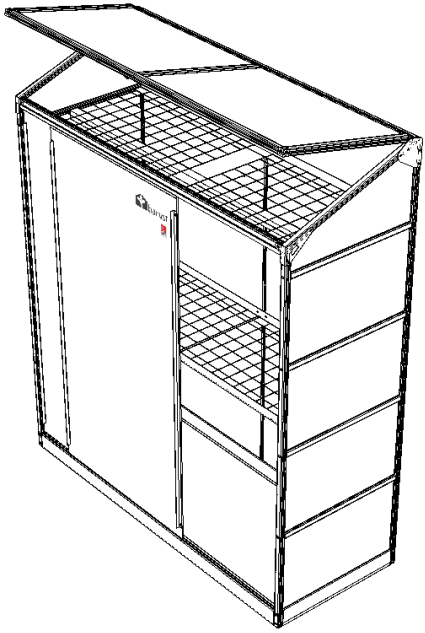
Setup guide

Model S24

Greenhouse only

V4/ From January 2023



If you have a Smart Sprout please also use the smart setup guide whilst assembling your S24

Thank you for buying a Harvst Sprout mini greenhouse.

You can also follow our step by step guide on youtube:

https://www.youtube.com/watch?v=jWL5YH0OSg4&list=PLKLY4TE98Co9VRVXQ2BDlPrBSCeyHmhpR

If you have any questions while setting up, send us an email (help@harvst.co.uk) or check out our forums:

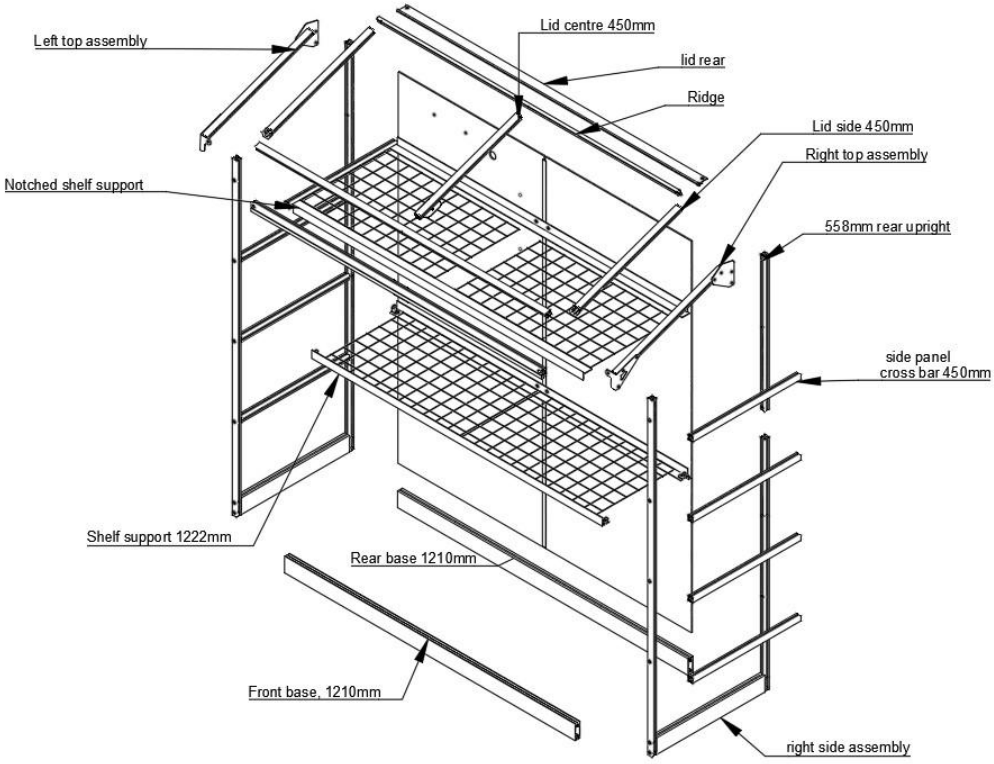
https://grow.harvst.co.uk

SCAN ME WITH YOUR CAMERA:

Important information

Sprout Mini Greenhouses are intended for outdoor use and should be secured to a fence or wall with the provided fixings. Harvst accept no liability for incorrectly used products.

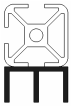
Exploded diagram



Tools provided	**Tools required (not supplied)**
3mm allen key, 4mm allen key 8mm spanner Pozidrive screwdriver	Tape measure to identify parts Secateurs for cutting pipe

Parts list (aluminium pieces)

450mm **x3**
2 lid sides **with corner**
1 lid centre



1210mm **x1**
Front crossbar
Double channel trim attached

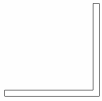
450mm **x8**
Side panel crossbar
2 pre-installed screws per piece

1210mm **x1**
Lid front bar

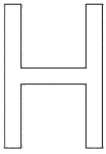
558mm **x2**
Rear upright (top pieces)

Lid prop **x2**

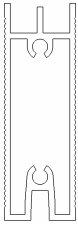
2 x side assemblies
Front uprights -1285mm
Rear uprights - 910mm
Base extrusion - 450mm



Shelf supports **x4**
1 pair notched - 1222mm
1 pair drilled - 1210mm

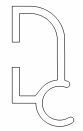


H trim
830mm **x1**
1208mm **x1**
540mm **x1**



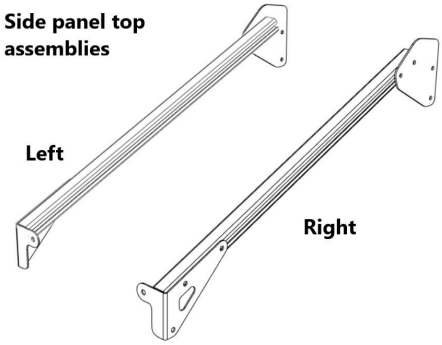
1210mm **x2**
Front and rear base parts

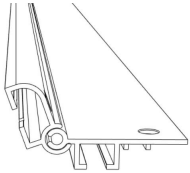
Front: double channel up
Rear: single channel up



1250mm **x1**
Lid bar rear

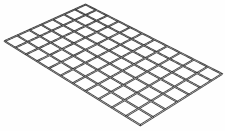
1250mm **x1**
Lid ridge
With black PVC channel





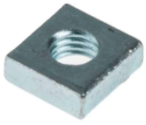
Lid ridge and ridge rear assembly

14” x 22” mesh panels **x4**



Fixings and small parts

Additional fixings will be supplied if your greenhouse comes with a smart control system. See the control system setup guide for details.



M5 square nut **x36**

M5 washer **x2**

M5 Nyloc nut **x12**

M5 x 30mm **x2**

M5 x 8 button **x20**

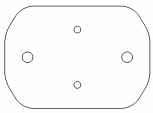
M5 x 10 button **x14**

M5 x 8 cap **x8**

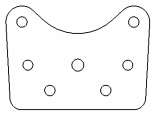
Shelf bracket **x4**

Joining strap **x2**

Fixing bracket **x2**



Lifter arm plate



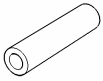
Lifter adapter plate

Cable tie **x10 long**

Hole punch

4.5 x 30mm countersunk head screws **x2**

Blanking plug **x15**



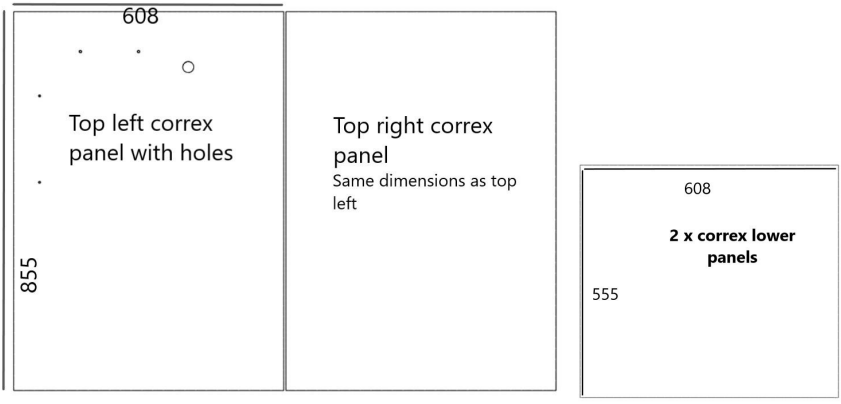
4mm tube for fixing shelves 90mm **x4,** 160mm **x2**

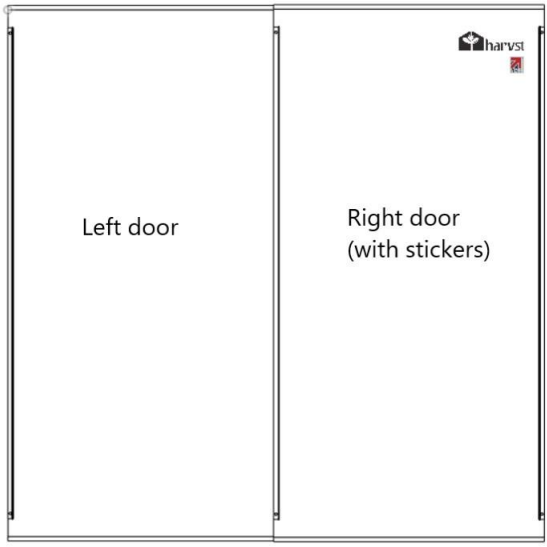
4.5 x 30mm dome head screw **x2**

O-ring **x2**

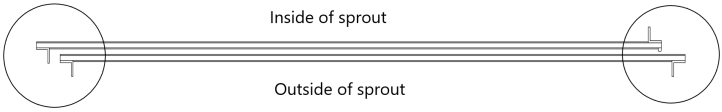
Roll of foil tape

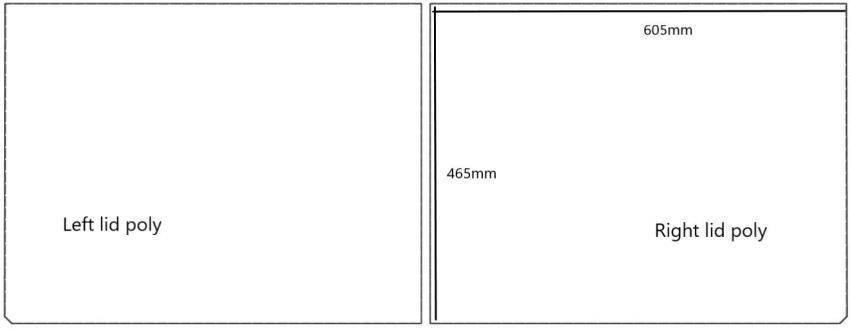
Panels



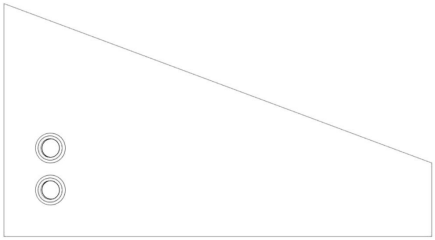


Top- looking down: Perspective of doors in sprout. Note the orientation of the handles

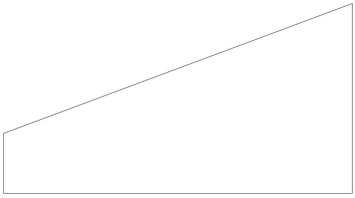




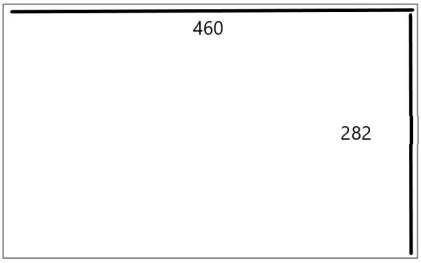
Above - note the orientation of the lid poly relative to the notches in the bottom left/right respectively.



Poly side top panel - left **x1**
Note: Holes for piping



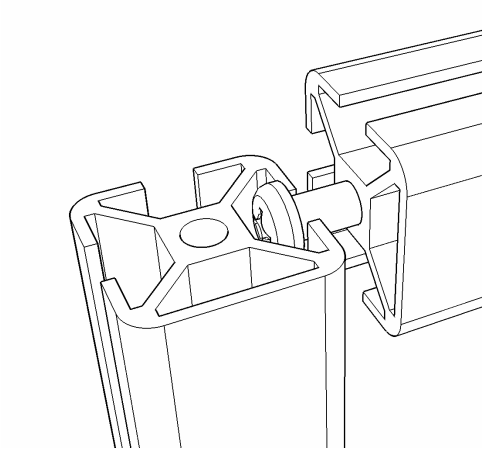
Poly side top panel - right **x1**



Poly side panels **x8**

Slotting parts together

The greenhouse is based on parts that slot together using 30mm stainless steel screws, as shown in the diagram below. These are self tapping screws which require a little bit of force to get them fully seated.



Ensure that your screwdriver is fully engaged with the screw head when you tighten, so that you don't round off the head of the screw.

Note the orientation of each piece in the description; specifically the closed face.

WARNING Every care has been taken during manufacture to avoid sharp edges or burrs, however you should still take care when handling metal parts.

WARNING DO NOT USE POWER TOOLS TO SCREW IN THE SCREWS. YOU MIGHT SNAP OFF THE HEAD, WHICH IS NOT COVERED BY WARRANTY.

Step 1 - Seal the polycarbonate panels (optional)

This step is optional, but is recommended.

Twin wall polycarbonate panels act like double glazing for your mini greenhouse. To improve the insulation characteristics, it's good to seal the ends of the channels using the foil tape provided. It also helps prevent bugs from crawling into the plastic.

1. Peel back a couple of inches of the protective foil which covers both sides of the panels, but don't take it all the way off yet.
2. Apply the tape to the end of the panel, covering the flutes / open ends.
3. Fold down the sides to seal the tape to the panels.

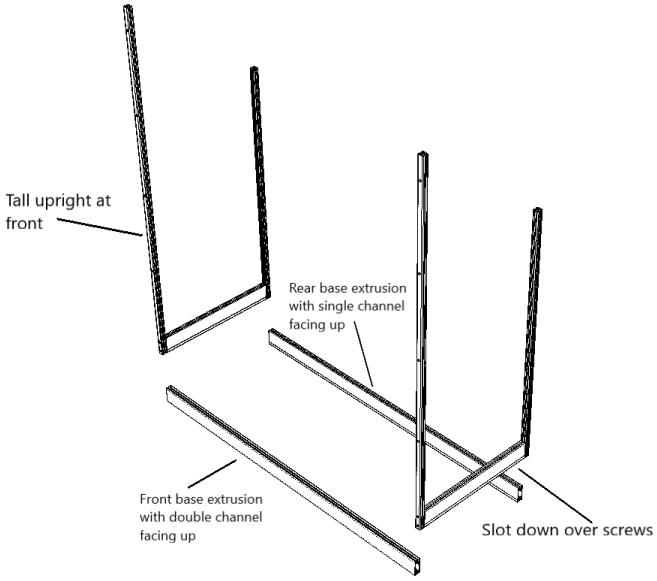
The white film is on the UV protected side which should face outwards when you place the panels into the greenhouse.

Step 2 - Assembling the base

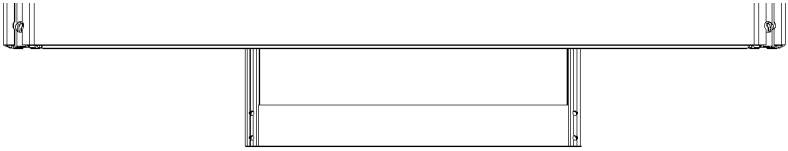
Parts:
1 x left assembly
1 x right assembly
1 x front base 121cm
1 x rear base 121cm

The left and right assemblies are interchangeable.

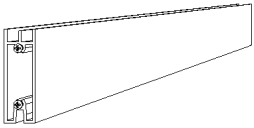
This step is best done on a flat surface where you can easily access the screws at the bottom, such as a table or workbench.

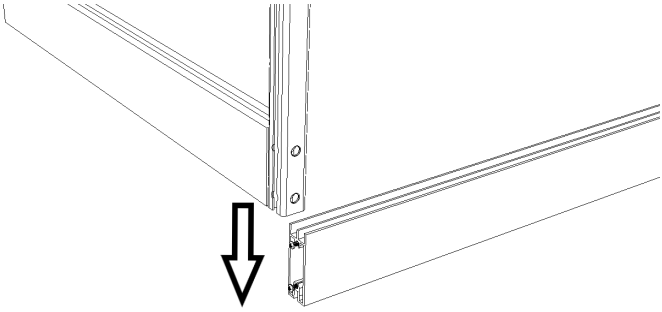


NOTE:
The rear base part has the single channel facing up, and the front has the double channel facing up.



Sprout front





Side assemblies slide down with screw heads of front and rear base extrsusion in the inside slot of upright

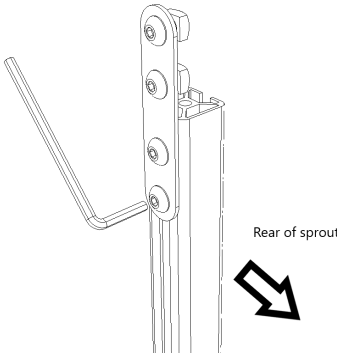
Front of sprout

Slot the left and right assemblies over the screws on the front and rear base parts and tighten the screws using the screwdriver.

Step 3 - Fit the rear upright joining straps

Move the frame down onto the floor.

Parts
2 x joining strap
8 x M5 x 8 button head
8 x M5 square nu5
2 x top rear upright 55.8cm



Insert the 8mm bolts into the joining straps, and put a square nut on the back of each, loosely.

Slide the square nuts into the outside channel of the rear uprights.

The outside channel is the far left or far right channel; the joining straps will be on the outside of the greenhouse.

Tighten the lower pair of bolts.

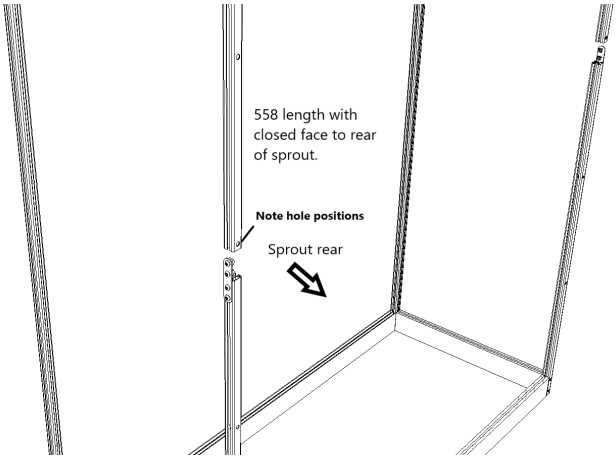
Step 4 - Fit the top rear uprights

Parts
2 x top rear upright 55.8cm

With the holes as shown in the drawing below, slide the top rear uprights down over the joining straps.

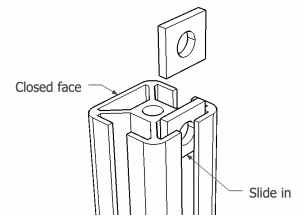
The closed face should be to the rear of the greenhouse.

Tighten the upper pair of bolts.



Step 5 - Insert square nuts to side cross bars

Parts
8 x side cross bar 45cm
8 x square nuts



Insert square nuts into the **inside** channel of each cross bar according to the following quantities per cross bar:

- 3 lengths with 1 square nut
- 1 length with 3 square nuts
- 1 length with 2 square nuts

Please refer to the diagram in step 6 for reference.

Step 6 - Insert the side panels and side cross bars

Parts:
8 x clear side panel
8 x side cross bar 45cm
2 x top clear side panel. Two holes in the Left panel

Note the sequence of cross bars, with the number of nuts in the diagram below.

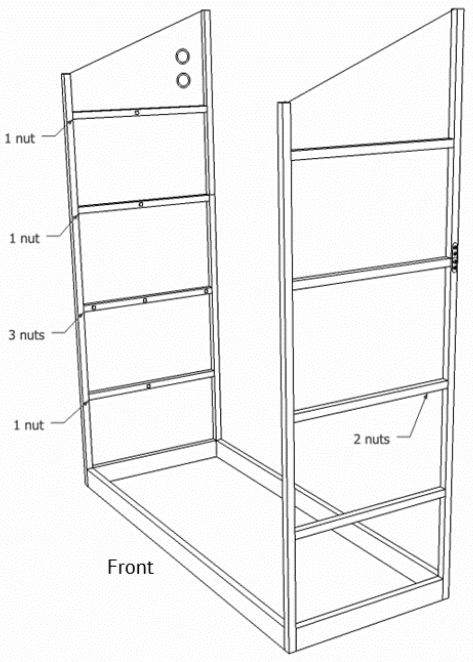
Peel the protective plastic off *both sides* of the side panels, remembering which side has the white film; it should face outside as it is UV treated.

Slot two panels into the frame, one on each side.

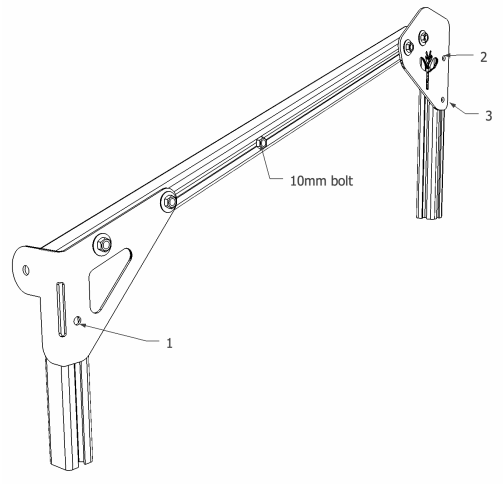
Slide the bars, **closed face outwards**, down over the clear side panels. Tighten the screws.

Finish inserting all the side panels and cross bars in the same way.

The top left panel has two holes, for greenhouses with automated watering.



Step 7 - Fit the **right** side panel top assembly



Parts:
1 x Right side panel top assembly
*3 x M5 * 8mm button head bolt*
3 x M5 square nut
*1 x M5 * 10mm button head bolt*

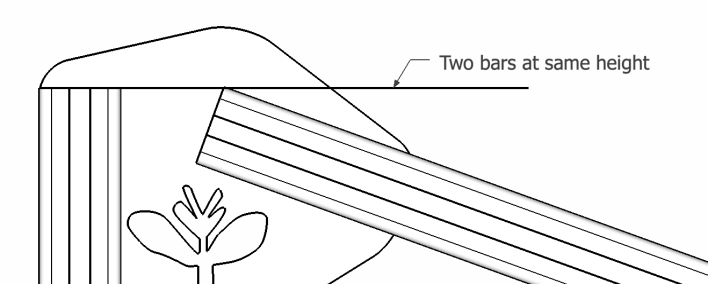
Insert the 8mm bolts into the assembly in positions marked 1,2,3, and add the square nuts on the inside, loosely.

Slide the assembly down over the side panel, inserting the square nuts into the outer channels on the uprights.

Screw the 10mm bolt into the lower square nut which is already in the outside channel of the assembly and tighten by hand. This will form part of the storm lock (see end of guide for more info.) **Ensure the second square nut in the channel is further up towards the rear of the extrusion.**

The front end goes down as far as it will go, and the rear end is flush with the top of the rear upright (see drawing).

Tighten the bolts.



Step 8 - Fit the **left** side panel top assembly

Repeat step 7 for the left hand side.

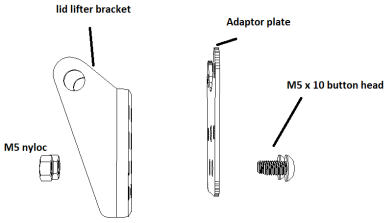
Step 9 - Fix lid lifter bracket to adapter plate

This step is only relevant if you have purchased an automatic lid opener.

Parts in Lifter Box :
1 x Piston Clip (end of box)
1 x Piston
1 x Arm
1 x Lifter Bracket
The *lid lifter bracket* is in the lid opener box.

Parts needed for Step 9:

1 x lid lifter bracket
1 x adapter plate
2 x M5 x 10mm button head
2 x M5 nyloc nut

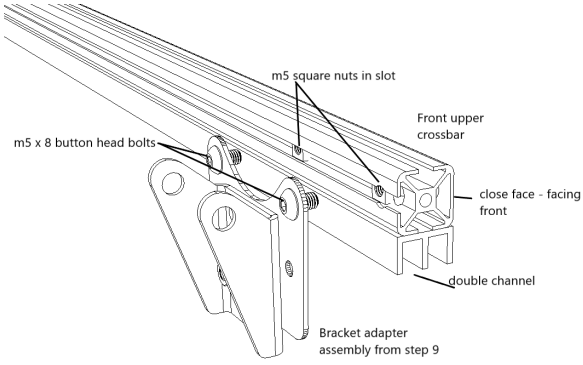


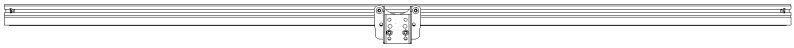
Bolt the lifter bracket to the adapter plate as shown in the diagram to the right, with the nyloc nuts on the inside of the bracket.

Step 10 - Fix bracket to front crossbar

Parts:
1 x front upper bar 121cm
1 x bracket assembly from above
2 x M5 x 8mm button head
2 x M5 square nut

Slide two square nuts into the **rear** channel (the side opposite the closed face). Bolt the bracket assembly in the exact centre of the bar.



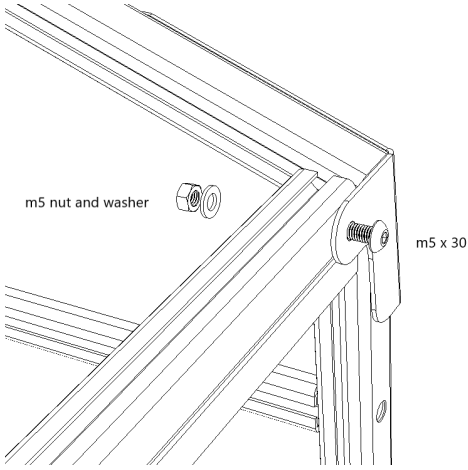


Step 11 - Insert the front crossbar

Parts
2 x M5 x 30mm bolt
2 x M5 nyloc nut
2 x M5 washer

Bolt the front crossbar to the rear of the brackets on the front of the greenhouse, using the M5 x 30 bolts through the front. Fix them in place with a washer and nyloc nut on the rear.

Tighten by hand (you'll remove one bolt later to lift the crossbar to fit the doors).

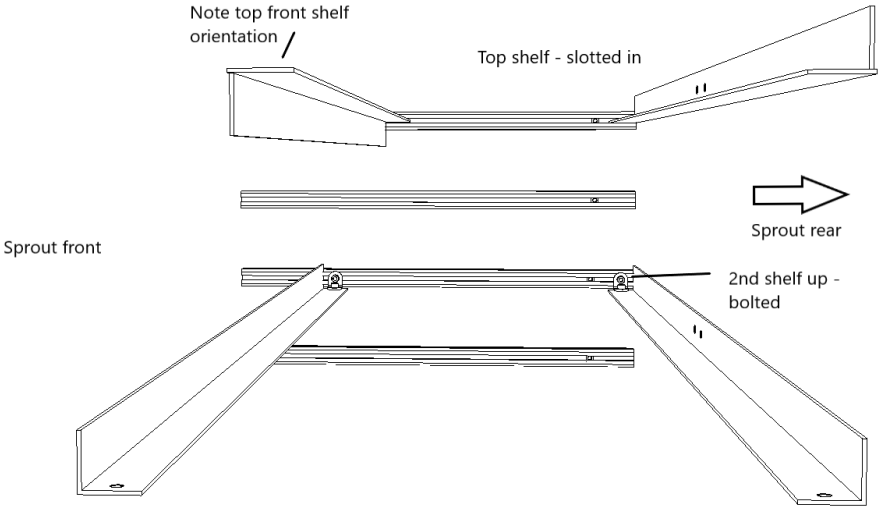


Step 12 - Understand how the shelves fit

Refer to the drawing below to see which shelves are bolted and which shelves simply slot into the greenhouse only frame.

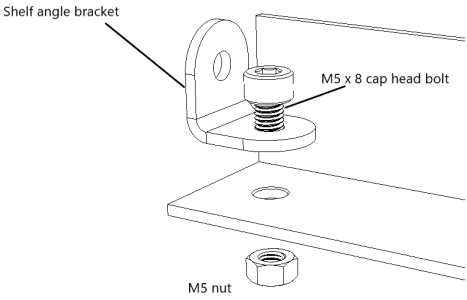
Note: If you have a 4 seasons model please refer to your smart control guide for layout of additional shelves.

A short section of 4mm tube pressed into the channel prevents the front shelf from sliding forwards. When the mesh shelves are in place, the other shelf supports will not slide out.
Use 160mm in front of the top shelf and 90mm in the rest that aren't bolted in.



Step 13 - Fit the shelf supports

The shelf **with** the double holes half way along is fitted to the **rear** of the greenhouse.
The shelf **without** the holes is fitted to the **front**. This step can be easier with an additional pair of hands to support the bars whilst positioning.

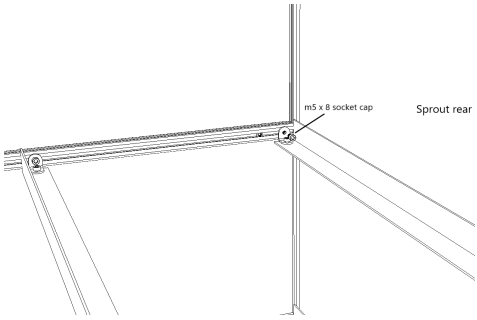


Parts
4 x M5 x 8mm cap head bolt
4 x M5 nyloc nut
1 x pair drilled shelf supports 121cm
4 x shelf angle bracket

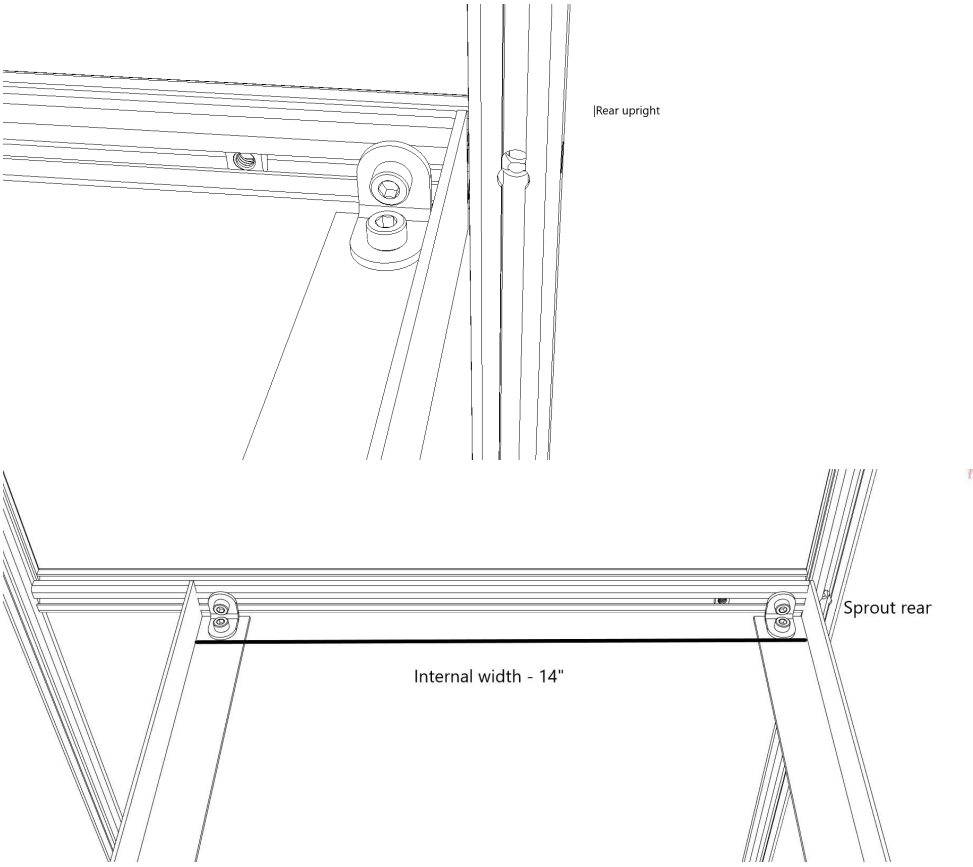
Tools
4mm allen key
8mm spanner

Fix the shelf angle brackets to your drilled shelves using the m5 x 8 cap head bolts and m5 nyloc nuts. Tighten up just enough so that there is some movement to make the next step easier.

Step 14 - Fit assemblies from step 13 to your frame



Parts
4 x M5 x 8mm cap head bolt
NOTE: Where the end panel has three nuts, leave the middle one unused.
Locate the square nuts in the 45cm sidebar channel and secure the shelf supports from step 14 using the m5 x 8 cap head bolts.
Fit the rear shelf bar assembly so the shelf support vertical face is flush with the frame upright as pictured below..
With the rear shelf bar in place use a mesh panel to ensure the correct spacing between the front and rear shelf bars. Alternatively use a tape measure and measure 14” distance between the two.



Top tip: Once you have the bolted shelf supports in place, use a long strip of masking tape (or similar) across the back of the greenhouse to hold the sides vertical.

Without the tape there is a tendency for the sides to splay out, and the slotted shelf supports and rear panels may fall out. When the lid is screwed on later, you can remove the tape.

Step 15 - Install lower rear panels

This step can be made easier by squeezing the edges of the panels that will be in the slots of the frame so that they are slightly deformed.

Parts
2 x lower rear panel
1 x PVC H-trim 54cm
2 x long cable ties

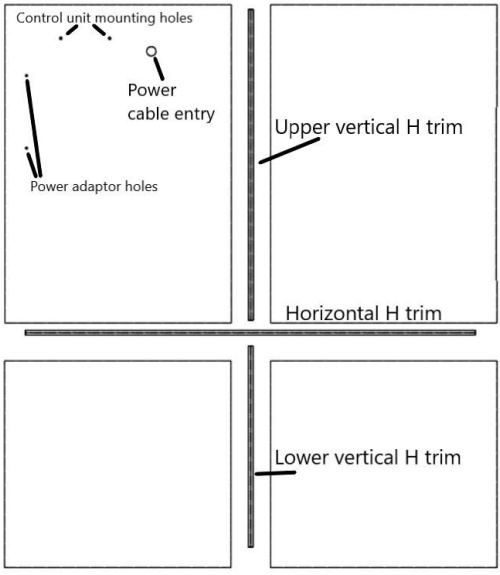
- Drop the lower rear panels (the smaller ones) into the inner slots of the rear uprights. Ensure they go fully into the lower base part - it's a tight fit.
- Slide the H-trim between the panels.
- Using the holes in the rear shelf supports as a guide, punch holes through the rear panels and secure the panels to the shelf support with cable ties.

Step 16 - Install upper rear panels

Parts
2 x upper rear panel
1 x PVC H-trim 84cm
1 x PVC H-trim 120cm
2 x long cable tie

- Put the long horizontal H-trim over the top of the lower rear panels.
- Insert the two top panels.
- Slide the 84cm H-trim between the upper panels

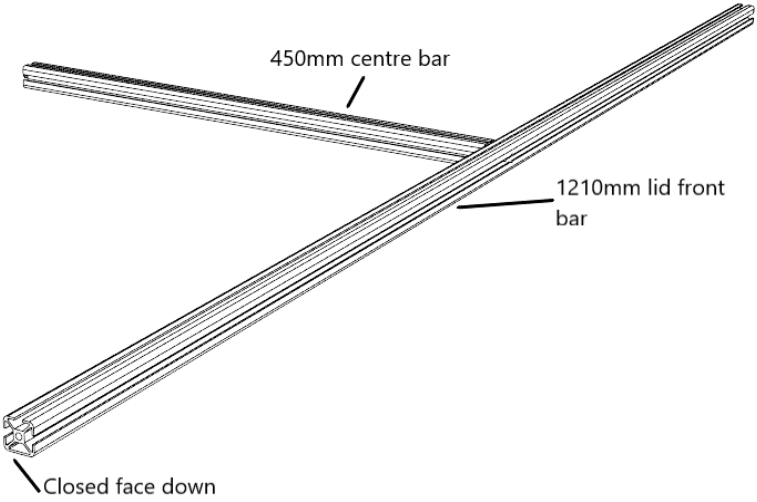
View from front



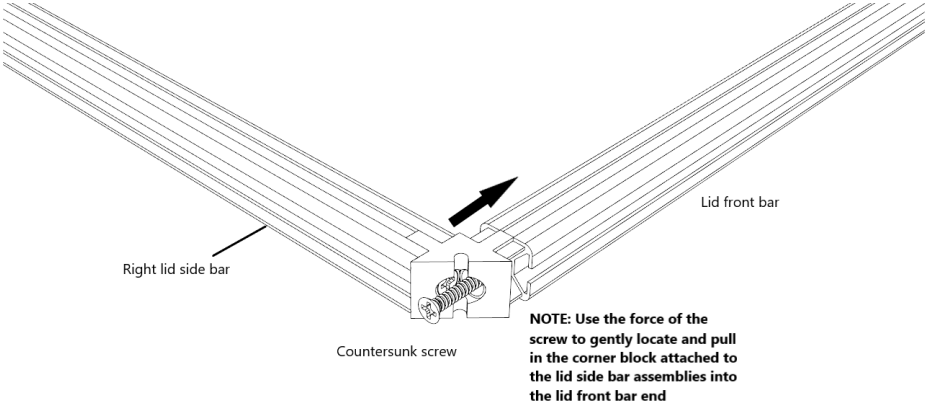
Step 17 - Assemble the lid

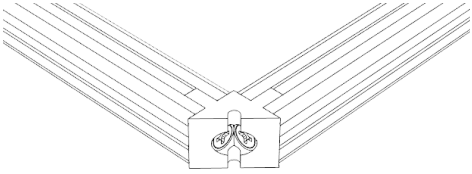
Parts
1 x lid ridge
1 x lid rear
2 x lid side bars with corner caps
8 x square nuts
2 x countersunk head screws
1 x 45cm lid centre bar
1 x 121cm lid front bar
1 x lid poly set

a) Lay out the lid front bar onto a flat surface with the closed face facing downwards. Slide the lid centre bar into the slot with the closed face in the same orientation. Use the screwdriver to firmly secure the centre bar in place through the hole in the centre of the lid front bar.



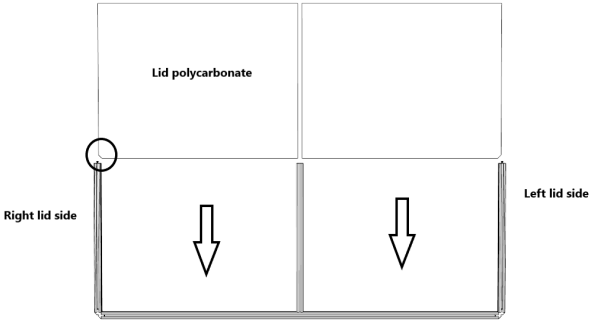
b) Attach the lid side bars with the corner piece to the lid front. The left and right lid side bars are identified by L and R on their protective packaging.
Line up the corner piece with the open end of the lid front bar and use the countersunk 30mm screw to gently pull the corner piece into the end of the 1210 bar



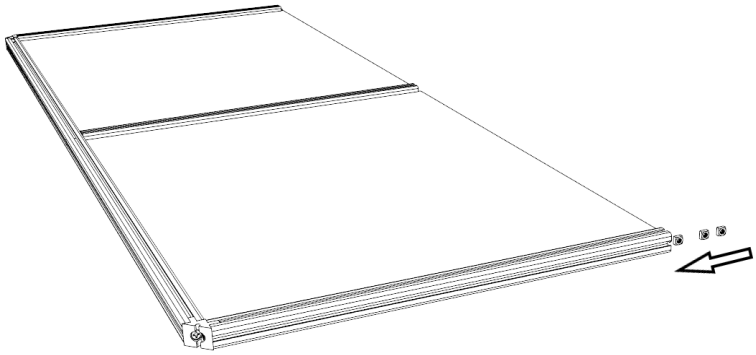


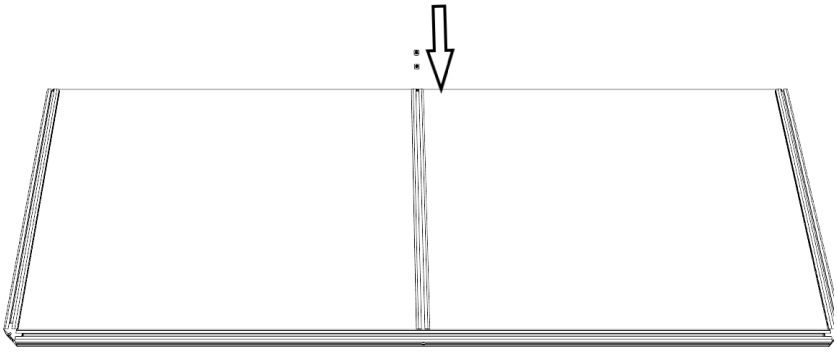
Repeat step b for the left lid side- bar

c) Peel back the film from the polycarb faces. The white side is outside facing. Slot the polycarb panels into the two internal areas in the lid paying attention to the notch in the polycarb corner.

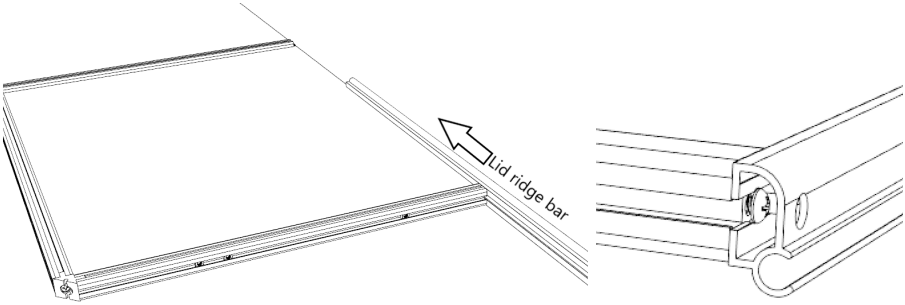


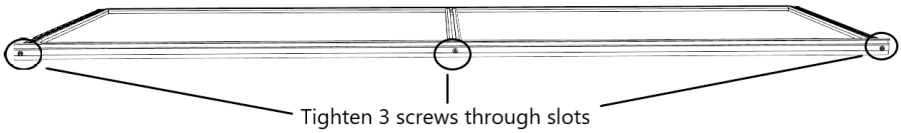
d) Insert 3 square nuts into the outside slot of the left/ right side bars. Insert 2 square nuts into the slot of the centre bar.





e) Slide the ridge bar slotted face over the screws in the centre bar/ side bar. Once positioned, tighten the 3 screws in the centre/ side bars.





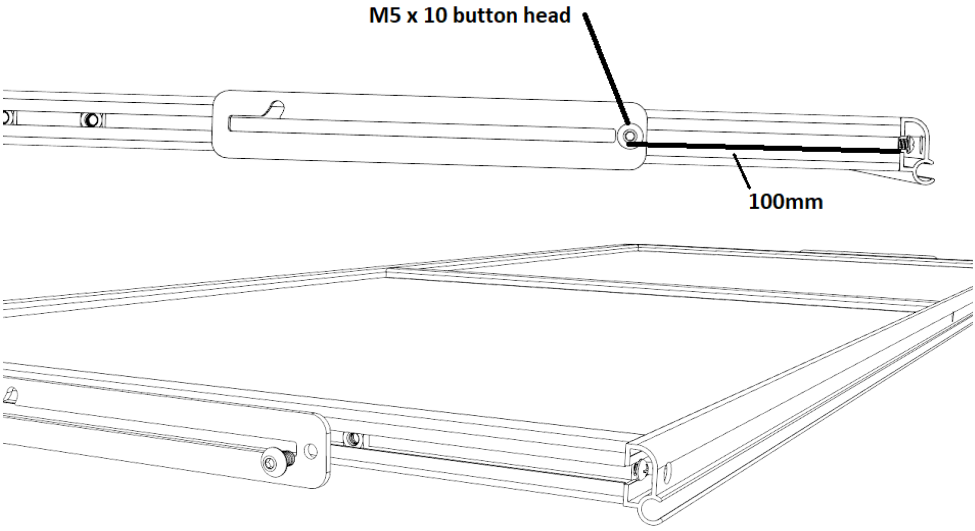
Step 18 - Add lid props to lid

This is easiest done on a flat table or worktop.

Parts

2 x lid props

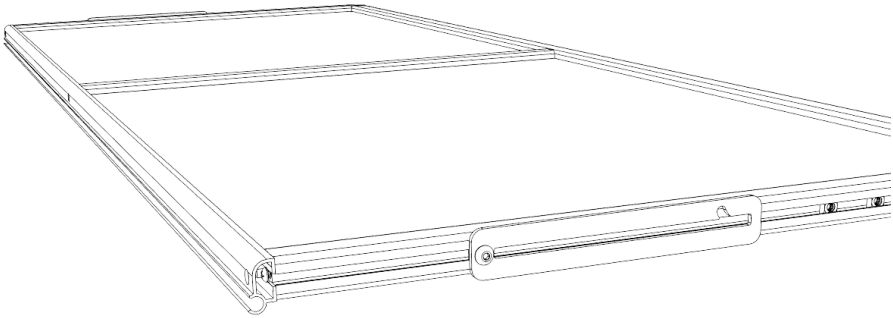
2 x m5 x 10 button head bolts



Note orientation of the lid prop

Secure the lid prop bracket. Measure 100mm from the rear of the lid sidebar to the centre of the bolt and secure the bolt through the lid prop hole and into the square nut in the slot. Tighten well.

Repeat for the other side, see diagram below.



Step 19 - Fit lifter piston

Parts

1 x lid lifter piston

Insert the black lid lifter piston into the lid lifter, using the instructions as supplied in the lifter box.

Step 20 - Fit the lifter arm plate to the lid lifter

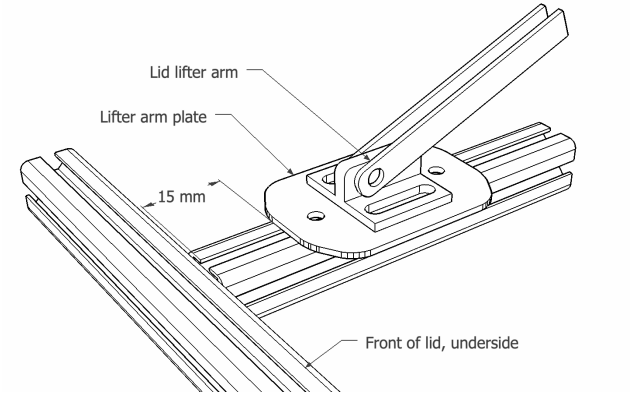
Parts:
2 x M5 x 10mm bolt
2 x M5 nyloc nut
1 x lifter arm plate
1 x lid lifter

Fit the lid lifter to the lifter arm plate.

Step 21 - Fit the lid lifter to the lid

Parts:
2 x M5 x 8mm bolt
1 x lid lifter

Turn the lid upside down.
The two square nuts in the centre channel will now be visible.



Refer to the drawing above and fix the lifter arm plate to the square nuts using the bolts, with a 15mm gap to the front bar.

Step 22 - Fit the lid to the greenhouse

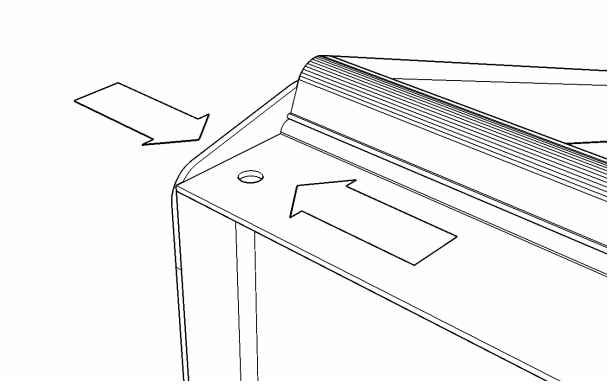
Parts

2 x 30mm domed screw

1 x Lid

Place the lid on top of the greenhouse, making sure that the rear panel slots into the black channel on the underside of the lid.

Secure it with two 30mm screws into the rear uprights.

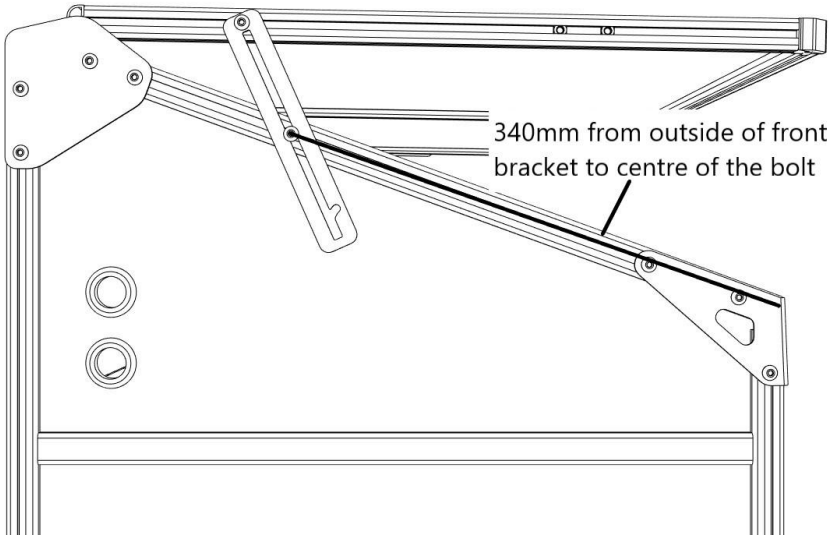


Before you tighten the screws, ensure the sides of the greenhouse are firmly pushed together to secure the rear panels in place.

Tighten the screws well.

Step 23 - Fix the lid props to the top side bars

Parts
2 x M5 x 10 bolts
Measure 34 cm from the front of the greenhouse to the centre of the M5 x 10 bolt.



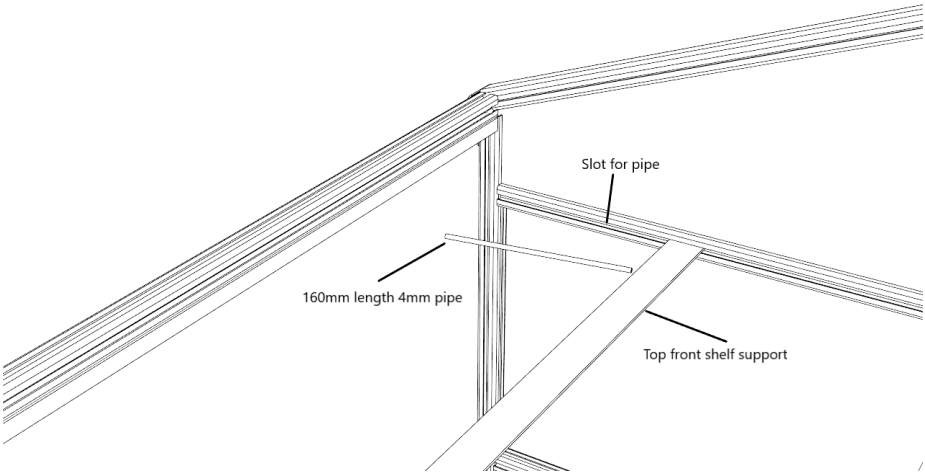
Step 24 - Slot in the rest of the shelf supports

If you have a 4 season S24 refer to the smart setup guide for installation of shelves.

Note: For the notched shelves it is recommended to use a length of tape across the top rear panels to brace it together

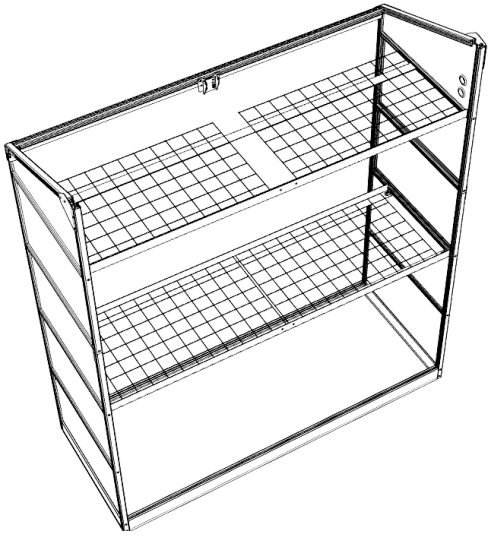
The other shelf supports are slid into the slots on the cross bars, with the 4mm tubes pushed into the slots in front of the front bars as per the drawing in step 13.

The top shelf supports are slot fitted into the side bars like the image below. The front shelf support here is orientated with the vertical plane facing down. Two pieces of **160mm** x 4mm pipe are then pushed into the slot in front of the front shelf support, to prevent it from moving out of place.

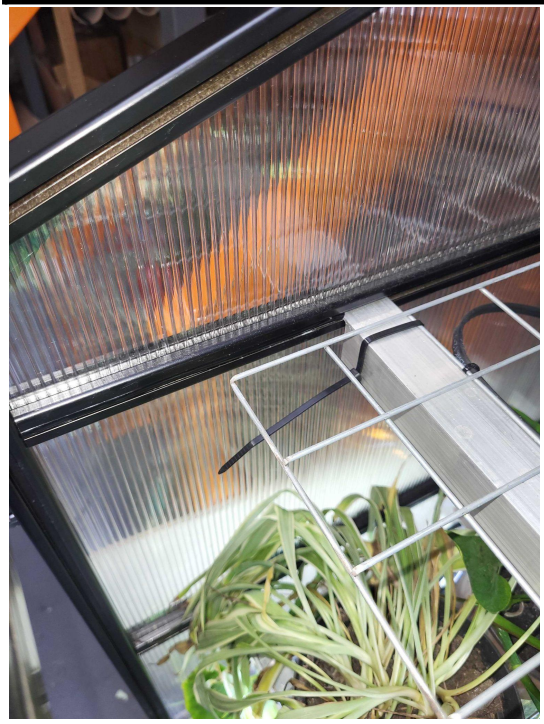


Step 25 - Fix the mesh panels

Once the shelf supports are in place, fix the top mesh shelves to the shelf supports using the long cable ties.
The other shelves can be cradled by the shelves and not require cable ties, but you can fit if required for extra security. Your S24 should now resemble the diagram below.



The front top shelf support needs to be mounted further back to allow the lid lifter piston to swing, as per the drawing. Leave a 50mm gap between the left and right mesh panels for the lifter piston.



Step 26 - Connect the lid lifter. **Optional**

Taking care not to trap your fingers, squeeze the sides of the lid lifter together and insert the studs into the bracket on the inside of the front upper bar.

Step 27 - Fit the hole caps

We've supplied some small black plastic caps to cover the screw holes in the front of the greenhouse and in the lid rear. Pop these over the holes when you are happy that everything is tight and secure.

Step 28 - Install irrigation, heating and lighting

If you have a **smart sprout**, refer to 3 season and 4 season setup guide

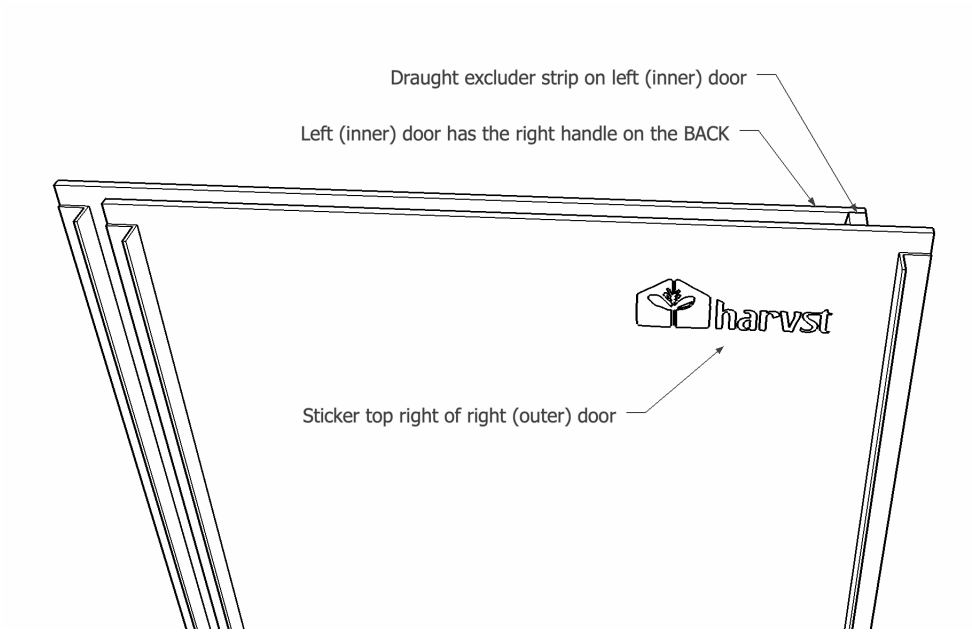
Step 29 - Fit the doors

Parts
2 x polycarbonate doors
With handles fitted

Remove one of the bolts that fix the front crossbar, so you can pivot one side up.

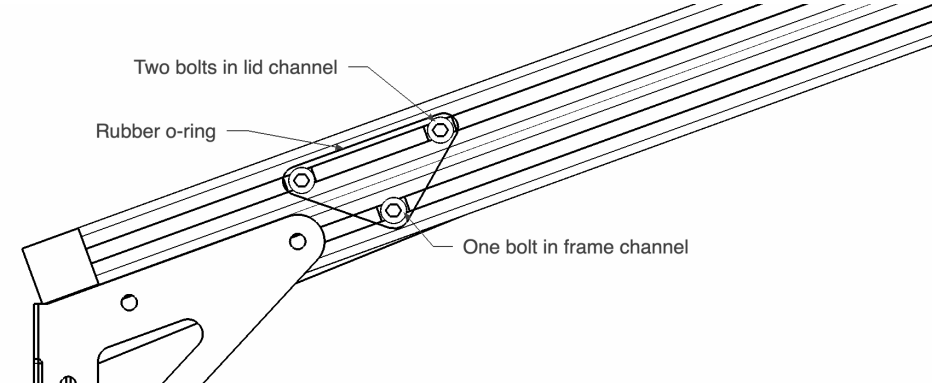
Slot the doors in, drop the crossbar back into place and secure it with the bolt.

The left hand door goes in the rear (inner) channel and the right hand door goes in the front (outer) channel.


Draught excluder strip on left (inner) door
Left (inner) door has the right handle on the BACK
harvst
Sticker top right of right (outer) door

Step 30 - Storm lock

Parts
4 x M5 x 10 bolts
Fit two M5 x 10s into the outside channel of the lid with a 60mm spacing. Fit the o ring around the two upper bolts and when you need to lock the lid pull it down over the lower bolt.

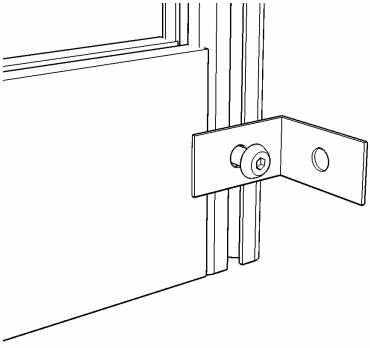


Step 31 - Secure the greenhouse down

We recommend that you secure the sprout to the ground, a wall or a fence.

Parts
2 x fixing bracket
2 x Square nut
2 x M5 x 8mm bolt

Use two square nuts in the rear upright side slots (one each side), with an M5 x 8mm bolt and the stainless steel angle bracket (or a bracket of your choice to suit what you're mounting to)



Note: When the storm lock is fitted, you must disengage the automatic lid lifter from the pegs on the lower mounting bracket.

Regular maintenance

The materials and design of your greenhouse mean that it does not need much maintenance.

- The automatic lid lifter will need oiling occasionally to prevent corrosion.
- Clean the inside of the panels often, especially if you have hard water.

To extend the life of your automatic lid lifter, avoid opening the lid against the pressure of the piston too frequently. Open the front doors, unclip the lifter mechanism, and then open the lid. The lid opener piston is not covered under our manufacturer's guarantee.

Help and support

For tips, advice and questions, visit our community at

https://grow.harvst.co.uk/forums

For setup assistance or other queries contact help@harvst.co.uk