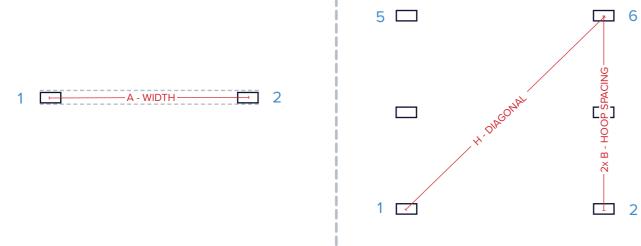
Tunnel Width	A - WIDTH Centre to Centre	B - HOOP SPACING Centre to Centre	H - DIAGONAL Centre to Centre
5 metres	5000mm	2500mm	7071mm
6 metres	6000mm	2500mm	7810mm
7 metres	7000mm	2000mm	8062mm
8 metres	8000mm	2000mm	8944mm
9 metres	9000mm	2000mm	9849mm

N = last hoop



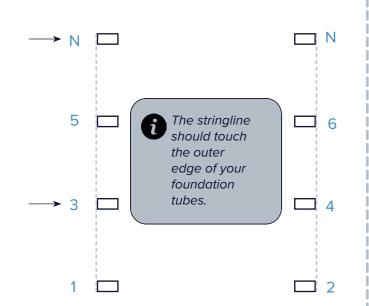
Method

You may wish to mark out your foundation placement with markers or stakes before positioning the actual foundations. For "Foundation Measurements" see page 6.



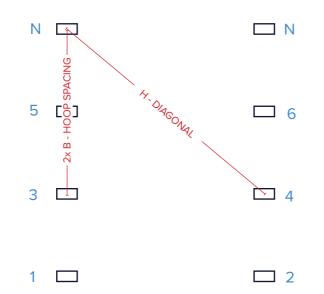
Position foundations 1 and 2.
 Check A - WIDTH is correct.
 Check alignment of the two foundations.

Position foundation 6
 Check H - DIAGONAL is correct.
 Check 2x B - HOOP SPACING is correct.
 Repeat for foundation 5.



3. Stringline the length of the tunnel from 1 and 2 to last foundations (N).

Use the stringline to help you place your last foundations (\mathbf{N}) as well as any other foundations e.g. 3 and 4.



4. Check alignment of the far end of your polytunnel:

Check **H - DIAGONAL** is correct. Check **2x B - HOOP SPACING** is correct. Repeat on each end foundation.

Installing Base Plate Foundations

1. Position the Base Plates

Use your string line as a guide. For "Foundation Measurements" see page 6.

2. Mark and Drill

Mark the position of the four fixing holes on each base plate.

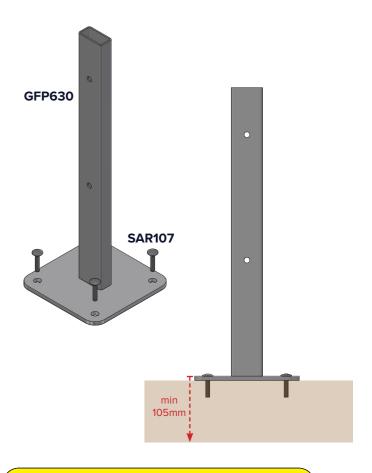
Drill four holes per plate: **12mm diameter x 100mm** deep into the concrete.

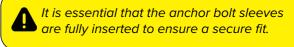
Vacuum out dust from each hole to allow full depth insertion of the anchor bolts.

3. Fix in Place

Insert the sleeved anchor bolts through the base plate and into the holes.

Hammer them fully in, then tighten the bolts securely.





For "Installing Concrete Foundations" see page 10



Installing Concrete Foundations

1. Dig the Foundation Holes

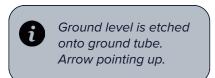
Follow the diagram for hole size. For "Foundation Measurements" see page 6.

Ensure holes are evenly spaced and aligned.

2. Set the Ground Tubes (GFT630) in Concrete

Pour concrete into each hole (recommended: ready-mix GEN3, 20 N/mm², 60mm slump).

Insert the ground tubes and align them using a string line, they must be straight and level.

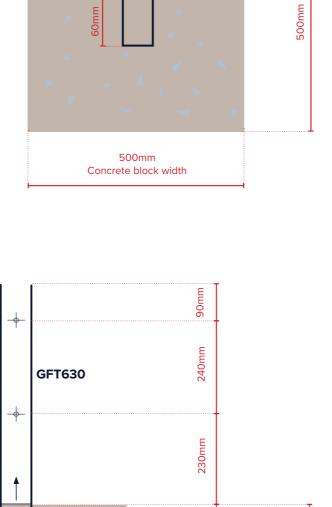


3. Allow Concrete to Set

Let the concrete cure for at least 48 hours (longer in cold or wet weather).

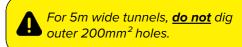
4. Mark the End Frame Lines

Once set, run a string line across the inside face of the first and last hoop to mark the lines for the end frame uprights.



Digging Holes For End Frame

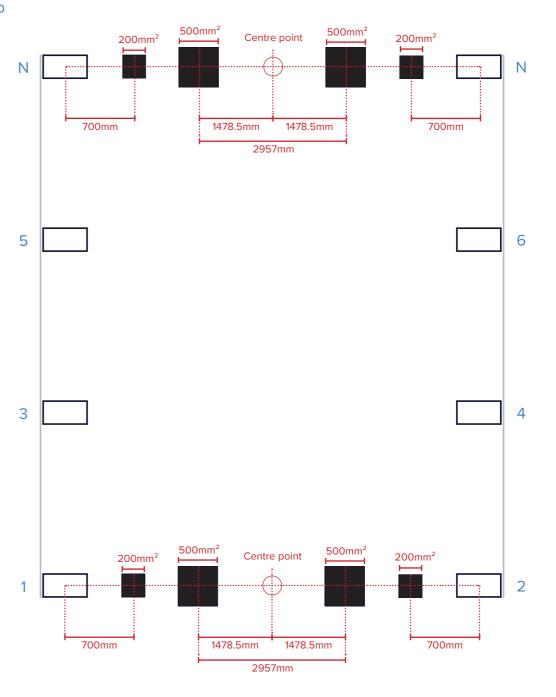
At each gable end, mark the post positions as shown in the diagram. Then dig:



- Two 500mm² holes for the door frame posts
- Two 200mm² holes for the outer upright posts (not required on 5m tunnels)

All holes should be 300-400mm deep.

N = last hoop



Concrete block width

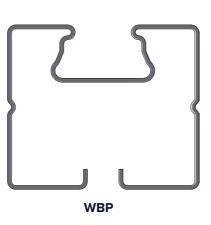
Pack(s): CSS206, CSS204

Familiarise Yourself With The Steel Box Profile

This steel box profile (WBP) is used throughout the construction of your EnviroPro Single Span Polytunnel, including end frames, base rails, side rails. It is useful to familiarise yourself with this profile to avoid confusion.

The top (larger) channel is for wiggle wire which is used for attaching the cover. The bottom (smaller) channel is used to slide M8 bolts with cotter in for fixing brackets.

The top wiggle wire channel should be on the outside of the tunnel, and the bolts should be on the inside.

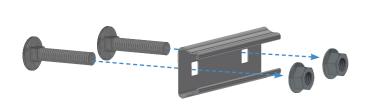


Using Cotters

Cotters are used throughout for attaching brackets to the steel box profile. Cotters come in various sizes.

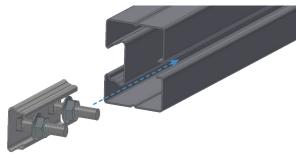
1. Assemble cotter, bolts, and bracket

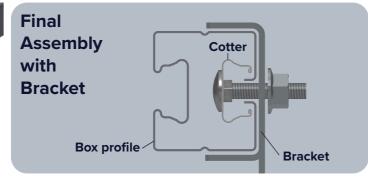






3. Slide cotter and bracket assembly into box profile





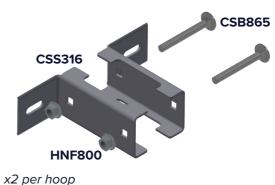


Take note of the cotter positions at each stage of the build.

It isn't possible to retrofit cotters, therefore it is critical that cotters are in position before the section is fitted to the frame.

Bracket Assembly



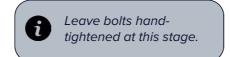




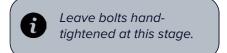
Bracket Layout
Loosely place parts
into position.

x4 total

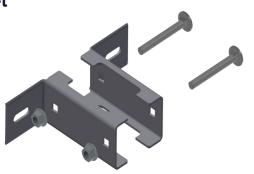
For all inner hoop foundations (a)

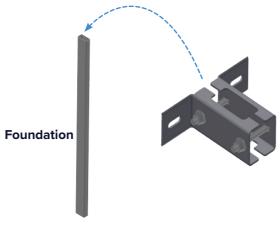


For all end hoop foundations (b)

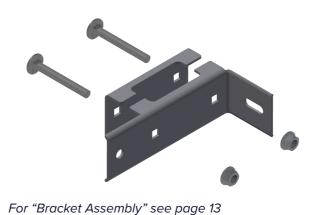


1. Loosely assemble inner hoop base rail 2. Slide bracket onto inner foundations bracket

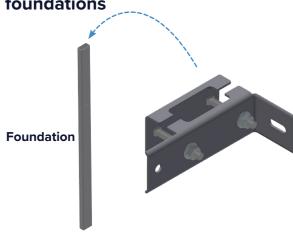




1. Assemble end hoop base rail bracket



2. Slide bracket onto end hoop foundations



For "Bracket Assembly" see page 13

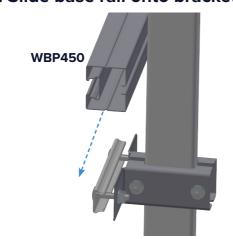
3. Loosely attach cotter

WWC003

CSB840

HNF800

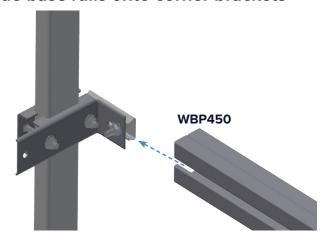
4. Slide base rail onto brackets



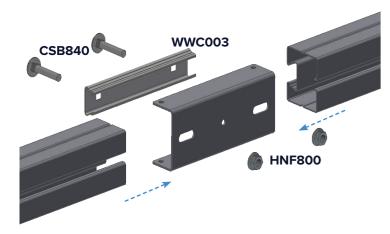
3. Loosely attach cotter



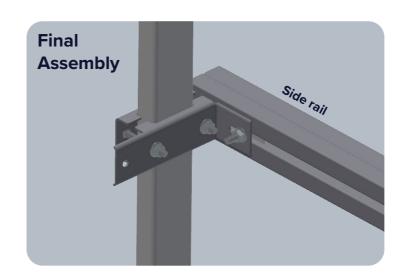
4. Slide base rails onto corner brackets



5. Join base rail profiles

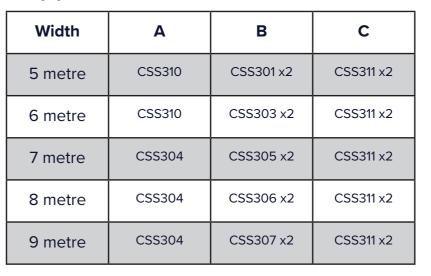






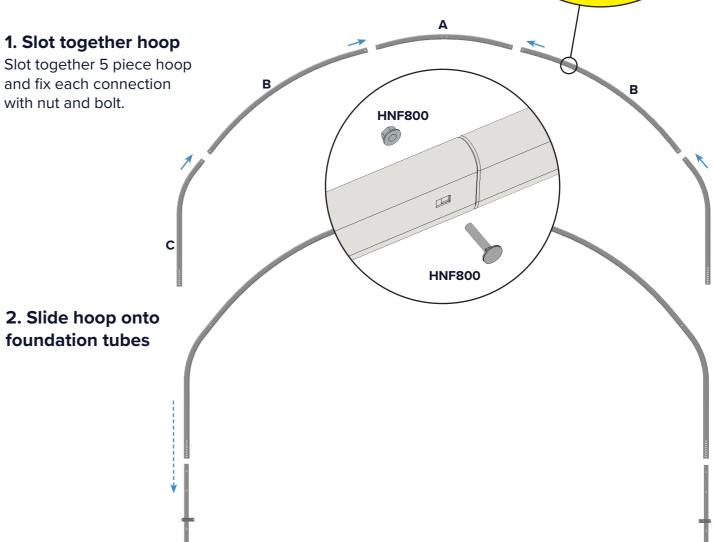
Hoop Assembly

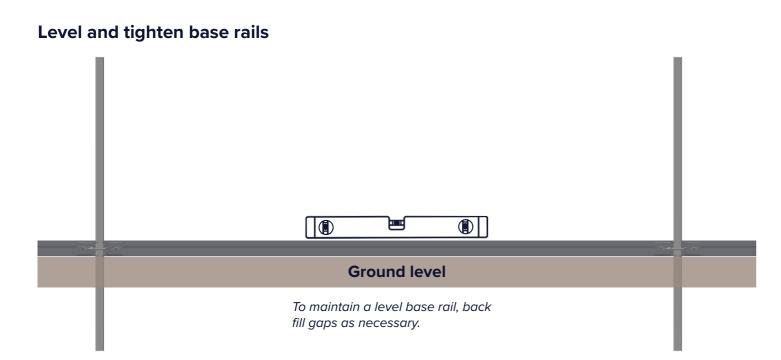
Hoop parts





For each hoop





Maintaining a level base rail is of particular importance if you have side ventilation.

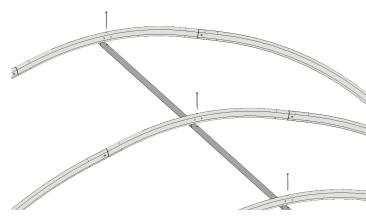
Install Ridge Bars

1. Attach first ridge bar



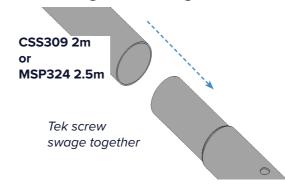
Starting at the front hoop, attach first ridge bar piece (CSS308) to hoop using nut and bolt.

3. Fasten ridge tubes to hoops



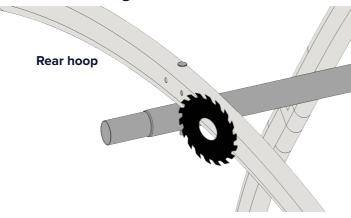
...and attach to hoop with nut and bolt. Continue for each hoop.

2. Connect ridge tube lengths



For each inner hoop, connect a length of ridge tube (CSS309)...

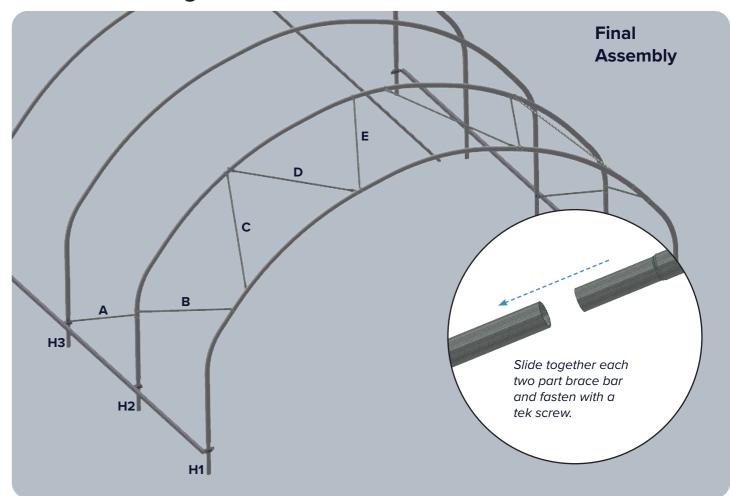
4. Trim final ridge tube



On the rear hoop, cut the protruding ridge bar flush with the outer face of the hoop. Insert plug RPP50.

Raise Two Outer Hoops Lift the two outer hoops by around 150mm and fix in place. Leave all inner hoops at lowest level. We'll use this for tensioning the cover in a later step. HINF100 HINF100

Brace Bar Configuration



Hoop bracing parts

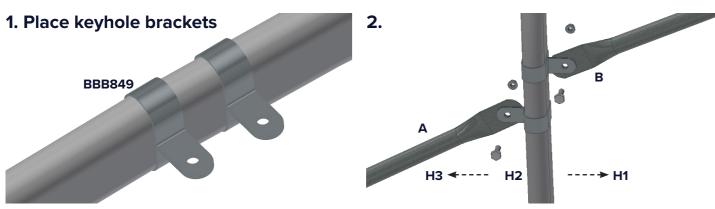
Each brace bar consists of two parts. Use the table below to identify your required brace bar parts.

Key to Part Codes Example: BBP160 Ø32

 $\{BB\} \qquad \{P/S\} \qquad \{160\} \qquad \{\emptyset 32\}$ $\{Brace\ Bar\} \{Plain/Swaged\} \{Length\ in\ cm\} \{Diameter\ in\ mm\}$

Width	Hoop Spacing	Α	В	С	D	E
5 metre	2500mm	BBP160 Ø32 BBS100 Ø32				
6 metre	2500mm	BBP160 Ø32 BBS102 Ø32				
7 metre	2000mm	BBP160 Ø32 BBS060 Ø32				
8 metre	2000mm	BBP183 Ø50 BBS040 Ø50	BBP183 Ø50 BBS040 Ø50	BBP160 Ø32 BBS071 Ø32	BBP160 Ø32 BBS071 Ø32	BBP160 Ø32 BBS071 Ø32
9 metre	2000mm	BBP183 Ø50 BBS040 Ø50	BBP183 Ø50 BBS040 Ø50	BBP183 Ø50 BBS040 Ø50	BBP160 Ø32 BBS094 Ø32	BBP160 Ø32 BBS094 Ø32

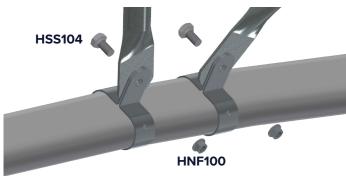
Fitting Brace Bars



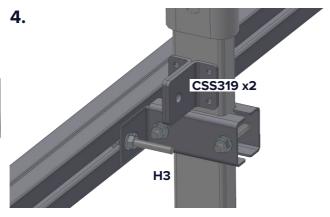
hoop **H2**.

Place keyhole brackets on hoops. Splay the bracket to slide over the hoop.

3. Attach brace bars

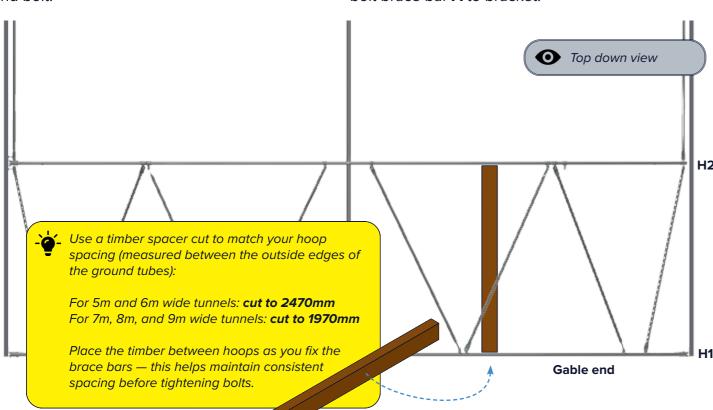


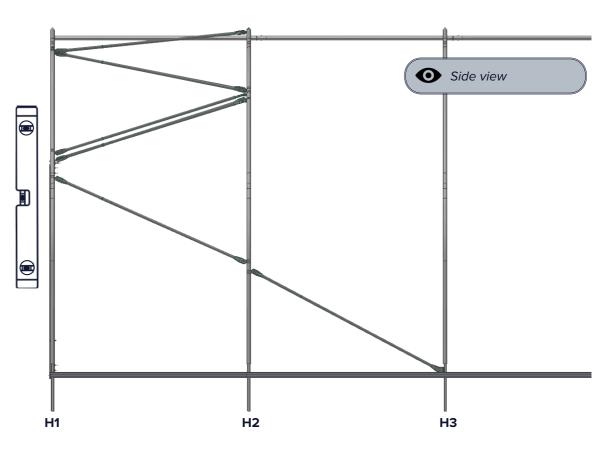
Attach brace bars to key hole clamps with nut and bolt.



Note bracket configuration for brace bar A & B on

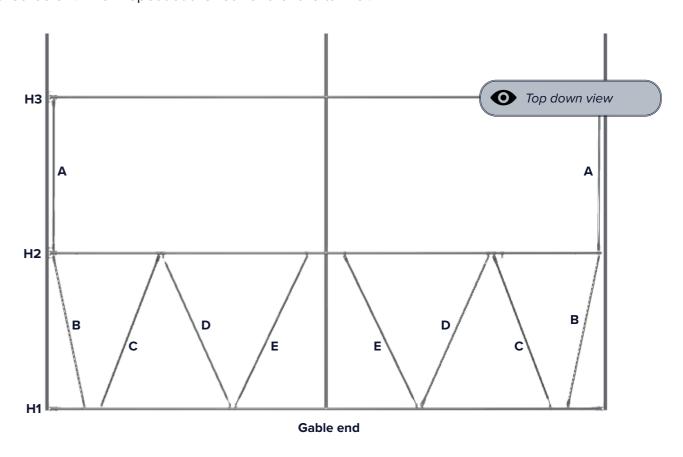
Note hoop **H3.** Attach bracket with tek screw and bolt brace bar **A** to bracket.





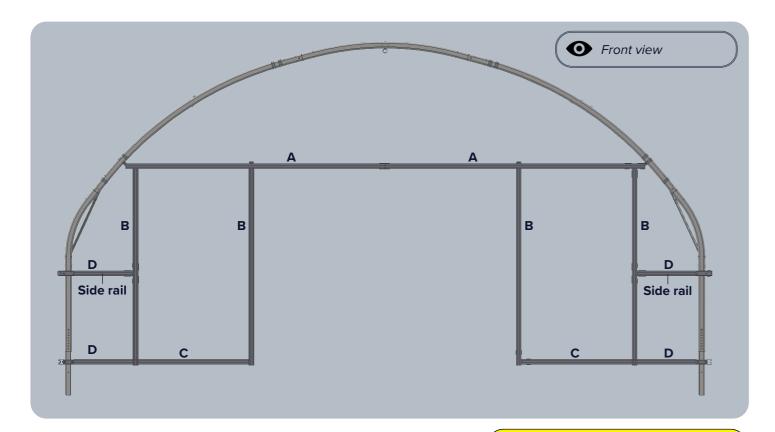
Ensure all hoops are vertical before fully tightening up. Fix brackets to hoops with tek screws.

Refer to image below for final configuration. Mirror configuration to complete the front end bracing as pictured below. Then repeat at the rear end of the tunnel.



Gable End Frame Configuration

Review the diagram and table below for the correct gable end configuration.

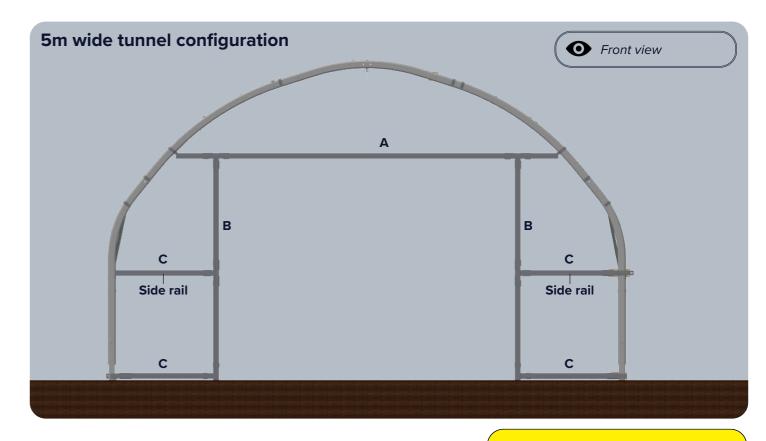


Side Rail only required if polytunnel includes side rails.

Gable End Parts

Width	А	В	С	D	Fittings
6 metre	WBP250 x2	WBP290 x4	WBP080 x2	WBP080 x4	CSS201
7 metre	WBP350 x2	WBP290 x4	WBP170 x2	WBP080 x4	CSS201
8 metre	WBP350 x2	WBP290 x4	WBP210 x2	WBP080 x4	CSS201
9 metre	WBP400 x2	WBP290 x4	WBP250 x2	WBP080 x4	CSS201

5m wide tunnels require a slightly different configuration. Review the diagram and table below for the correct gable end configuration.



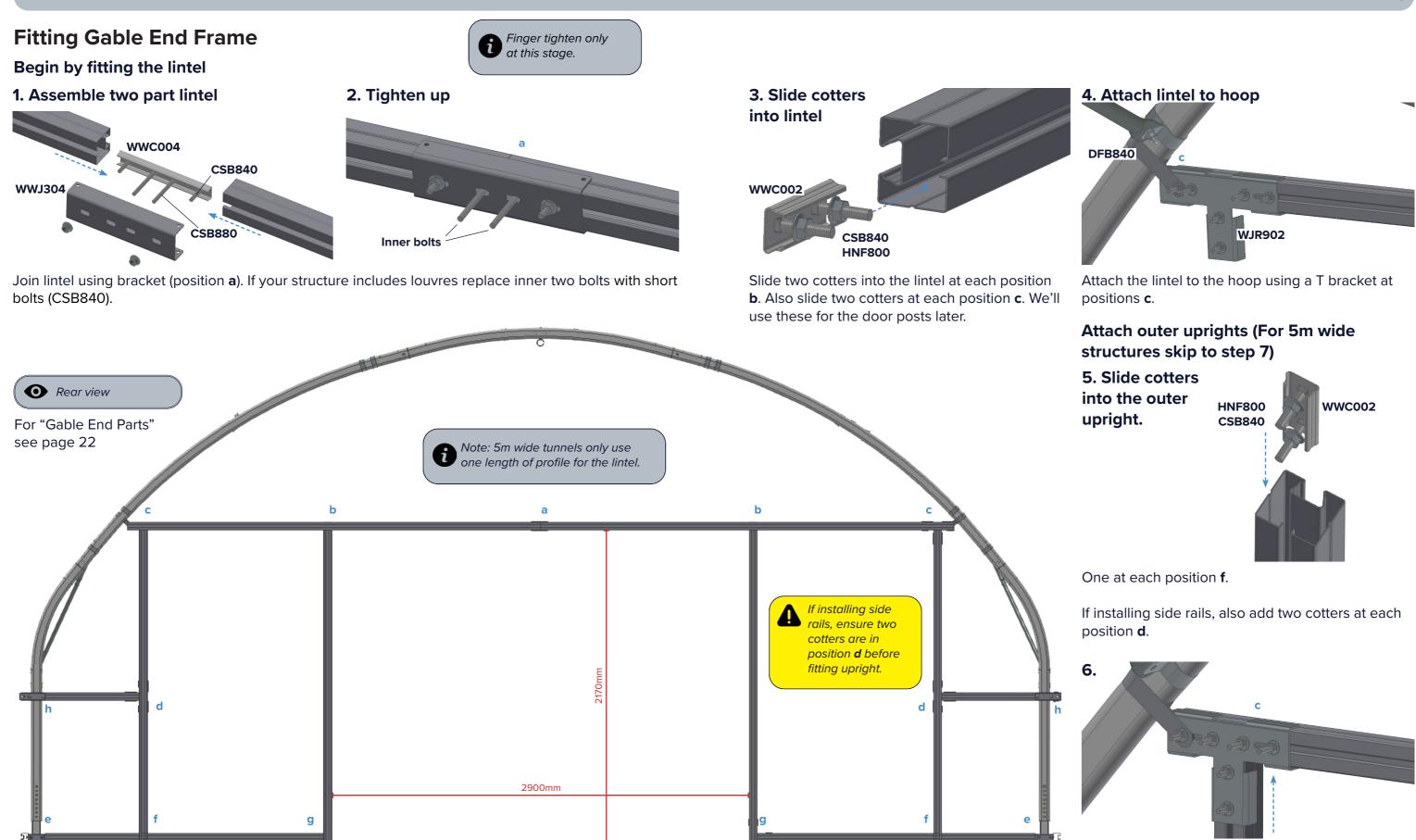
Side Rail only required if polytunnel includes side rails.

Gable End Parts

Width	Α	В	С	Fittings
5 metre	WBP400 x1	WBP250 x2	WBP210 x2	CSS200

For "5m wide tunnel configuration" see page 23





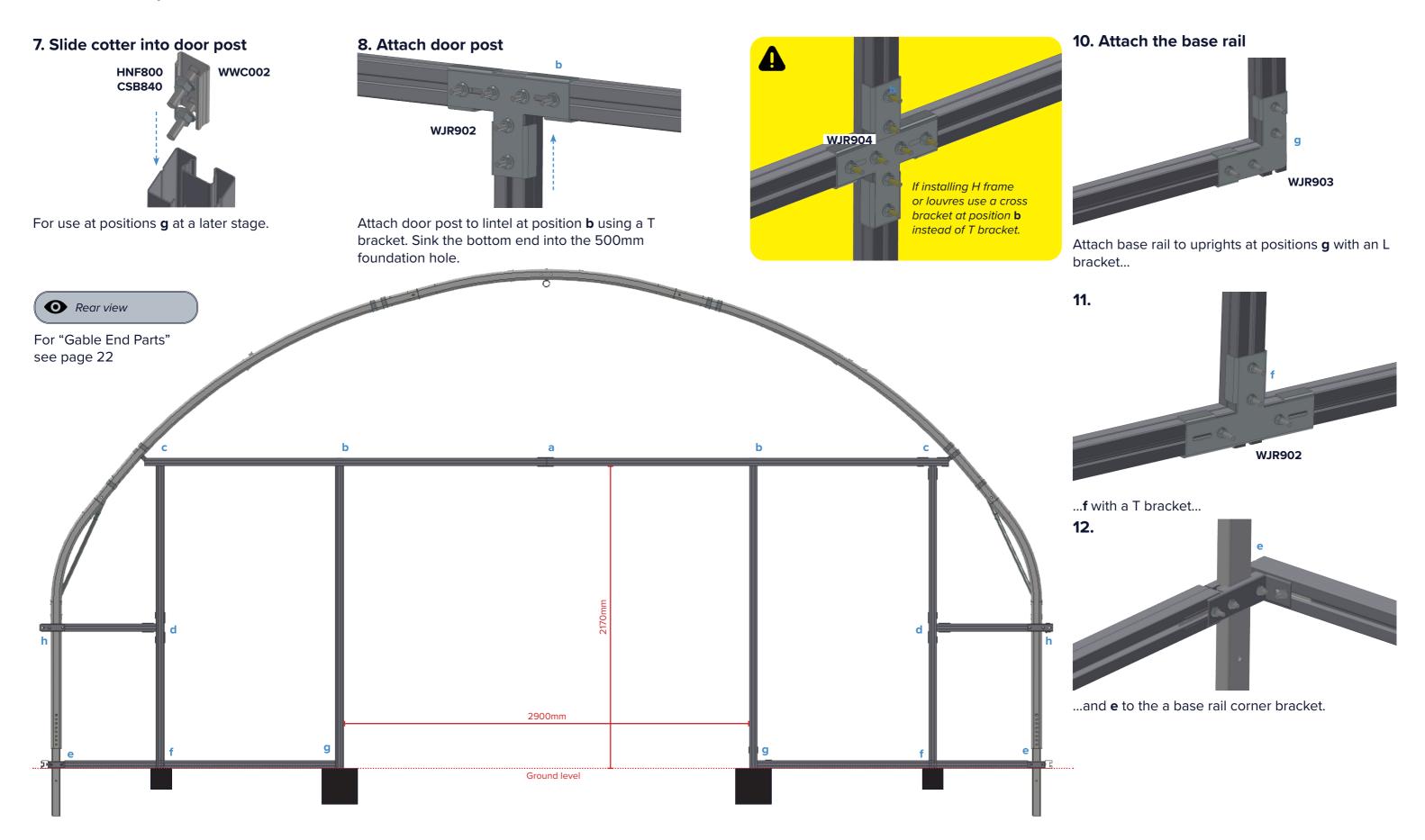
Ground level

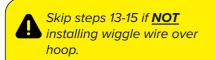
foundation hole.

Attach the outer upright to the lintel at positions **c**. Sink the bottom end of profile into the 200mm

26 27

Attach the door post

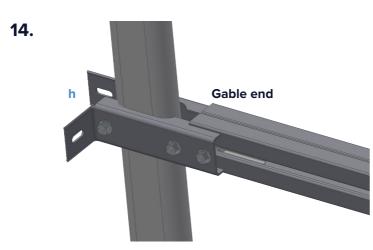




13. Attach gable end side rail (if required)



Attach gable end side rail to hoop using a side rail bracket. **Only on sides with side rail**.



Finger tighten to hold in place.

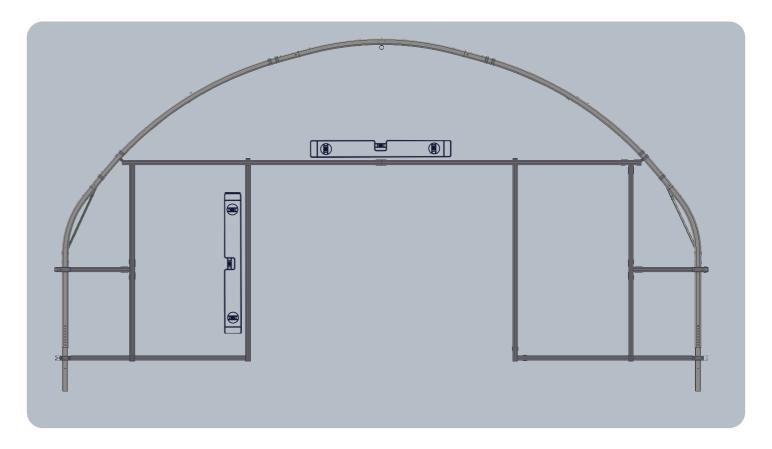
15. Attach to upright



Attach gable end side rail to upright at position **d** using a T bracket. You should have two loose cotters in the upright from an earlier step.

16. Check levels

Check levels on all bars before fully tightening.

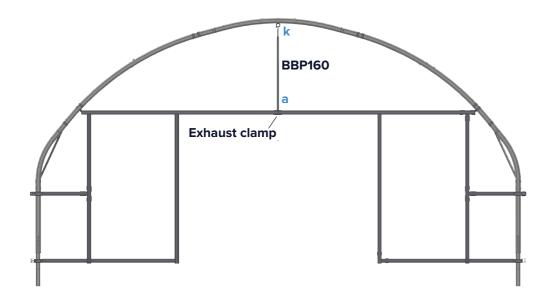


Repeat steps for the other gable end.

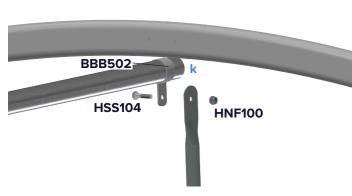
Install Single Dropper



Skip if installing louvres.

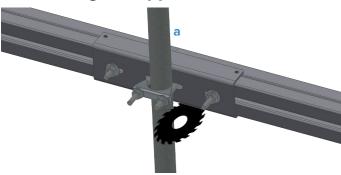


1. Attach to ridge bar



Attach single dropper to ridge bar with bracket.

3. Trim single dropper

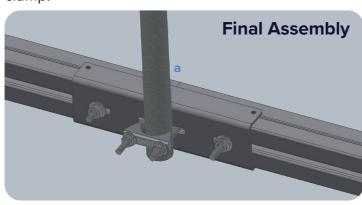


Then cut single dropper flush with the underside of the lintel.

2. Attach to lintel

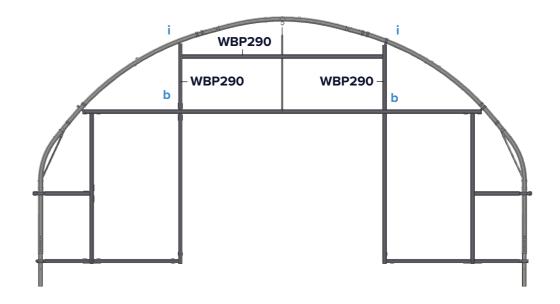


Attach single dropper to lintel with exhaust clamp.



Install H frame

Only applies to 8m, & 9m wide tunnels.



1. Attach to hoop



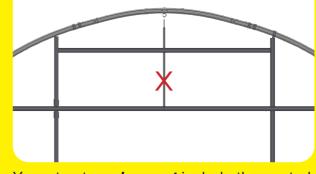


2. Attach to lintel

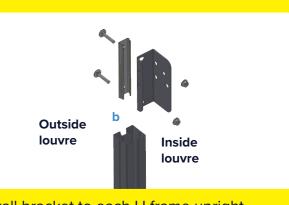


...and a cross bracket at positions b.





Your structure **does not** include the central drop hanger.



Install bracket to each H frame upright. Ensure correct orientation.

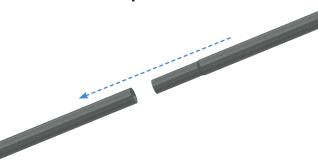
Install Lintel Brace Bar

The lintel brace bar goes from the second hoop (**H2**) to the lintel at position **b**. Depending on your structure spec, position **b** will either be a T or cross bracket.

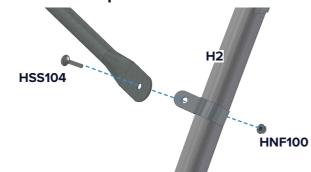
Lintel Brace Bar Parts

Width	Lintel Brace Bar
5 metre	BBS094 + BBP160
6 metre	BBS098 + BBP160
7 metre	BBS060 + BBP160
8 metre	BBS083 + BBP160
9 metre	BBS081 + BBP183

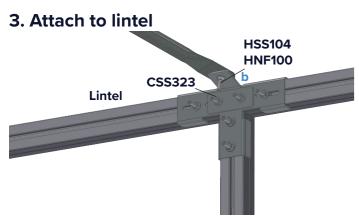




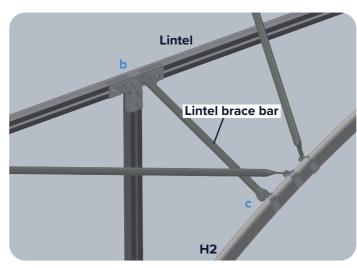
2. Attach to hoop



Connect two part lintel brace bar, and secure with Attach lintel brace bar to hoop **H2**. a tek screw.

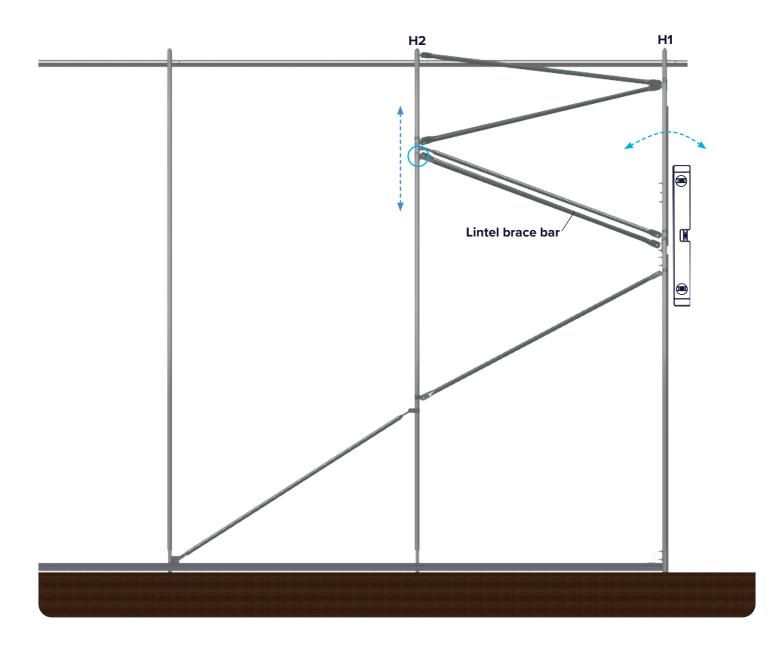






4. Adjust lintel brace bar position

As you push the brace bar up and down the hoop it will push the end frame in and out.



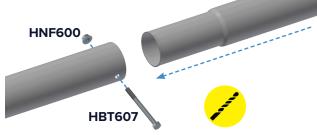
Crop Bar I Hanger Configuration

Width	Crop bar	Α	В	С	D
5 metre	CBP217 CBP174	BBP036 BBS056	n/a	n/a	n/a
6 metre	CBP174 CBP291	BBP036 BBS075	n/a	n/a	n/a
7 metre	CBP291 CBP278	BBP036 BBS083	n/a	n/a	n/a
8 metre	CBP466 CBP174	BBP036 BBS098	n/a	n/a	n/a

1. Assemble two part hanger

Connect two part hanger. Secure with a tek screw.

2. Assemble two part crop bar



Connect two part crop bar. Drill and secure with nut and bolt.

3. Attach crop bar to hoop

At positions a.

4. Attach hanger to ridge bar

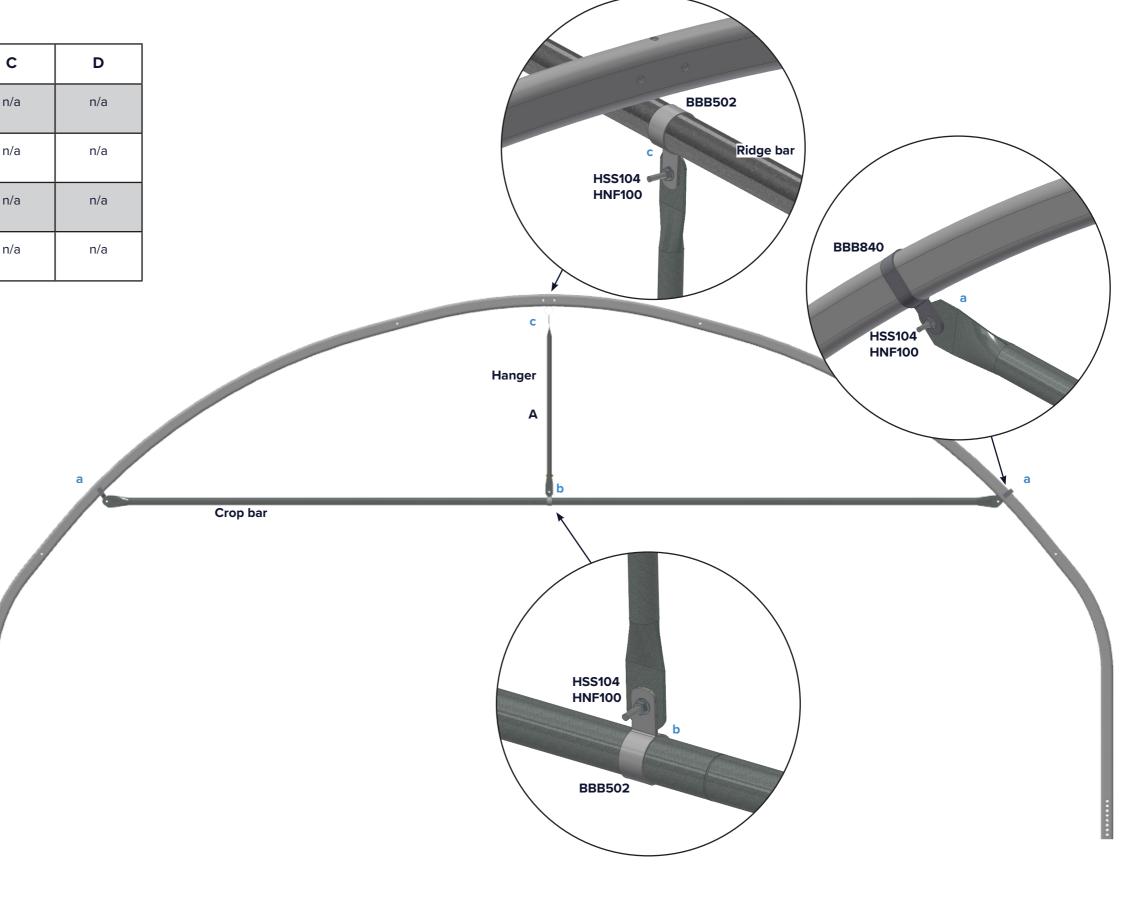
At position **c**.

5. Attach hanger to crop bar

At position **b**.

6. Repeat

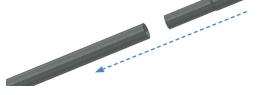
Repeat for every inner hoop.



Crop Bar V Hanger Configuration

Width	Crop bar	Α	В	С	D
8 metre	CBP466 CBP174	n/a	BBP160 BBS030	n/a	n/a
9 metre	CBP466 CBP285	n/a	BBP160 BBS083	n/a	n/a

1. Assemble two part hangers



Connect two part hanger. Secure with a tek screw.

2. Assemble two part crop bar



Connect two part crop bar. Drill and secure with nut and bolt.

3. Attach crop bar to hoop

At positions a.

4. Attach hanger to hoop

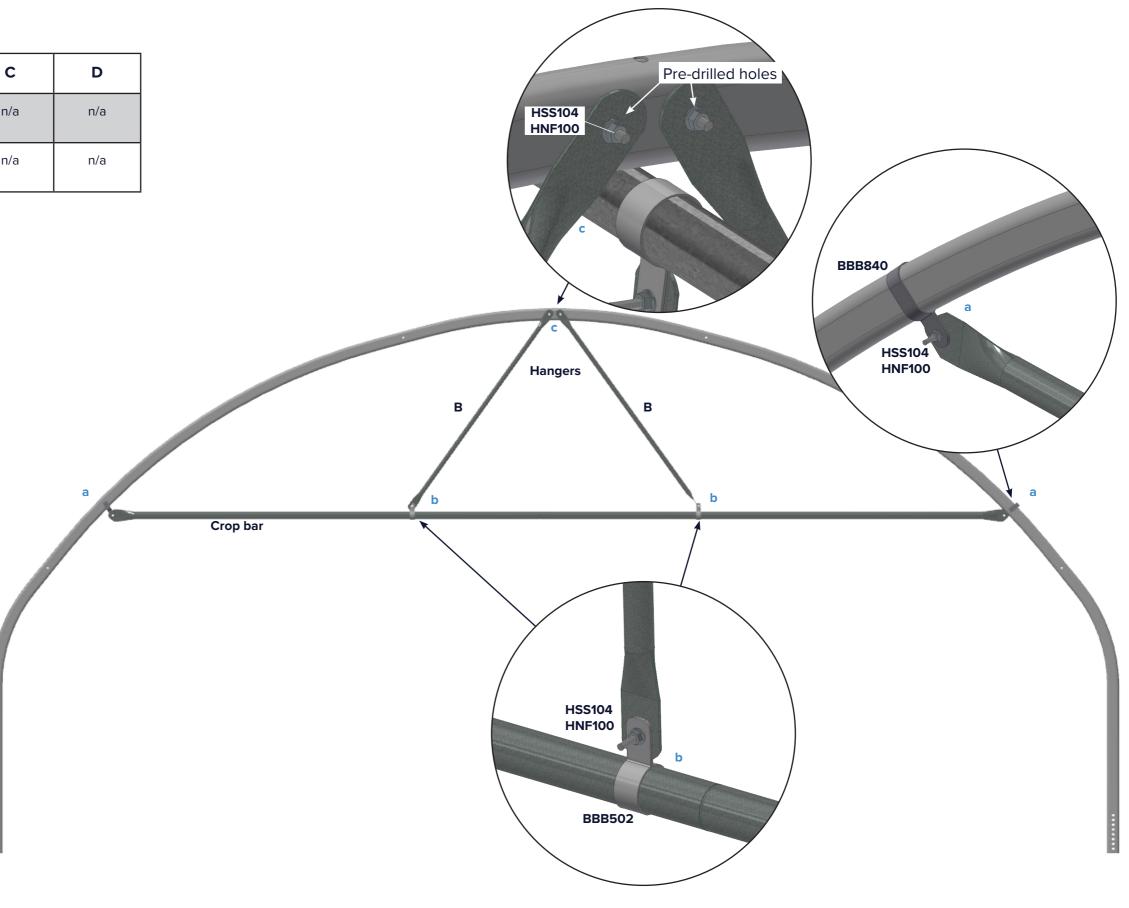
Attach hangers to the hoop (either side of the ridge bar) at position ${\bf c}$ using the the pre-drilled holes.

5. Attach hanger to crop bar

At position **b**.

6. Repeat

Repeat for every hoop.



Crop Bar W Hanger Configuration (Optional Haunches)

Width	Crop bar	Α	В	С	D
9 metre	CBP466 CBP285	n/a	BBP160 BBS083	CBH132	CBH160



Connect two part hanger. Secure with a tek screw.

2. Assemble two part crop bar



Connect two part crop bar. Drill and secure with nut and bolt.

3. Attach crop bar to hoop

At positions a.

4. Attach hanger to hoop

Attach hangers to the hoop (either side of the ridge bar) at position **c** using the the pre-drilled holes.

5. Attach hanger to crop bar

At position **b**.

6. Attach hanger to hoop

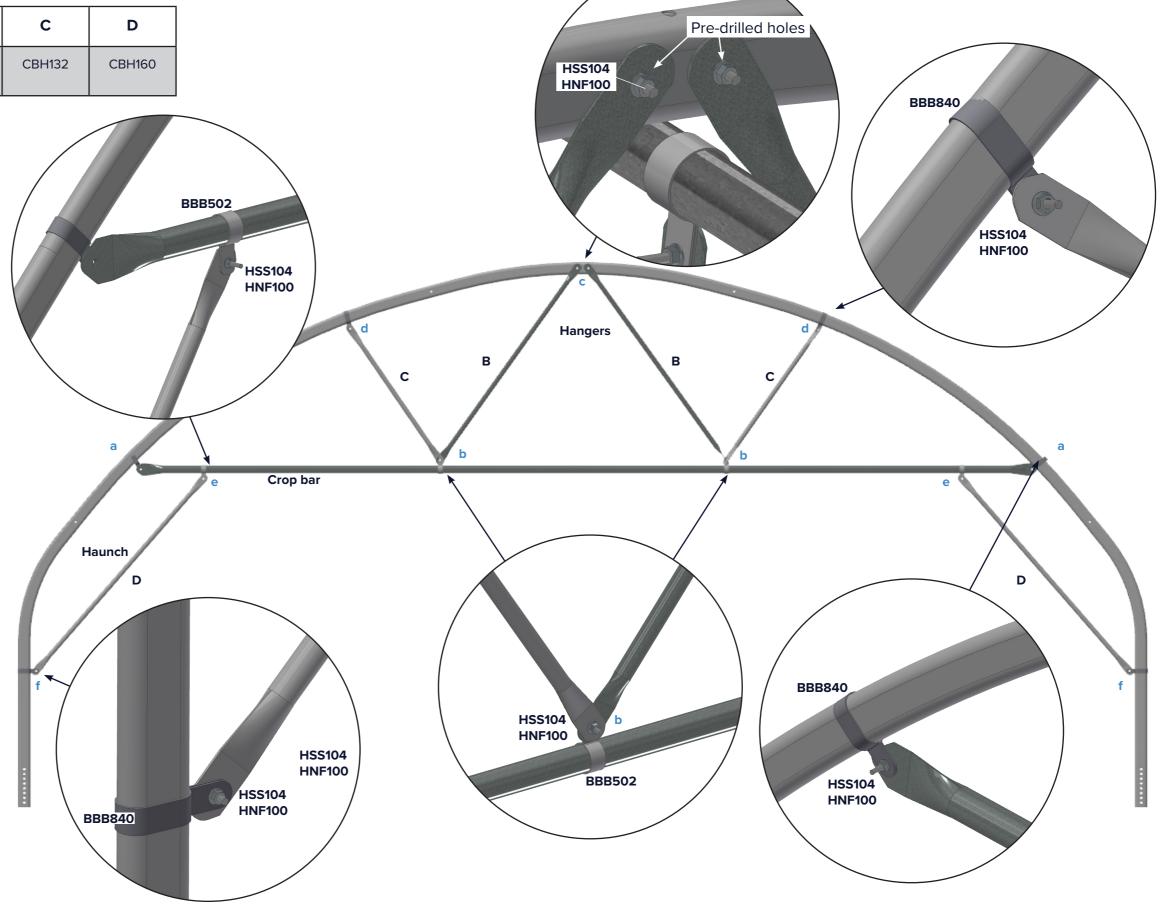
At positions d.

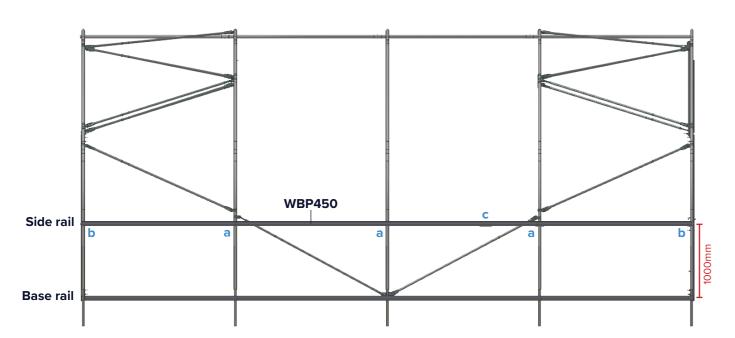
7. Attach haunches (if applicable)

At positions **f**.

8. Repeat

Repeat for every hoop.





If your tunnel has side rails, proceed with the following steps.

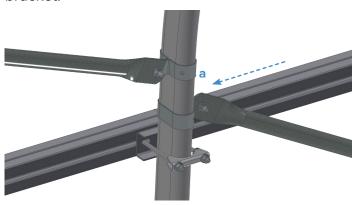
1. Assemble side rail bracket

Loosely assemble side rail bracket around hoop at position **a**.



3. Attach side rail to hoops

Starting at one end of the tunnel. Slide side rail profile onto the cotter and bracket at each hoop - pushing the first piece of profile into the corner bracket.



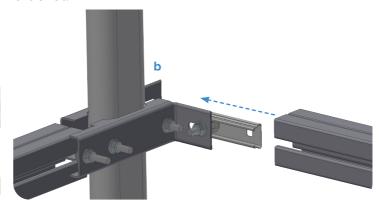
2. Finger tighten

Finger tighten to hold in position, at around 950mm from the base rail.

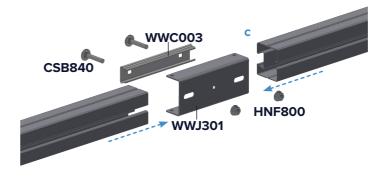


4. Attach to side rail to corner brackets

At each corner (**b**) attach the profile to the corner bracket.



5. Join side rail lengths

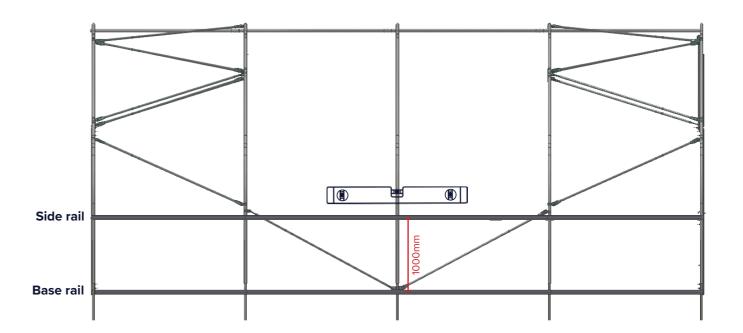


Where side rail profile pieces join, connect them with a bracket.

6. Tighten up



Tighten side rail to form a continuous side rail the full length of the tunnel.



7. Check levels and tighten

Finish side rail assembly by checking level. Ensure distance from base rail is 1000mm (from centre to centre of profile). Tighten all nuts and bolts.

Repeat on sides with side vents.

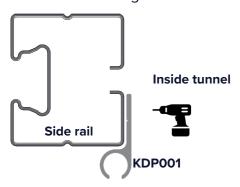
Curtain

Installing Curtain

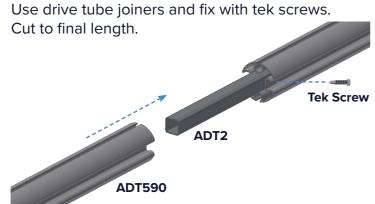
If installing curtain, proceed with the following steps.

1. Attach keder profile (KDP001)

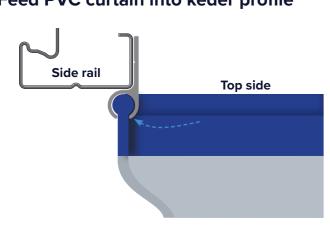
Fix to inside of side rail using tek screws.



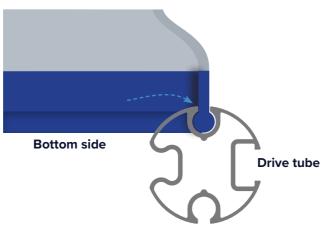
2. Assemble drive tube



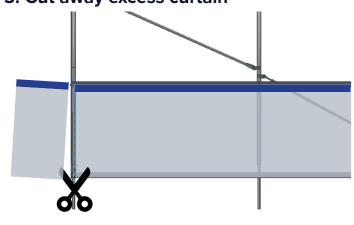
3. Feed PVC curtain into keder profile



4. Feed curtain onto drive tube



5. Cut away excess curtain



Manual Winder

1. Attach bottom bracket (SVB001)

Slide bottom bracket onto winch tube and fasten with a tek screw.

2. Slide on manual winder (MWD001)

Onto winch tube.

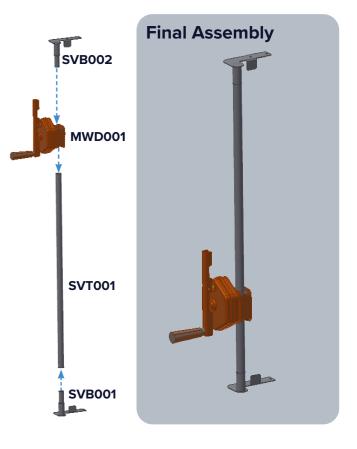
3. Attach top bracket (SVB002)

Onto winch tube.

4. Attach drive tube adapter (SVA093)

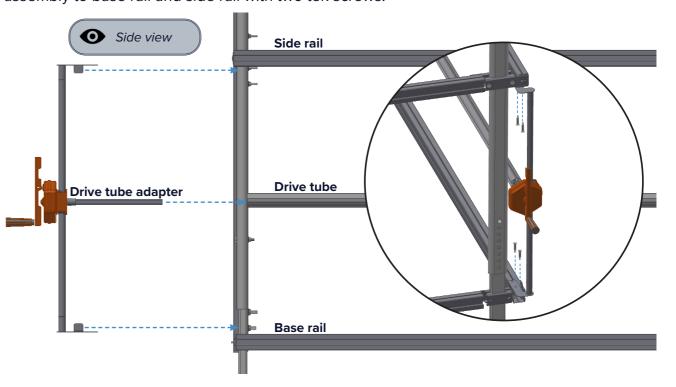
Fix in place with a bolt.





5. Fit manual winder assembly to drive tube

Attach manual winder assembly to the structure. Slide drive tube adapter into drive tube and fix winder assembly to base rail and side rail with two tek screws.

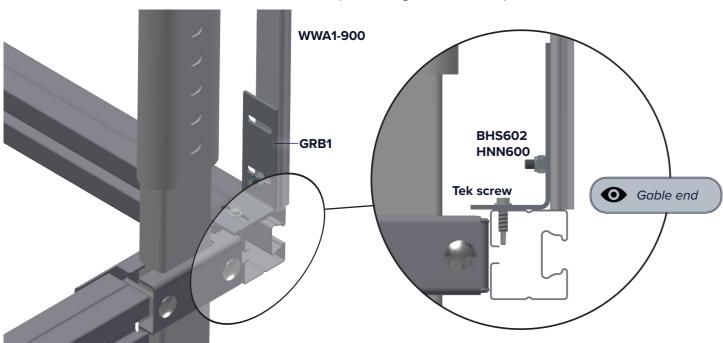


6. Test operation and leave in rolled up position

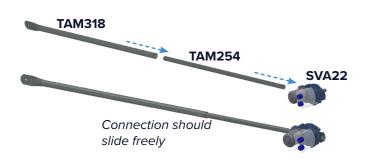
Motorised Winder

1. Attach wiggle wire channel

Fix with tek screw to base rail. Use nut and bolt (nut facing inside tunnel)



2. Assemble motorised winder

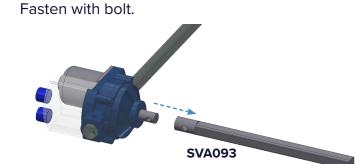


3. Fix motor to arm

Align holes with tube and secure with bolt.



4. Attach drive tube adapter



5. Connect motor to drive tube

Slide onto drive tube and fix with tek screw.



7. Attach arm to base rail

Lay motor assembly on the floor with telescopic arm in shortest position. Mark position **a** on base rail and drill hole. Fix telescopic arm with nut and bolt. The middle connection should slide freely.

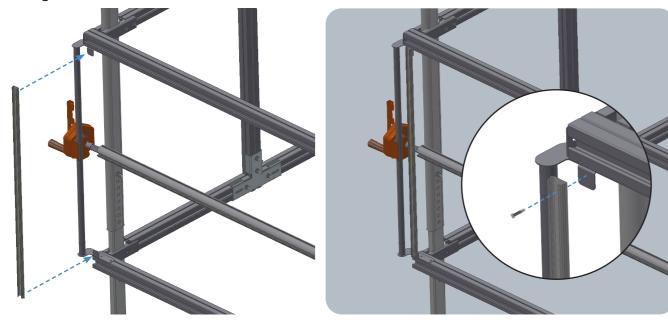


8. Test operation and leave in rolled up position

Before fixing side vent netting, install wiggle wire profile uprights, if not already in place.

For ends with curtain winder

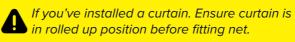
Attach a length of wiggle wire channel to the winder assembly bracket using tek screws.



For ends without curtain winder

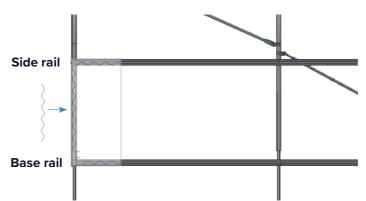
Attach a length of steel profile between the side rail and base rail. Use L bracket and tek screws to fix to rails.





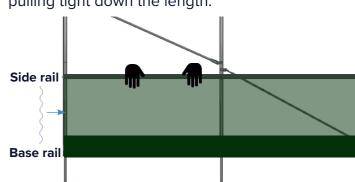
1. Fit draught exclusion panels

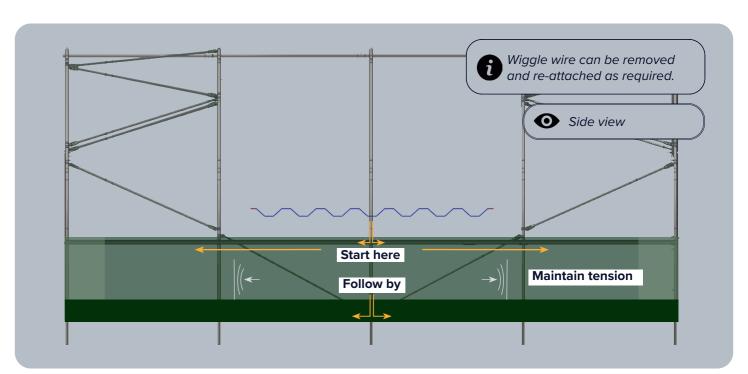
Install one for either end of curtain.



2. Position net and hold in place

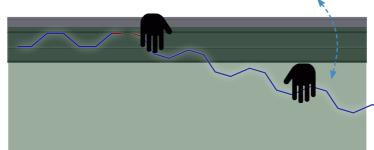
Attach either end with a piece of wiggle wire pulling tight down the length.





3. Attach net with wiggle wire

Start from the centre of the side rail working outwards. Then attach to the base rail.



4. Cut wiggle wire to length

Using a pair of wire snips.



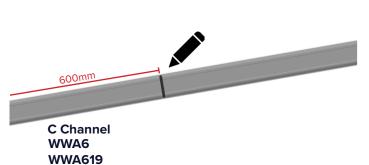
Please refer to instructions INS440, INS388, and INS068

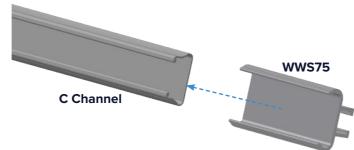
1. Mark C channel every 600mm

Use tape or a marker pen.

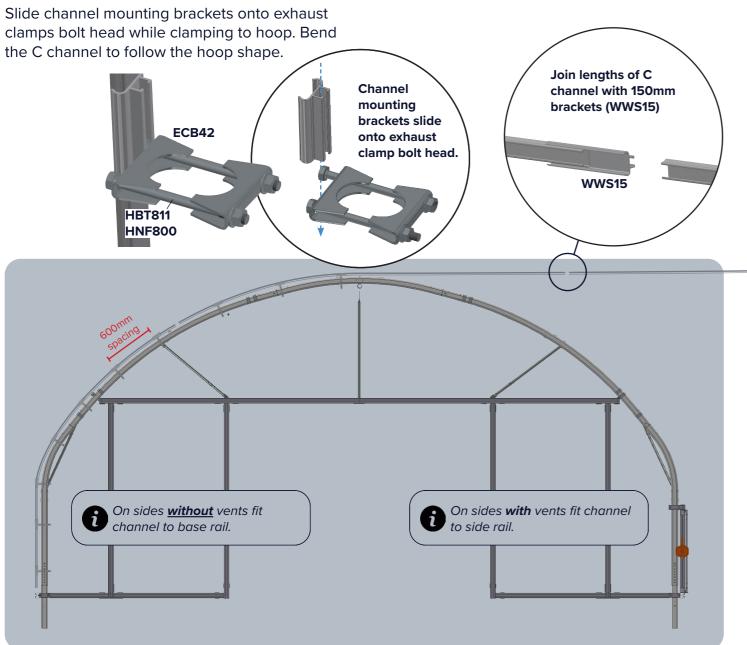
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3. Attach C channel to hoop



Above Door Louvre

Assemble Louvre

1. Slide brackets onto outer uprights

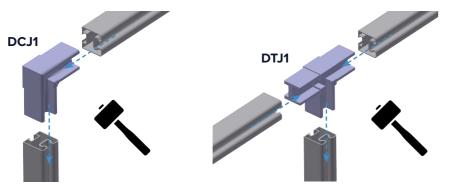
Ensure correct orientation.

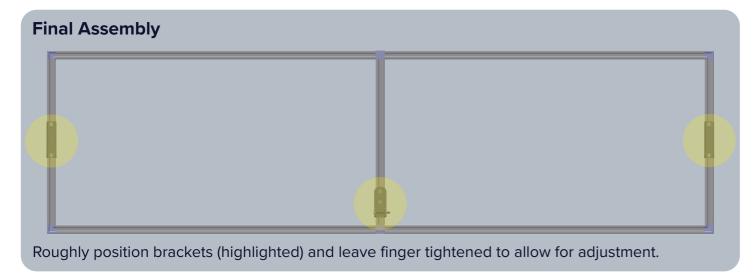
2. Slide bracket onto centre upright



3. Complete frame using corner and T joiners

Use mallet to secure.

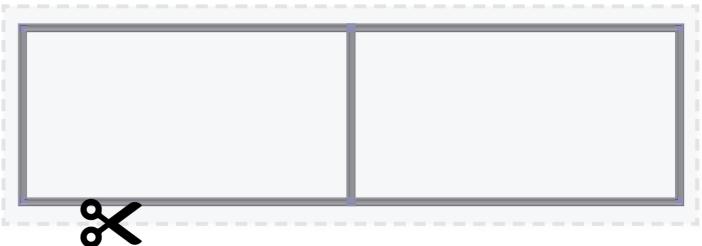




Cover Louvre

1. Roughly cut polythene to size

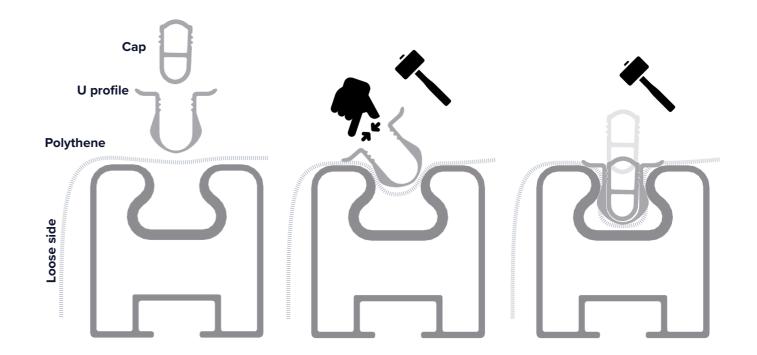
Allow approximately 30cm excess of polythene on all sides to allow for U profile to be pushed into position.

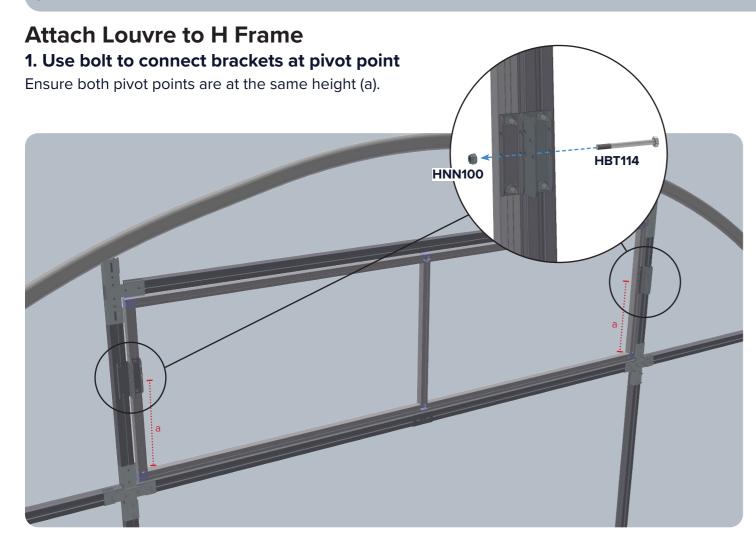


2. Fix polythene to frame

Attach polythene to frame perimeter using ali trap, ensuring polythene is tight. See below for guidance using ali trap.

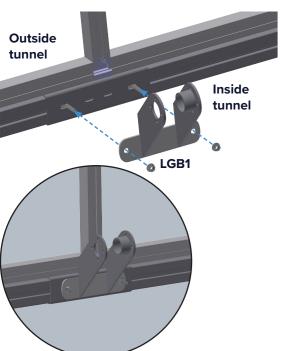




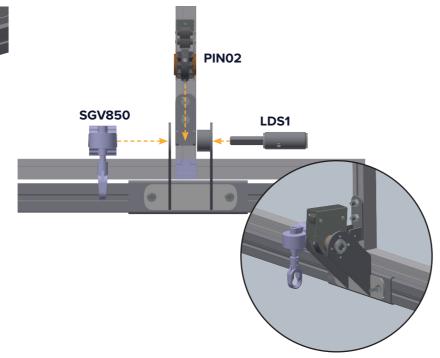


Connect Rack and Pinion

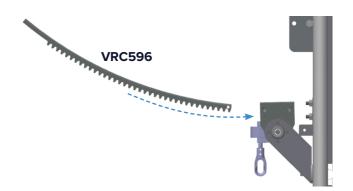
1. Attach bracket to lintel



2. Assemble motor

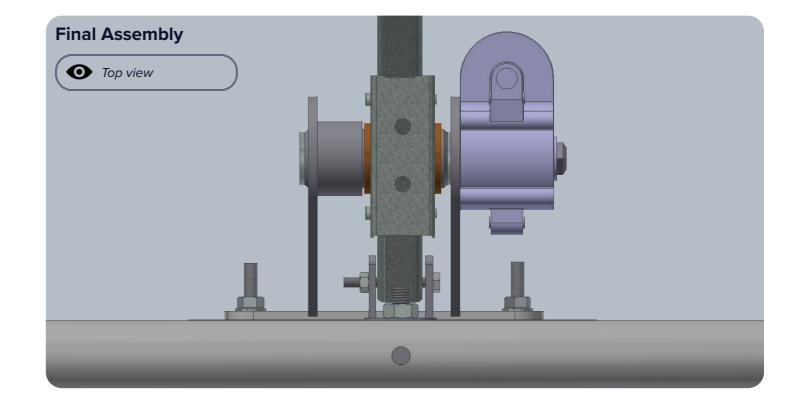


3. Slide rack into motor assembly



4. Attach rack to louvre bracket

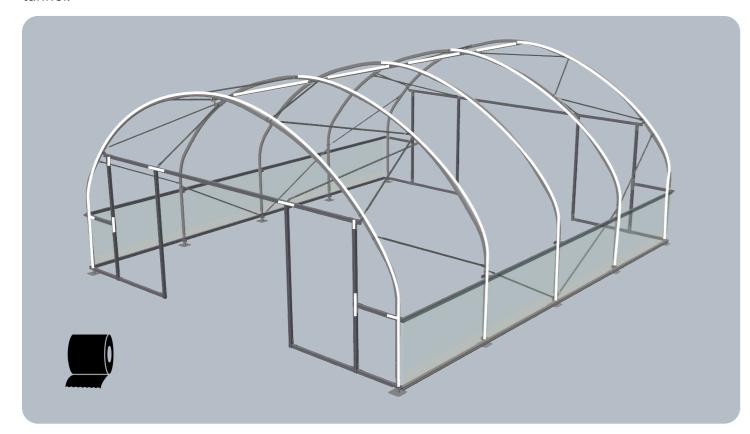




Covering

Applying Anti Hot Spot tape

Use anti hot spot tape to cover hoops and ridge bars, as well as any sharp edges before covering your tunnel.



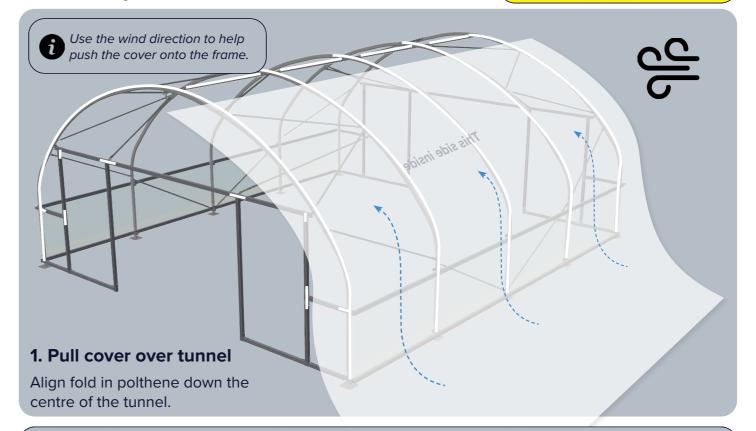
Prepare Polythene

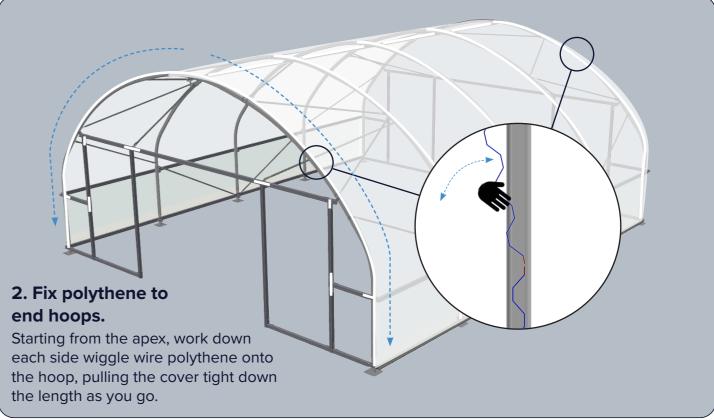
Unroll or unfold your polythene. Polythene is folded widthways. Ensure your polythene is the right way round - you should be able to read the text from the inside.



Covering Polytunnel With Wiggle Wire Over Hoop



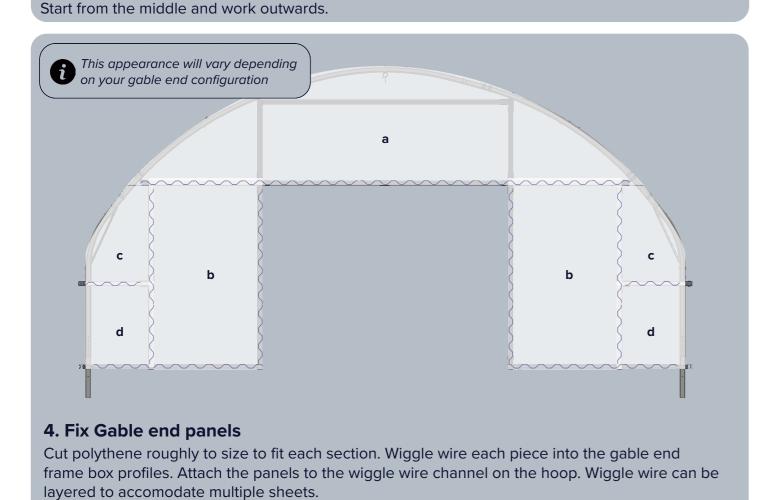




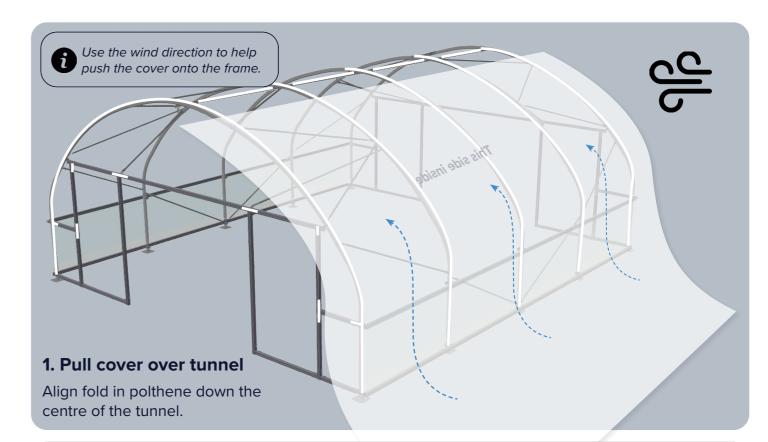
For "Covering Polytunnel Pleating Gable Ends Method" see page 57

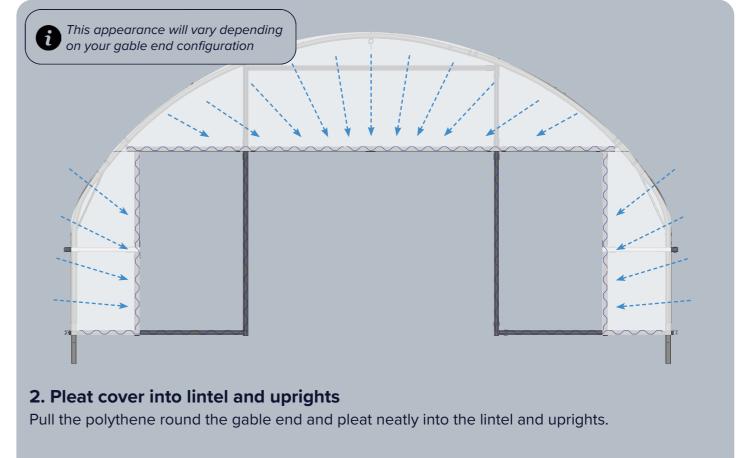


3. Fix polythene to polytunnel sides For sides with vents attach to side rail. For sides without vents attach to base rail.

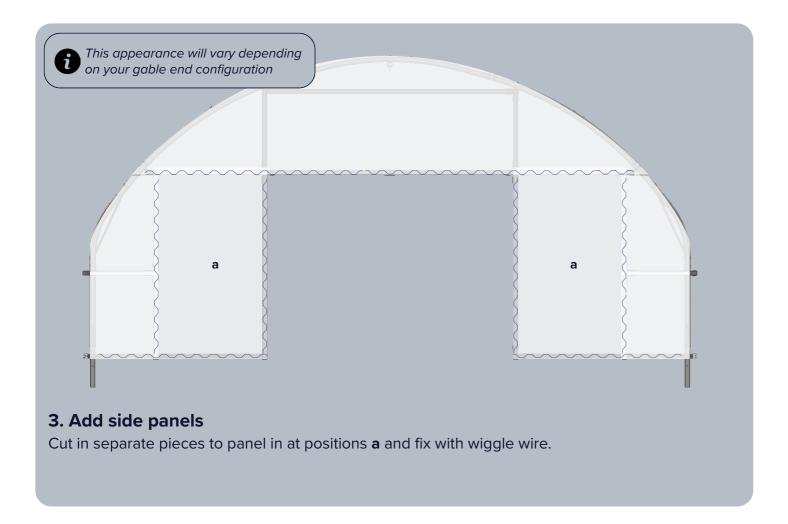


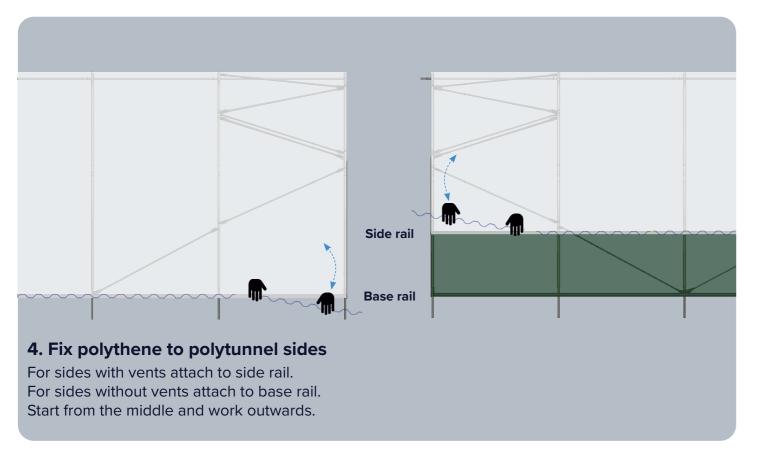
Covering Polytunnel Pleating Gable Ends Method





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We're Always Looking To Improve

If you have any feedback on:

- Delivery
- Design
- Build quality
- Instructions
- Support & customer services

Please email: marketing@npstructures.co.uk

Acknowledgements

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