Setup guide

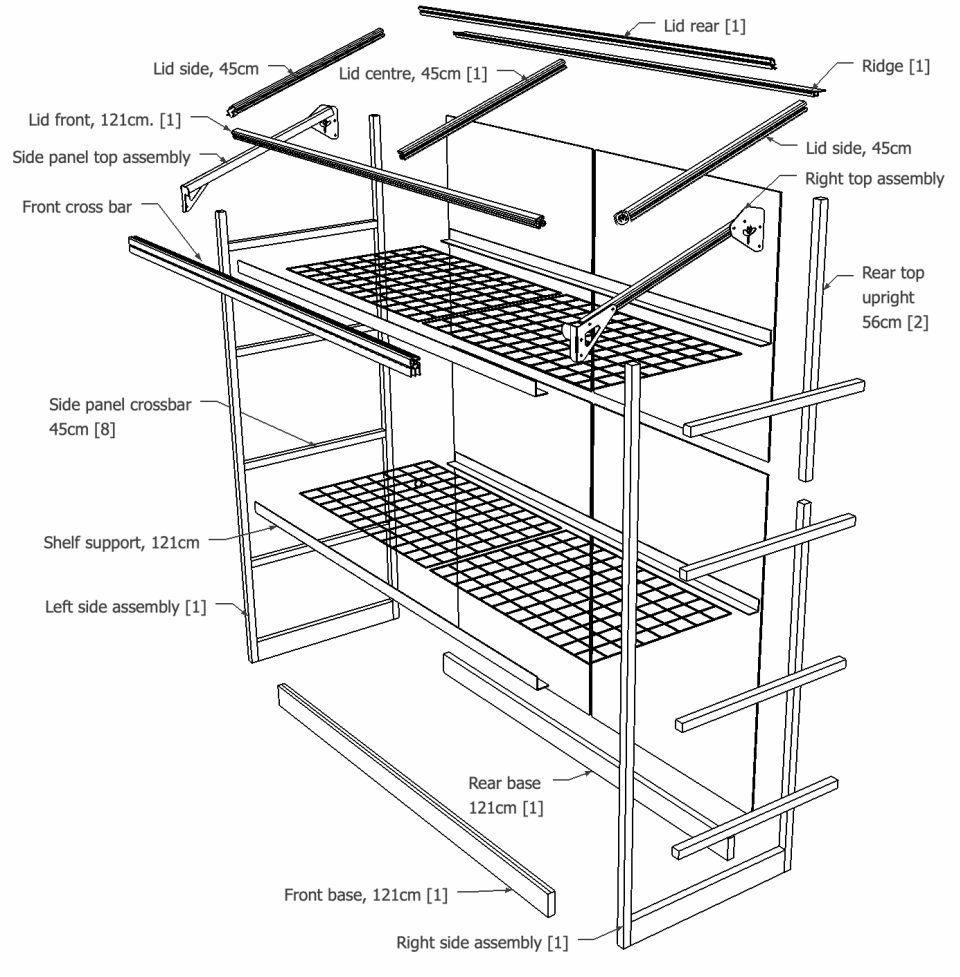
Model S24

Greenhouse only, Solar, 3-season and 4-season versions

V2 / From Jan 2022

4-season model shown above

Exploded diagram



SCAN ME

Visit **www.harvst.co.uk/setup** for more information, videos and photos

Thank you for buying a Harvst greenhouse.

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

https://grow.harvst.co.uk

There are also videos at https://www.harvst.co.uk/setup

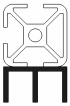
Important information
Sprout mini greenhouses are intended for outdoor garden use, fixed securely to a fence, wall or the ground. Use outdoors unsecured, or indoors, is at your own risk.

Mains powered greenhouses are provided with a waterproof power supply and 5m of mains cable. They should be plugged into a waterproof outdoor socket, or an indoor socket in a shed, garage or other safe place. Non waterproof extension leads should never be used.

Parts list (aluminium pieces)

We've fitted the front and rear uprights to the side base parts for you, to save time and help you get started. We've also pre-fitted screws into bars, where required.

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



1210mm **x1**
Front upper crossbar
(box profile as alternative)

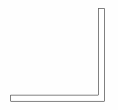
450mm **x8**
Side panel crossbar

1285mm **x2**
Front upright
(fitted to assembly)

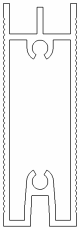
910mm **x2**
Rear upright
(fitted to assembly)

1210mm **x1**
Lid front

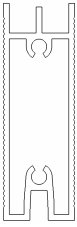
535mm **x1**
Lid prop



1210mm Shelf support
x4 GH / Solar models
x8 4-season model
Rear have holes in middle

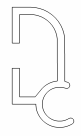


450mm **x2**
Side base parts
(fitted to assembly)

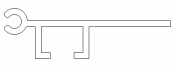


1210mm **x2**
Front and rear base parts

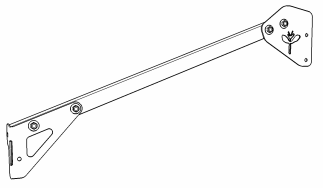
Front: double channel up
Rear: single channel up



1250mm **x1**
Lid rear



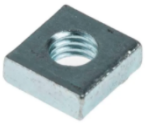
1250mm **x1**
Ridge
With black PVC channel



Side panel top assembly **x2**
One left and one right

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 **x32**

M5 washer **x4**

M5 nut **x11**

M5 Nylock **x1**

M5 x 8 button **x22**

M5 x 10 button **x6**

M5 x 16 button **x1**

M5 x 8 cap **x8**

M4 x 12mm **x2**
May be slot head

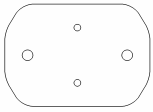
M5 x 30mm **x3**

M5 x 40mm **x3**

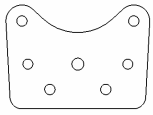
Shelf bracket **x4**

Joining strap **x2**

Fixing bracket **x2**



Lifter arm plate



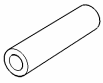
Lifter adapter plate

Cable tie **x12**

Hole punch

M4 nut **x2**

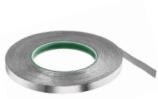
Blanking plug **x15**



4mm tube for fixing shelves
80mm **x4,** 120mm **x2**

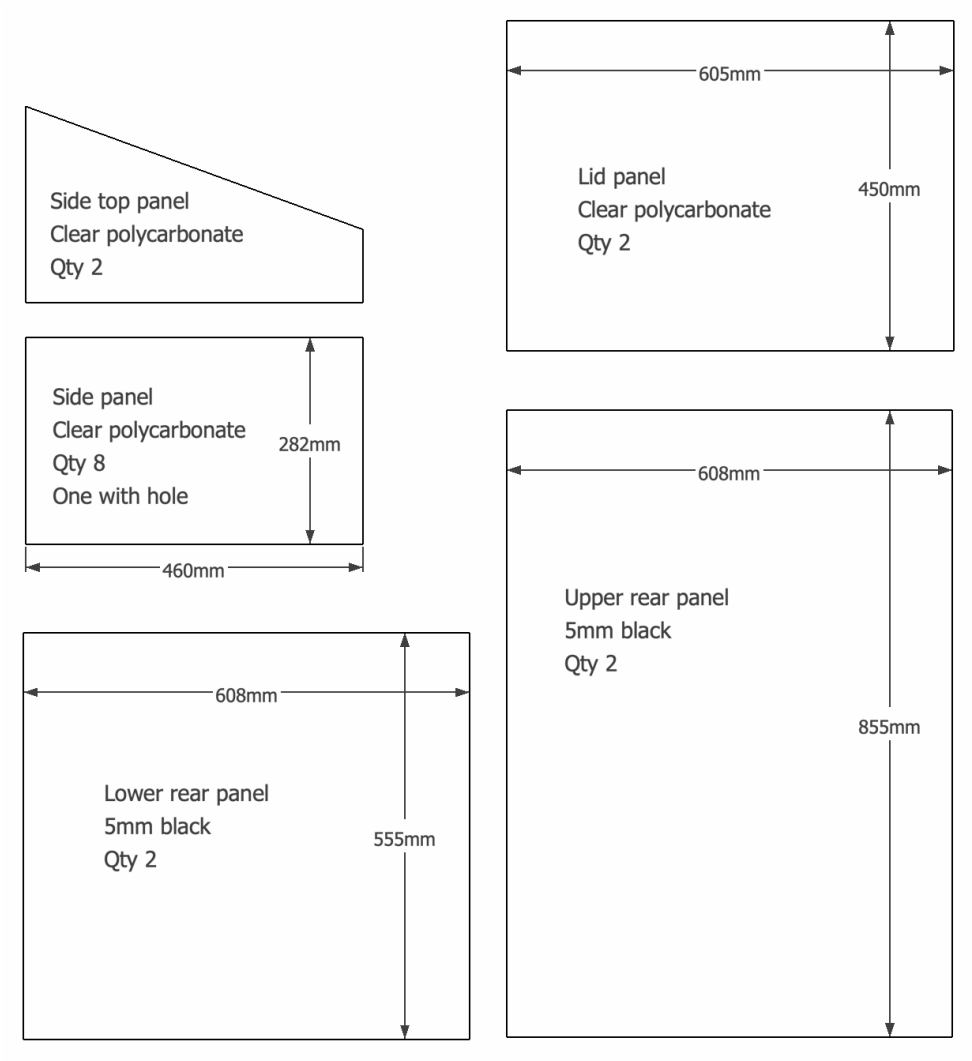
4.5 x 30mm screw **x4**

O-ring **x2**

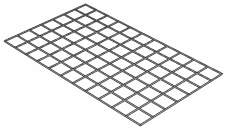


Roll of foil tape

Panels



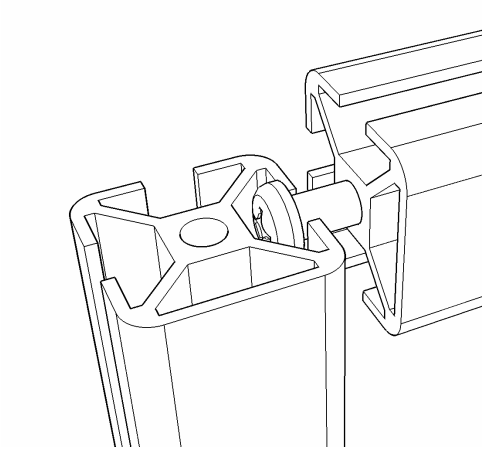
Tools provided
3mm allen key, 4mm allen key
8mm spanner
Pozidrive screwdriver
Tools required (not supplied)
Tape measure to check parts
Secateurs for cutting pipe



You will also have mesh shelves, the quantity depending on which model you have bought.

Slotting parts together

The greenhouse is based on parts that slot together using 30mm stainless steel screws, as shown in the diagram below.



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)

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

This step is optional - it can take some time but is recommended.

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.
3. Fold down the sides to seal the tape to the panels.

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

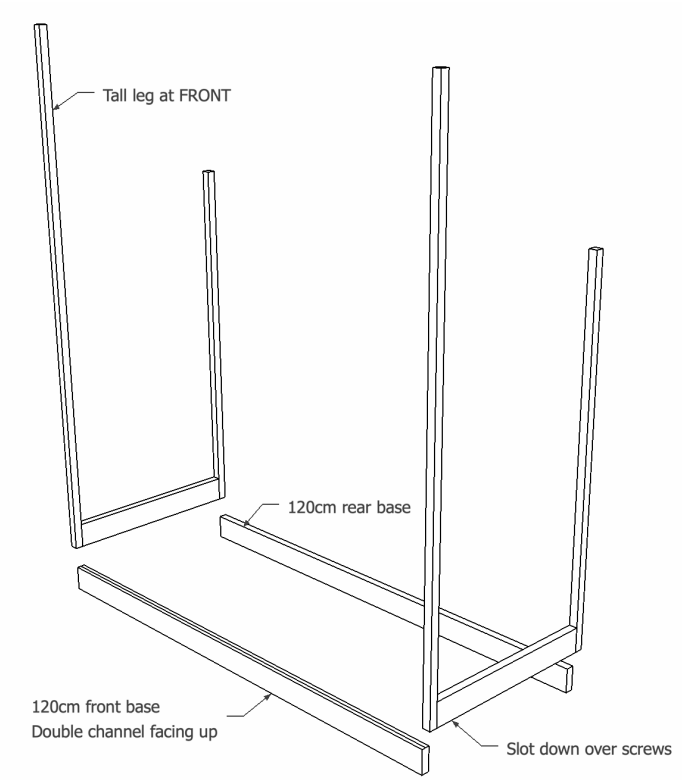
Step 2 - Assemble the base

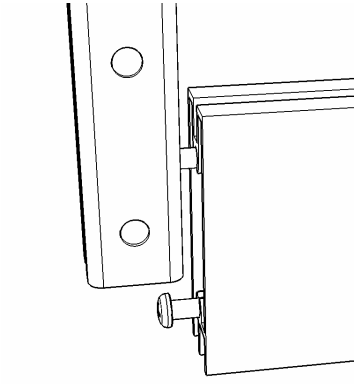
Parts:
1 x left assembly
1 x right assembly
1 x front base 121cm
1 x rear base 121cm

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.

The left and right assemblies are interchangeable.

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



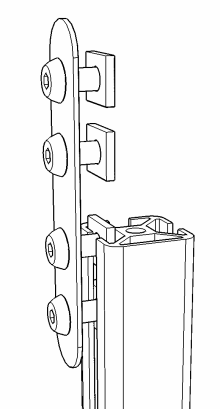


Slot the left and right assemblies over the screws on the front and rear base parts and tighten the screws.

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 nut
2 x top rear upright 56cm



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.

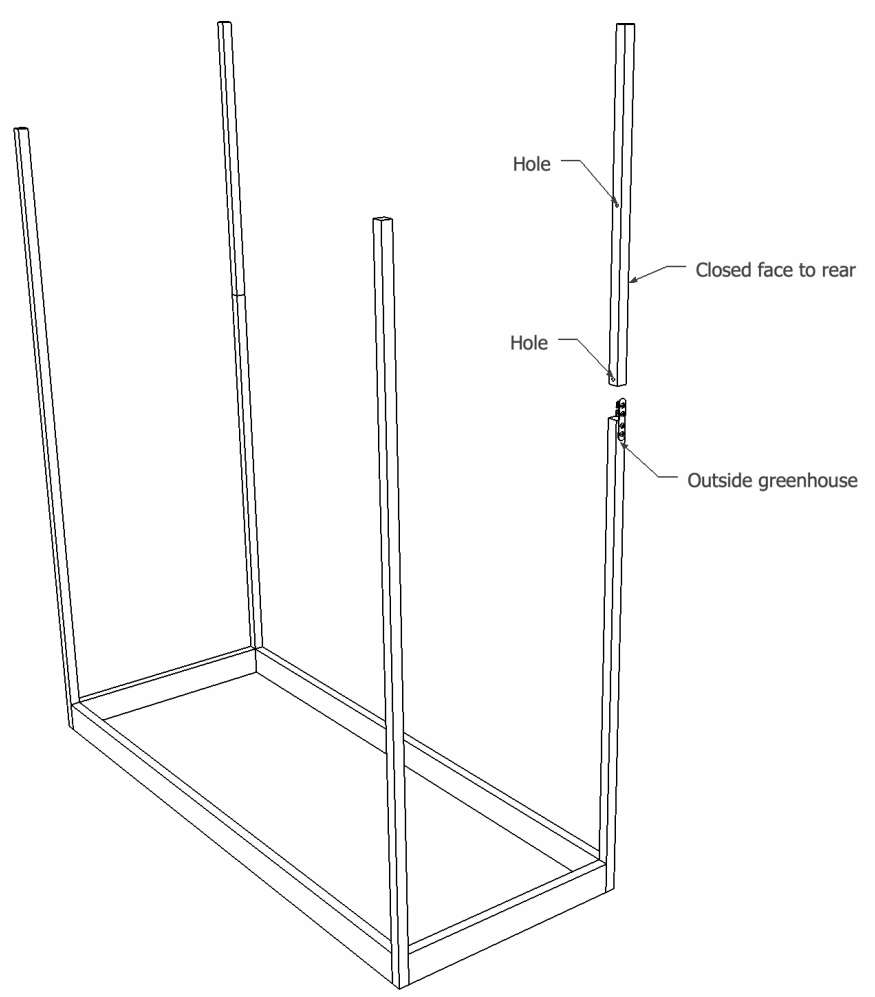
Step 4 - Fit the top rear uprights

Parts
2 x top rear upright 56cm

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

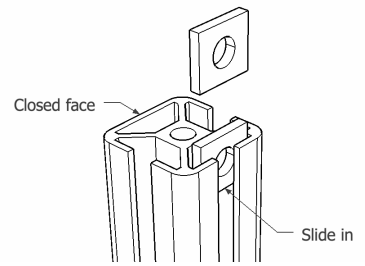
The closed face should be to the rear of the greenhouse.

Tighten the upper pair of bolts.



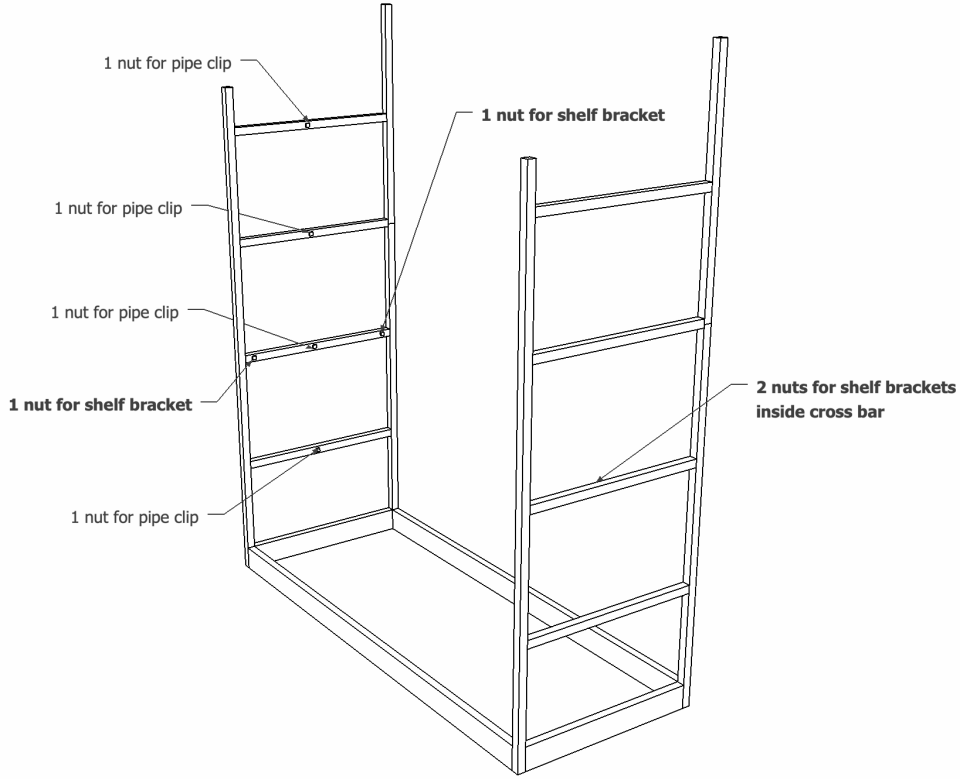
Step 5 - Insert square nuts to side cross bars

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



Insert square nuts into the **inside** channel of each cross bar as per drawing below. It's worth fitting all the nuts now even if you don't have the irrigation kit yet - in case you want to fit it in the future. The irrigation pipe will run up the left side of the greenhouse.

Note the extra nuts on the second bar up, for the shelf support brackets. Both left and right sides.



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

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

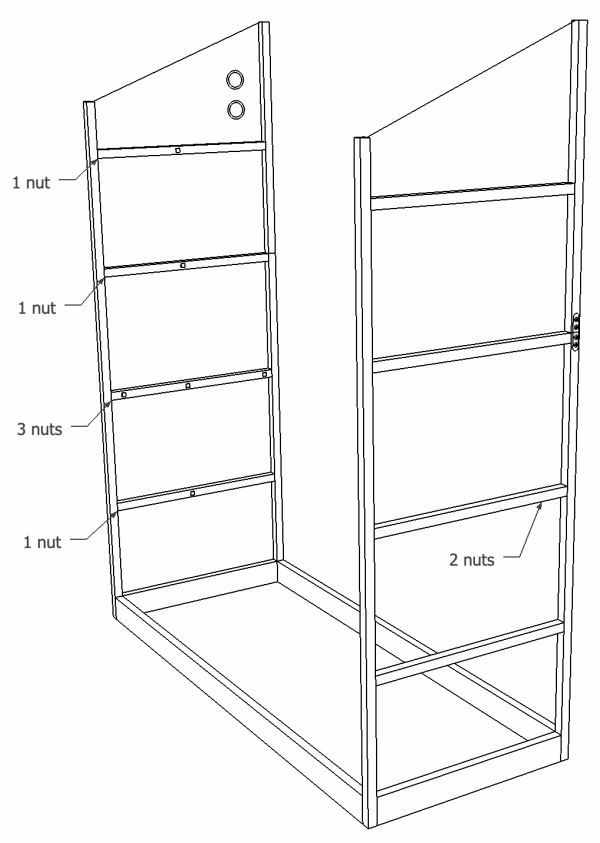
Peel the protective plastic off *both sides* of the side panels, remembering which side has the white film; it should face outside as it is UV treated.

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

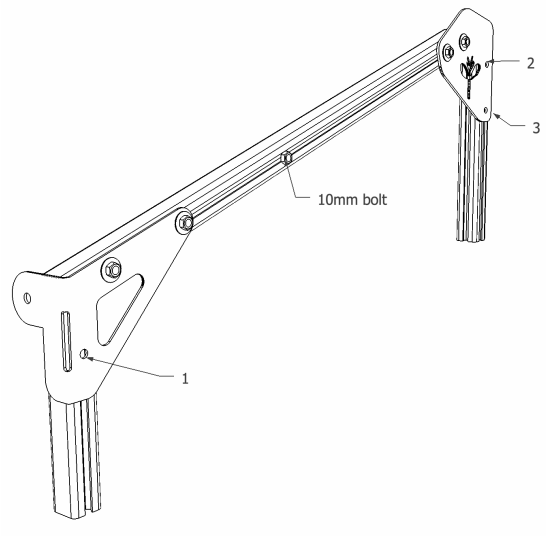
Slide the bars, **closed face outwards**, down over the clear side panels. Tighten the screws.

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*

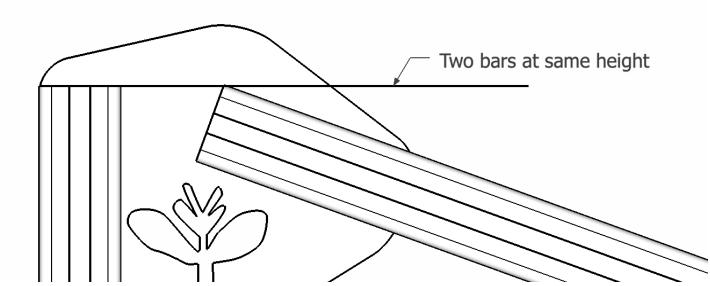
Insert the 8mm bolts into the assembly in positions marked 1,2,3, and add the square nuts on the inside, loosely.

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 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)

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 below).

Tighten the bolts.



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

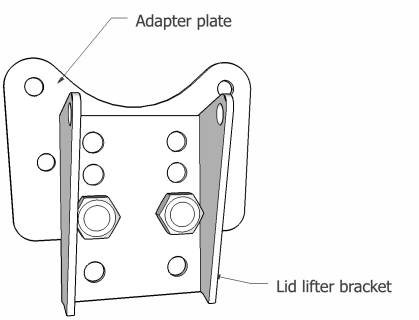
Repeat for the left hand side.

Step 9 - Fix lid lifter bracket to adapter plate

OPTIONAL - if you have an automatic lid opener
The *lid lifter bracket* is in the lid opener box. (see drawing below for named parts)

Parts:
1 x lid lifter bracket
1 x adapter plate
2 x M5 x 8mm button head
2 x M5 nut

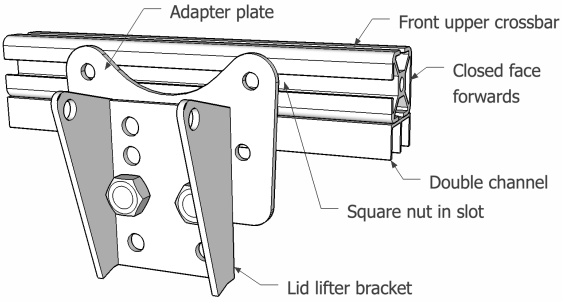
Bolt the lifter bracket to the adapter plate as shown, with the nuts on the inside of the bracket.



Step 10a - Fix bracket to front bar : slot method

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 of the bar (the side opposite the closed face). Bolt the bracket assembly to the front bar, in the exact centre of the bar.



Step 10b - Through-hole method

If your greenhouse has a front crossbar with no slot, it will have holes drilled in the relevant places.

Parts:
1 x front upper bar 121cm
1 x bracket assembly from step 9
2 x M5 x 30mm button head
2 x M5 nut
2 x M5 washer

Bolt the bracket to the front bar, through the two holes using the 30mm bolts, washers and nuts.

Step 11 - Add the lid prop bolt

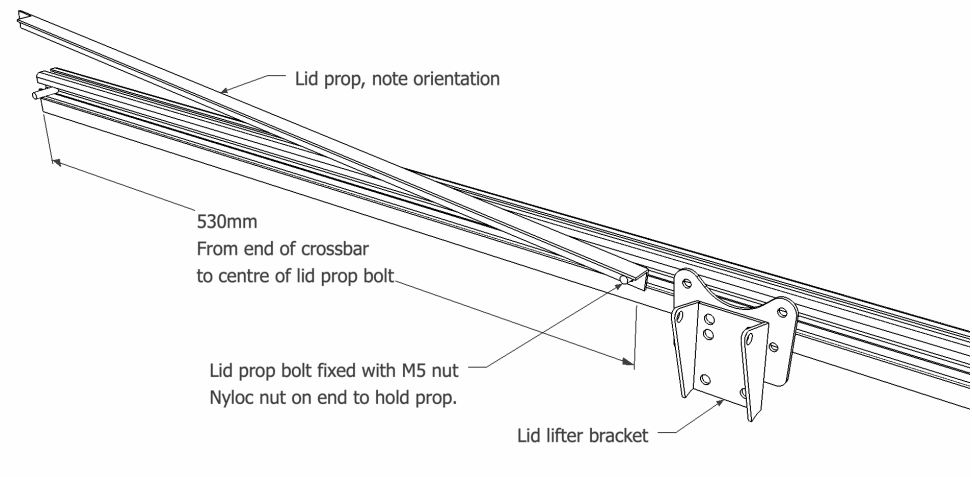
This is the pivot bolt for the lid prop.

Note: If your crossbar does not have a slot, you will be provided with longer bolts (M5 x 30) which go all the way through the bar from the front.

Parts:
1 x M5 x 16mm bolt
1 x M5 nut

1. Put the M5 nut loosely onto the 16mm bolt.
2. Slide the bolt *head* into the rear channel (same channel as the lid lifter bracket) on the right hand side (with the lid lifter bracket facing away from you)
3. Slide the bolt to 530mm from the right hand side.
4. Holding the thread of the bolt, tighten the nut to lock the bolt in place.

The lid prop itself will be fitted later.



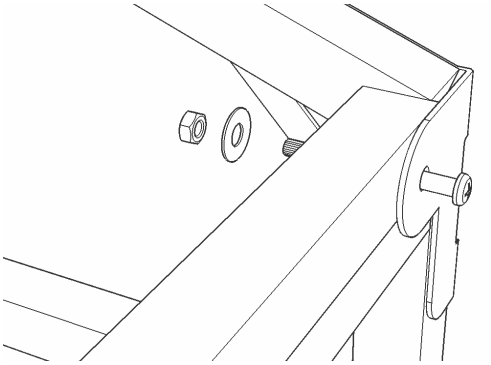
Step 12 - Insert the front crossbar

Parts
1 x M5 x 30mm bolt
1 x M5 x 40mm bolt
2 x M5 nut
2 x M5 washer

Bolt the front upper bar to the rear of the brackets on the front of the greenhouse.

The 40mm bolt goes on the right hand side to act as a support for the lid prop which you will add later.

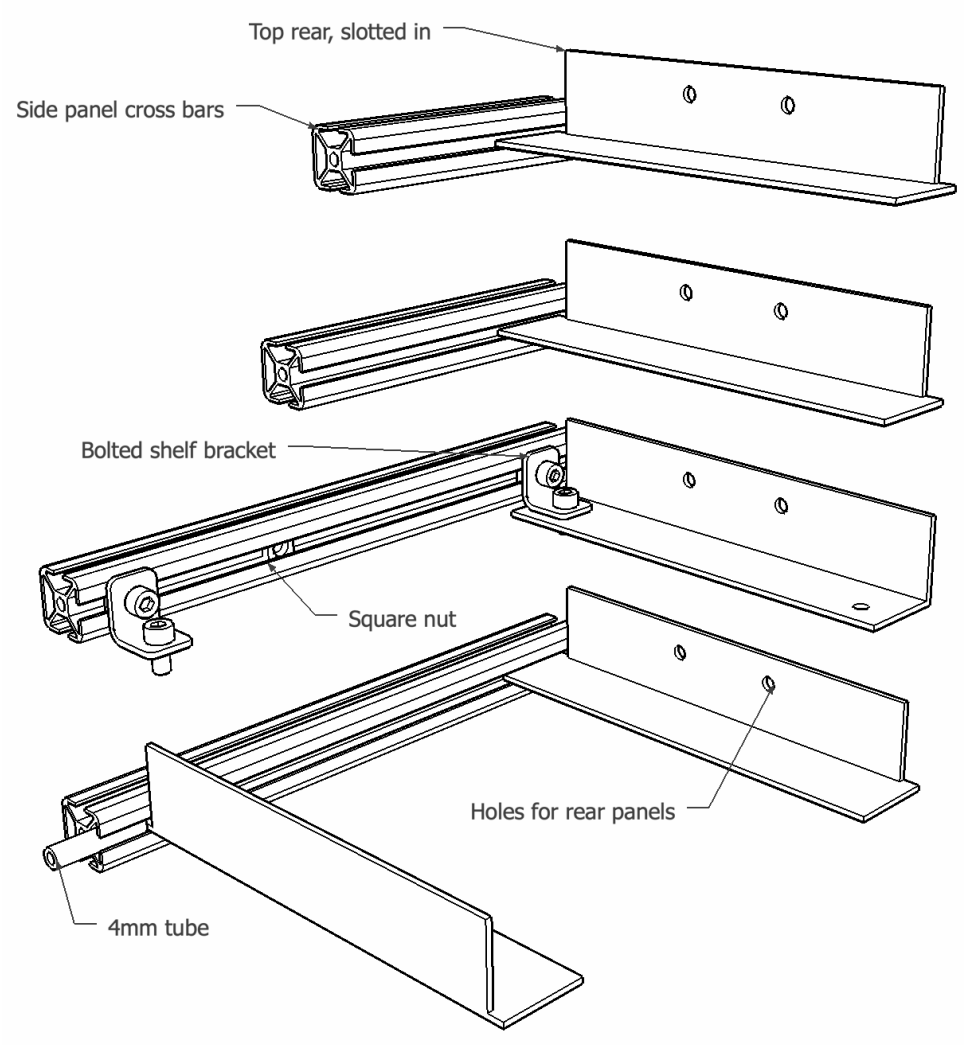
Tighten by hand (you'll remove one bolt later to lift the crossbar to fit the doors)



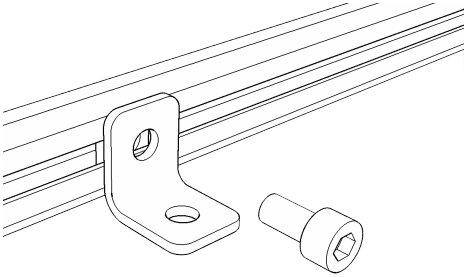
Step 13 - Understand how the shelves fit

Refer to the drawing below to see which shelves are bolted to the frame, and which shelves simply slot in. The bolted shelf supports give more strength to the frame.

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.



Step 14 - Fit the shelf brackets to the frame



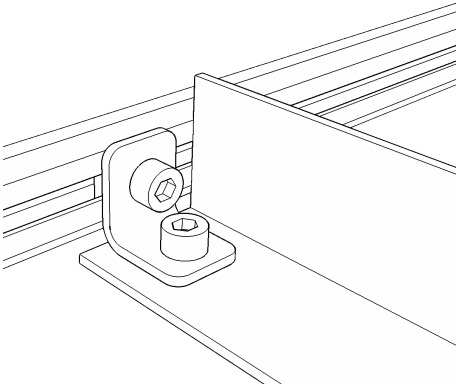
Parts
4 x M5 x 8mm cap head bolt
4 x shelf angle bracket

Screw the shelf brackets loosely onto the end panel cross-bars, using the 8mm cap head bolts into the square nuts already in the channels.

Where the end panel has three nuts, leave the middle one unused.

Step 15 - 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**.



Parts
4 x M5 x 8mm cap head bolt
4 x M5 nut
1 x rear shelf support, 121cm
1 x front shelf support, 121cm

Fix the shelf support loosely to the **bottom** of the bracket, using an 8mm bolt and a nut underneath.

Push the rear shelf as far back as it will go, without obstructing the channel on the inside of the rear upright; this slot is where the rear panels will fit.

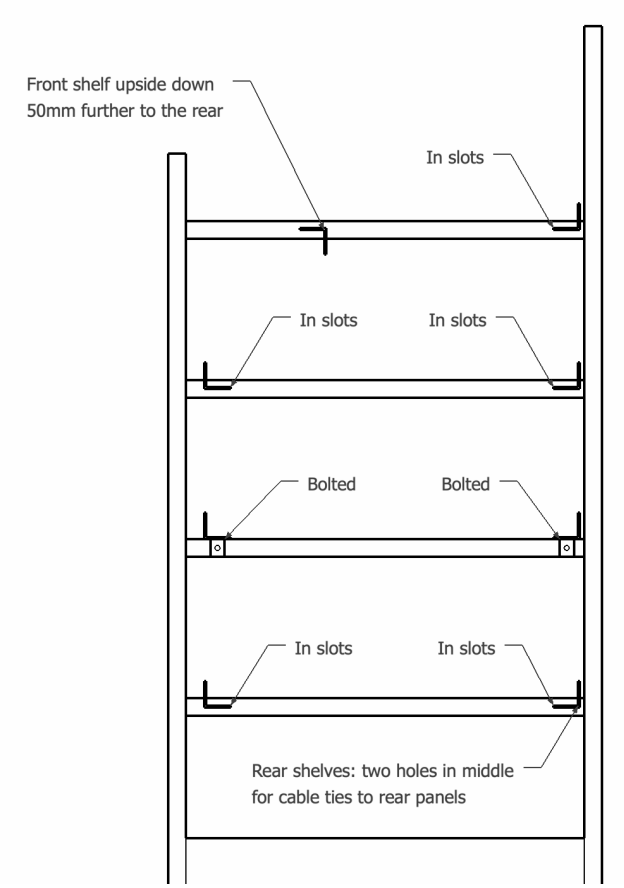
Tighten all the bolts with the 4mm allen key.

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 16 - Slot in the rest of the shelf supports

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.



Step 17 - Fix the mesh panels

Once the shelf supports are in place, fix the mesh shelves to the shelf supports using cable ties.

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 18 - Install lower rear panels

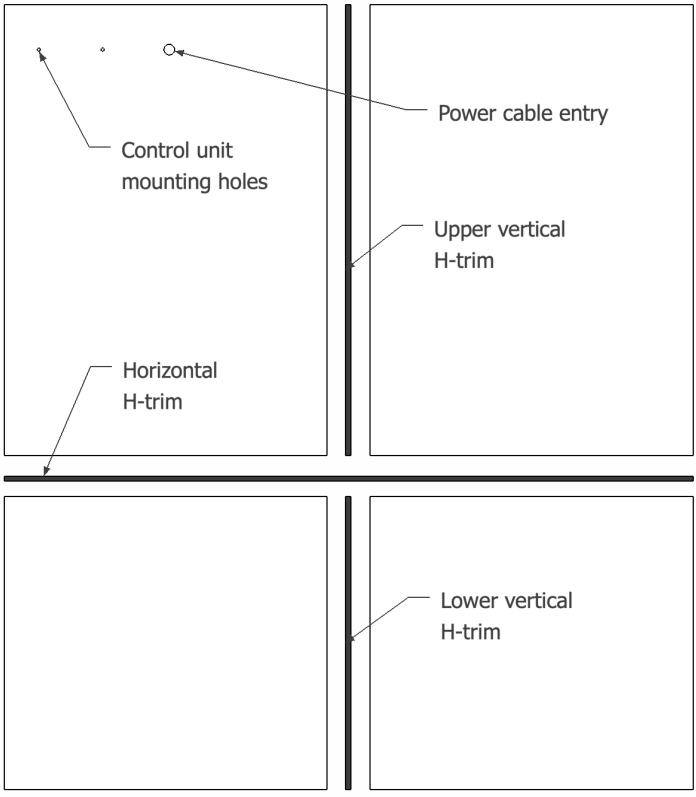
Parts
2 x lower rear panel
1 x PVC H-trim 54cm
2 x cable tie

- 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 as a guide, punch holes through the rear panels and secure the panels to the shelf support with cable ties.

Step 19 - 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



Step 20 - Fit the lid prop

Parts
1 x lid prop, 535mm
1 x M5 nyloc nut

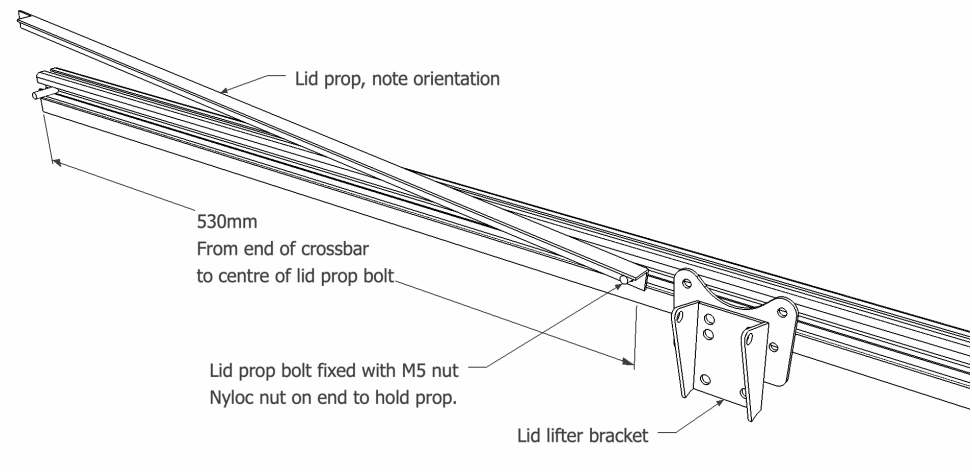
Note: The nyloc nut has a little plastic ring inside to prevent it loosening.

Put the hole in the lid prop over the stud formed by the bolt on the front crossbar.

Put on the nyloc nut, tightening it just so that the plastic “bites” the thread. The prop should be loose enough to move around.

The right hand end of the lid prop rests on the bolt which secures the front bar.

The drawing below shows the view from the inside of the greenhouse.



Step 21 - Lid centre bar

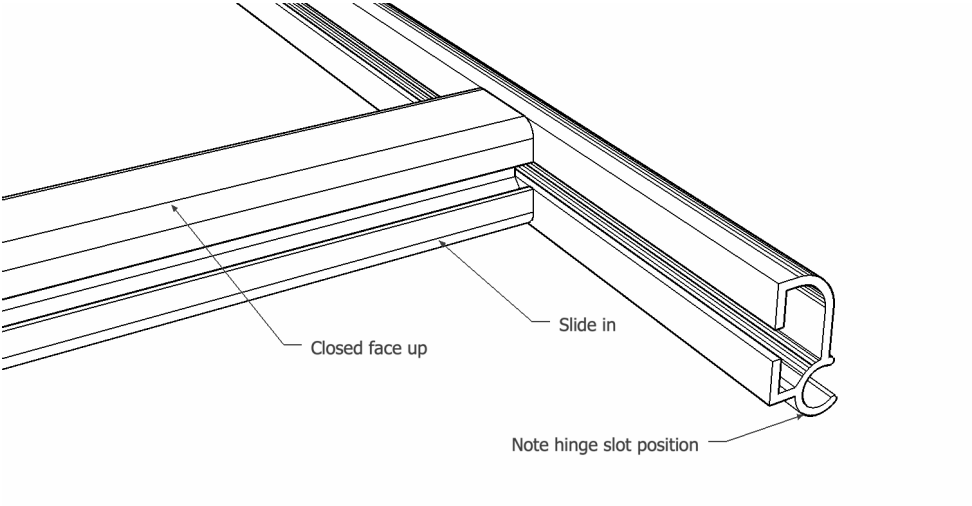
This is easiest done on a flat table or worktop.

Parts
1 x lid rear bar 125cm
1 x lid centre bar 45cm
2 x square nut

Slide the lid centre bar into the lid rear bar, with the closed side upwards.

Slide the square nuts into the channel opposite the closed face. These will hold the automatic lid opener arm.

When the bar is in the middle, tighten the screw at the back.

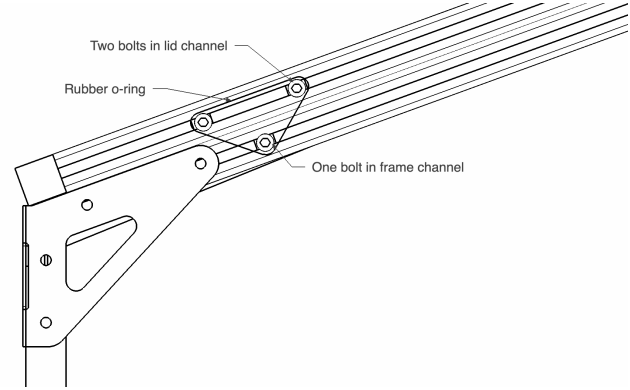


Step 22 - Lid side bars

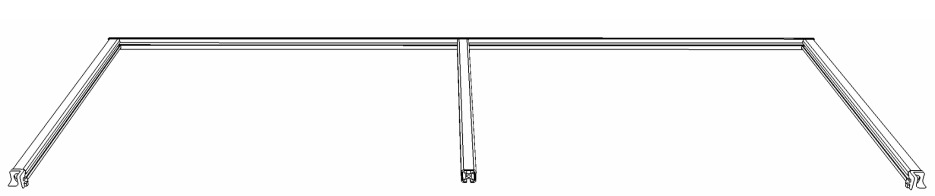
Parts
1 x lid assembly from step 21
4 x square nut
4 x M5 x 10mm
2 x lid sidebar 45cm with corner cubes

Left and Right lid sides will be marked with the corner cubes facing towards you, as per the drawing at the bottom of this page.

1. Slide two square nuts into the outside channels of the lid sides. These will form the top bolts for the storm lock as per drawing below.
2. Screw the bolts into the nuts and tighten them by hand to lock them in place.
3. Fit the o-rings over the two bolts on both sides of the lid. This is what the lock will look like when in operation, holding the lid down:



1. Slide the lid sides into the ends of the lid rear, with the closed side upwards.
2. Tighten the screws.



Step 23 - Insert the lid polycarbonate

Parts
2 x clear lid panel

Slot in the lid polycarbonate sheets.
You'll need to flex the lid side bars apart slightly.

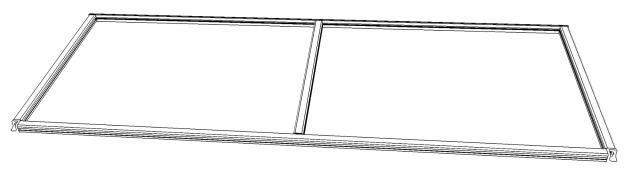
Make sure the white UV protected side is upwards. There is a corner taken off the polycarbonate to fit the corner cubes - ensure that is in the right position before moving to the next step.

Step 24 - Fit the lid front bar

Parts
1 x lid front bar 121cm
2 x 30mm screw

With the closed face up, slide the lid front bar over the protruding screw on the centre bar.

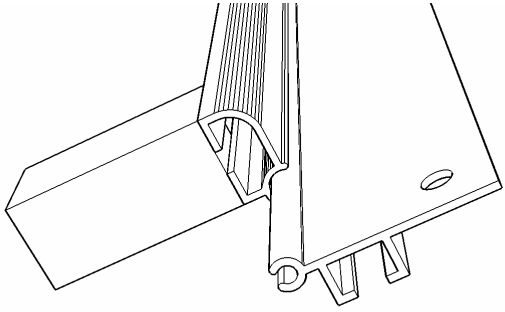
Screw the sides of the lid to the front bar using the 30mm screws.



Tighten the lid screws **firmly**.

Step 25 - Fit the ridge to the lid

Parts
1 x assembled lid
1 x ridge



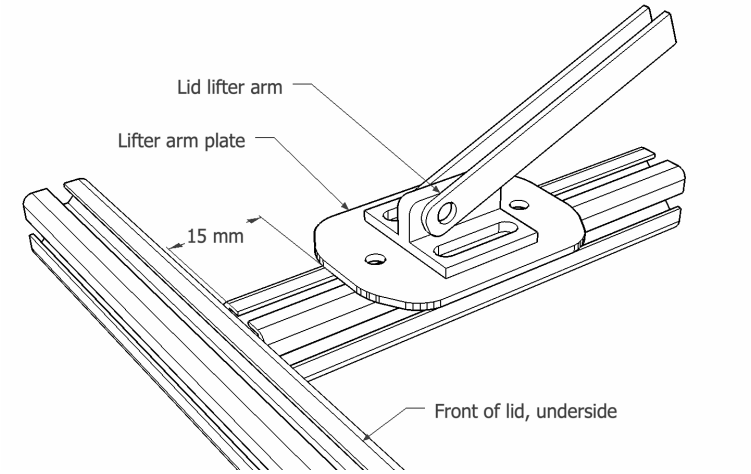
Slide the ridge into the assembled lid as in the drawing above.

Step 26 - Fit the lifter arm plate to the lid lifter

Parts:
2 x M4 x 12mm bolt
2 x M4 nut
1 x lifter arm plate
1 x lid lifter

Open the lid lifter box and remove the small parts from the bag.

Fit the lid lifter to the lifter arm plate.



Step 27 - 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 28 - Fit lifter piston

Parts
1 x lid lifter piston

Prop the greenhouse lid open using the lid prop. Insert the black lid lifter piston into the lid lifter, using the instructions as supplied with the lid lifter.

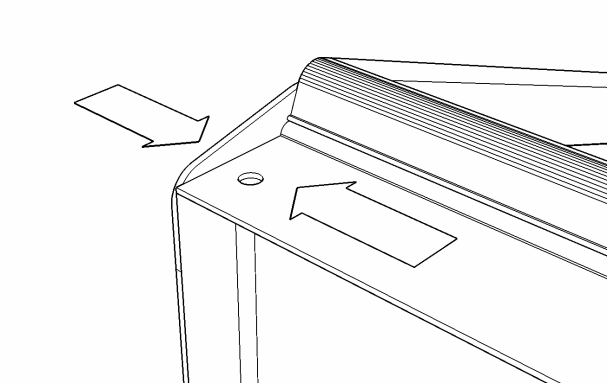
Tip: There's a video on our website which shows how we recommend you fit the piston to the automatic lid opener www.harvst.co.uk/setup

Step 29 - Fit the lid to the greenhouse

Parts
2 x 30mm 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 30 - Connect the lid lifter

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 31 - 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 32 - Install irrigation, heating and lighting (if supplied)

If you have a smart greenhouse with automatic controls …
it will be easiest to install the pipes, lights and heaters now while the doors are off.

Follow the instructions in the Control System Setup Guide

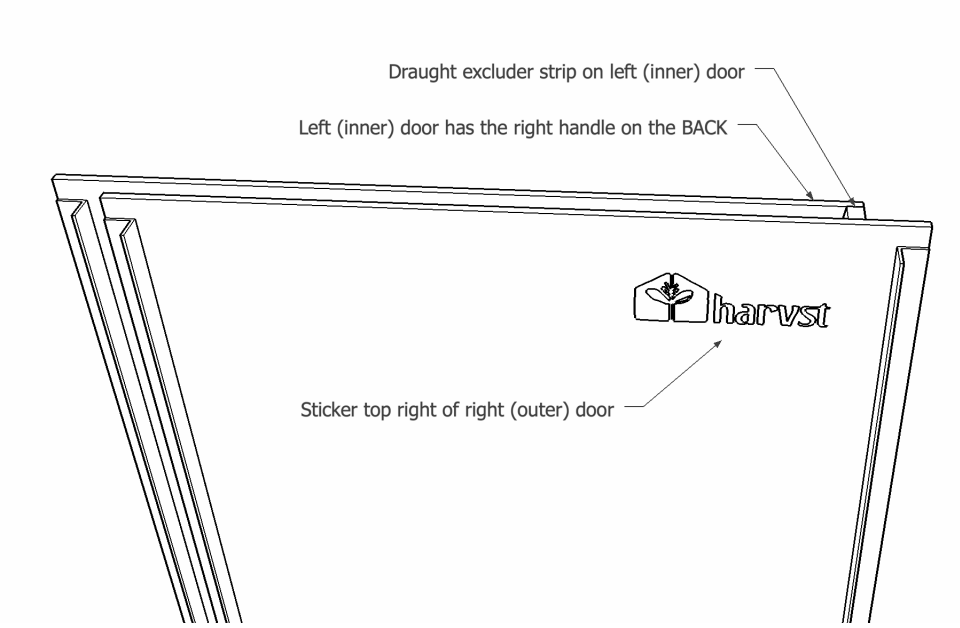
Step 33 - Fit the doors

Parts
2 x polycarbonate door
With handles fitted

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

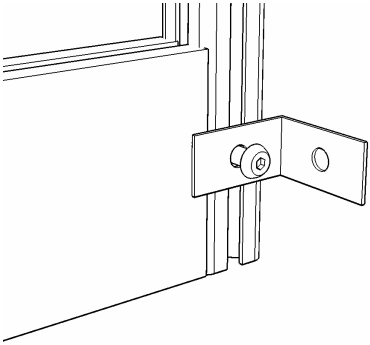


Step 34 - Secure the greenhouse down

If you are in an exposed location, we recommend that you secure the greenhouse to the ground, a wall or a fence.

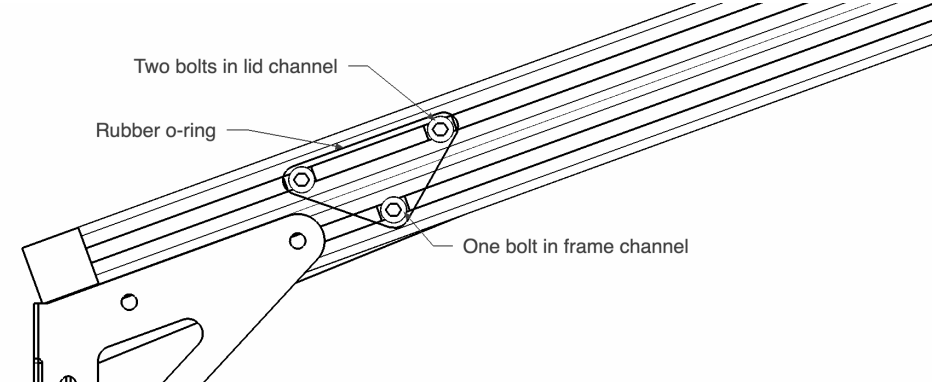
Parts
2 x fixing bracket
2 x Square nut
2 x M5 x 8mm bolt

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)



Storm lock

In very strong winds, you may want to lock the lid so that it doesn't blow open. The o-ring fitted to the sides of the lid should be stretched over the frame bolt as shown below. The top two bolts are 60mm apart.



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 means that it does not need much maintenance.

- The automatic lid lifter will need oiling from time to time to prevent corrosion.
- Clean the inside of the panels from time to time, 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