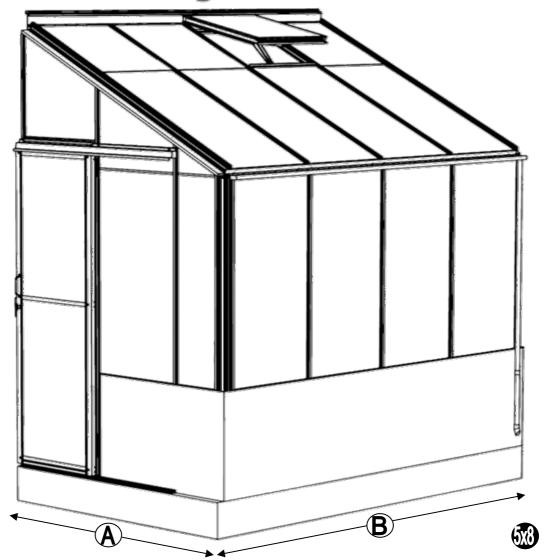


5' DWARF Lean-To Assembly Instructions



NOMINAL SIZE	A (mm)	B (mm)
5lt X 6		1990
5lt x 8	1620	2610
5lt x 10	1620	3230
5lt x 12		3850

NOMINAL SIZE	A (mm)	B (mm)
6ft extension		1860
8ft extension		2480
10ft extension	-	3100
12ft extension		3720



Thank you for purchasing your new Robinsons greenhouse. We recommend you familiarise yourself with the instructions and read all safety information before you commence assembly. This instruction manual is also available online at www.robinsonsgreenhouses.co.uk in our technical help section should you need to reprint it. Should you require any additional advice you can always call us on 01782 385409.

These instructions are divided into sections highlighted by a white number/letter on a black background at the bottom corner of most pages (see opposite page for details); part lists, B-base, P-preparation, 1-side, 2-front gable, 3-rear, 4-joining the three sides together, 5-roof, 6-wall attachment, 7-vent, 8door, 9-glazing, 10-vent attachment, 11-door attachment, 12-anchoring down, 13-optional louvre, 14-optional shelf, 15-optional staging, 16-finishing touches. If you need to contact us for assistance please refer to the relevant section/s. If your building is longer than 12', i.e. has an extension then please also refer the separate extension manual.

Safety Warning

- Glass and aluminium can potentially cause injury. Please ensure you wear protective goggles, gloves, headgear and suitable footwear when assembling and glazing the building.
- Please remember that glass is fragile and should be handled with extreme care. Always clear up and dispose of any breakages immediately.
- Do not assemble the greenhouse in high winds.
- For safety reasons and ease of assembly, we recommend that this greenhouse is assembled by a minimum of two people.
- Please clear all lying snow from the greenhouse roof as it can cause the roof to buckle or collapse.

Site Preparation

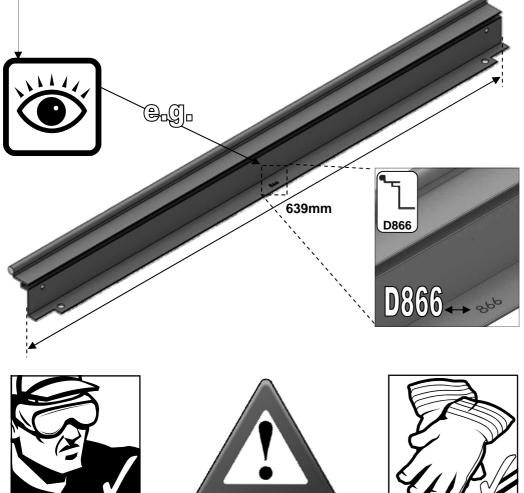
- When selecting a site for your greenhouse, it is vital that you choose as flat and level an area as possible.
- A concrete or slabbed base will provide the most solid foundation for your greenhouse.
- IMPORTANT: Do not fix your building down until the building is fully assembled, including glazing.
- Avoid placing your greenhouse under trees or in other vulnerable locations.
- To minimise the risk of wind damage, try to select as sheltered a site as possible, e.g. beside a hedgerow or garden fence.

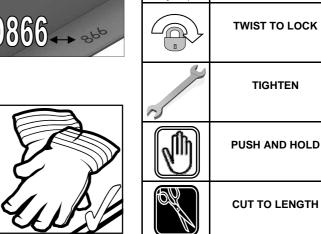
Additional Considerations

- Please bear in mind that assembling your greenhouse can be time consuming. You may need to spread the construction over two or more days. We recommend that you avoid leaving the building partially glazed. If you ever have to leave your greenhouse half assembled and not anchored down, weigh it down with slabs or bags of sand to stop the wind moving it.
- You will find it helpful to prepare a large, clean and clear area in which to work in. A garage floor or flat lawn area is ideal.
- If you have arranged for someone to install your greenhouse for you, please check that all components are included. Some parts are numbered and can be identified by a stamped or hand written number (without the 'D'). Alternatively, the components can be identified by their distinctive profiles, lengths and quantities detailed in the parts list (see next page). **KEY DESCRIPTION**
- Anchoring down your greenhouse should be the final stage of construction (including glazing).
- Once installed your greenhouse requires little maintenance, but to maintain the smooth running of your door(s) WD40 or similar can be applied to the door wheels and lower door guides.

Guarantee

Your new Robinsons greenhouse is guaranteed for 10 years against faulty manufacture of the framework. This does not include glazing, moving parts, accidental damage or wind damage.





KEY

SYMBOL

EXTERNAL VIEW

INTERNAL VIEW

THINK

THIS SECTION **RELATES TO** ANOTHER (e.g. 1 to 5)

CORRECT

DO <u>NOT</u> FIX DOWN!

SECTION No	TITLE	ASSEMBLY SYNOPSIS: IMPORTANT INFORMATION / CONSIDERATIONS
	PARTS LIST	Most components should have a 'D' code punched into their metal surface. Identify and separate all like for like components prior to assembly. The 'parts list' also separates parts into the various sections shown below. Parts can also be identified by their profile pictures and stated lengths etc
В	BASE	Base dimensions and recommendations. Ensure that your base is level as this will make assembly of the building, especially the glazing of the roof much more straight forward.
Р	PREPARATION	Tools required. <u>IMPORTANT</u> : Use WD40 or similar in the glazing bar channels and insert the black glazing rubber prior to frame assembly.
1	SIDE	Take the side glazing bars 'D609' with the rubber inserted and the diagonal braces 'D604', use 10mm bolts to join them to the gutter and 15mm bolts to the cills (note how the head of the bolts slide into each glazing bar during construction).
2	FRONT	Again ensuring that the gable framework is rubbered-up follow the diagrams to assemble each end of the building. Make sure that you have inserted the extra bolts utilised in sections
3	REAR	4, 5 and 11. On the roof and side corner bars not every rubber channel will require rubber unless it is to be utilised in a partition (see separate manual and section P).
4	JOINING THE THREE SIDES	Take the side (1) and both gables (2 & 3) and join them together on your base. It is a good idea to tie some ladders to the side to support them if you do not have anyone to hold them for you.
5	ROOF	Attach the ridge and then the rubbered-up roof bars ensuring that they are fully butted up to the ridge and down onto the gutter. Some tubular braces are supplied to add extra strength, they can be fitted now or later with crop head bolts.
6	REAR WALL ATTACHMENT	The main body of the frame is complete it can be attached to the wall. Make sure that the wall bars are vertical and the ridge is horizontal then drill and screw the building to the wall. Do not attach the base to the ground until section (12) as your building may not be square.
7a	VENT	Once the vent is glazed add silicone to the vent sides and top. Stand the vent/s on their hinge (vent top) and then leave the silicone to set.
7b	VENT SLAM	The slam bar 'D079' can be moved up and down between the roof glazing bars so that it can be butted down onto the pane of glass beneath, the autovent is attached to it later on (10).
8	DOOR	Construct the door using the diagrams and then leave to one side ready for attachment in section (11).
9	GLAZING	Layout the bar capping and covers around the building like a sundial checking that all is present and correct. You can also place the roof capping in the gutters so they are closer to hand. The glass in the ends has to bevel on the black separator strip, this bevelling action allows the glass to tuck underneath the roof corner canopy. Use the capping and the self tapping screws to then hold the glass in place. The covers then enclose the screw heads giving a neat finish. A top tip is to not attach the door post capping (D814/D836) until you have fitted the door runner and threshold (11) to give you more room to manoeuvre.
10	VENT ATTACHMENT	Take the assembled vent and slide the vent hinge 'D866' into the end of the ridge allowing the vent the pivot open and closed. Vent stops go either side of the vent to stop any lateral movement (so insert stop / vent / stop). Attachment of the Bayliss XL autovents.
11	DOOR ATTACHMENT	Use the bolts inserted in section (2) to attach the upper door track. The lower door runner 'D860' and ramp threshold 'D087' push down and lock together.
12	ANCHORING DOWN	Now that the greenhouse is finished and the door and vent/s are operating without interference then you need to anchor the building down using 2" rawl plugs and screws. Use a 7mm masonry bit in a hammer drill to create the holes.
13	OPTIONAL LOUVRE	They attach to the building during the glazing process (9) like a piece of glass with a black separator above and below them.
14	OPTIONAL SHELVING	Robinsons integral cantilever staging and shelving attaches to the inside of the greenhouse frame using either square head bolts (insert four into each side glazing bar 'D609' during construction of the sides (1)) or rectangular 'crop head' bolts which can be fitted retrospectively (both sets of bolts accompany the shelving/staging). This system allows the height of either the staging or the shelf to be set at an operator specific height. Commonly the staging brack-
15	OPTIONAL STAGING	ets are set 900mm from the cills though you can alter this to suit the end user/s. The aluminium shelf / staging slats come in two lengths; (4'):1240mm 'D2002' and (6'):1860mm 'D2003'. These slats can combine to create any length of staging required, i.e. 4'+6' = 10' etc
16	FINISHING TOUCHES	Now that the main body of the structure is complete you can add; downpipe fittings, eave bungs.

Section Ref	Part No.	Section	Size (mm)	5lt 6	5lt 8	5lt 10	5lt 12	
								1
	D043		1894	1				
	D021		2514		1			
	D022	$\overline{}$	3134			1		
	D023		3754				1	
	D042		1897	1				
	D014	٦_	2517		1			
1	D015		3137			1		
	D016		3757				1	
	D604		1316		2	2		
	D609	رج الحا	1160	2	3	4	5	
	RUBBER	Q	1000 (1m)	5	7	9.5	12	
	D174	6	N/A	2	2	4	4	

	D039L	1		1?
	D039R		1625	1?
	D668		4004	1?
	D669	$\overline{}$	1004	1?
	D628	ـــا	650	1
	D608		1160	2
2	D655		1906	1
2 中 3	D656		1610	1
3	D657	7	1314	2
	D670	<u>1</u> F	2210	1
	D675		2506	1
	D110		1585	1
	D626		1497	2
	D149	0 4	N/A	2

Section Ref	Part No.	Section	Size (mm)	5lt 6	5lt 8	5lt 10	5lt 12
2	D854L	Ľ.	1744			1	
9 {	D854R				,	1	
) [RUBBER	Q	1000 (1m)		3	1	
<u>ئ</u>	D174		N/A		8	3	

)	D045	<u></u>	1897	1			
	D007	ſ	2517		1		
	D008	*	3137			1	
5	D009	\wedge	3757				1
	D065		1744	2	3	4	5
	RUBBER	Q	1000 (1m)	7	11	14	18

	D866	•	639	1	1	2	2
	D863L	الس	613	1	1	2	2
	D863R	1	613	1	1	2	2
7	D862	<u></u>	593	1	1	2	2
	D079 PLUS FLUFF	H TÊ	590	1	1	2	2
	D114	60	N/A	2	2	4	4
	D220 PLUS FS6060 SCREW	00	N/A	2	2	4	4
	D205		N/A	2	2	4	4

Section Ref	Part No.	Section	Size (mm)	5lt 6	5lt 8	5lt 10	5lt 12
	D090 + D347 lock = D301	<u></u>	1824				
	D094	<u></u>	1824			1	
	D096 + D217 wheel = D307		611			1	
8	D095		611			1	
	D097		611		1		
	D232		905			2	
	D233		797			2	
	P053				1		
	D225	0	610	1			
	D840B		4000			1	

ANTITIES	EPERATE	10mm	20	23	26	29
MAIN FRAME QUANTITIES	VENTS / DOORS etc SEPERATE	15mm	37	38	39	40
MAIN F	VENTS/	m6	57	61	65	69

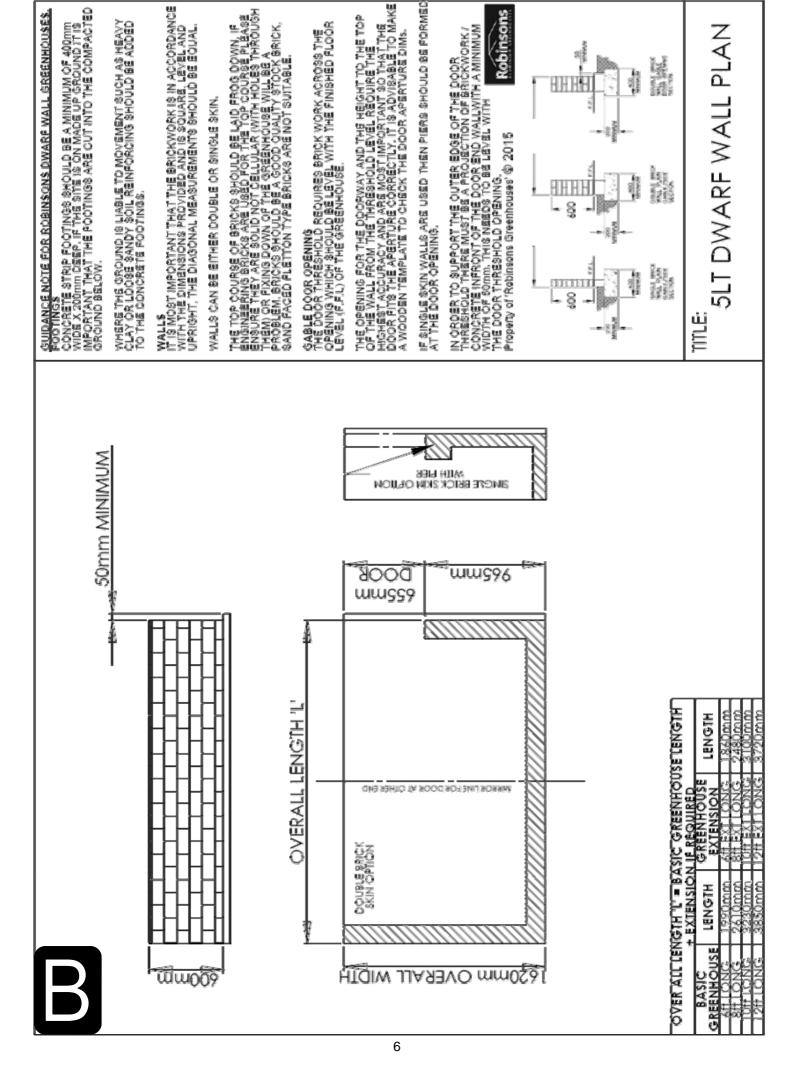


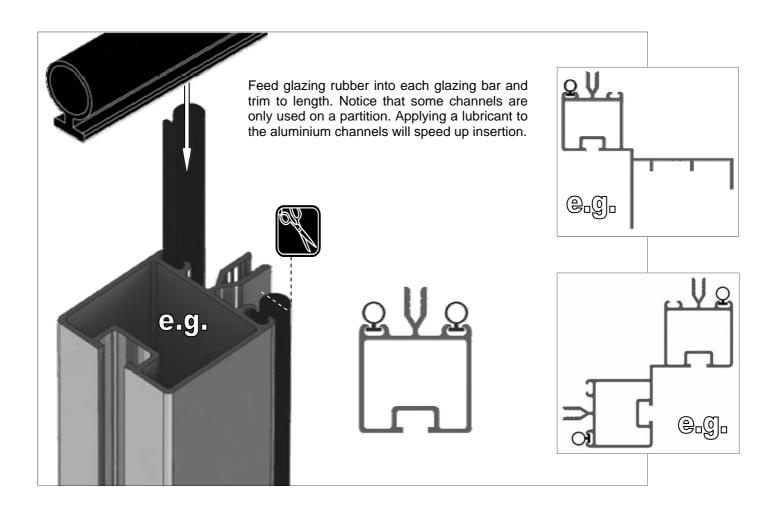


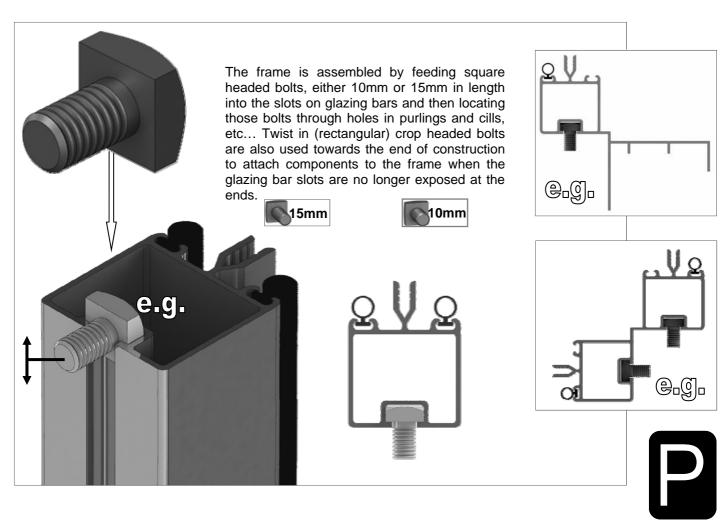
	Section Ref	Part No.	Section	Size (mm)	5lt 6	5lt 8	5lt 10	5lt 12
		D 0 4 0		4444	_	_		
	1	D618	;	1144	2	3	4	5
	2/3	D658		1314		2	2	
	3	D659		1610		1		
	2	D660		311		1		
	3	D661	7	1906		1		
	2	D662		600		1		
	5	D870		601	2	3	4	5
	5	D876	·	1152	2	3	4	5
	2/3	D610		1160			2	
	1	D620	H	1144	2			
9	2	D814	- 7	1883	2			
	5	D871	•	601		2	2	
	5	D877		1152		2	2	
	2/3	D614		1162		2	2	
	1	D619		1144	4	5	6	7
	2/3	D663		1316		2	2	
	3	D664		1610			1	
	3	D665		1908			1	
	2	D666		602		•	1	
	2	D667		313			1	
	5	D811		1754	4	5	6	7
	2	D836		1883		2	2	

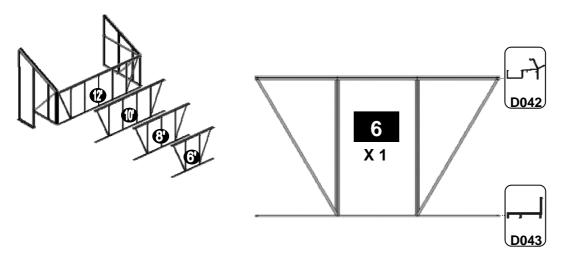
D864		590	1
D860	炡	1240	1
D087		587	1
D084	لل الم	1270	1
D083]	1270	1
D627	10 07	114_	1
D163	000	90	2
D154	-	N/A	1
	D860 D087 D084 D083 D627 D163	D860	D860



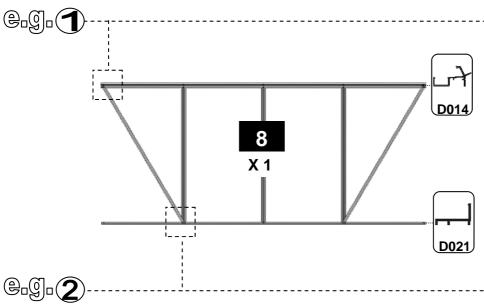




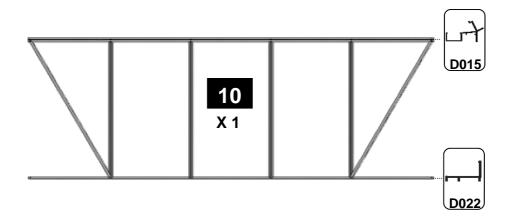




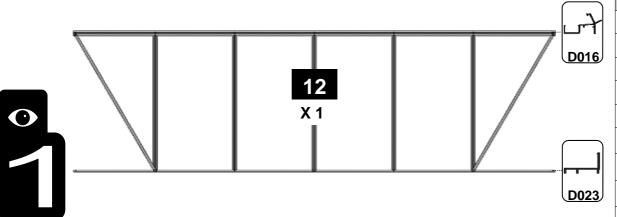
6 X 1 DWARF					
Part No	mm	Quantity			
D042	1897	1			
D043	1894	1			
D609	1160	2			
D604	1316	2			
D174	6	2			
M6- 10mm		2			
M6- 15mm	P	4			
M6- NUT		6			
Rubber	1000	5			



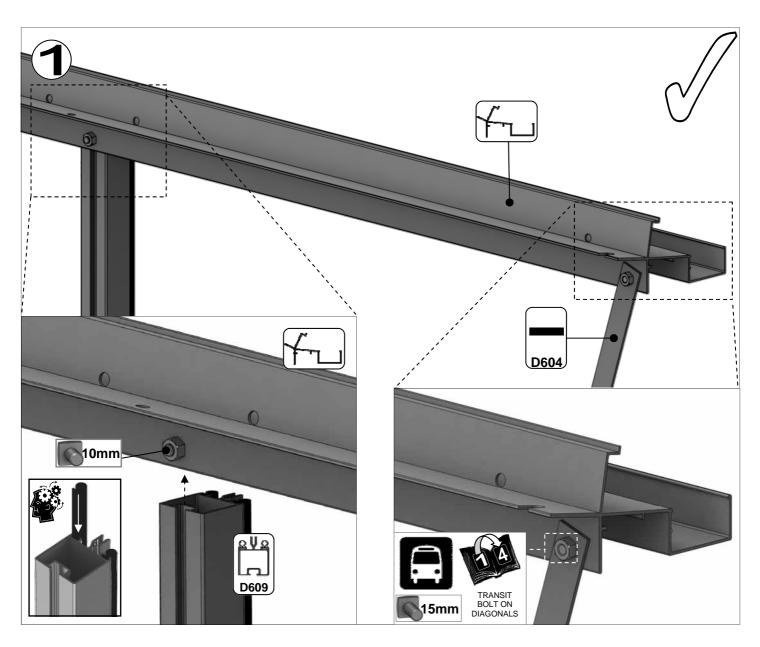
8 X 1 DWARF						
Part No mm Quantity						
D014	2517	1				
D021	2514	1				
D609	1160	3				
D604	04 1316 2					
D174	4	2				
M6- 10mm	6	3				
M6- 15mm	P	5				
M6- NUT		8				
Rubber	1000	7				

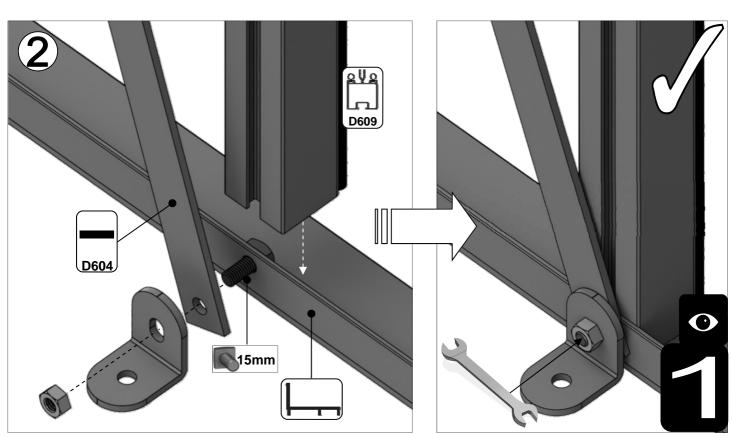


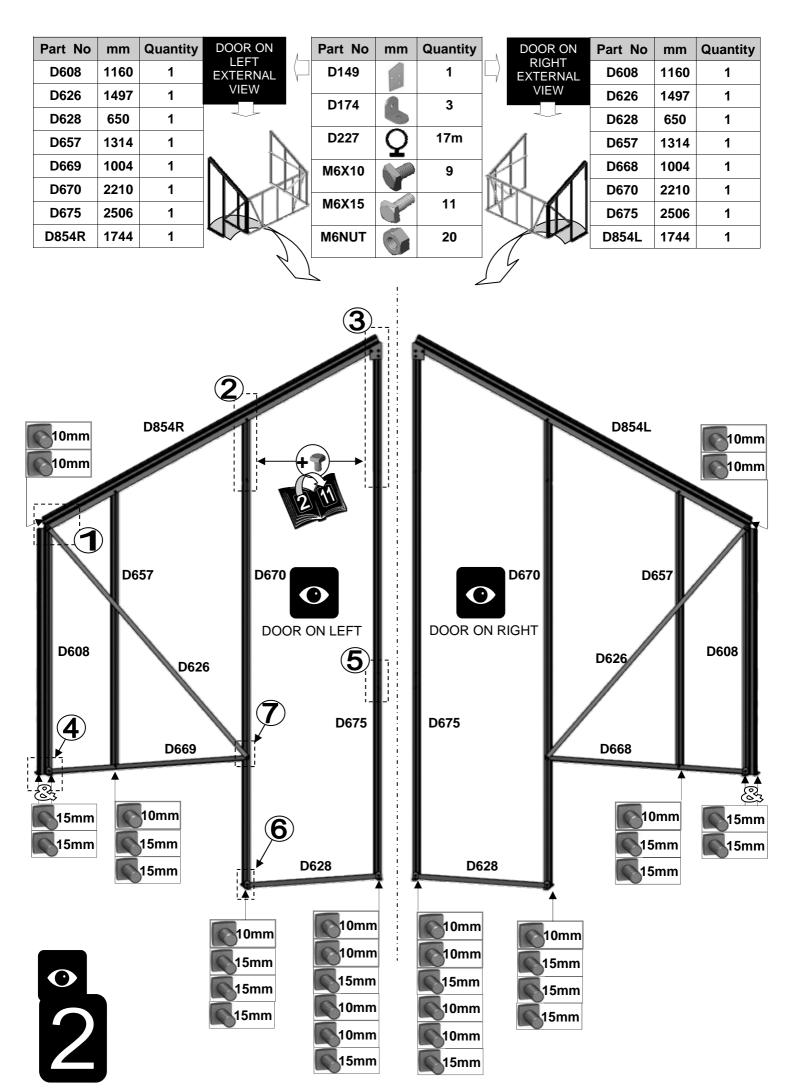
10 X 1 DWARF						
Part No	Part No mm Quantity					
D015	3137	1				
D022	3134	1				
D609	1160	4				
D604	1316	2				
D174	4	4				
M6- 10mm		4				
M6- 15mm		6				
M6- NUT		10				
Rubber	1000	9.5				

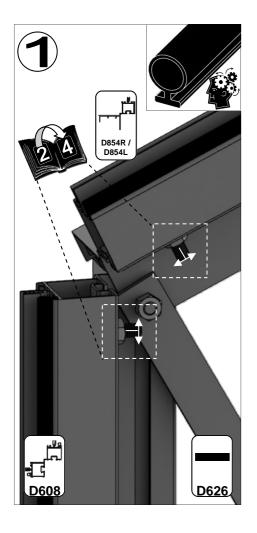


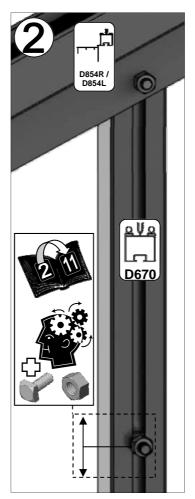
12 X 1 DWARF				
Part No	No mm Quantity			
D016	3757	1		
D023	3754	1		
D609	1160	5		
D604	1316	2		
D174	9	4		
M6- 10mm	3	5		
M6- 15mm		7		
M6- NUT		12		
Rubber	1000	12		

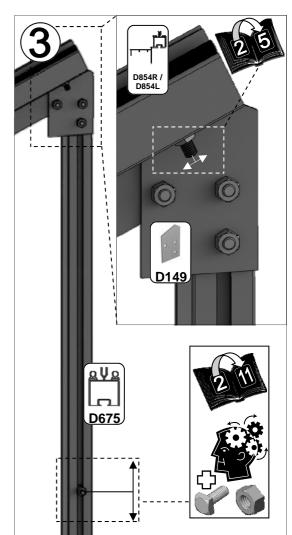


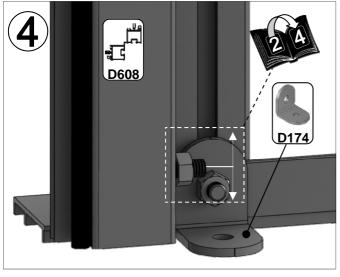


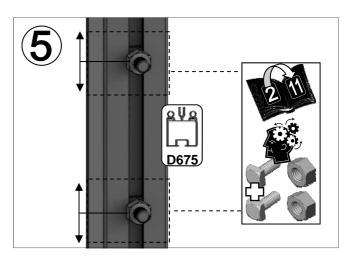


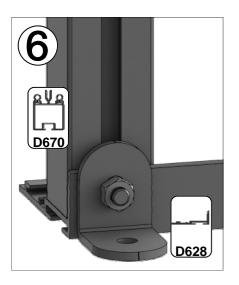


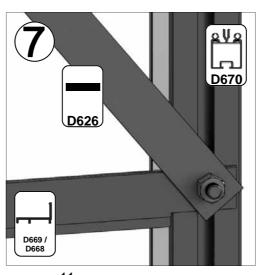










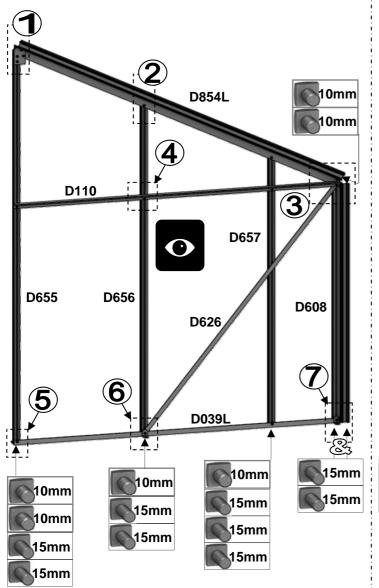


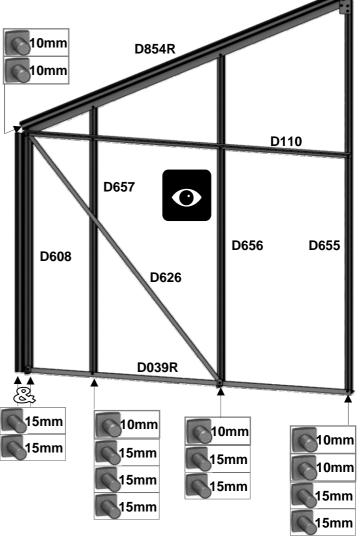


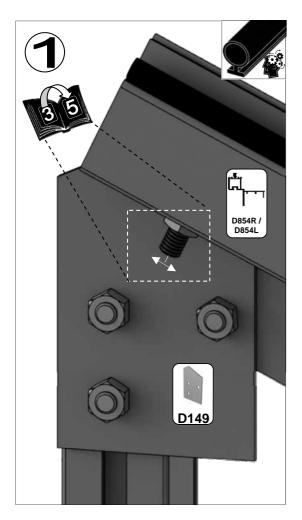
Part No	mm	Quantity	DOOR ON
D039L	1625	1	LEFT EXTERNAL
D110	1585	1	VIEW
D608	1160	1	
D626	1497	1	1
D655	1906	1	
D656	1610	1	
D657	1314	1	
D854L	1744	1	7
			· _/ /

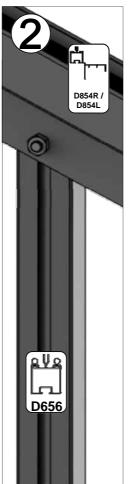
	Part No	mm	Quantity
	D149		1
	D174	3	2
	D227	Ю	14m
1	M6X10		7
1	M6X15	GPP .	11
	M6NUT		18

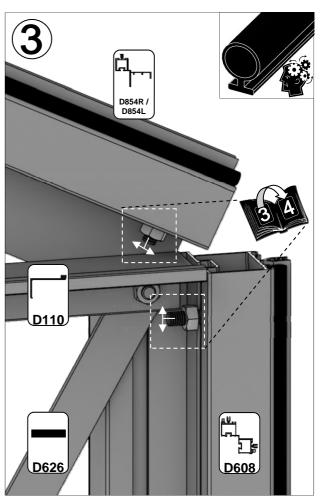
l.	DOOR ON	Part No	mm	Quantity
\rightarrow	RIGHT EXTERNAL	D039R	1625	1
	VIEW	D110	1585	1
		D608	1160	1
	1	D626	1497	1
Ų	$1 \wedge$	D655	1906	1
		D656	1610	1
1	TAMI	D657	1314	1
		D854R	1744	1

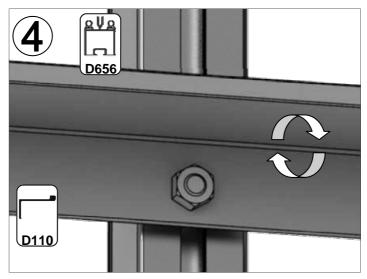




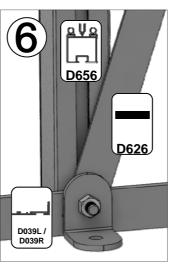


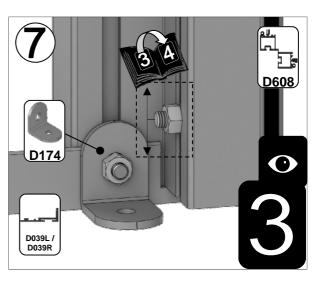


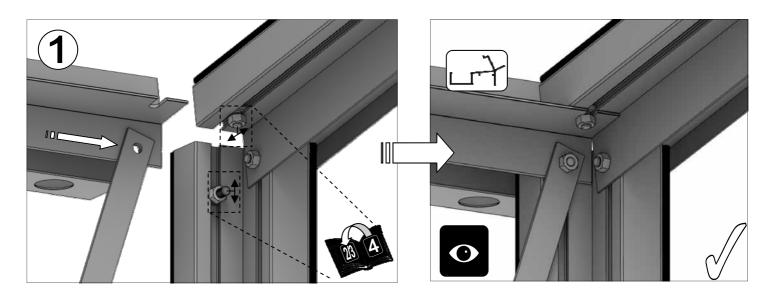


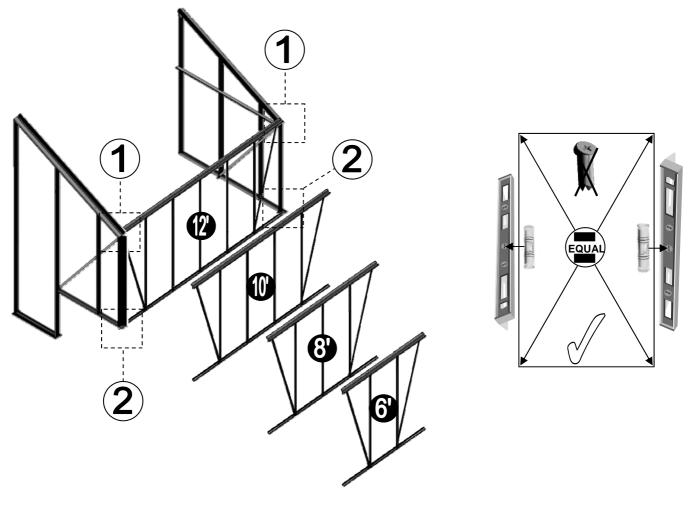


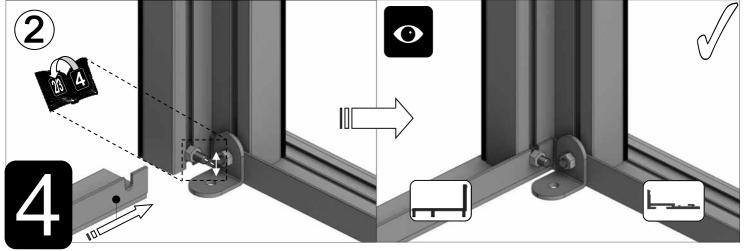










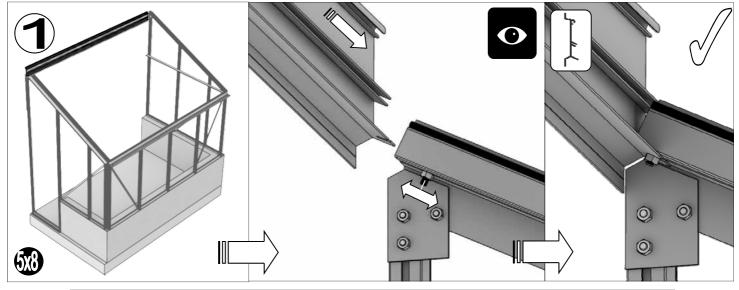


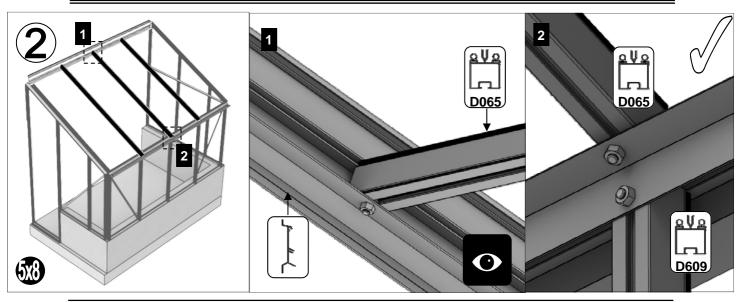
6'		4
Part No	mm	Quantity
D045	1897	1
D065	1744	2
D126	445	2
RUBBER	1000	7

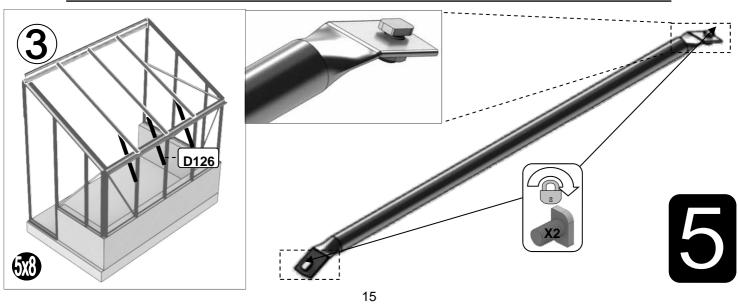
n	Quanti	
	Quanti	ity
7	1	
4	3	
5	3	
0	11	
	4	4 3 5 3

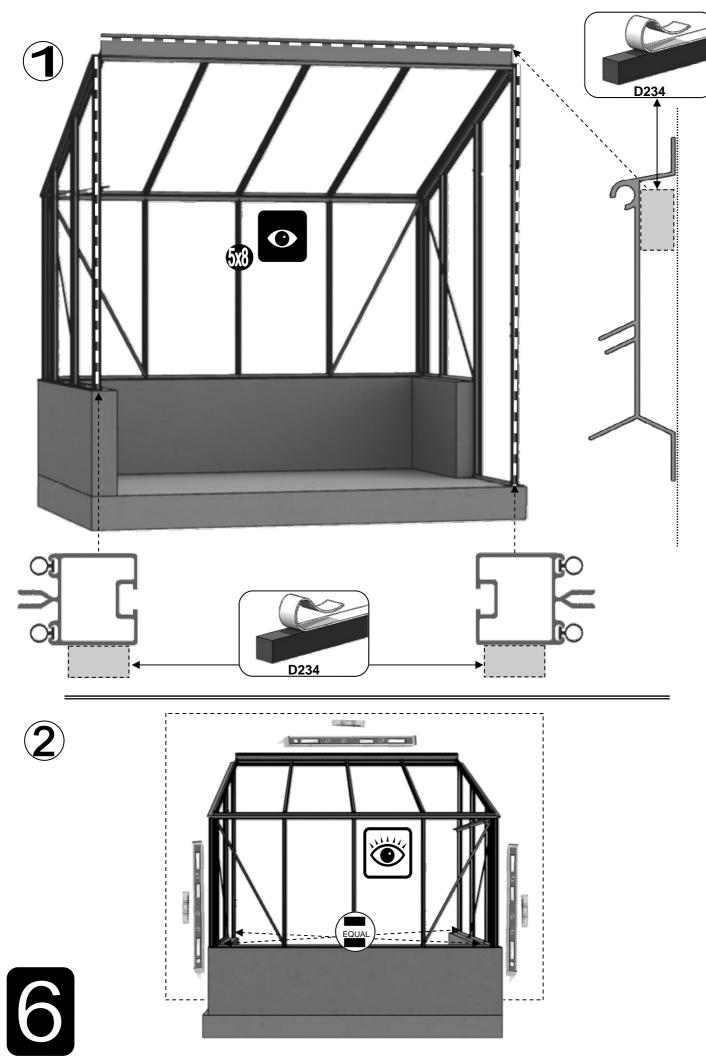
10'				8
Part No	mn	n	Qu	antity
D008	313	3137		1
D065	1744		4	
D126	44	5		4
RUBBER	1000		14	
RUBBER	100	0		14

12'			10
Part No	mm	Qu	antity
D009	3757	1	
D065	1744	5	
D126	445		5
RUBBER	1000		18



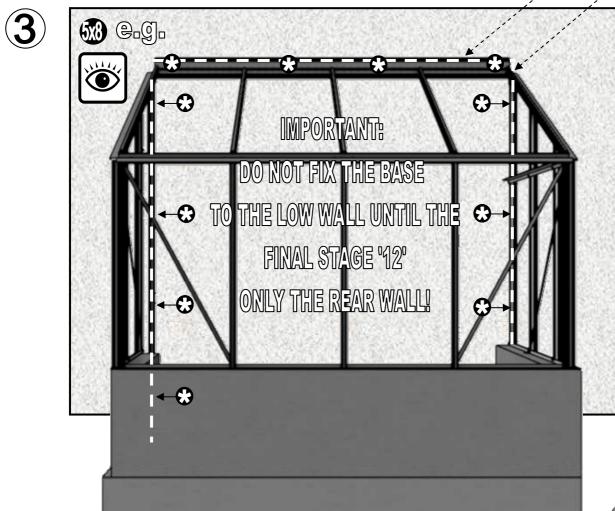


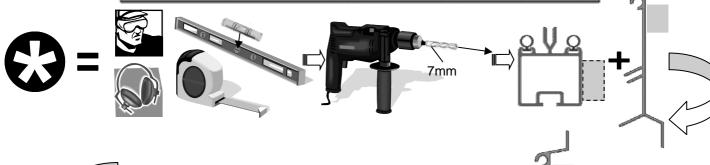


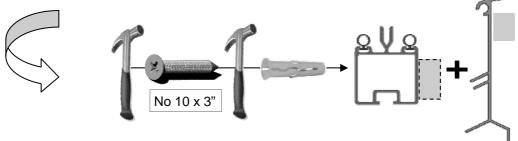


		5x6	5x8	5x10	5x12
Part No	mm		Qu	antity	
SYSCR3	75	10	11	12	13
SYRAWL	50	10	11	12	13





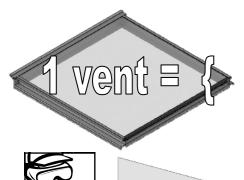




There are various methods for attaching your greenhouse frame to its wall.

- 1) Drill through the vertical wall bars with a 7mm drill/hammer drill using a 7mm masonry bit, Use 3" screws to secure the wall bars.
- 2) Drill through the vertical wall bars with a 7mm drill bit and enlarge the inner hole to 10mm. Use 2" screws to secure the wall bars hiding the screw heads inside the bars to give a neat finish.
- 3) Use L-shaped brackets and 2" screws to secure the frame to the wall similar to anchoring the green-house down (e.g. section 12).



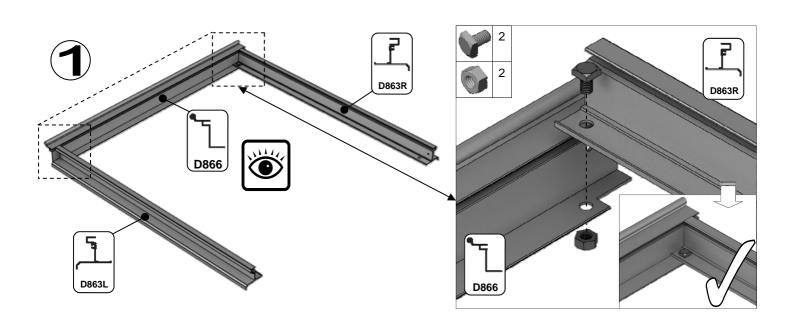


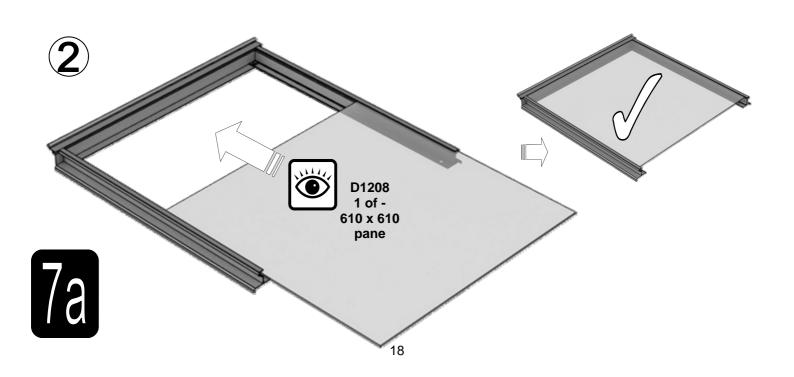


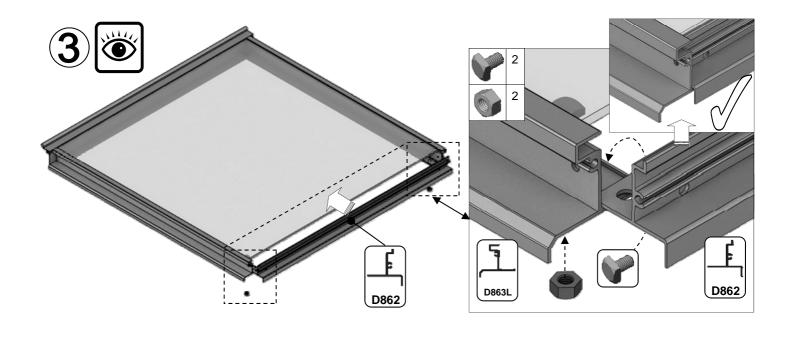
D1208 1 of -610 x 610 pane

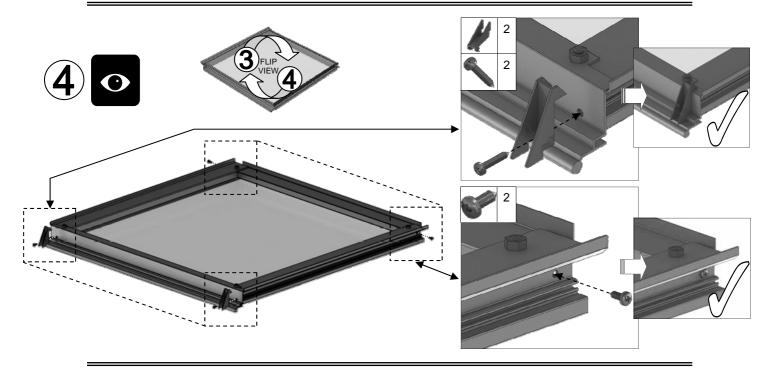
Part No		mm	Quantity
D866	,	639	1
D863L	سط	613	1
D863R	\mathbb{I}	613	1
D862	<u></u>	593	1

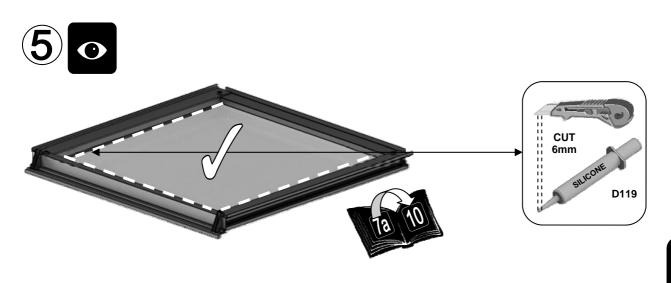
Part No		mm	Quantity
D220 PLUS FS6060 SCREW	0	N/A	2
D205	-	N/A	2
SY- BOLM6X11		10	4
SYNUTM6	6	M6	4
8 X 12 S/T FS6017	6	10	2
8 x 19 S/T FS6018		19	2







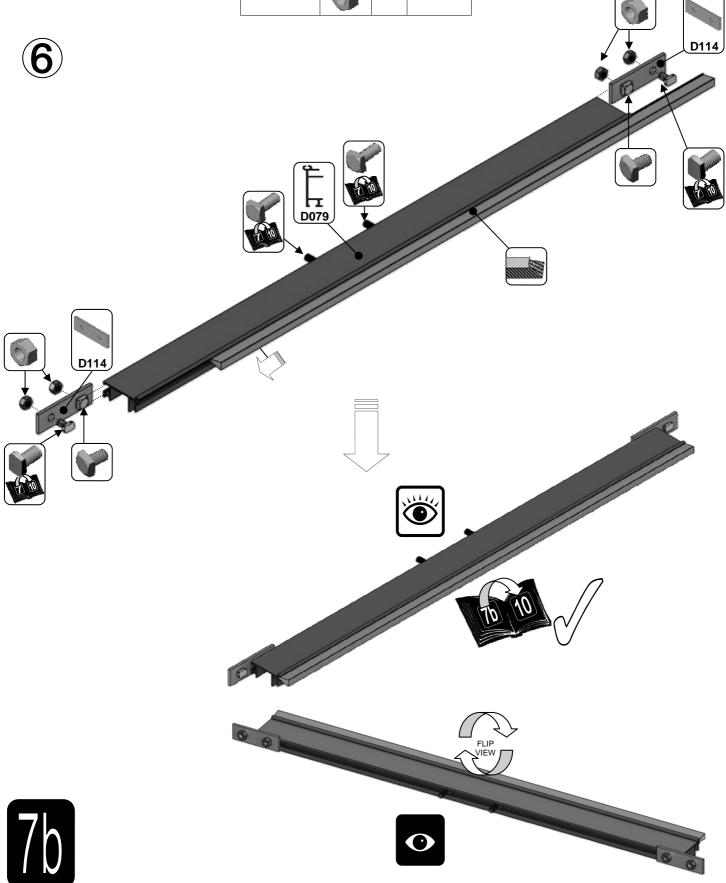


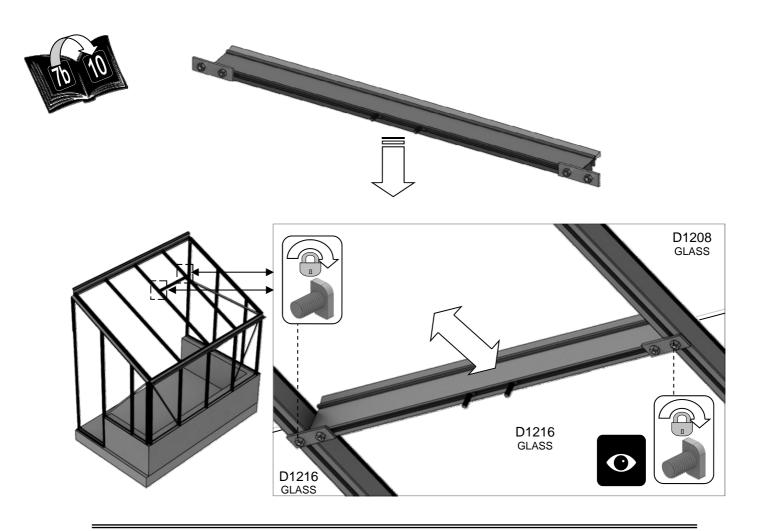


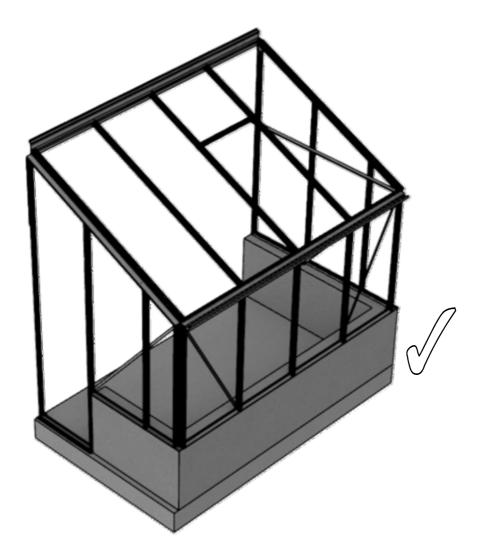


Part No		mm	Quantity
SY- BOLM6X11		10	2
SY- BOLM6X15	P	15	2
SYBOLM6 X11CROP		10	2
SYNUTM6		N/A	4

Part No		mm	Quantity
D079 PLUS FLUFF	щ	590	1
D114	00	N/A	2



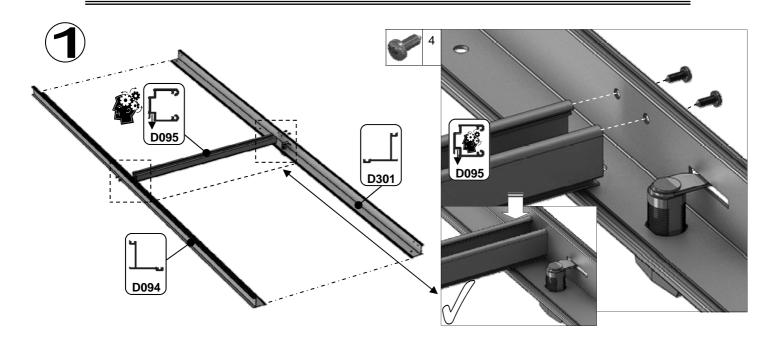


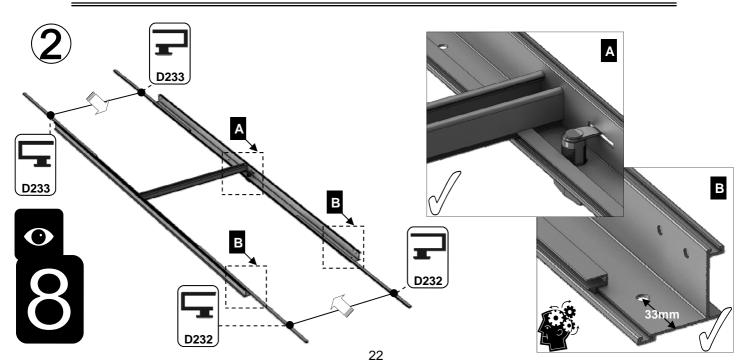


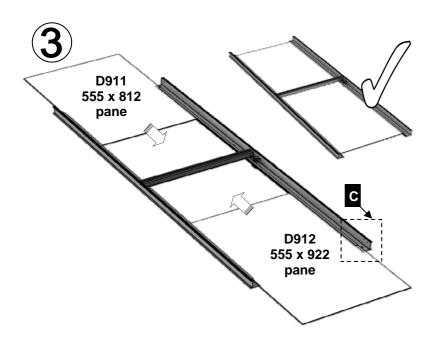


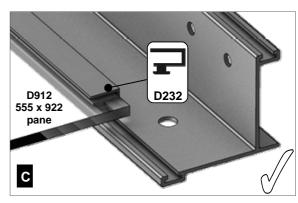
Part No		mm	Q
D090 + D347 lock = D301	1	1824	1
D094		1824	1
D096 + D217 wheel =	#	644	
D307	֓֜֜֜֜֜֜֜֜֜֜֜֜֜֜֜֓֓֓֓֓֓֜֜֜֓֓֓֓֓֓֓֓֓֓֓֓֓֓	611	1
D095	ټ	611	1
	سا		
D097	لي	611	1
			-

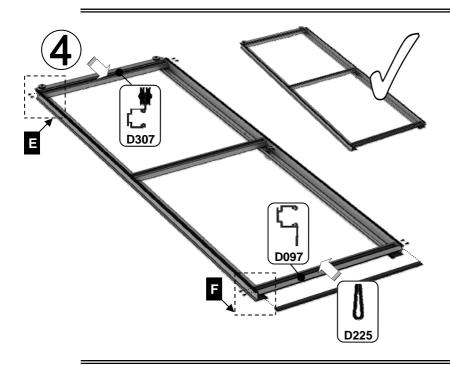
Part No		mm	Q
D232		905	2
D233		797	2
P053		N/A	1
D225	0	610	1
D840B		4000	1
D263		N/A	7
PACK		N/A	7
D260 PACK	Carrie	N/A	12

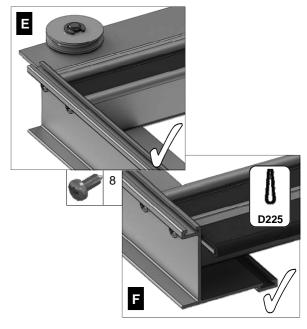


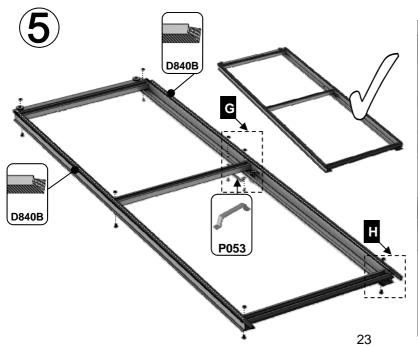






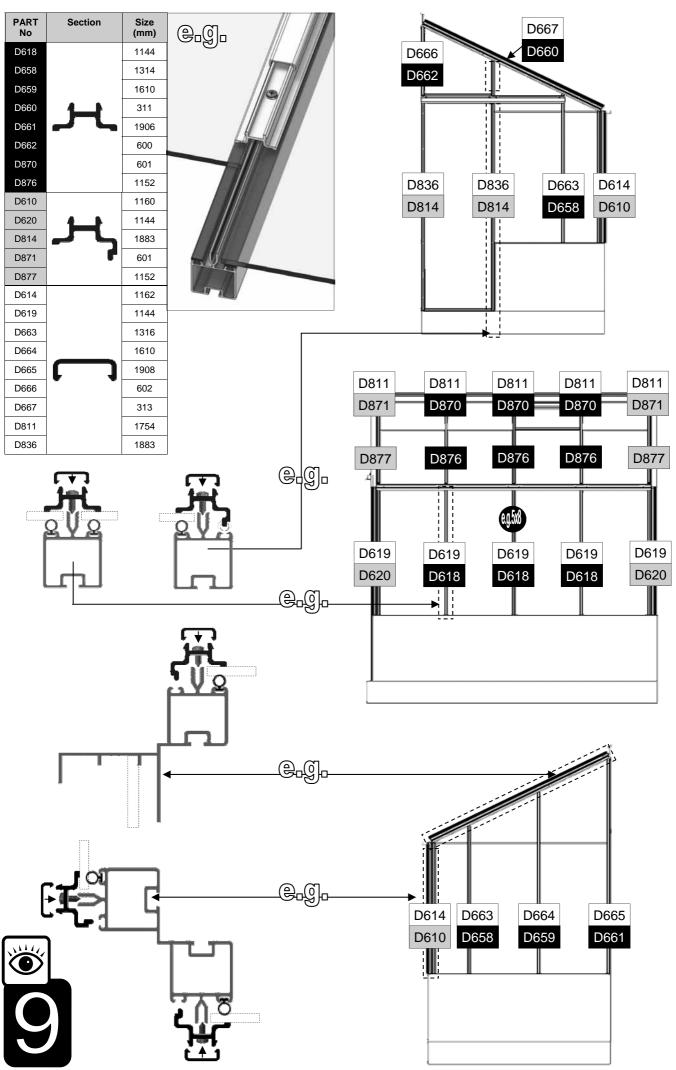


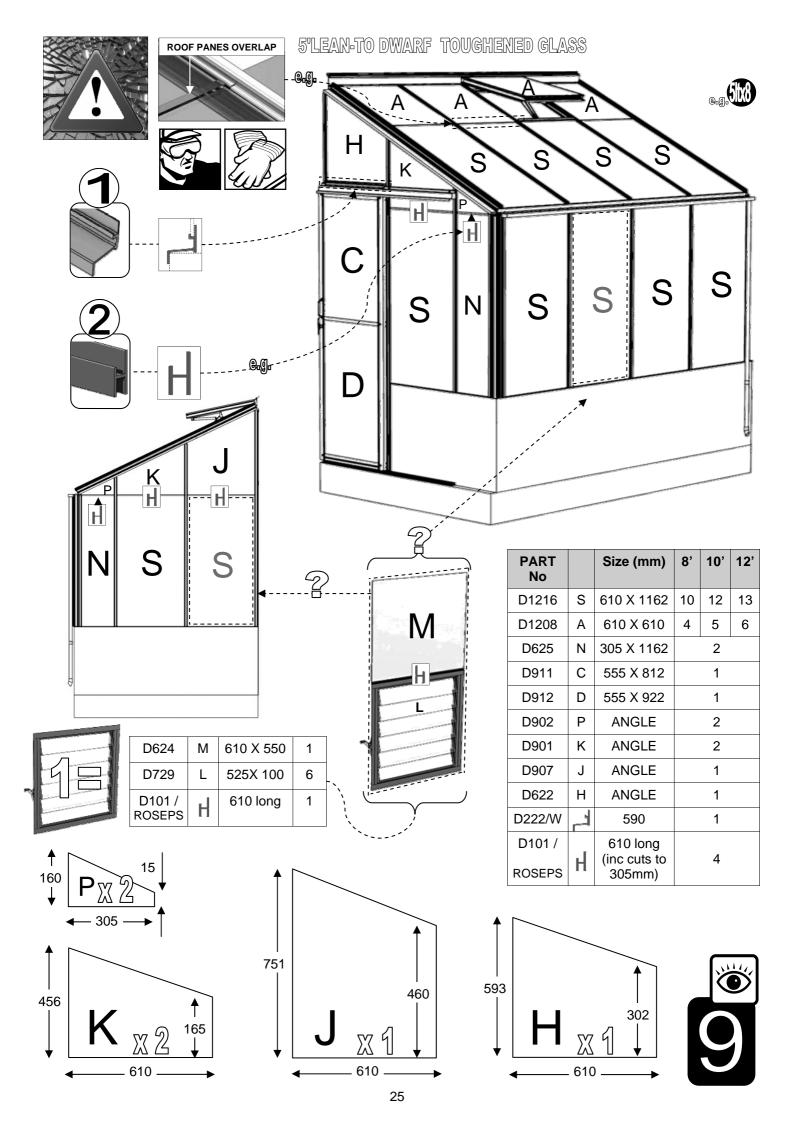


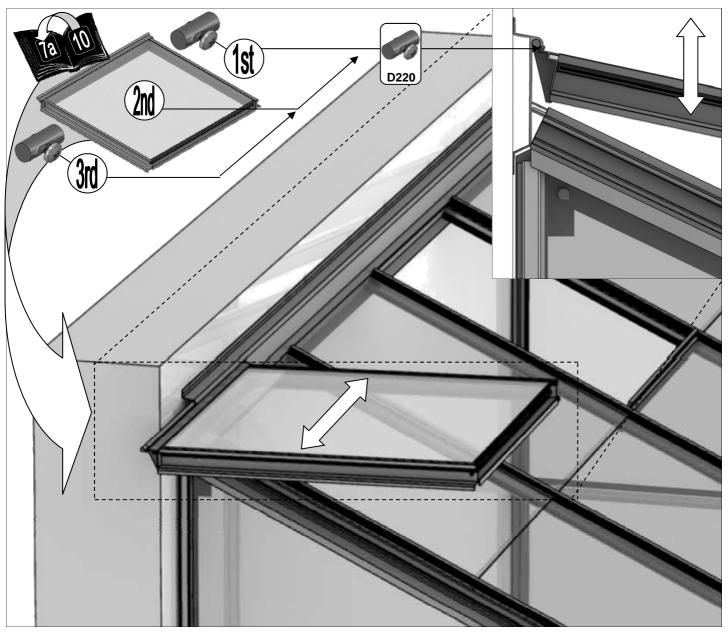


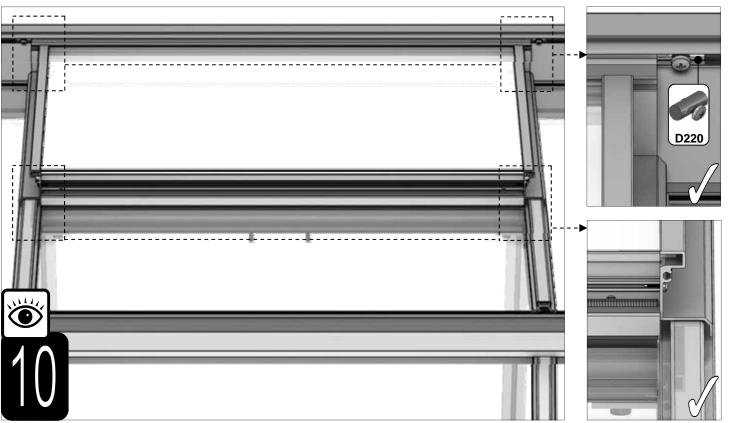


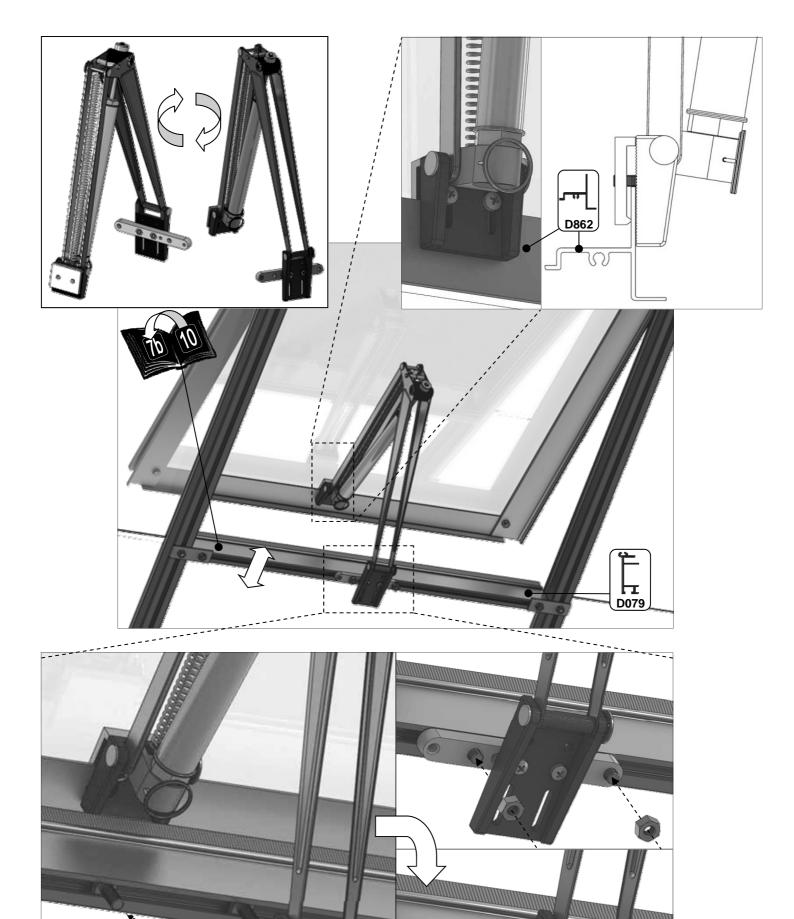








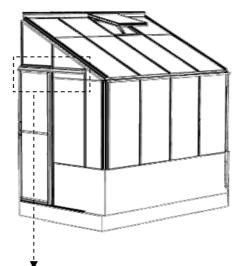


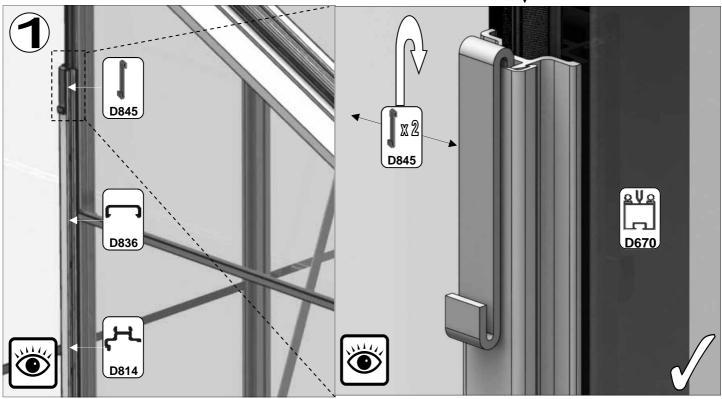


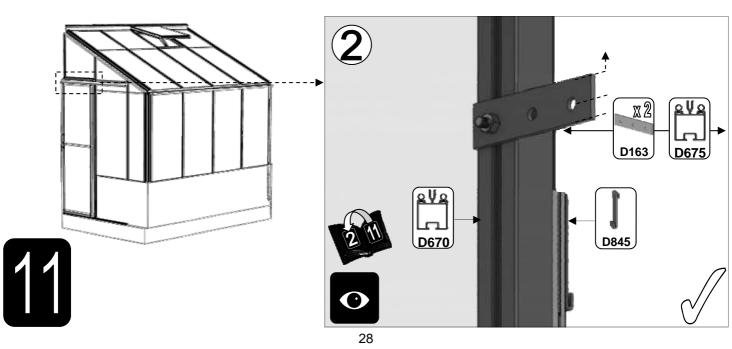


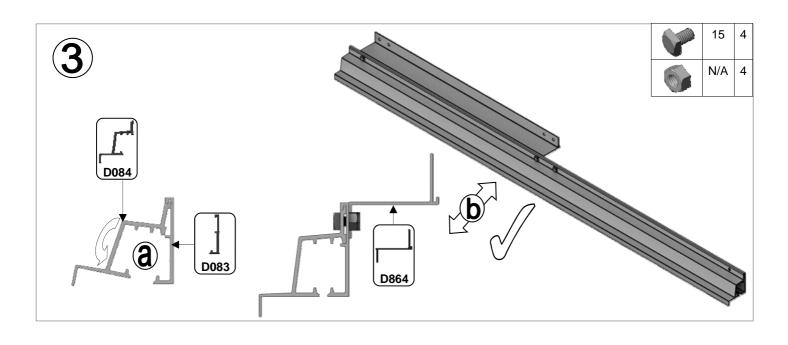
Part No		mm	Q
D864		590	1
D084	للر	1270	1
D083		1270	1

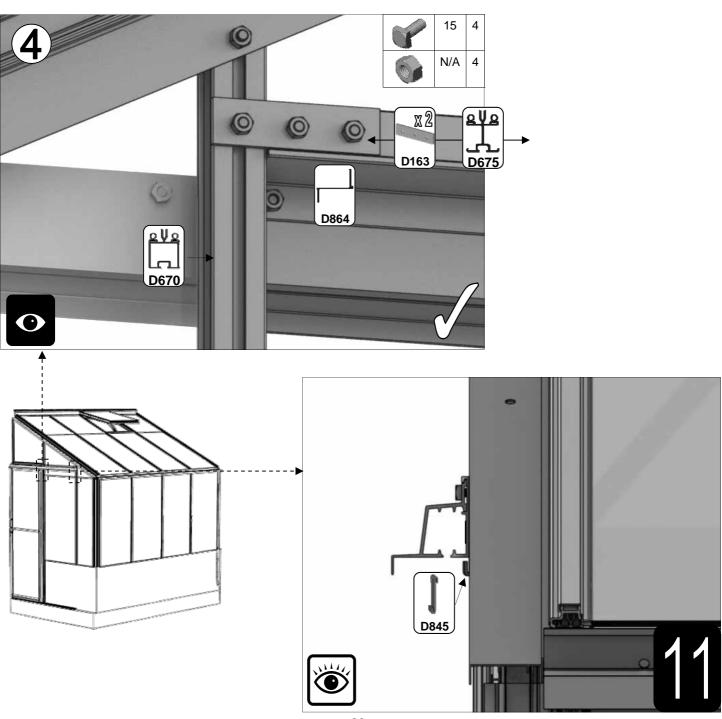
Part No		mm	Q
D163	000	90	2
D845	-		2
SY- BOLM6X15			10
SYNUTM6			10

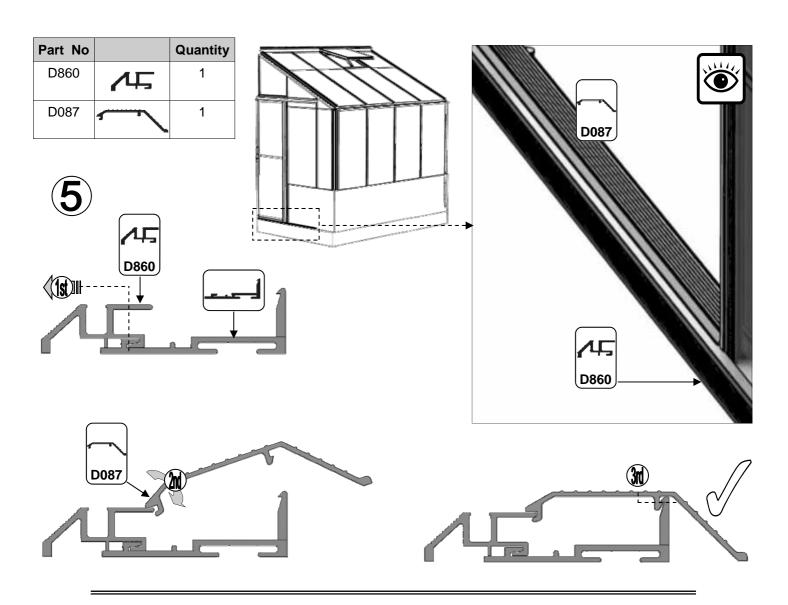


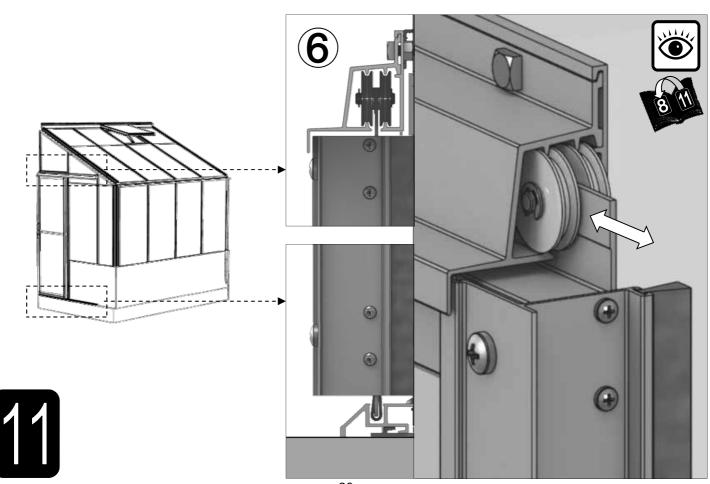


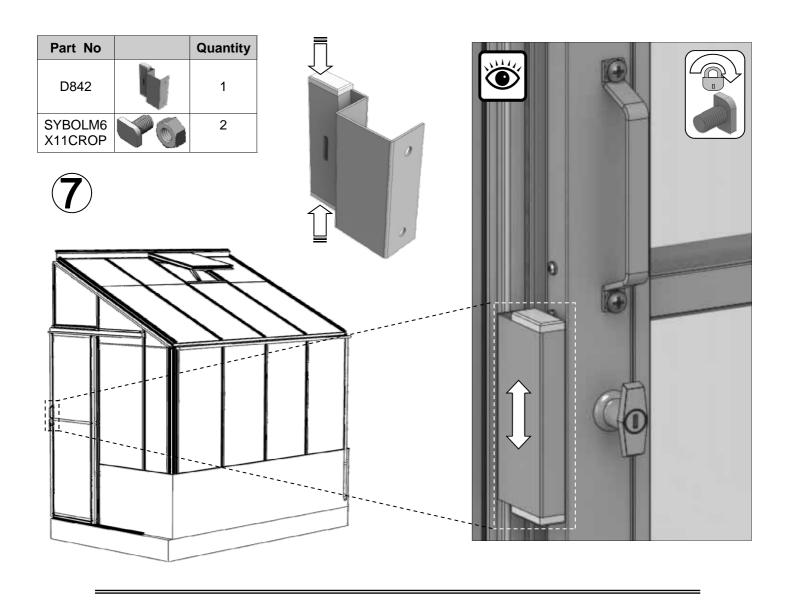


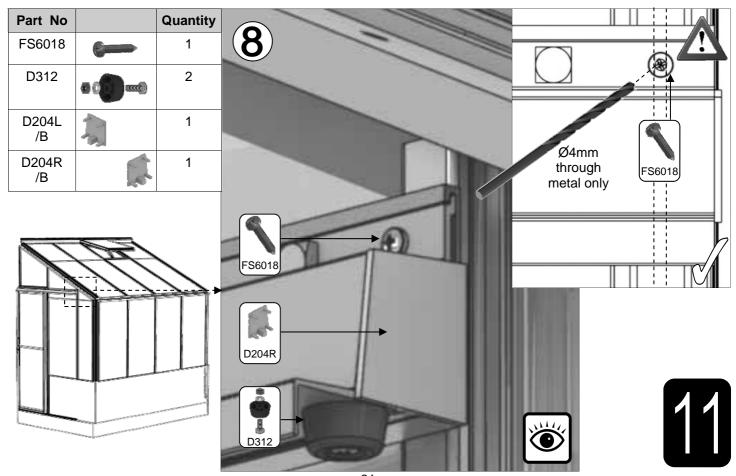




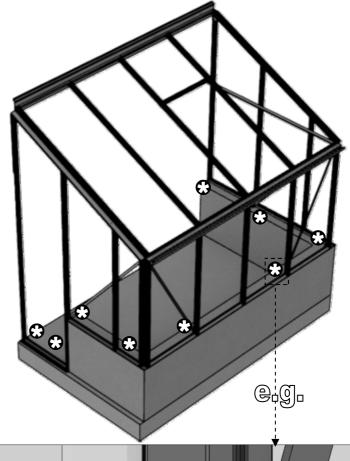


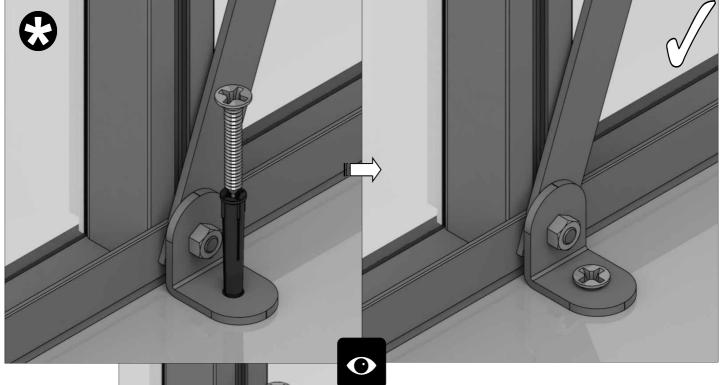




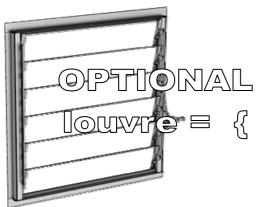






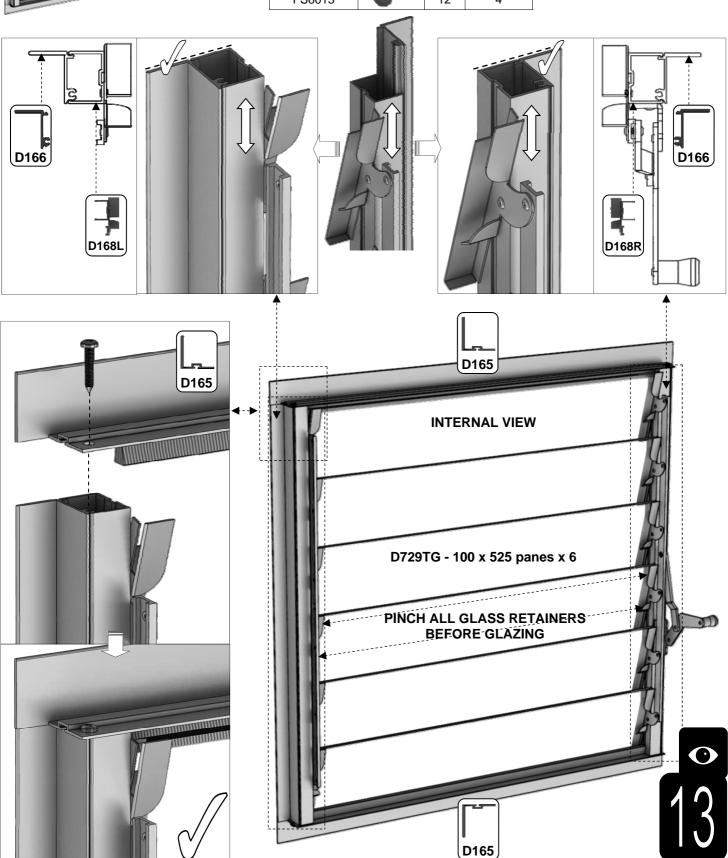


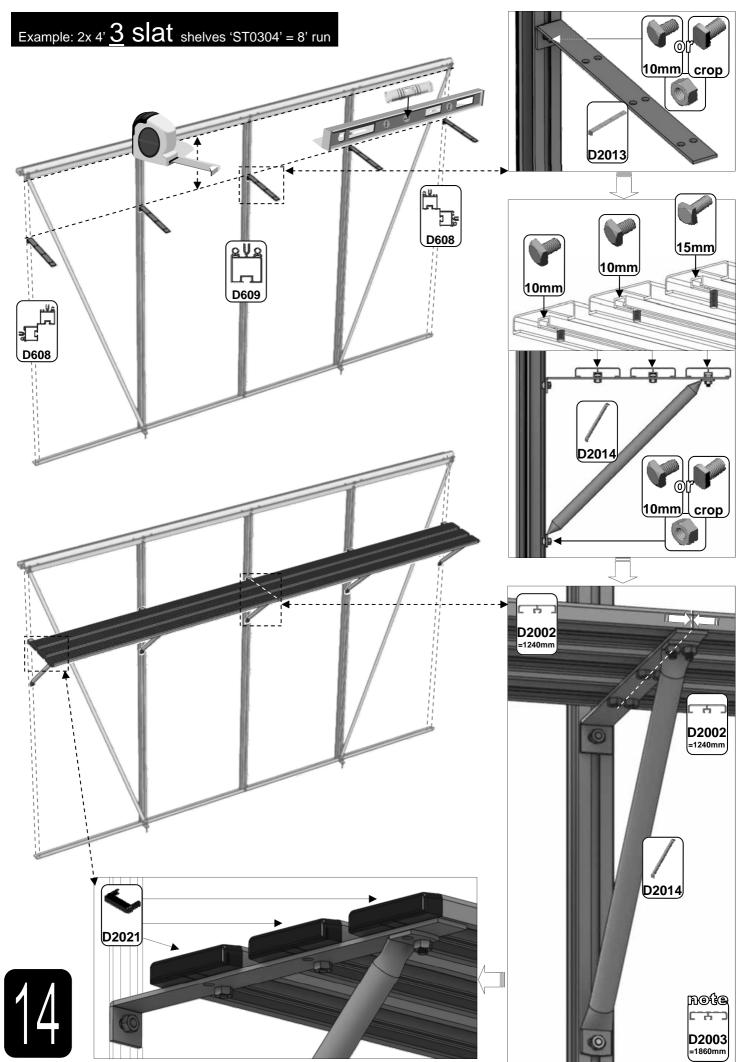


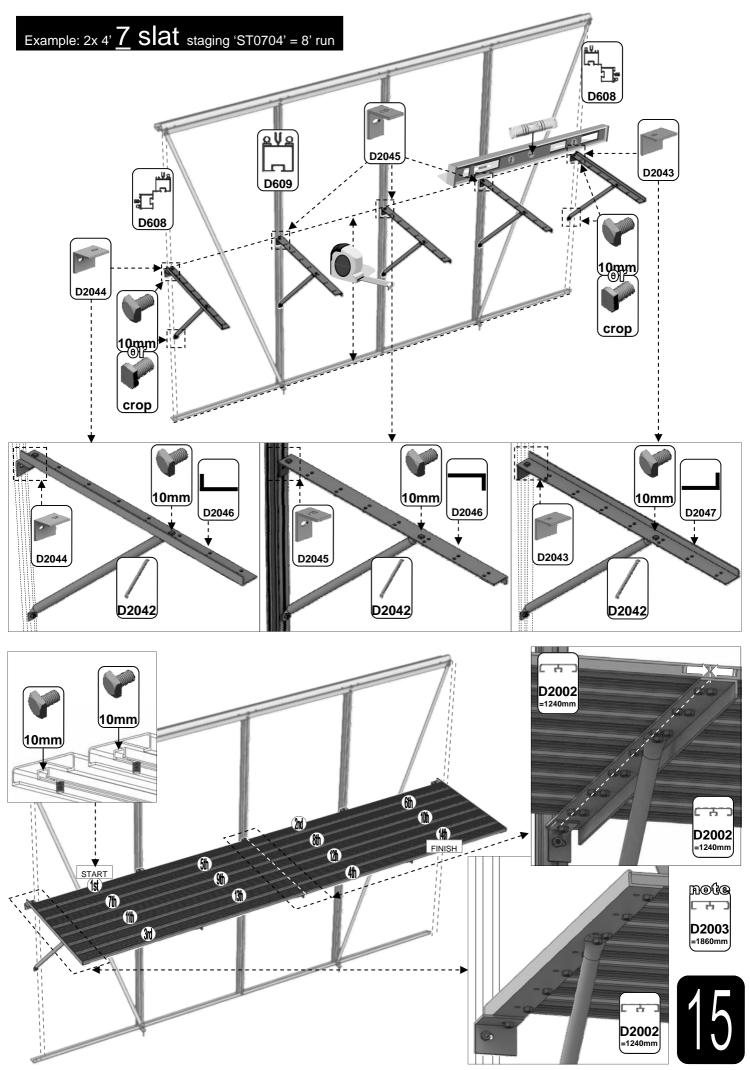


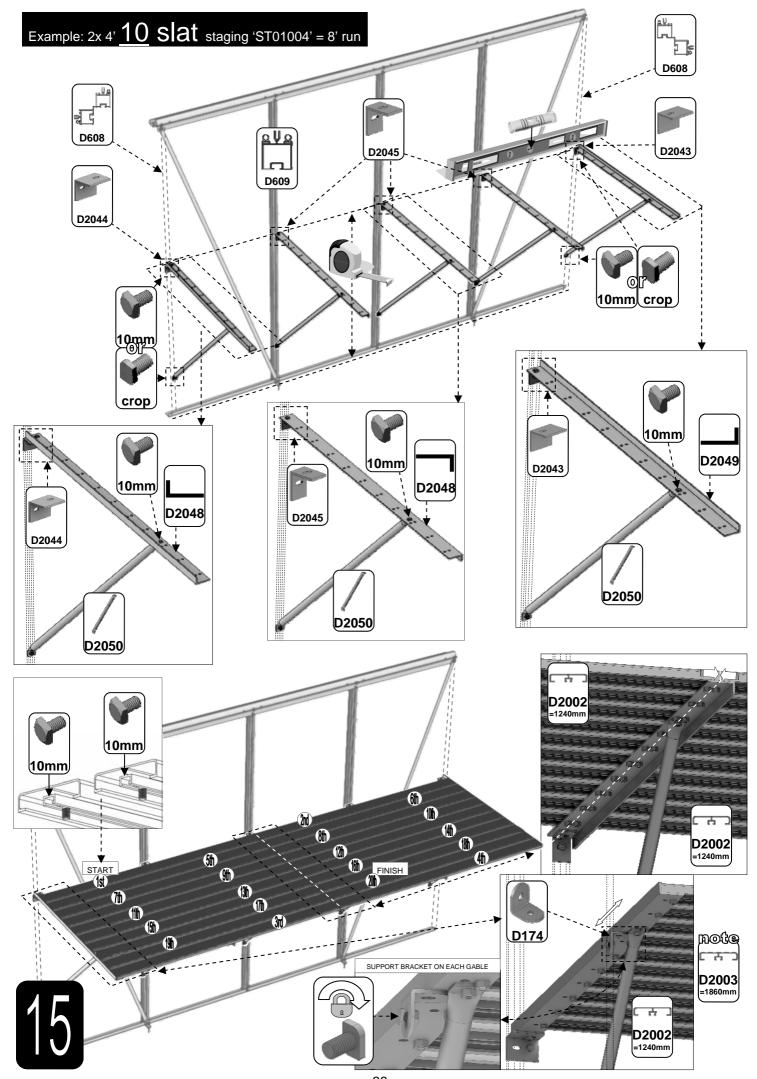
Part No		mm	Quantity
D168L		552	1
D168R (handle)	事丰	552	1
D165		612	2
D166		552	2
FS6013	6	12	4

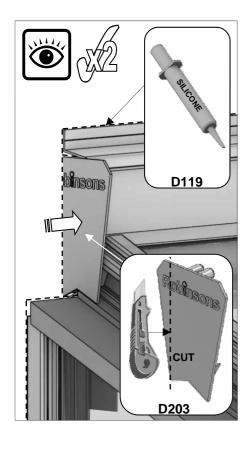


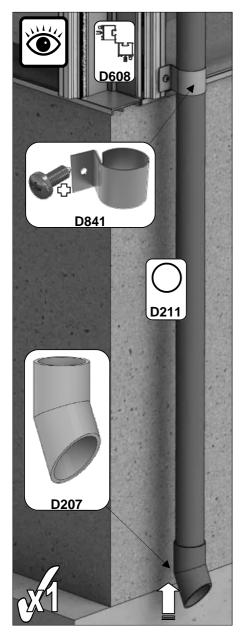


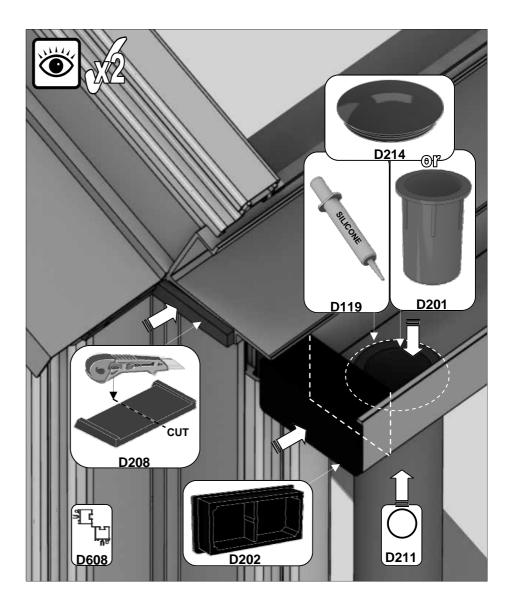


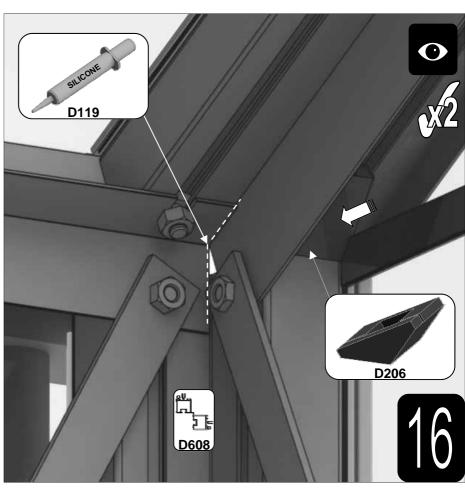


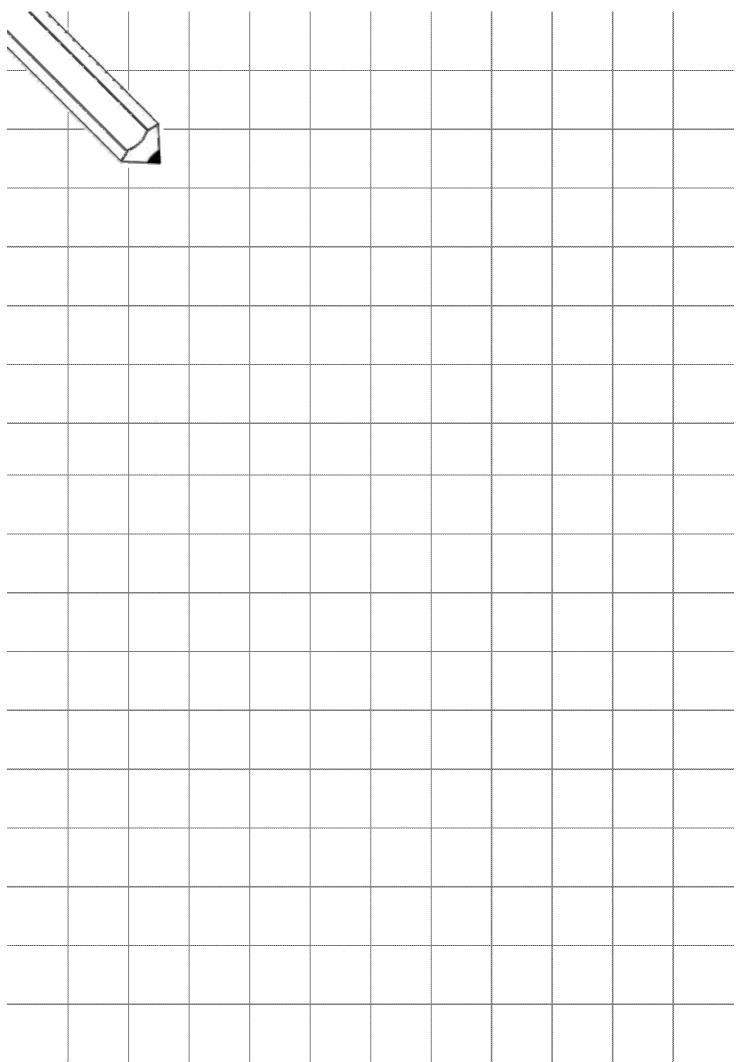


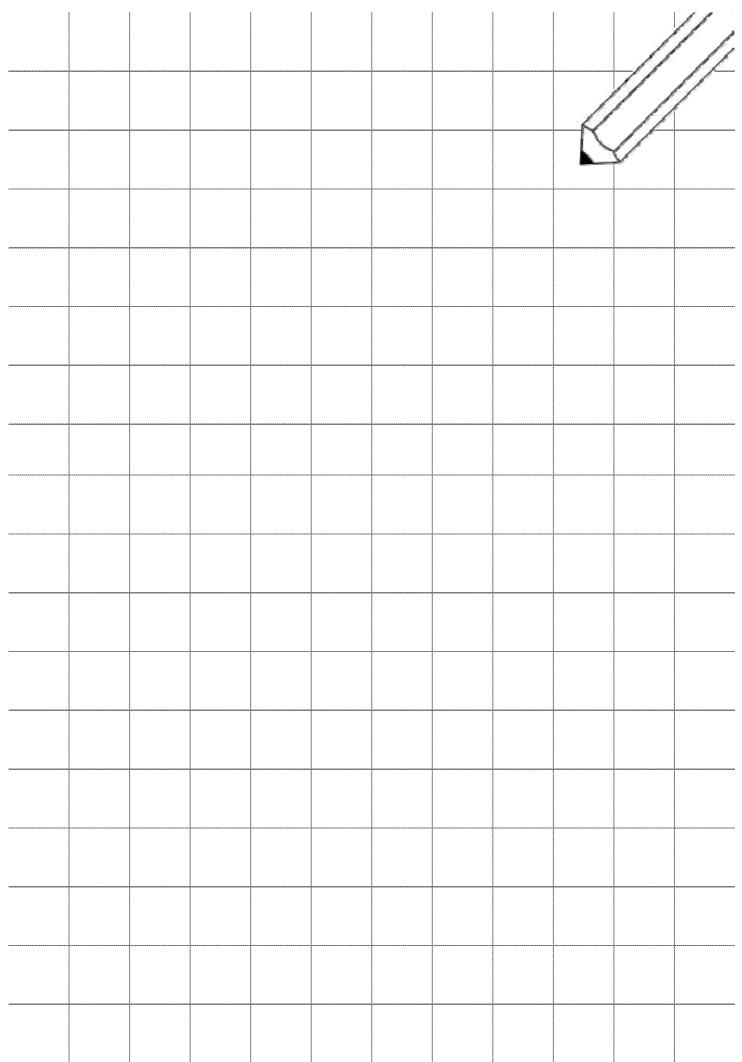












Please be aware that this is a multi-national manual, if you spot any errors or have any constructive comments regarding the manual please email james.spooner@greenhousepeople.co.uk and I will make the necessary amendments. Whilst the information contained in this booklet is accurate at the time of publication, changes in the course of Robinsons policy of improvement through development and design might not be indicated. We point out this fact to avoid any infringements of the Trade Descriptions Act and also to advise that Robinsons Greenhouses reserve the right to change specifications and materials without prior notice.

In addition any photographs of completed buildings would be most appreciated to add to our portfolio.

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