ASSEMBLY INSTRUCTIONS

Value Growhouse

Video instructions:
Helpful video clips are available at

www.garden-products.co.uk/instructions

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Model FBG shown

Can we improve?
We hope that you find our instructions clear and concise.
If you have any suggestions for improvements email:

instructionfeedback@garden-products.co.uk

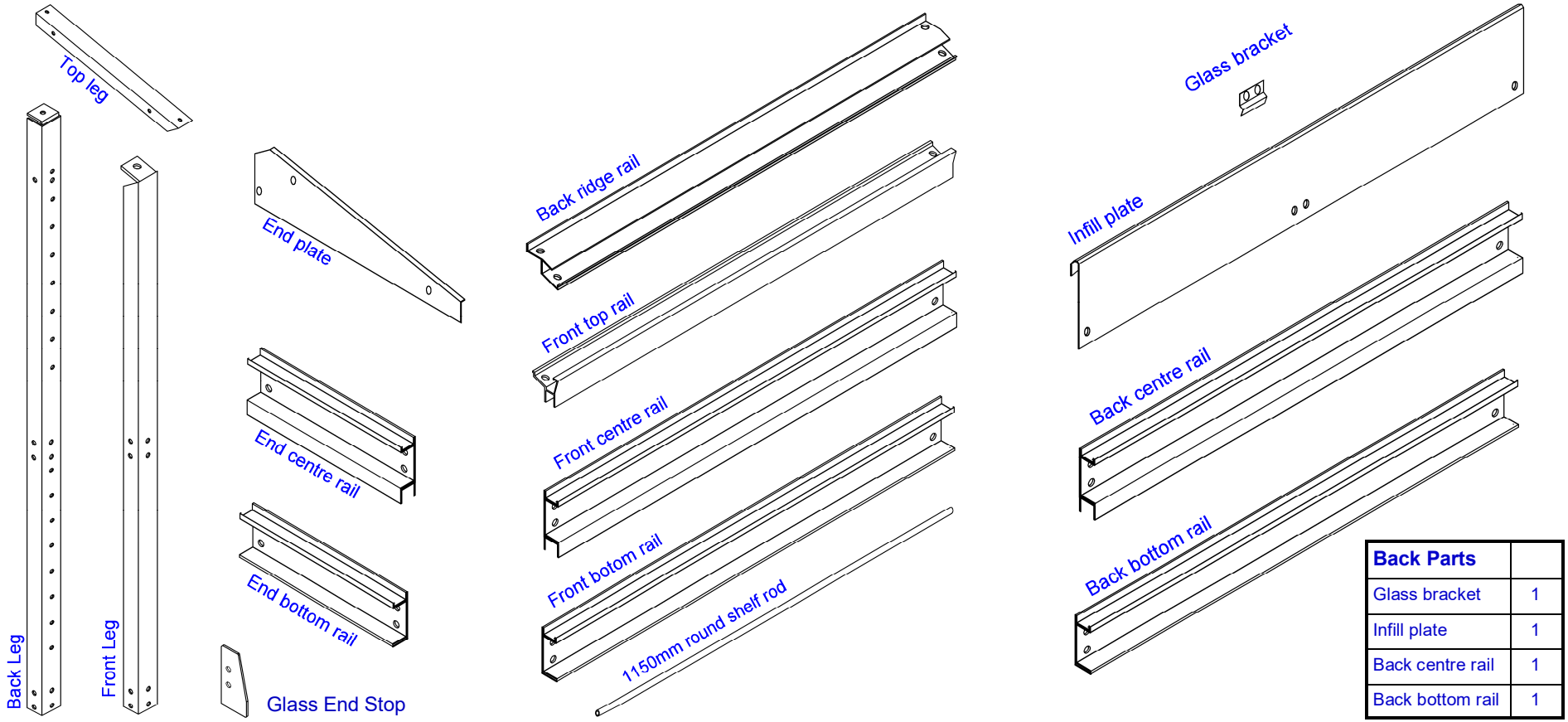
Please keep all packaging until installation is complete

Assembly instructions for models: FBG (Growhouse)

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Date: Sep 26 Rev: 12 File: FBG



Back Parts	
Glass bracket	1
Infill plate	1
Back centre rail	1
Back bottom rail	1

Leg parts	
Back leg	2
Front leg	2
Top leg	2

End parts	
End plate	2
Centre rail	2
Bottom rail	2
Glass End Stop	2

Long parts	
Ridge rail	1
Top rail	1
Centre rail	1
Bottom rail	1
Infill Plate	1
1150mm shelf rod	10

Additional Items		
Handle 350mm		4
Screw pack	SCREW-H5	1
Screw pack	SCREW-H8	1
Shelf pack	S-V	2
Ground fixing kit	FR-AKG	1
Black 12mm channel liner	W65-5M	1
Black 16mm channel liner	W66-2M	1
Allen Key	SCREW-H5	1



Note:
If optional deluxe upgrade, mist watering or centre staging ordered - these parts will be in separate packs.

Powder Coated models only
These have washers supplied to protect the coating - refer to instructions in washer pack

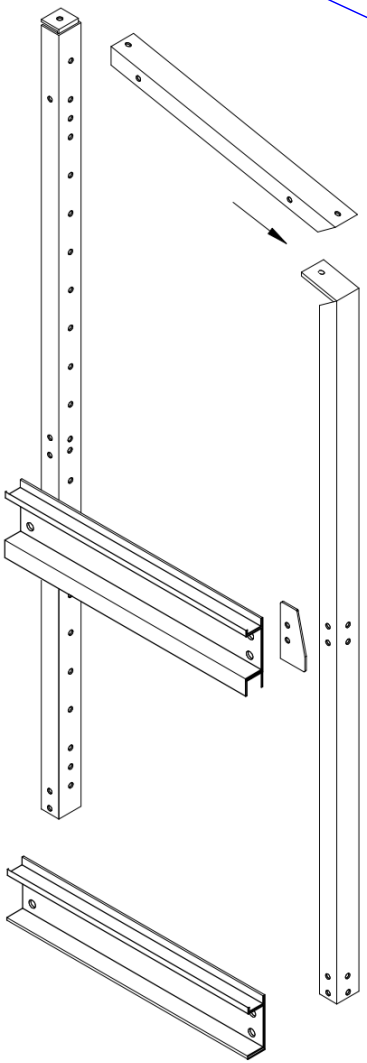
MAIN ALUMINIUM PARTS



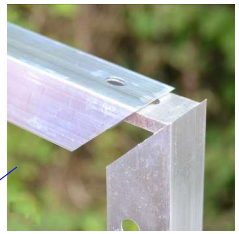
Top leg rests against the **FLAT FACE** of back leg - it is not bolted to the back



Back leg the wrong way round

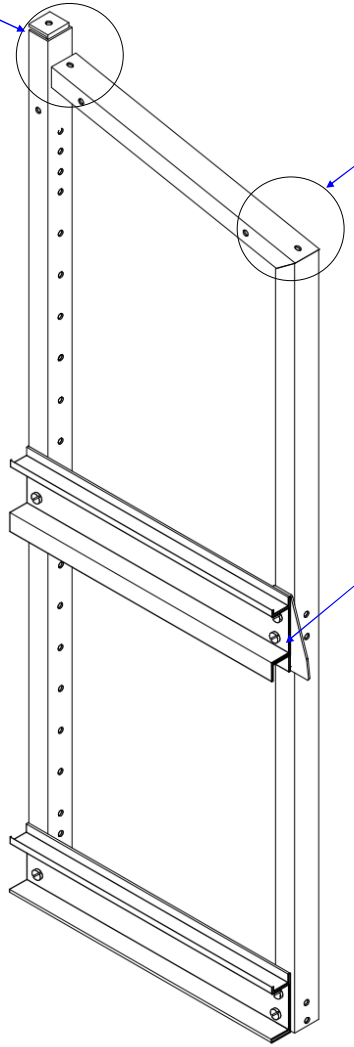


EXPLODED VIEW

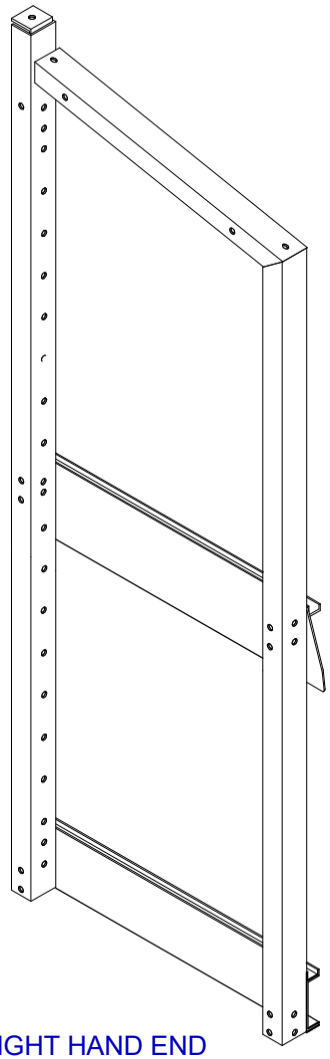


Slide the tongue of the front leg into the groove on the top leg

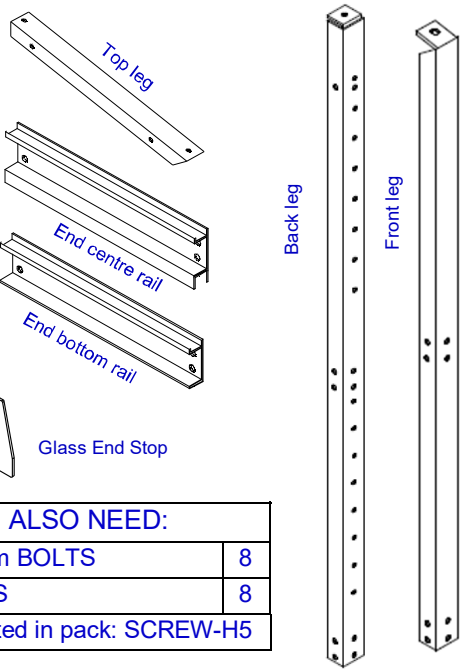
DEEPER CHANNEL AT BOTTOM



FINISHED LEFT HAND END



FINISHED RIGHT HAND END



YOU ALSO NEED:	
10mm BOLTS	8
NUTS	8
Located in pack: SCREW-H5	

PARTS NEEDED FOR EACH END

1 Make up the LEFT hand end as shown.

2 Make up the RIGHT hand end as shown.

DO NOT FULLY TIGHTEN BOLTS AT THIS STAGE

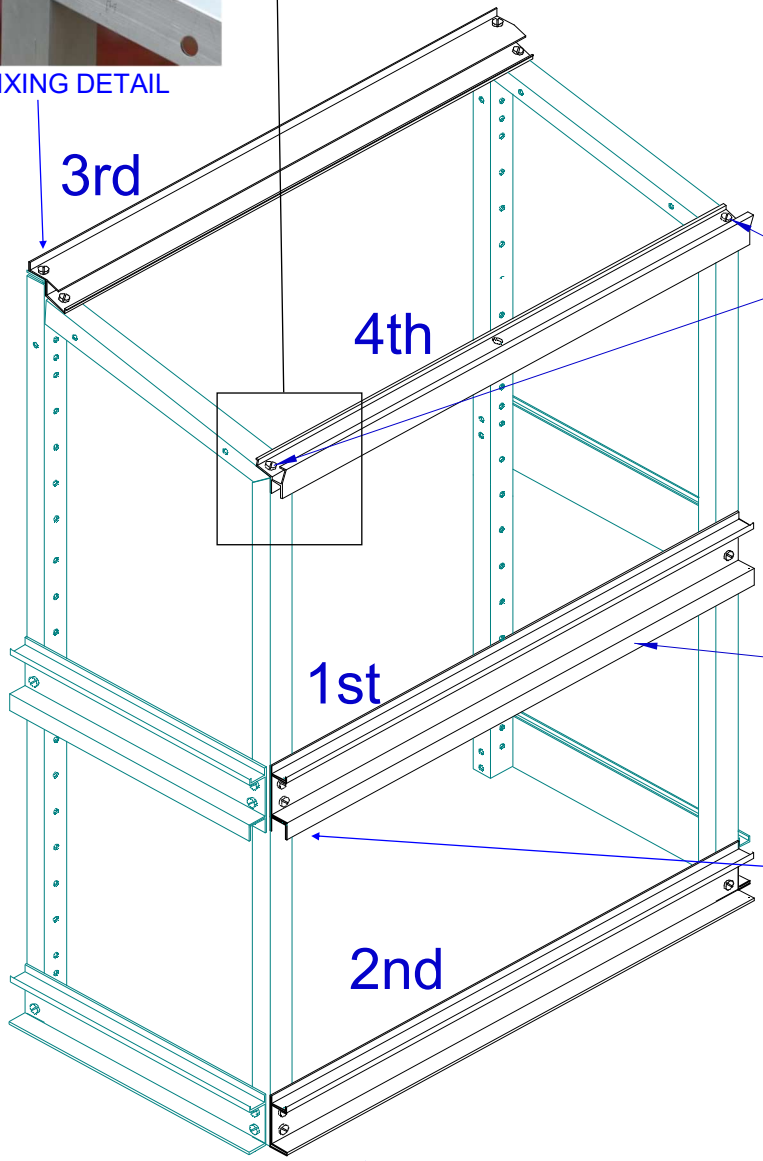
END SECTIONS



FIXING DETAIL

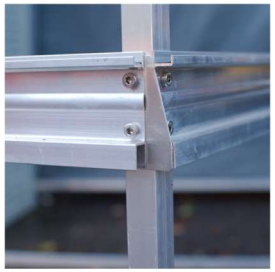


FIXING DETAIL



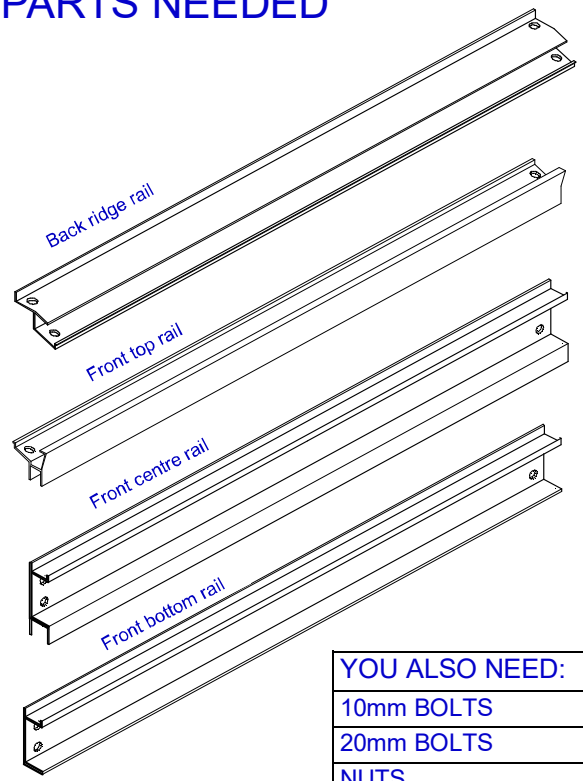
USE THE TWO 20MM BOLTS WITH THIS RAIL

THE DEEPER CHANNEL GOES AT THE BOTTOM



FIXING DETAIL

PARTS NEEDED

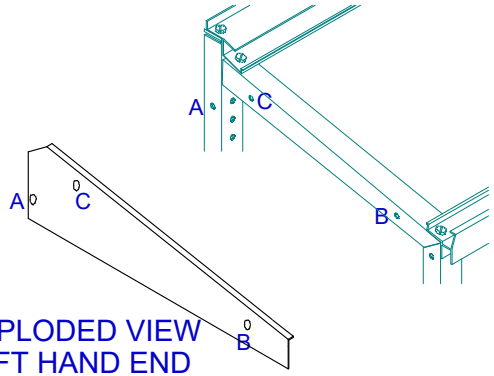


YOU ALSO NEED:	
10mm BOLTS	12
20mm BOLTS	2
NUTS	14
Located in pack: SCREW-H5	

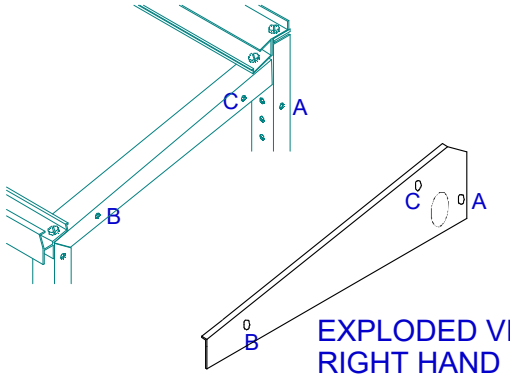
1 Bolt on the rails in the order shown.

DO NOT FULLY TIGHTEN BOLTS AT THIS STAGE

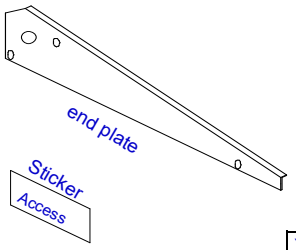
ADDING THE LONG RAILS



EXPLODED VIEW
LEFT HAND END



EXPLODED VIEW
RIGHT HAND END

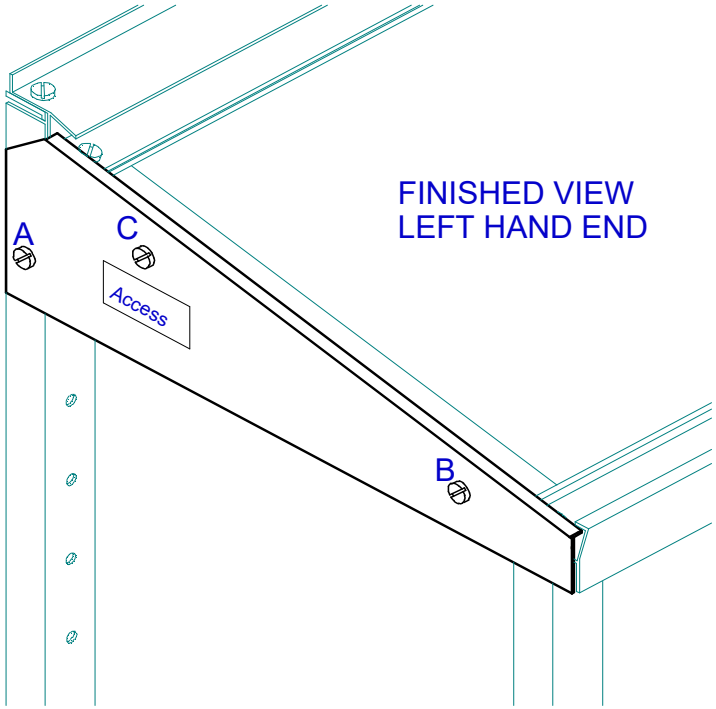


PARTS NEEDED FOR EACH END

YOU ALSO NEED:	
10mm BOLTS	3
NUTS	3
3mm NYLON SPACER	2
BLACK GROMMET	1
Located in pack: SCREW-H5	



THE END PLATE
FITS UNDER THE
RIDGE RAIL LIP



FINISHED VIEW
LEFT HAND END



THE END PLATE
FITS UNDER THE
FRONT RAIL LIP

1. **Remove any plastic protective film** from the end plates and put ‘Access’ sticker on.
2. Bolts 'A' and 'B' go through the end plate THEN have a 3mm nylon spacer fitted BEFORE fitting to the frame.
3. Bolt ‘C’ only goes through the end plate and the frame.
4. Repeat for the other end.
5. One end plate will have a large hole in. Fit the black grommet into this hole.

DO NOT FULLY TIGHTEN
BOLTS AT THIS STAGE

END PLATES

1

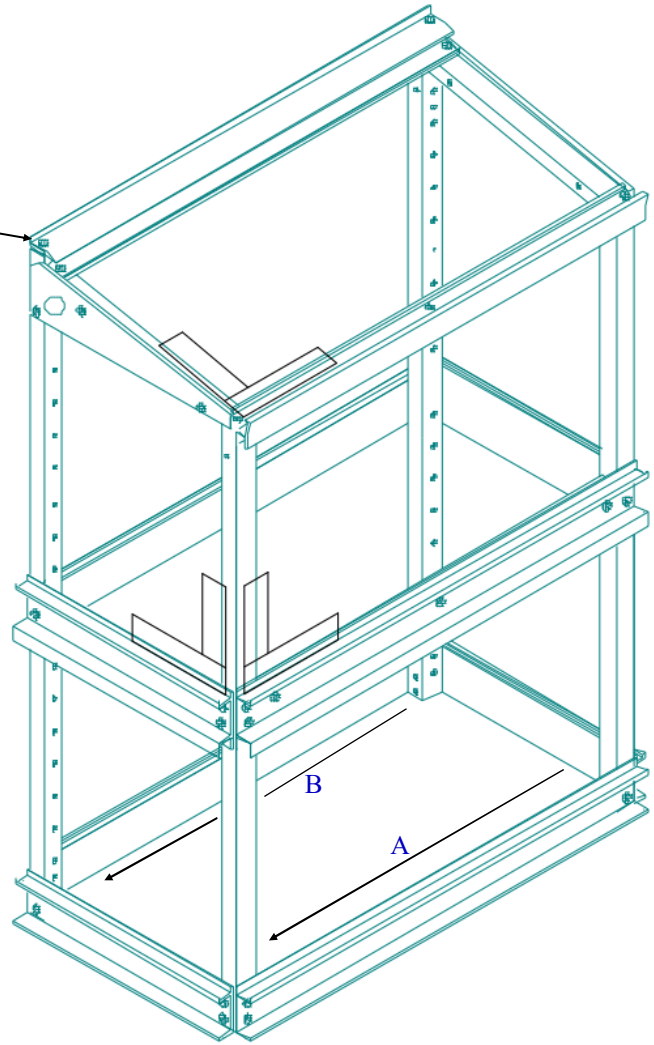
SQUARING THE FRAME

Use a set square (or the A5 frame squaring card provided) to square the unit up in the 3 places shown.
Slacken the nuts if necessary to move the framework into a square position.

IT IS ESSENTIAL TO GET THE FRAME SQUARE.

Ensure distance 'A' is equal to distance 'B' otherwise the shelves will not fit.

If this nut turns while tightening, use a small pair of pliers to hold the nut



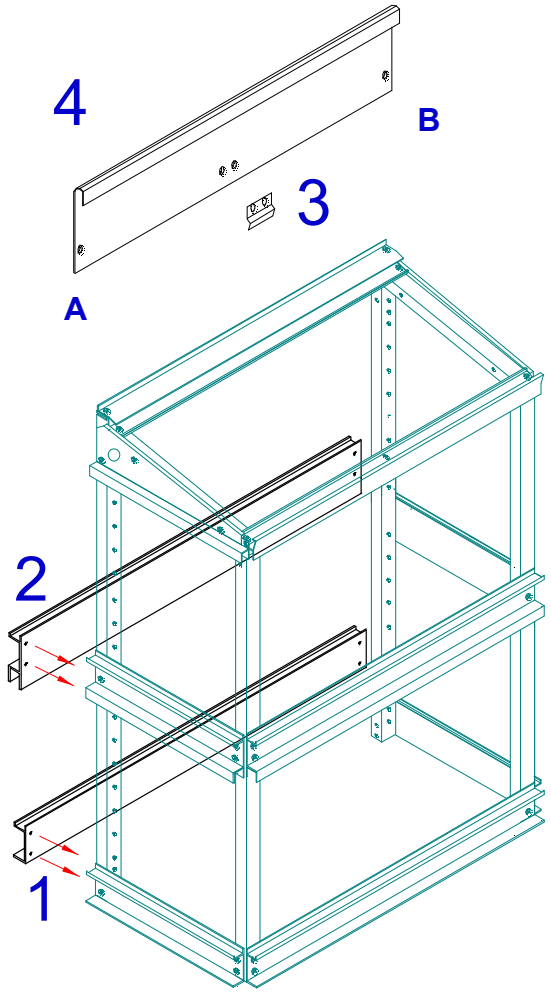
2

Once the frame is completely square fully tighten up all the nuts and bolts.

FULLY TIGHTEN ALL BOLTS EXCEPT THE END PLATE BOLTS, otherwise the framework will quickly work loose.

PERIODICALY CHECK THE TIGHTNESS OF THE BOLTS

SQUARING



3

Remove the plastic protective film from the infill plate. 10mm bolts goes through the infill plate from the outside. Put a 3mm nylon spacer on each bolt before pushing on the glass bracket, then fit the nut.

Glass bracket is **INSIDE** frame and will clamp onto the glass once the glass is in place.

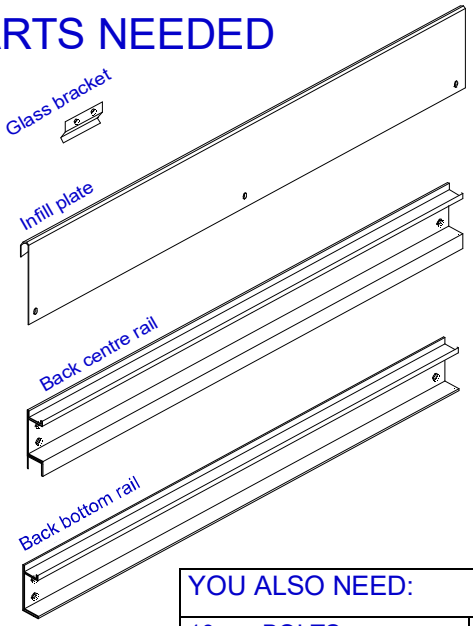


Nylon spacers on infill plate



Completed bracket inside Growhouse

PARTS NEEDED



YOU ALSO NEED:	
10mm BOLTS	2
30mm BOLTS	10
NUTS	12
20mm NYLON SPACER	10
3mm NYLON SPACER	4
Located in pack: SCREW-H8	



Nylon spacers on bolt

1

Bolt on back bottom rail. Push long bolts through bottom rail then fit a 20mm nylon spacer before passing through the leg and fitting a nut on the inside of the frame.

2

Bolt on back centre rail. Push long bolts through centre rail then fit a 20mm nylon spacer before passing through the leg and fitting a nut on the inside of the frame.

4

Place the lipped section over the upstand on the back rail. Push a long bolt through hole A, then fit a 3mm and a 20mm nylon spacer. Push the bolt into the frame and fit a nut on the inside of the frame. Repeat for hole B at the other end. **Do not overtighten these bolts**.

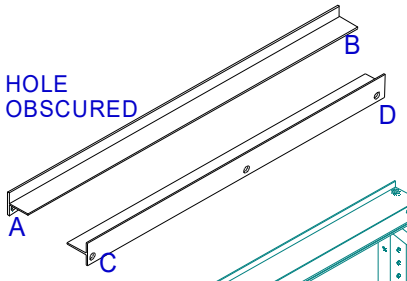


Nylon spacers on infill plate

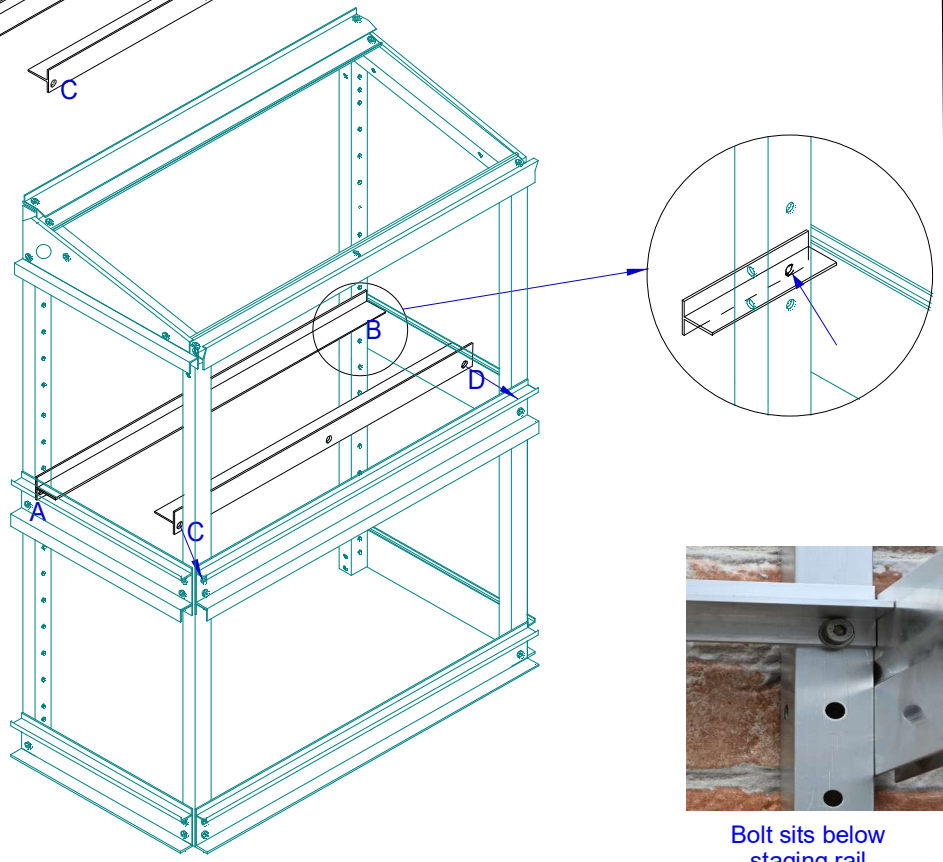
FULLY TIGHTEN BOTTOM AND CENTRE RAIL BOLTS ONLY

FITTING THE BACK RAILS

FITTING THE CENTRE STAGING RAILS (OPTIONAL KIT)

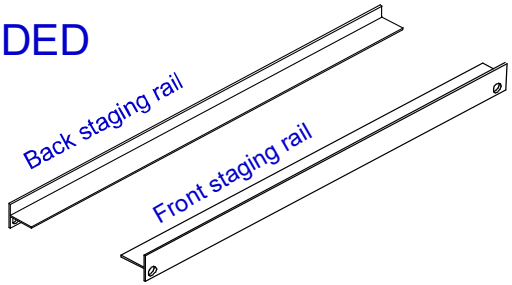


Centre staging rails must have fixing bolt holes on the underside



Bolt sits below staging rail

PARTS NEEDED



YOU ALSO NEED:	
40mm BOLTS	4
NUTS	4
20mm NYLON SPACER	4

1 POSITION THE RAILS INSIDE THE FRAME AS SHOWN. BOLT THROUGH HOLES SHOWN

Front staging rail: replace the upper 10mm bolts on the front centre rail with 40mm long bolts. Slide on the 20mm nylon spacers, then the front staging rail before refitting the nut.

Back staging rail: Push a 40mm bolt through the centre rail **upper** holes. Slide the 20mm nylon spacer onto the bolt **before** passing the bolt through the back leg. Fit the back staging rail onto the bolt then fit a nut.

To fit the centre staging glass (560mm x 560mm) sheets place these on the middle staging supports before glazing the frame. Centre Staging is in glass pack GT-FBU

FULLY TIGHTEN BOLTS

1 Fit the watering inlet.



Fit the washer onto the thread of the adaptor, and then fit the nipple

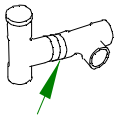


Push the assembly through the hole from the inside

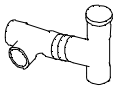


Screw the brass elbow onto the protruding thread from the outside

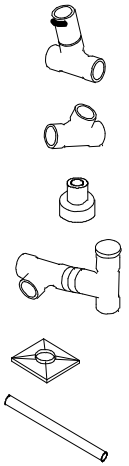
Right hand watering entry:
The double tee is configured for fitting to the left hand end. To change to r/h entry, twist the tee through 180 degrees.



Twist here for r/h end fitting

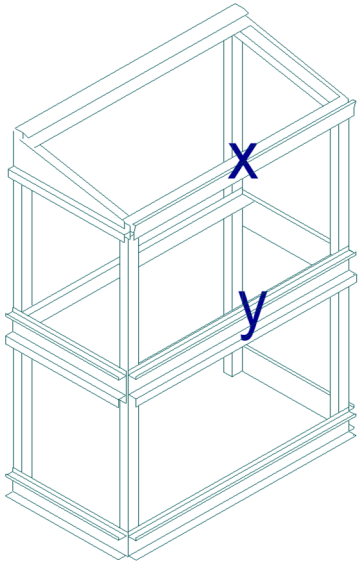


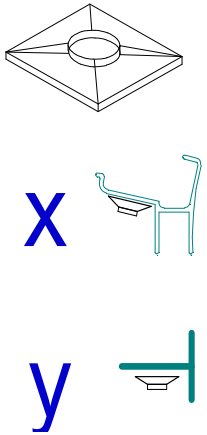
Finished tee for r/h end fitting



PARTS NEEDED:		
NOZZLE ASSEMBLY	FWG/FBG SWG/SBG	2 4
SINGLE TEE		2
BLANKING PLUG		4
DOUBLE TEE		1
STRAP HOLDER	FWG/FBG SWG/SBG	2 4
GREY PIPES	FWG/FBG SWG/SBG	4 6
ENTRY FITTING		1
BLACK STRAPS	FWG/FBG SWG/SBG	4 6
Located in pack: I-SP-FB		

2 Clean any dirt or grease from the framework at positions ‘X’ and ‘Y’, then fit the self-adhesive strap holders at the centre point along the length of the rail.

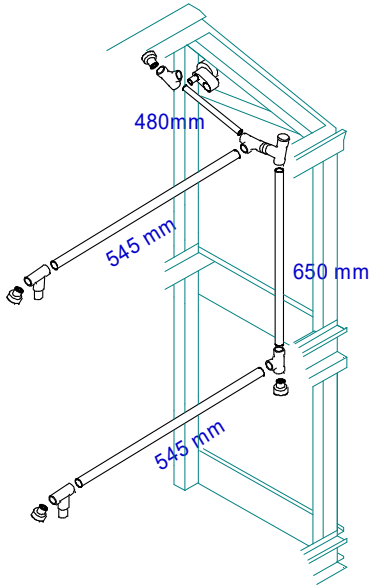




3 Fit the irrigation system as shown. The grey tubes push into the black fittings. Dip the end in water, then twist the pipes as they are inserted for a better fit. Ensure the open face of the grey nozzle faces into the frame.



Inlet and link pipe





Double tee

4 Once assembled use the black straps to secure the watering system to the framework using the self-adhesive strap holders. Also strap the pipes to the end of the frame using the hole in the top leg and the hole half way down the front leg.



Use black strap through hole to fix pipework to holder

1

FIXING TO FLOOR

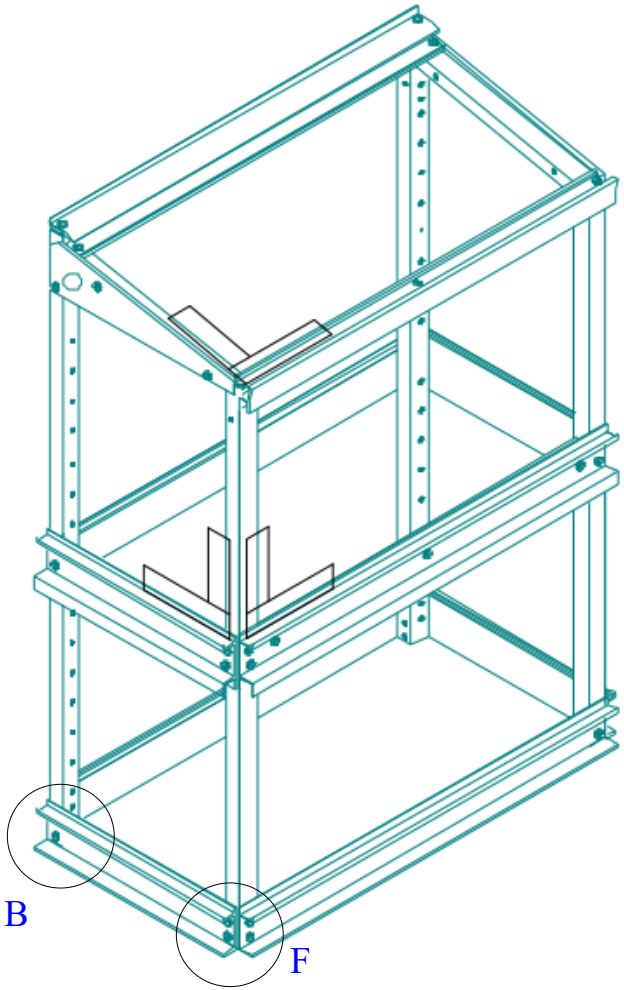
Fit the 'L' brackets to the front legs using a nut and bolt.

Turn the framework upside down and fit the 'L' brackets to the back legs using a nut and bolt.

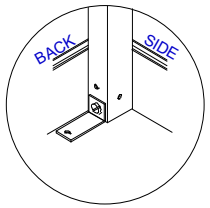
PARTS NEEDED

Ground Fixing Pack FR-AKG

WEAR APPROPRIATE SAFETY EQUIPMENT WHEN DRILLING OR HAMMERING

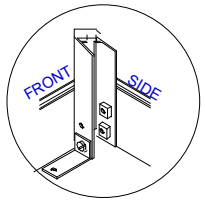


B



INSIDE VIEW OF BACK LEG SHOWING FIXING

F



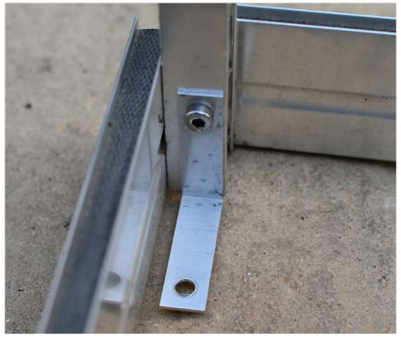
INSIDE VIEW OF FRONT LEG SHOWING FIXING

2

Place the framework in its final position and drill through the bracket with a 6mm masonry drill bit, to a depth of 35mm. Insert the red rawlplug, through the bracket and into the concrete.

Using a woodscrew, screw through the 'L' bracket and into the rawlplug.

Repeat for other brackets.



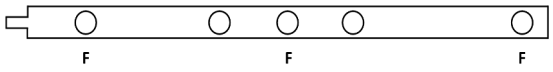
Completed front bracket

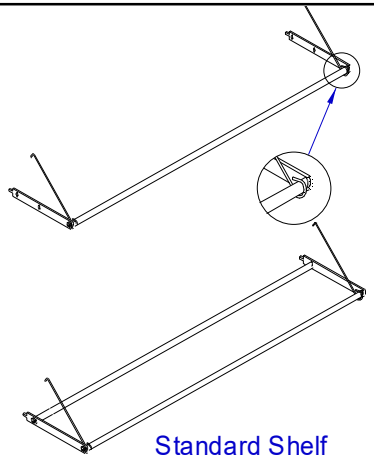
GROUND FIXING

FBG models have 2 standard full length shelves + 2 wide full length shelves.

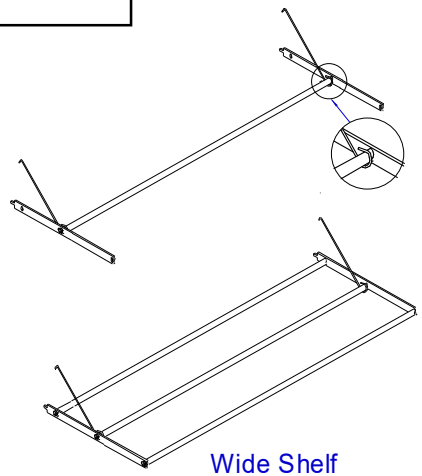
1. Lightly tap rawlplug inserts into both ends of the tubular aluminium shelf rods with a hammer.
2. Slide the two hooks onto the tube, as shown then screw the support bracket on at each end.
3. Fit the other rods to the shelf.

NEW 5–hole strap
Fit the rods to the holes ‘F’





Standard Shelf



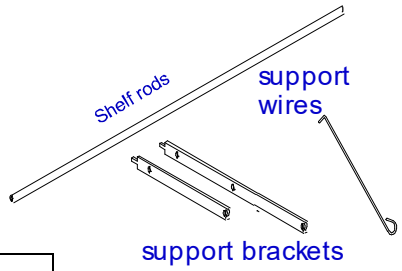
Wide Shelf

FITTING



Hook support wire into top hole, then swing shelf upward into the adjacent hole below.

PARTS NEEDED



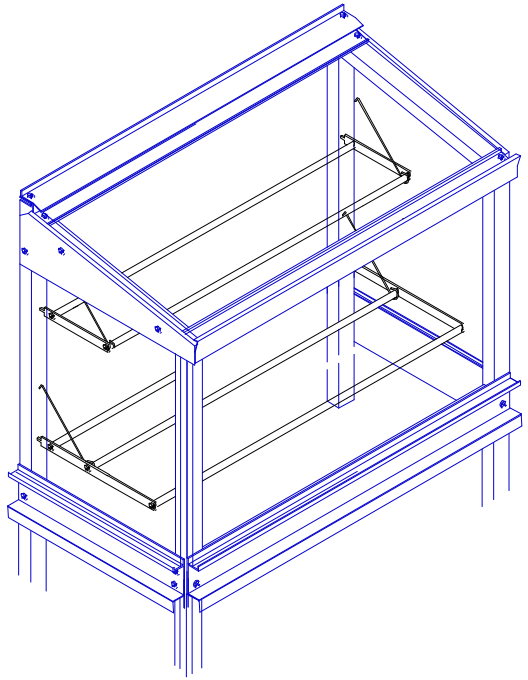
YOU ALSO NEED PER SHELF ROD:	
RAWLPLUGS	2
1” WOOD SCREW	2
Located in packs: S-V	

The large number of holes in the back leg allow the spacing of the shelves to be easily altered.

When the shelves are not needed they can either be removed or they can be unhooked from the lower fixing hole and hung flat against the back using the wires.



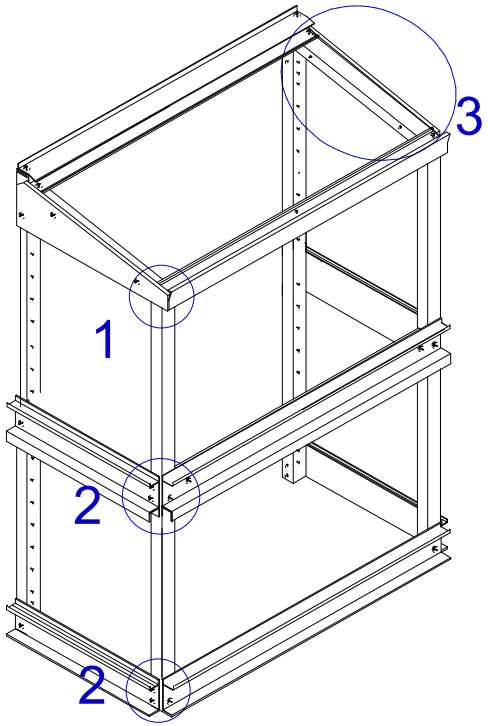
Bottom shelf hung flat against the back



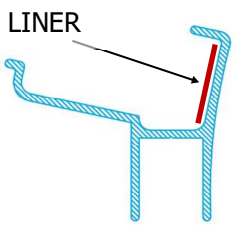
Note: A Pozidrive screwdriver will fit the screws best

FITTING THE CHANNEL LINER

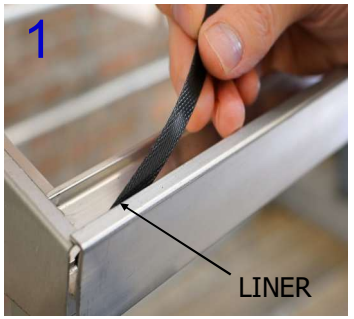
TIP:- Before sticking the tape, clean the aluminium of any oil traces to promote adhesion.



1 The 16mm channel liner (W66-2M) fits on the inside <u>vertical</u> face of the top FRONT rail only. This is a loose fit so strips of double sided tape are included to secure it until the glass is in place.



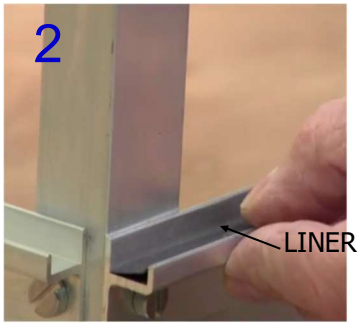




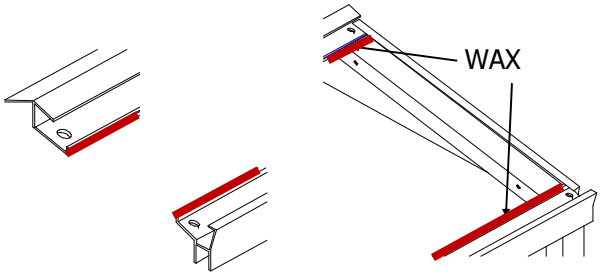
TIP: Do not use the red covered sticky pads that are for the handles

2 The black 12mm channel liner (W65-5M) goes in the FRONT bottom and centre rails only. Using the strips of double sided tape press liner down so that it LIES FLAT at the bottom of the channel - trim with a knife if necessary.

THE DOORS WILL NOT SLIDE PROPERLY
IF THE LINER IS NOT FLAT



3 To make the top glass slide more easily, rub candle wax onto the glass bearers. Also wax the black 12mm and 16mm channel liners.





Removing the tape

Peel the **narrower** backing tape off first, this will expose the sticky pad, allowing it to be stuck onto the liner.

Tip: Bend the backing tape back on itself to make it easier to peel the sticky pad off.

Place pads regularly down the length of the liner.

When ready, peel the wide backing pads off the tape and stick the liner to the aluminium.



On the next page are instructions on how to fit the handles to the glass

When fitting the handles, place the glass on a table or timber battens. **NEVER PLACE THE GLASS DIRECTLY ON CONCRETE OR SLABS**

Always fit the handles to the left hand side of the glass sheet

DO NOT lift the glass by the handle

If possible, leave the handles overnight in a warm place to promote the curing of the adhesive

WARNING

If broken, toughened glass will fragment safely.

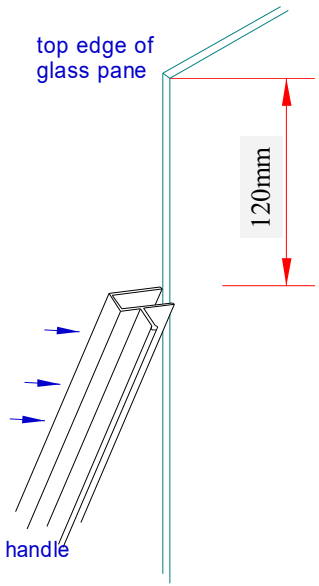
If the edges are knocked or chipped the glass will spontaneously fragment. This is a natural occurrence due to the toughening process. Care should be taken when moving or cleaning, not to damage the edge of the glass.

When placing the glass in the frame, ensure that the glass is securely placed in the runners before letting go of the glass.

GLASS	
610mm x 610mm	14

Sheets requiring handles	4

1

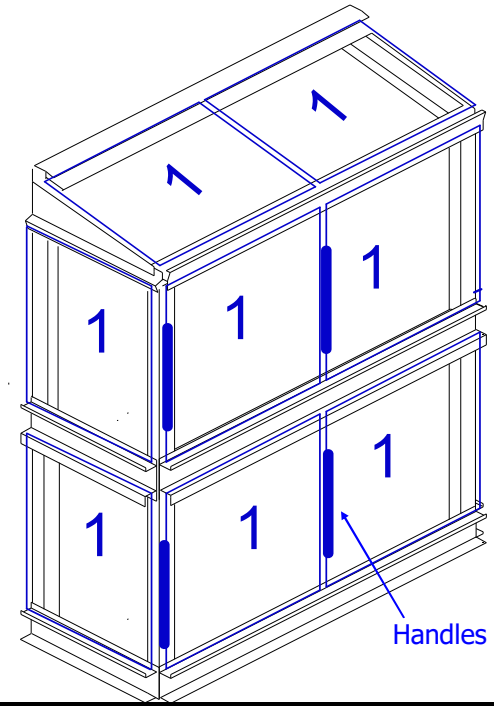


Place the handle 120mm from the top edge of the glass.

Note:
If you have purchased the optional long handles, place the longer length handle 15mm from the top edge of the glass.

TIP: Always grip the handle in the CENTRE when sliding

TIP: Do not try and slide the handle on from the top or bottom



Top, back and end glass have no handles

FITTING THE HANDLES



1

Ideally work on a table or a workbench.

It is best to work inside to keep the pads warm and dry.



2

Front sheet handles are 120mm from the edge.

For the optional long handles mark 15mm from the top edge.



3

Open the sachet and wipe the glass where the tape will stick.



4

Replace the cloth in the plastic bag to prevent evaporation.



5

Peel the pad off the backing.

Each handle has 2 pads



6

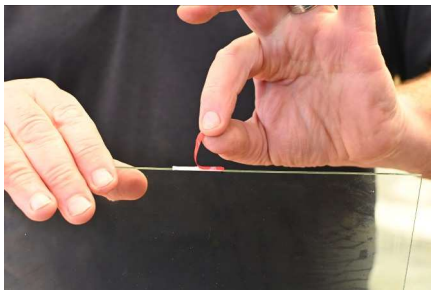
Press the pad down firmly to ensure good adhesion to the glass.



7

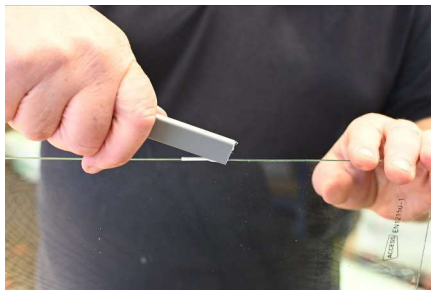
Use the handle to find the 2nd pad position.

Fit the second pad.



8

Peel the cover strips off all of the pads.



9

Using the pen mark as a guide, fit the handle.

Slide the two arms of the ‘U’ over the edge of the glass.



10

Work the handle on with your hands.



11

Use one of the glass battens to gently tap the handle down.



12

Work the handle on all the way down the glass.

Use the timber batten to tap the handle if necessary.

HOW TO FIT THE HANDLES AND PADS

FITTING HANDLES
Fit the handles to the front glass before fitting into the frame. Ensure the handles are always on the left hand side of the glass.

TOP BACK GLASS
Slacken the infill panel bolts and gently slide the first sheet in from the rear corner, slide to the centre. Repeat for the other end. The two sheets will overlap in the centre, behind the glass bracket (B). Carefully retighten the bolts. Fit a ring wedge (F) into the lower glass channel - 1 per sheet.

BOTTOM BACK GLASS
To fit the glass push the sheet into the deeper top channel, then lower into the bottom channel. sure the glass is firmly in the bottom channel before letting go. In the centre of each pane, push a black thimble shaped wedge into the top glass channel to prevent the glass rattling (D). Fit a ring wedge (F) into the bottom glass channel - 1 per sheet.

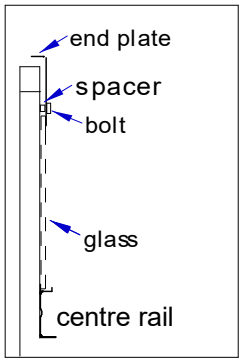
FITTING THE GLASS (TOP SHEETS, FRONT SHEETS & BOTTOM END SHEETS)
To fit the glass push the sheet into the deeper top channel, then lower into the bottom channel (E). Make sure the glass is firmly in the bottom channel before letting go. Always start glazing from the left hand end and overlap each subsequent pane by approx 1”(2cm).

TOP END GLASS
Slacken the two lower end plate bolts then slide the glass into place from the front corner. The glass is held between the framework and the end plate (A). The bolts on the end plates can then be carefully re-tightened. Fit a ring wedge (F) into the bottom glass channel.

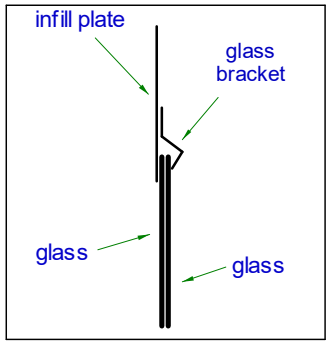
BOTTOM END GLASS
To stop the lower end glass panel rattling, push a black thimble shaped wedge into the top glass channel (D). Fit a ring wedge (F) into the bottom glass channel.



E. Fitting the glass



A. End glass detail



B. Top back glass overlap detail



B. Glass bracket



D. Thimble wedge detail
(Located in packs: SCREW-H5 and SCREW-H8)



F. Ring wedge
(Located in packs: SCREW-H5 and SCREW-H8)

GLASS STICKS TOGETHER	This is normally due to the handles not being put on the correct side of the glass. See page 12 for details of where the handles should be fitted to the glass.
HANDLES COME OFF	If handles come off frequently either purchase some new handles and sticky pads from Access or use a glue such as 'liquid nails' or 'no more nails' to permanently glue the handles to the glass.
SHELVES WILL NOT FIT INTO THE BACK LEGS	Check that the back legs have been fitted the right way round - see page 2. Check that dimension A = B - see page 5.
GLASS FALLS OUT OF THE LOWER LEVEL	Ensure that the centre rail has the deeper channel at the bottom.
FRAMEWORK MOVES AND GLASS FALLS OUT	If the nuts and bolts haven't been properly tightened, the framework will quickly become loose and move, even in light winds. In strong winds the glass will fall out. Remove the glass, re-square the frame, then **fully tighten all of the nuts and bolts**.
WATERING INLET LEAKS (OPTIONAL ACCESSORY)	Try tightening the inlet fitting as it needs to be tight to seal. If this does not work, undo the fitting and use some white plumbers PTFE tape on the thread and reassemble.

PERIODIC MAINTENANCE Every Spring take the glass out of the greenhouse and wash glass and framework with warm soapy water. When inserting the glass, always check that the glass is properly seated in its top and bottom channels before letting go of the sheet.

CHECK THE TIGHTNESS of all bolts regularly, especially in very windy areas or powder coated frames.

CROP ROTATION Suggestions for suitable crops and sowing dates given in the free Access Growing Guide.

VENTILATION In cold weather gentle ventilation can be given by sliding the front sheets of glass to give 2-3" (5-8cm) gap at each corner. In warmer weather allow a gap on the top sheets as well. In very hot weather open all the sheets of glass. To ensure that the correct temperature is maintained use a thermometer inside the greenhouse. You can completely remove the top sheets in summer.

GALES The greenhouse must be kept fully closed in rough weather.

GLASS CHANNELS Ensure that this is kept free from debris and allows the glass to slide smoothly. Periodically lubricate the running edge of the glass with a wax candle.

SNOW Snow is very heavy - avoid letting it build up on the roof.

SHELVING Stand pot plants on saucers, or use optional shelf covers which incorporate a layer of capillary matting to absorb excess water when watering. Alternatively, stand the pots in empty seed trays.

SITING Site on the sunniest place available. Anything from East through South to West is suitable. If it has to face North, don't despair, it will be warmer in than outside! If you can fix to a brick or stone wall, you will get extra heat storage during the day.

REDUCING THE LENGTH If it is just too long for your ideal spot, it can be shortened. Re-drill the holes at one end of the rails - moving them in by the amount you need to remove. Hacksaw off the surplus aluminium and shorten the shelf rods. The glass will merely overlap more - don't try to cut toughened glass!

OPTIONAL ACCESSORIES

MIDDLE STAGING To accommodate tall plants slide one sheet over another or lift out completely.

WATERING SYSTEM The system accepts standard quick connectors. Turn the tap on slowly until the mist fills the greenhouse; too much pressure will throw water on to the back wall. Leave on for 5 minutes, or ½ minute for damping down.