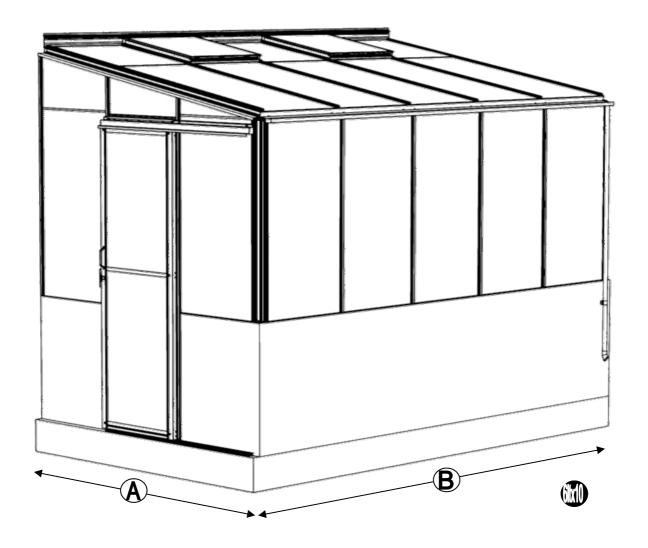


6'DWARF Lean-To Assembly Instructions



NOMINAL SIZE	A (mm)	B (mm)
6lt x 6		1990
6lt x 8	1929	2610
6lt x 10	1929	3230
6lt 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, 8-door, 9-glazing, 10-vent attachment, 11-door attachment, 12-anchoring down, 13-optional louvre, 14-optional shelf, 15-optional staging, 16-finishing touches, Door/s on side of structure rather than or in addition to the gable/s. 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

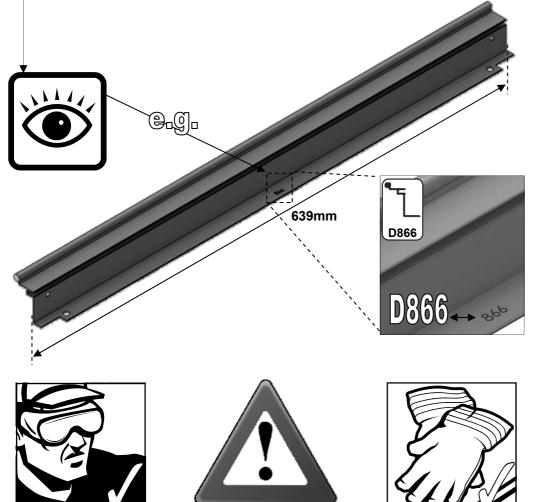
- When selecting a site for your greenhouse, it is vital that you choose as flat and level an area as possible.
- A concrete or slabbed base will provide the most solid foundation for your greenhouse.
- IMPORTANT: Do not fix your building down until the building is fully assembled, including glazing.
- 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.

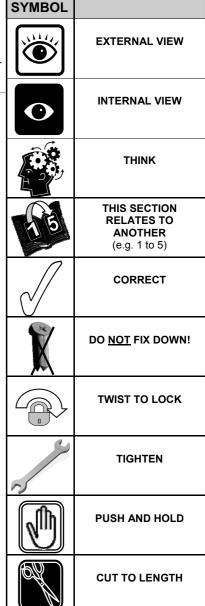
Additional Considerations

- 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).
- 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 DESCRIPTION

KEY

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 1 - 12 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 bolt slides 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 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 parti-
3	REAR	tion (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 will be attached to it later on (10).
8	DOOR/S	Construct the door using the diagrams and then leave to one side ready for attachment in section (11).
9	GLAZING	Layout the bar cappings and covers around the building like a sundial checking that all is present and correct. You can also place the roof cappings in the gutters so they are closer to hand. You will notice that your roof cappings (D541 / D547) are in one long section however you can cut this into two sections if you wish due to the glass overlap in the roof. This will remove the bulge in the roof capping, however keep the roof cover strips (D544) full lengths for the neatest finish. 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. Please note that if you are putting the door on the left hand gable (as you look at wall) the door track and runner will go from the doorway towards the gutter and if you are putting the door on the right hand end the track and runner will open towards the wall.
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 brackets are set 900mm from the cills though you can alter this to
15	OPTIONAL STAGING	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)	6It 6	6lt 8	6lt 10	6lt 12
	D043		1894	1			
	D021		2514		1		
	D022	$\overline{}$	3134			1	
-	D023		3754				1
	D975		1897	1			
	D974	٦	2517		1		
	D979		3137			1	
	D978	-	3757				1
	D604		1316		2	2	
	D609		1160	2	3	4	5
	RUBBER	Q	1000 (1m)	5	7	10	12
	D174	6	N/A	2	2	4	4
	D961		1894			1	
	D628		650			1	
	D605(R)	1	690			_	
	D606(L)	$\overline{}$	690			1	
	D632L	1	650	1			
	D632R	$\overline{}$	650		1		
	D608	₹ 1	1160		·	2	
2 + 3	D955	- L	2037			1	
3 3	D956	<u></u>	2147			1	
J	D985		1480		ì	2	
	D992		1267	1			
	D993		1377	1			
	D962		1890			1	
	D950L	لمارجا	1915			1	
	D950R					1	

t 2	Section Ref	Part No.	Section	Size (mm)	6It 6	6It 8	6lt 10	6lt 12
	2	RUBBER	Q	1000 (1m)		2	29	
	3	D174		N/A			8	
		D976	<u>ل</u>	1897	1			
		D973	1	2517		1		
		D981	5	3137			1	
		D977	Ļ	3757				1
		D962		1890	1			

	D976	k	1897	1			
	D973		2517		1		
	D981	5	3137			1	
	D977		3757				1
	D962		1890	1			
5	D113		2510		1		
	D918		3130			1	
	D034		3750				1
	D951		1915	2	3	4	5
	RUBBER	Q	1000 (1m)	8	12	16	20

	D866	•	639	1	1	2	2
	D863L	اس	613	1	1	2	2
	D863R	<u></u>	613	1	1	2	2
7	D862	4	593	1	1	2	2
	D079 PLUS FLUFF	д Т	590	1	1	2	2
	D114	00	N/A	2	2	4	4
	D220 PLUS FS6060 SCREW	6	N/A	2	2	4	4
	D205		N/A	2	2	4	4

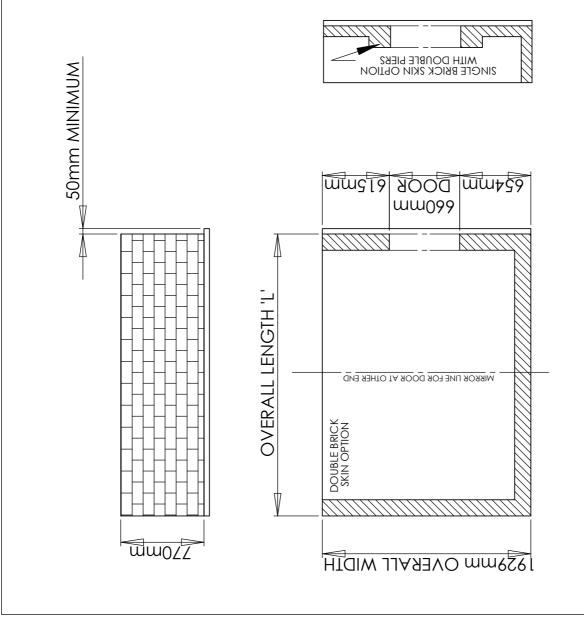
Section Ref	Part No.	Section	Size (mm)	6lt 6	6lt 8	6lt 10	6lt 12	
	D090 + D347 lock = D301	<u></u>	1824		,	1		
	D094	<u></u>	1824	1				
	D096 + D217 wheel = D307	*	611			1		
8	D095	[]	611		,	1		
	D097		611			1		
	D232		905		:	2		
	D233	_	797		:	2		
	P053	5	N/A		,	1		
	D225	0	610		,	1		
	D840B		4000	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

ANTITIES	SEPEKAIE	10mm	16	19	22	25
MAIN FRAME QUANTITIES	VENIS/ DOOKS etc SEPEKALE	15mm	31	32	33	34
MAIN F	VENIS	m6	47	51	55	59





	Section Ref	Part No.	Section	Size (mm)	6lt 6	6lt 8	6lt 10	6lt 12
	5	D541		1915	2	3	4	5
	1	D618		1144	2	3	4	5
	2	D969	4	140			1	
	2	D971	 _	250			1	
	3	D987		1370			1	
	3	D991		1260			1	
	5	D547		1915		;	2	
	1/2/3	D620	1	1144			4	
Q	2	D814	- 5	1883		:	2	
	2/3	D986	•	1480			2	
	5	D544		1915	4	5	6	7
	1/2/3	D619		1144	6	7	8	9
	2	D836		1883			2	
	2	D970		140			1	
	2	D972	r 1	250			1	
	3	D988		1370			1	
	2/3	D989		1480			2	
	3	D990		1260			1	
		D864		590			1	
		D860	作	1240			1	
		D087		587			1	
		D084	لل	1270			1	
	11	D083		1270			1	
		D153	/· •	198			1	
W		D163	000	90			2	
		D154		N/A			1	
		D222/B		590			1	
		D112		650			1	
		D845	<u> </u>	N/A			2	
		D842		N/A			1	



GUIDANCE NOTE FOR ROBINSONS DWARF WALL GREENHOUSES. FOOTINGS

CONCRETE STRIP FOOTINGS SHOULD BE A MINIMUM OF 400mm WIDE X 200mm DEEP. IF THE SITE IS ON MADE UP GROUND IT IS IMPORTANT THAT THE FOOTINGS ARE CUT INTO THE COMPACTED GROUND BELOW.

WHERE THE GROUND IS LIABLE TO MOVEMENT SUCH AS HEAVY CLAY OR LOOSE SANDY SOIL REINFORCING SHOULD BE ADDED TO THE CONCRETE FOOTINGS.

IT IS MOST IMPORTANT THAT THE BRICKWORK IS IN ACCORDANCE WITH THE DIMENSIONS PROVIDED AND IS SQUARE, LEVEL AND UPRIGHT, THE DIAGONAL MEASUREMENTS SHOULD BE EQUAL.

WALLS CAN BE EITHER DOUBLE OR SINGLE SKIN

THE TOP COURSE OF BRICKS SHOULD BE LAID FROG DOWN. IF ENGINEERING BRICKS ARE USED FOR THE TOP COURSE PLEASE ENSURE THEY ARE SOLID NOT CELLULAR (WITH HOLES THROUGH THEM) OR FIXING DOWN OF THE GREENHOUSE WILL BE A PROBLEM. BRICKS SHOULD BE A GOOD QUALITY STOCK BRICK, SAND FACED FLETTON TYPE BRICKS ARE NOT SUITABLE.

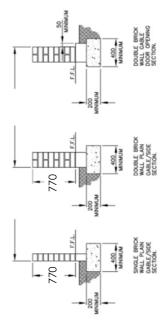
GABLE DOOR OPENING
THE DOOR THRESHOLD REQUIRES BRICK WORK ACROSS THE
OPENING WHICH SHOULD BE LEVEL WITH THE FINISHED FLOOR
LEVEL (F.F.L) OF THE GREENHOUSE.

THE OPENING FOR THE DOORWAY AND THE HEIGHT TO THE TOP OF THE WALL FROM THE THRESHOLD LEVEL REQUIRE THE HIGHEST ACCURACY AND ARE MOST IMPORTANT SO THAT THE DOOR FITS THE APETURE CORRECTLY. IT IS ADVISABLE TO MAKE A WOODEN TEMPLATE TO CHECK THE DOOR APERTURE DIMS.

IF SINGLE SKIN WALLS ARE USED THEN PIERS SHOULD BE FORMED AT THE DOOR OPENING.

IN ORDER TO SUPPORT THE OUTER EDGE OF THE DOOR THRESHOLD THERE MUST BE A PROJECTION OF BRICKWORK / CONCRETE INFRONT OF THE DOOR END WALLWITH A MINIMUM WIDTH OF 50mm. THIS NEEDS TO BE LEVEL WITH THE DOOR THRESHOLD OPENING.

Property of 'Robinsons Greenhouses' @ 2015



860mm 480mm 100mm 720mm

LENGTH

EXTENSION

990mm 30mm <u>Omm</u>

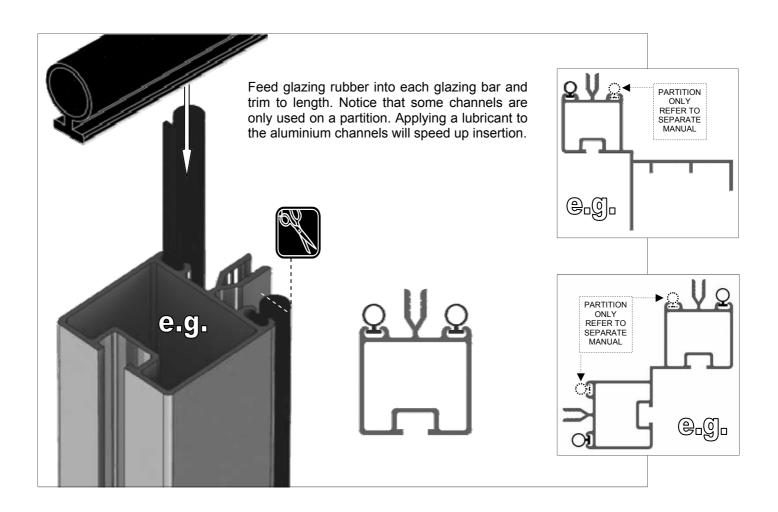
LENGTH

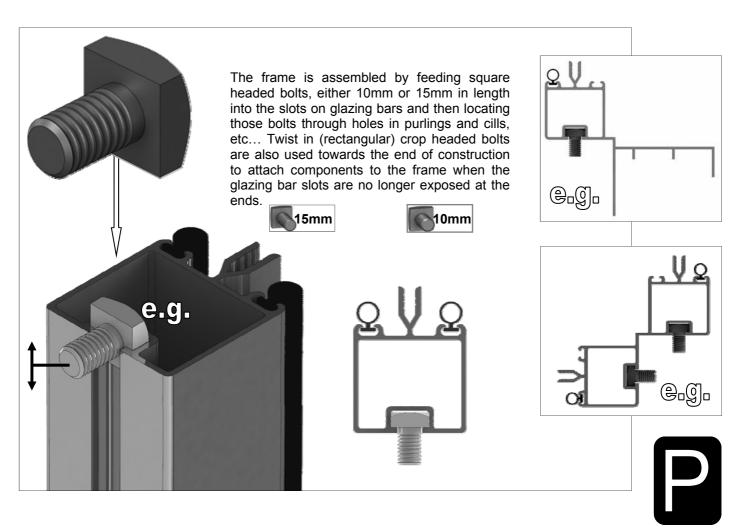
GREENHOUSE

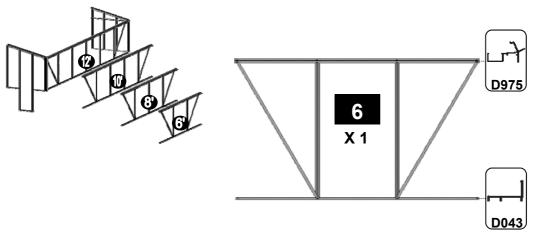
OVER ALL LENGTH 'L' = BASIC GREENHOUSE LENGTH

+ EXTENSION IF REQUIRED

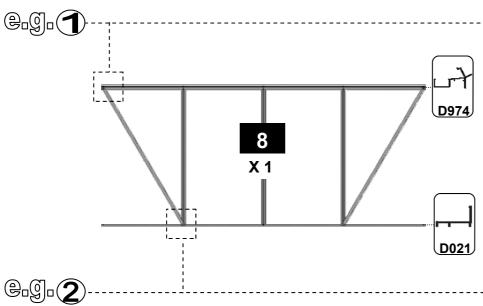
6LT DWARF WALL PLAN



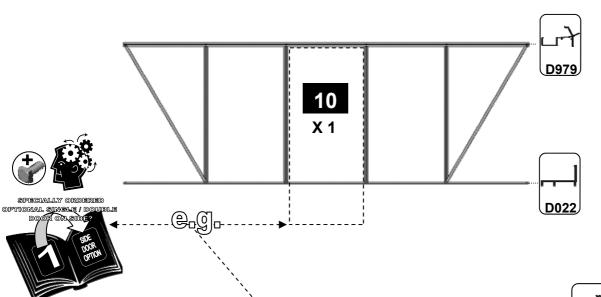








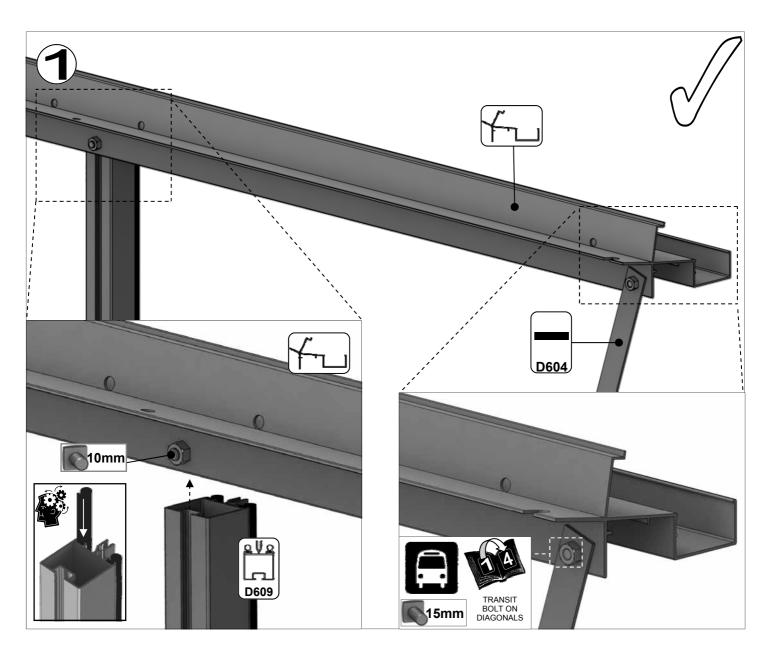
							
8 X 1 DWARF							
Part No	mm	Quantity					
D974	2517	1					
D021	2514	1					
D609	1160	3					
D604	1316	2					
D174	4	2					
M6- 10mm		3					
M6- 15mm	Carrie Carrie	5					
M6- NUT		8					
Rubber	1000	7					

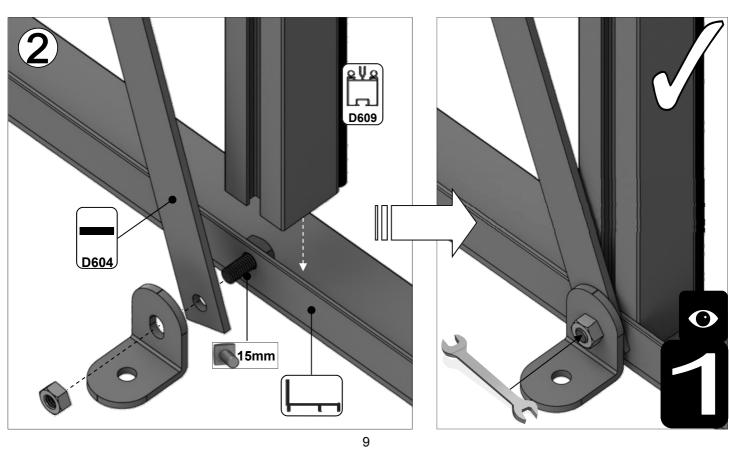


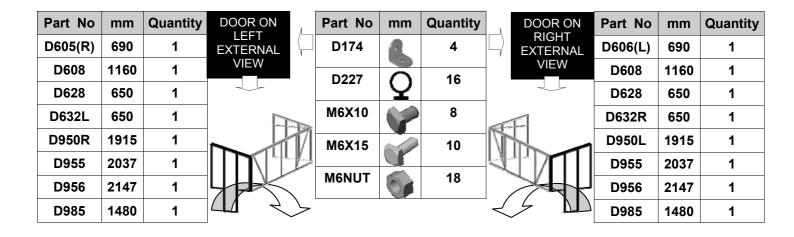
10	X 1 DW	ARF
Part No	mm	Quantity
D979	3137	1
D022	3134	1
D609	1160	4
D604	1316	2
D174	6	4
M6- 10mm		4
M6- 15mm	Carrie	6
M6- NUT		10
Rubber	1000	10

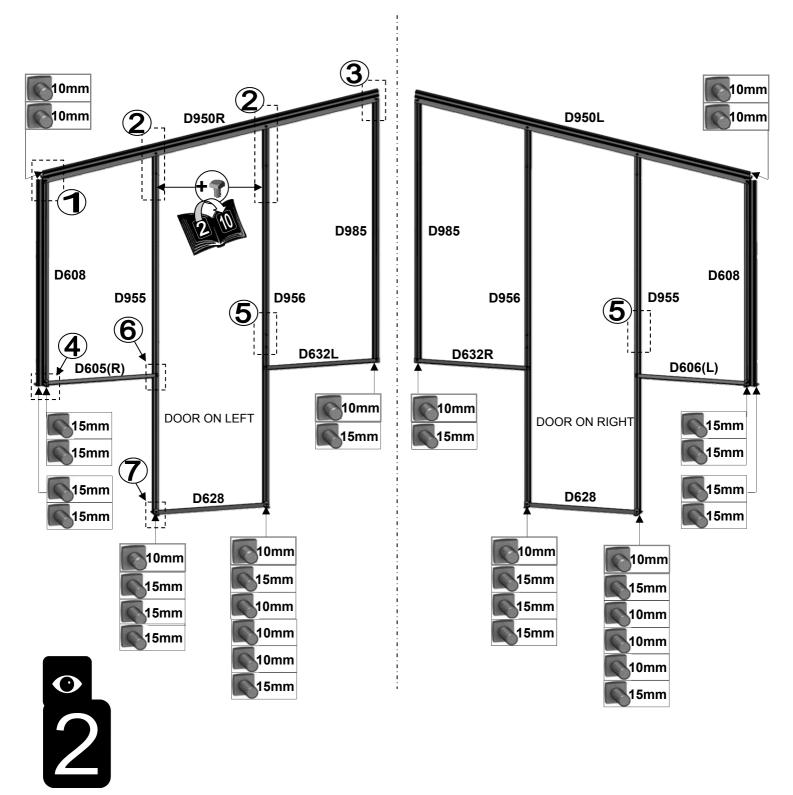
	``\		
0	12 x 1		
		D023	
		_'	F

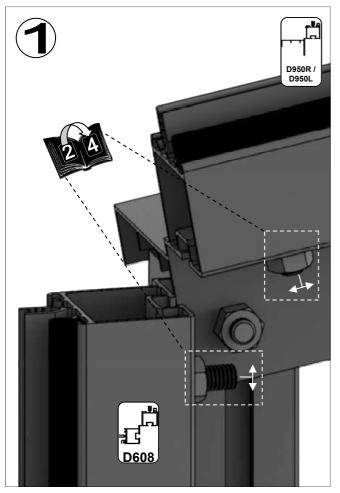
12	12 X 1 DWARF					
Part No	mm	Quantity				
D978	3757	1				
D023	3754	1				
D609	1160	5				
D604	1316	2				
D174	1	4				
M6- 10mm		5				
M6- 15mm	Carron Carron	7				
M6- NUT		12				
Rubber	1000	12				

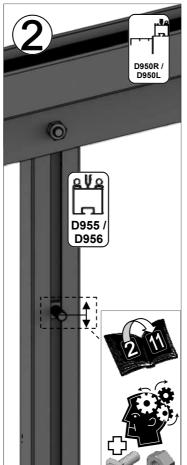


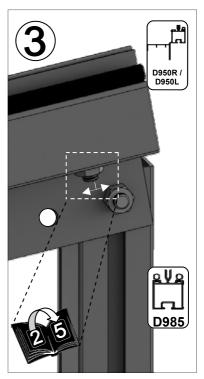


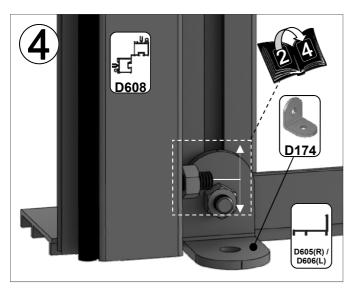


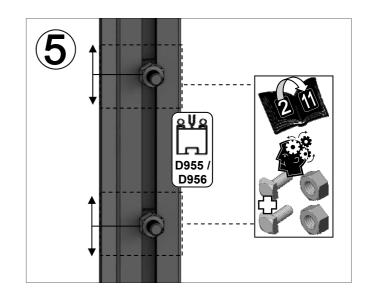




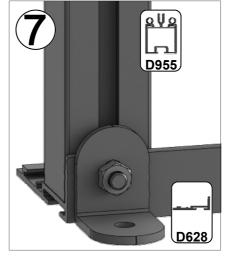






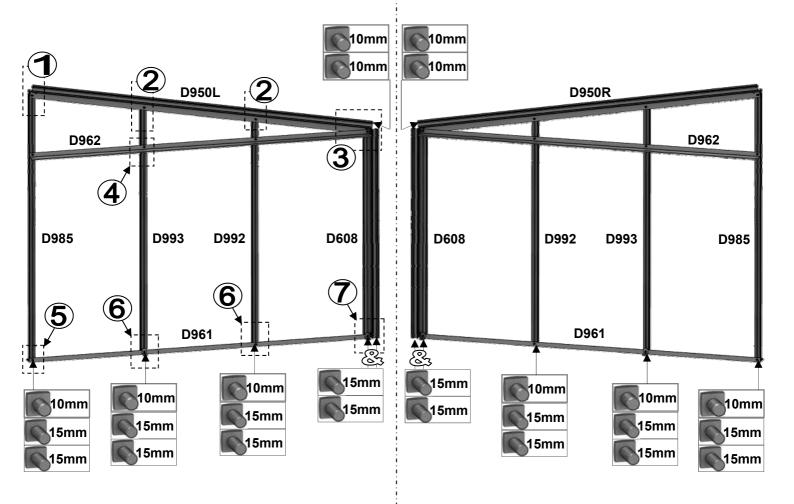




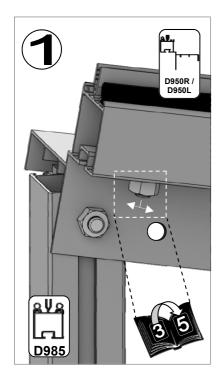


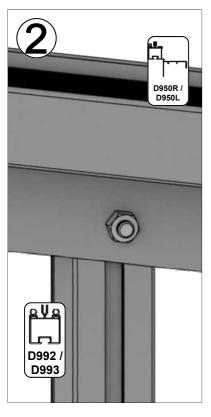


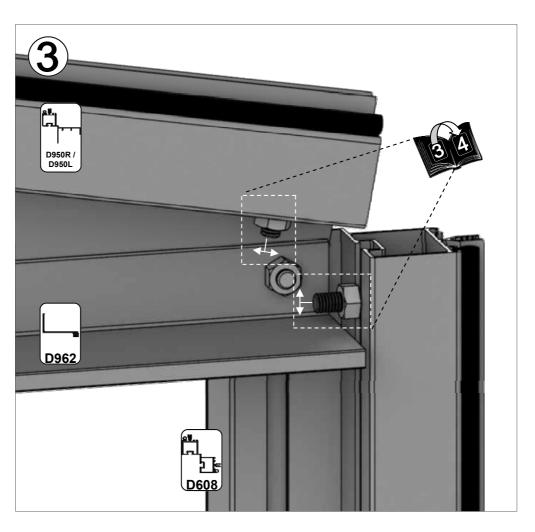
Part No	mm	Quantity	DOOR ON	Part No	mm	Quantity	١,	DOOR ON	Part No	mm	Quantity
D608	1160	1	LEFT EXTERNAL	D174		4	\Box	RIGHT EXTERNAL	D608	1160	1
D950L	1915	1	VIEW	D227	0	11		VIEW	D950R	1915	1
D961	1894	1		DZZI	Δ	11			D961	1894	1
D962	1890	1		M6X10		5	M.	f	D962	1890	1
D985	1480	1		M6X15		10	Ц		D985	1480	1
D992	1267	1			<u>a</u>		1	\mathbb{W}	D992	1267	1
D993	1377	1		M6NUT		15			D993	1377	1

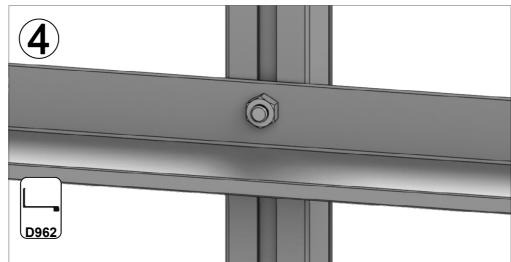


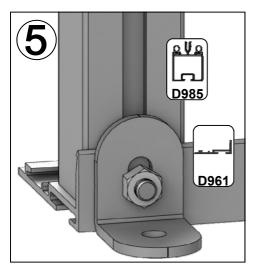


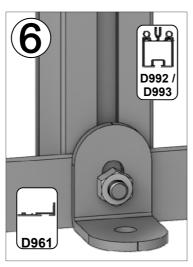


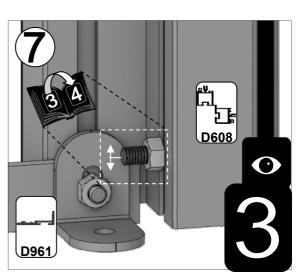


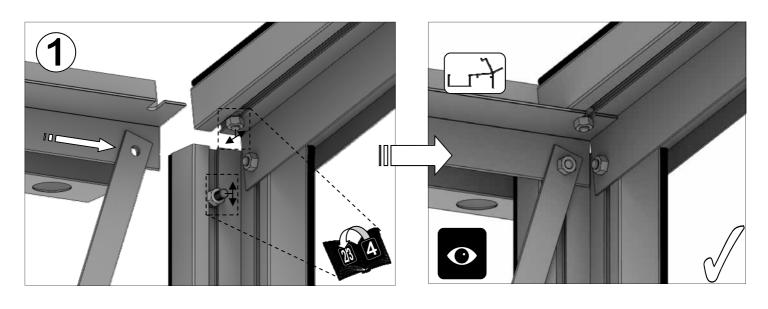


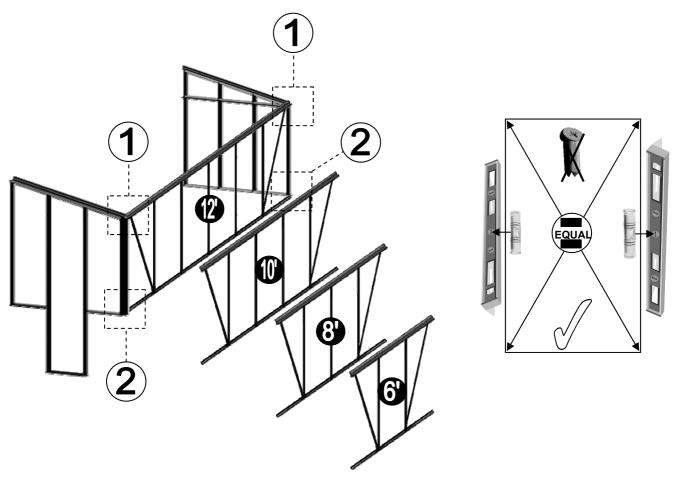


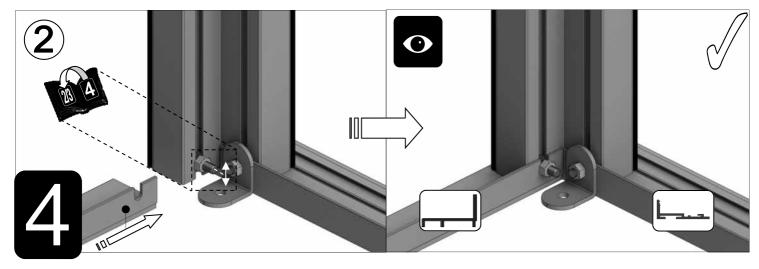


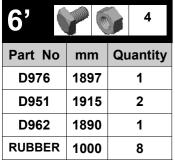








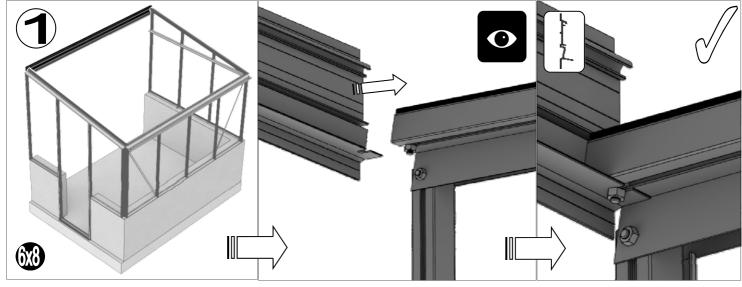


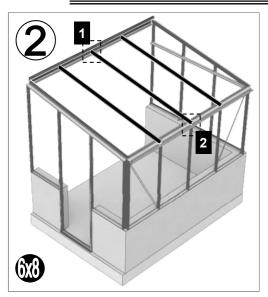


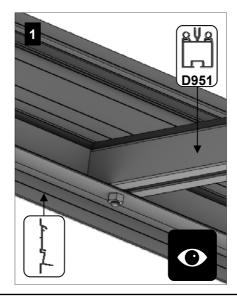


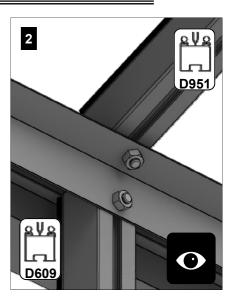
10'			8	
Part No	mm	Quantity		
D981	3137	1		
D951	1915	4		
D918	3130	1		
RUBBER	1000		16	

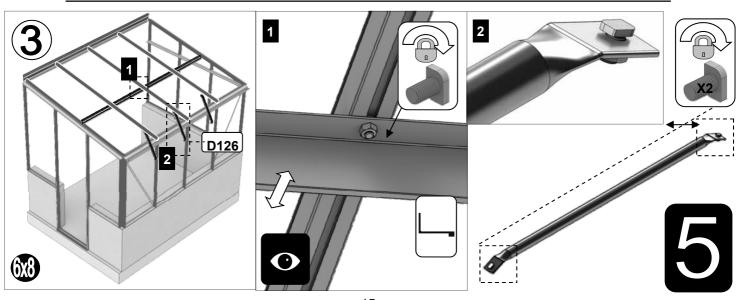
	10	
No mm Quant		
3757	1	
1915	5	
3750	1	
1000	20	
	3757 1915 3750	

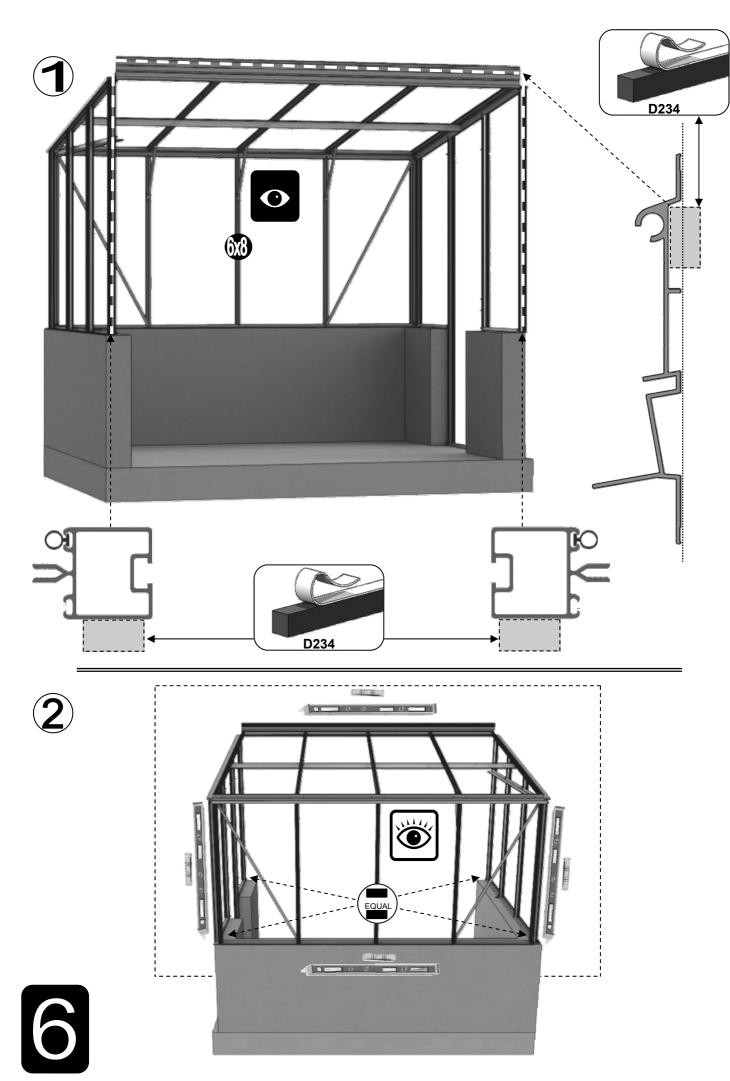








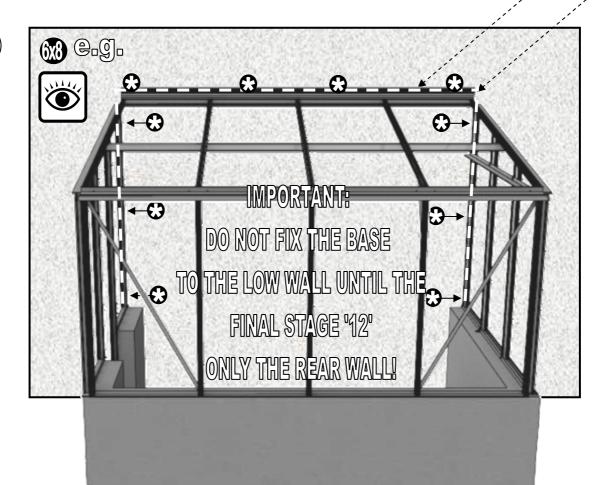


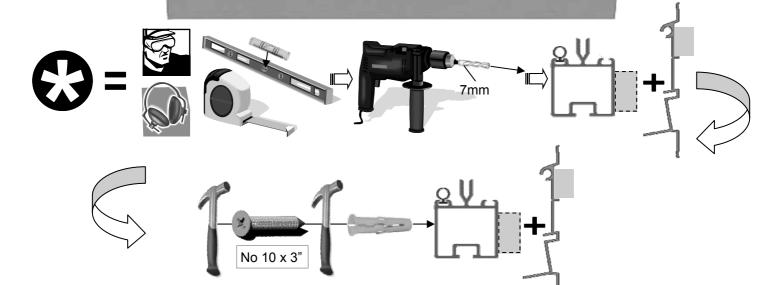


			6x6	6x8	6x10	6x12
Part No		mm	Quantity			
SYSCR3	×	75	9	10	11	12
SYRAWL		50	9	10	11	12





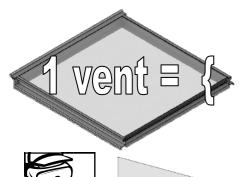




There are various methods for attaching your greenhouse frame to its wall.

- 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).



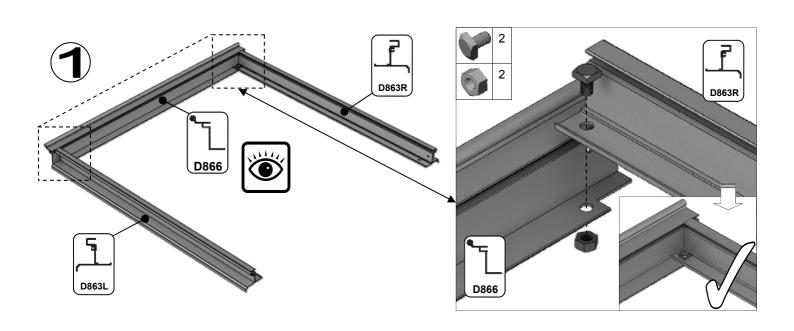


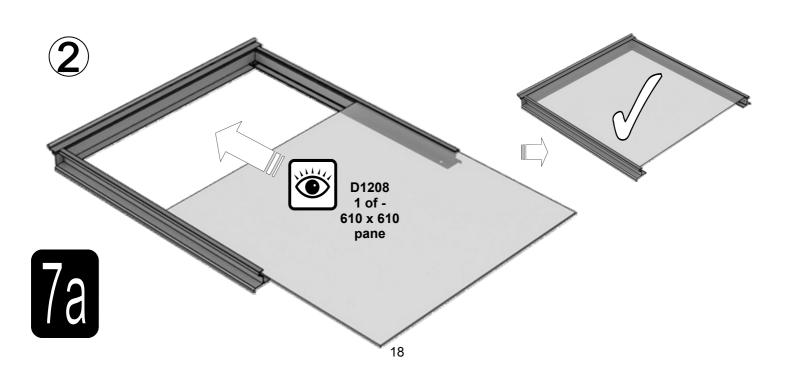


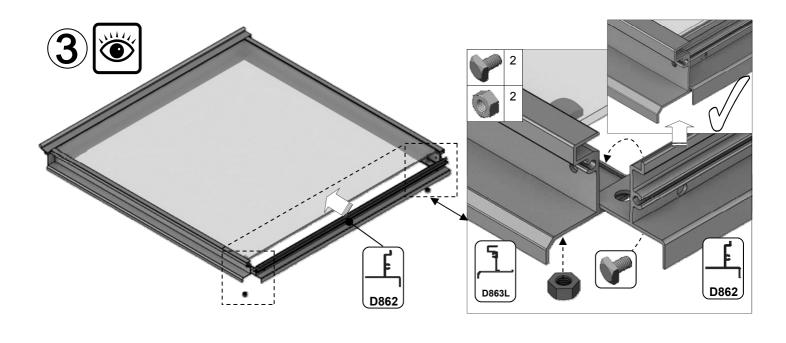
D1208 1 of -610 x 610 pane

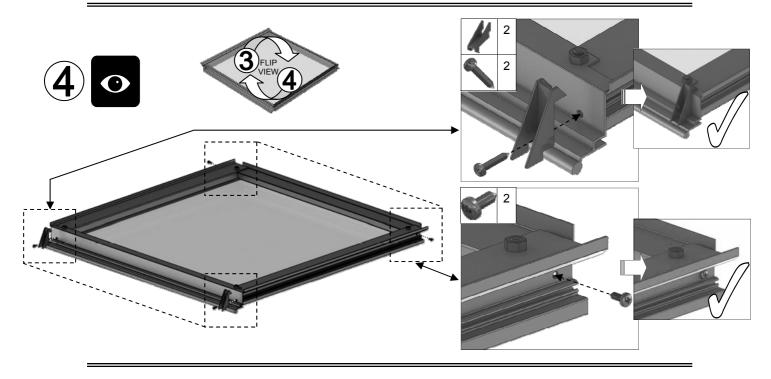
Part No		mm	Quantity
D866	الم	639	1
D863L		613	1
D863R	上	613	1
D862	<u>_</u>	593	1

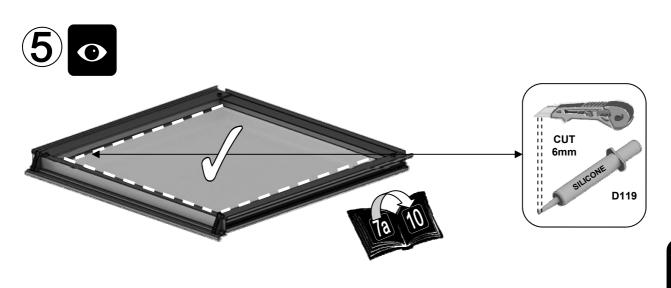
Part No		mm	Quantity
D220 PLUS FS6060 SCREW	0	N/A	2
D205	-	N/A	2
SY- BOLM6X11		10	4
SYNUTM6		M6	4
8 X 12 S/T FS6017	6	10	2
8 x 19 S/T FS6018		19	2







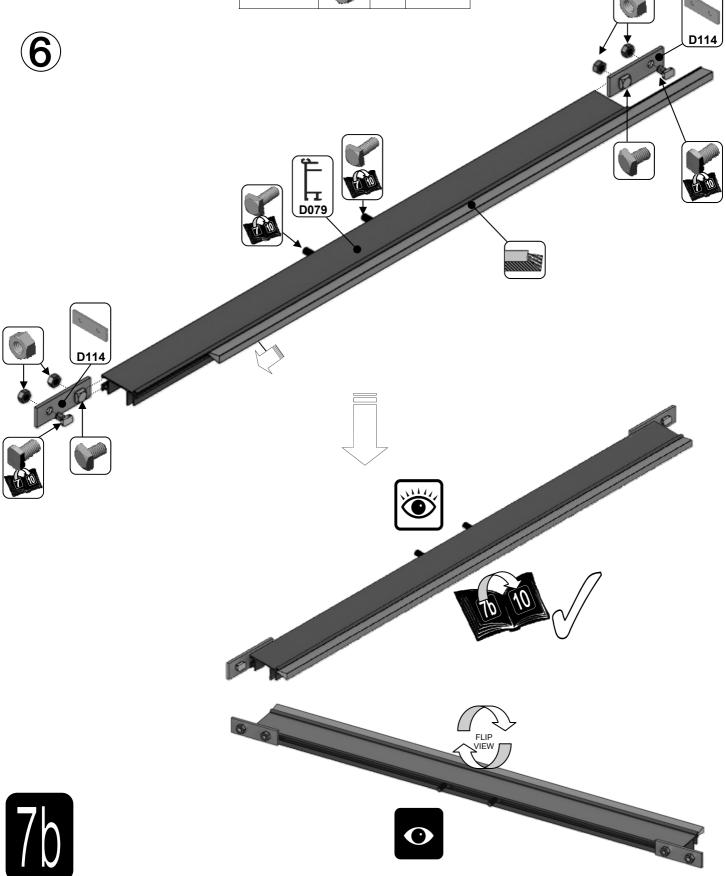


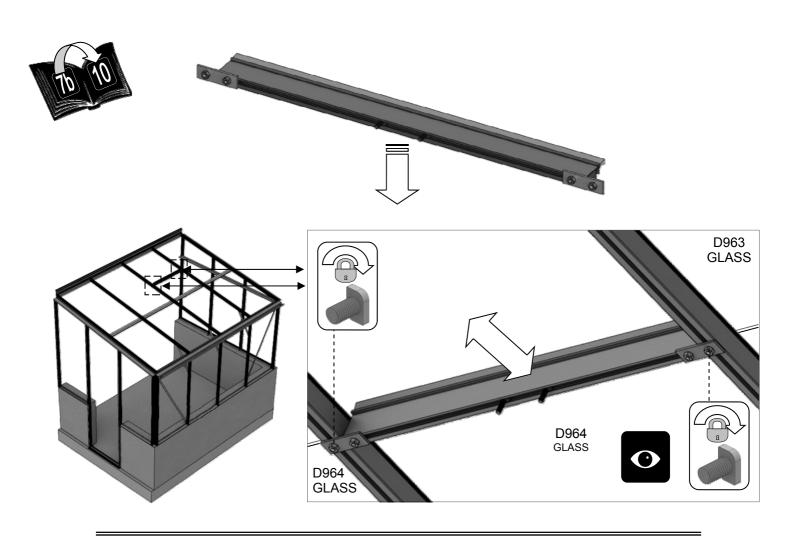


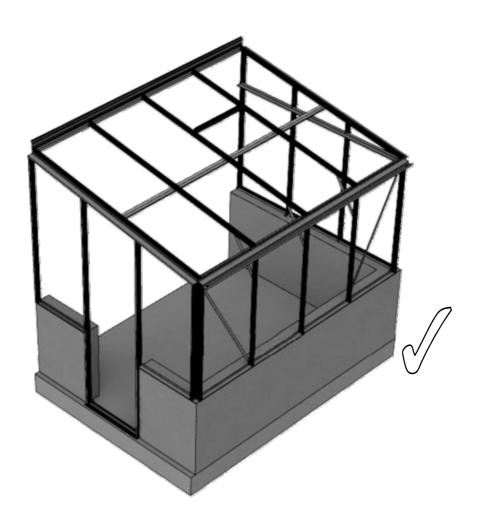


Part No		mm	Quantity
SY- BOLM6X11		10	2
SY- BOLM6X15	GP .	15	2
SYBOLM6 X11CROP		10	2
SYNUTM6		N/A	4

Part No		mm	Quantity
D079 PLUS FLUFF	щ	590	1
D114	0	N/A	2



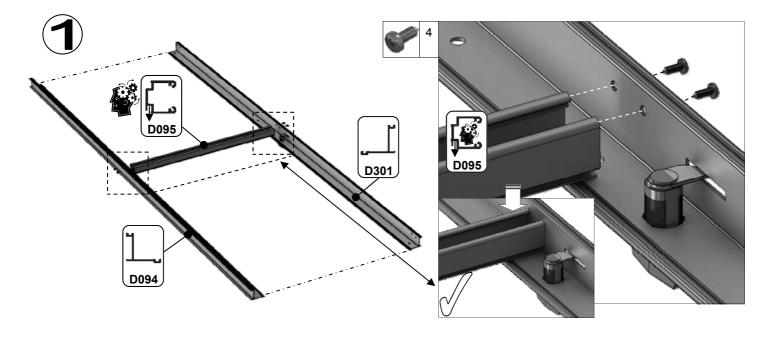


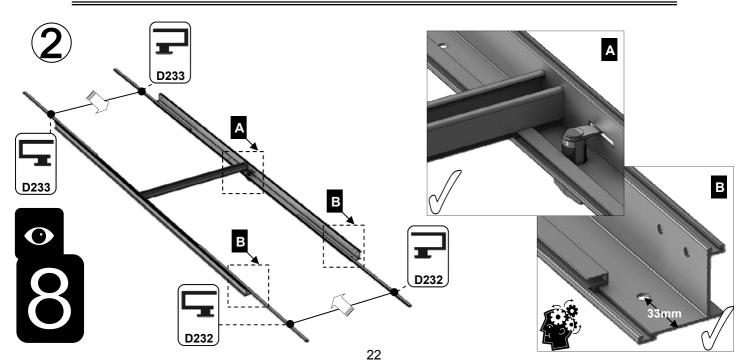


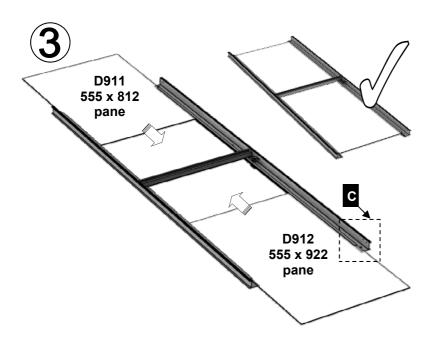


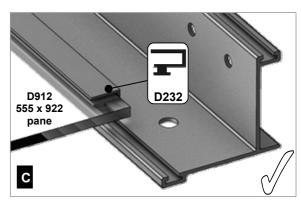
Part No		mm	Q
D090 + D347 lock = D301		1824	1
D094	1	1824	1
D096 + D217 wheel =	لِيَّ	611	1
D095	Ĺ	611	1
D097	<u>ל</u>	611	1

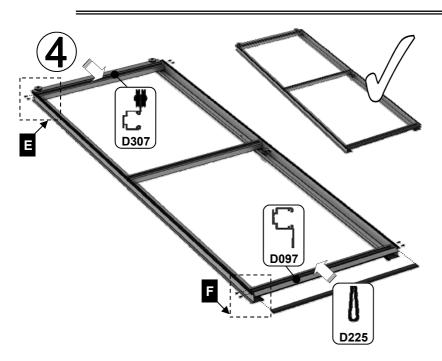
Part No		mm	Q
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D233		797	2
P053		N/A	1
D225	0	610	1
D840B		4000	1
D263		N/A	7
PACK		N/A	7
D260 PACK	S. Talant	N/A	12

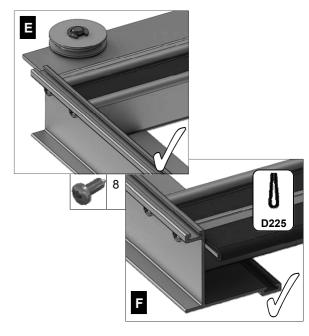


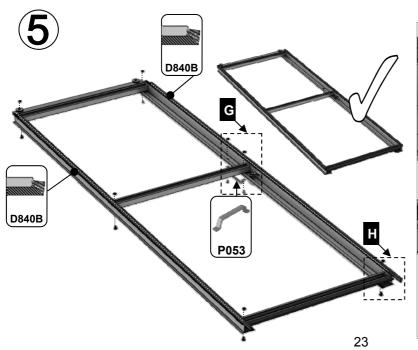


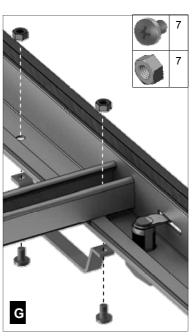




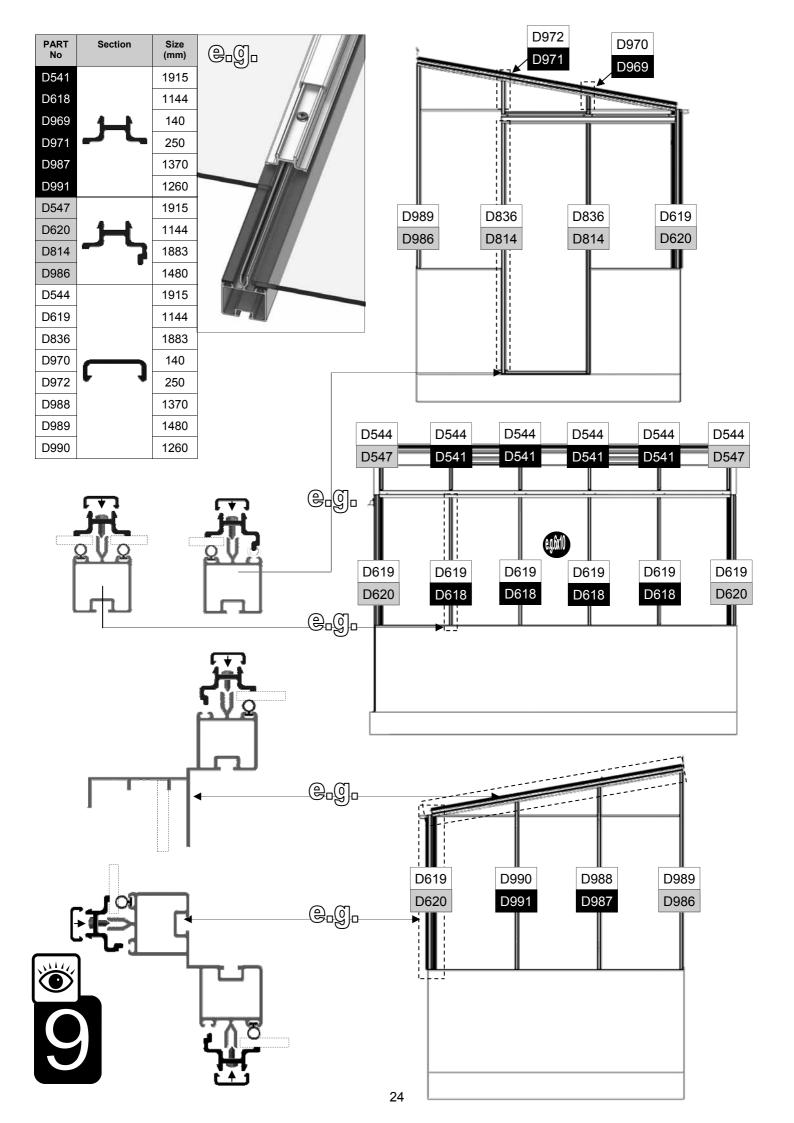


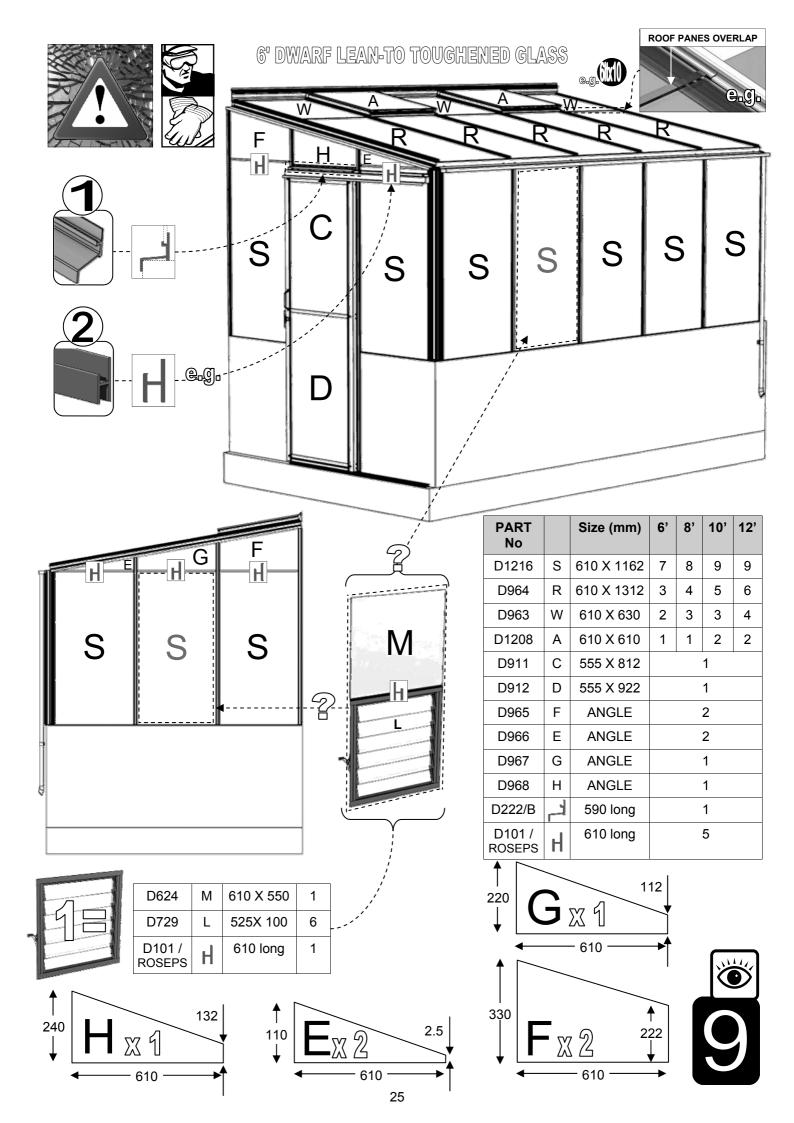


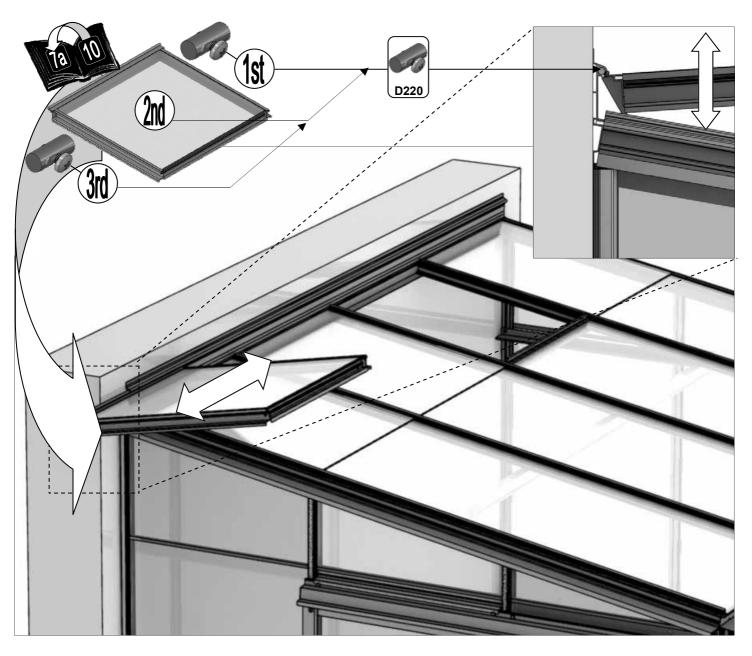


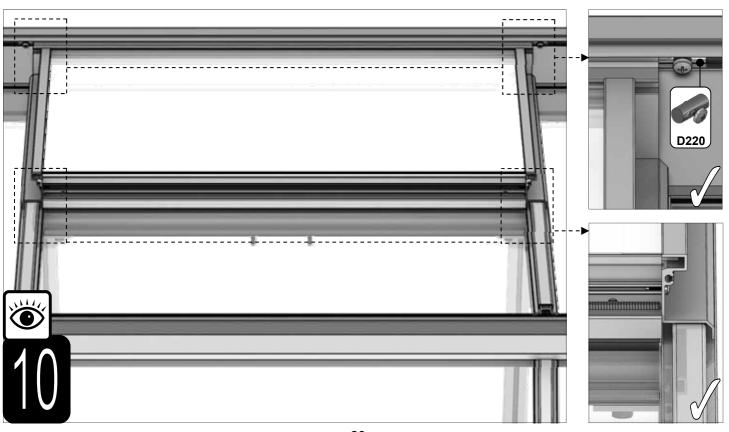


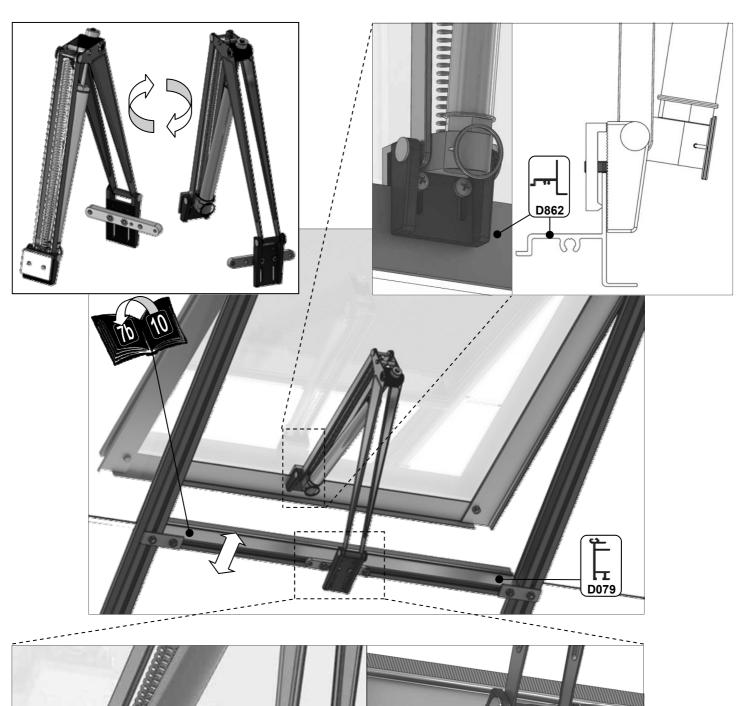


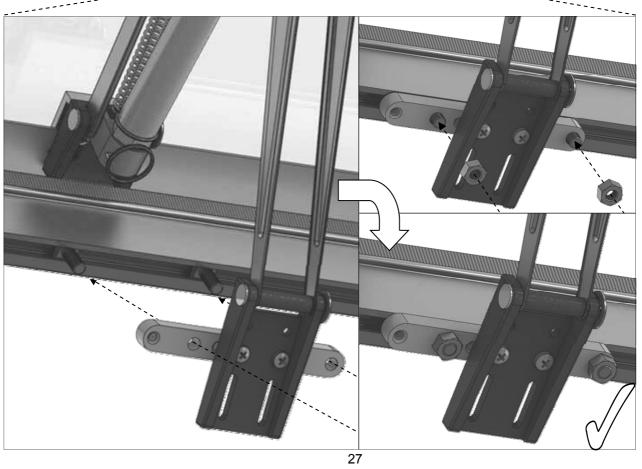






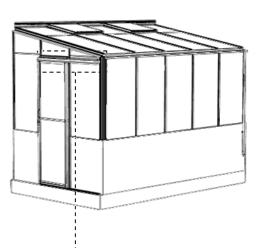


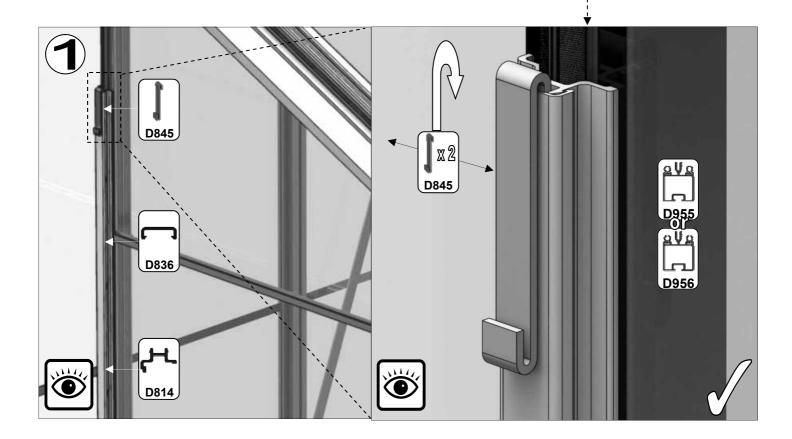


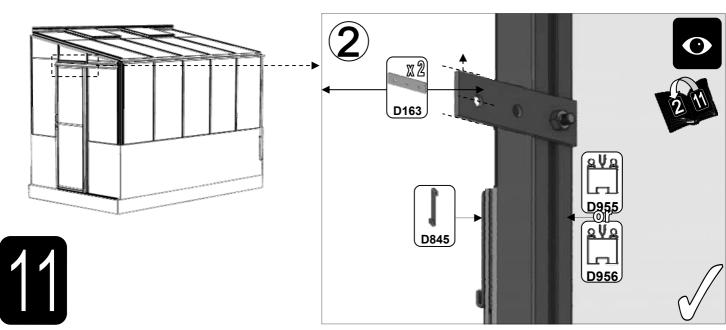


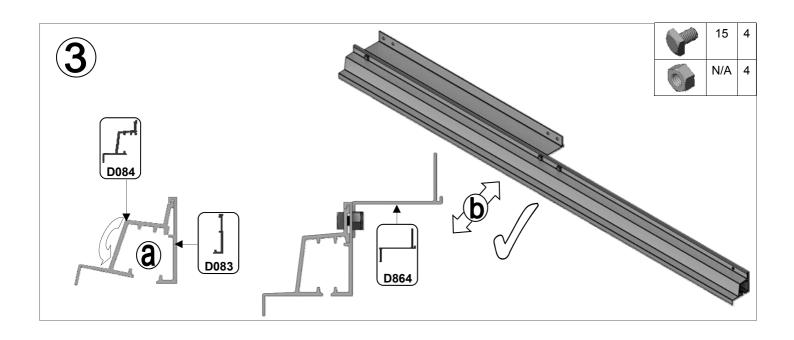
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D084	T	1270	1
D083]	1270	1

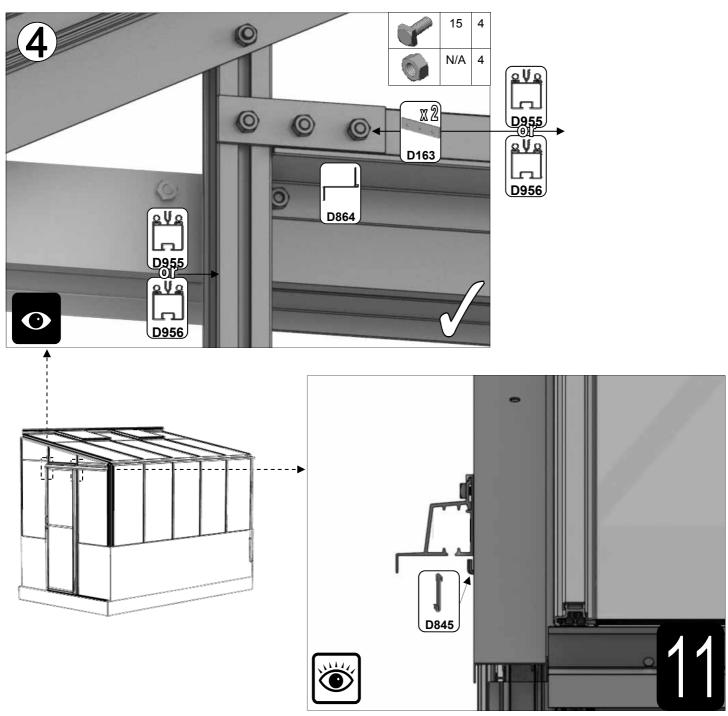
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D163	6	90	2
D845	-		2
SY- BOLM6X15	P		8
SYNUTM6			8

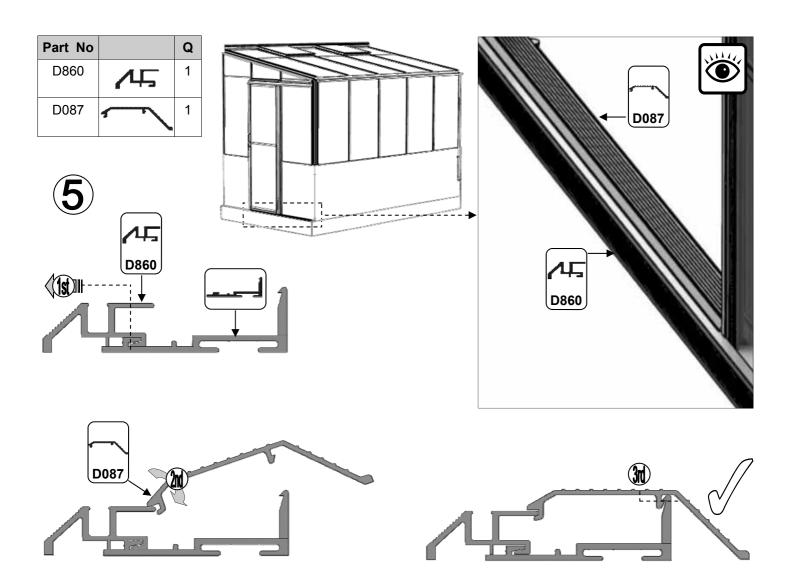


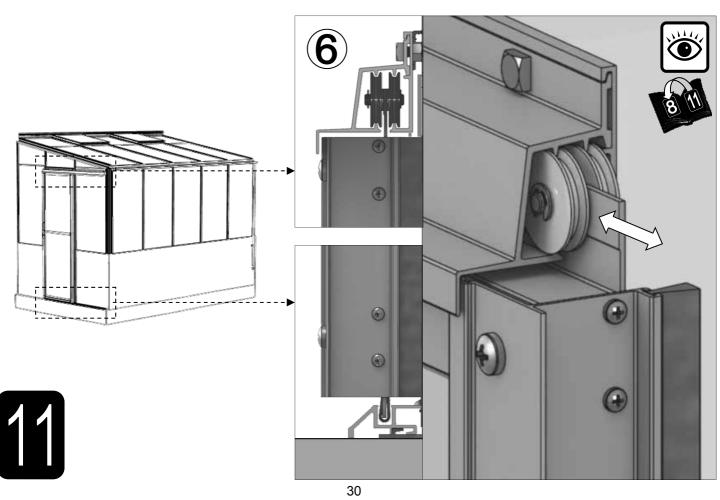


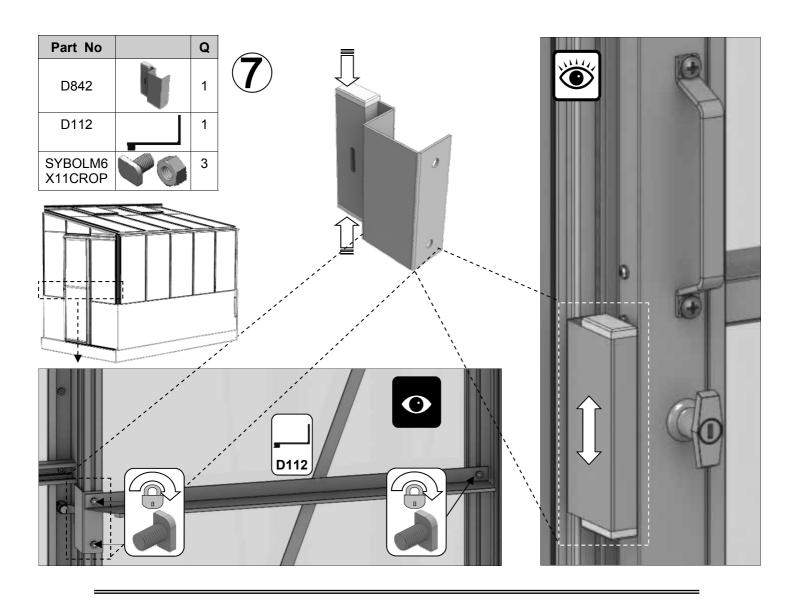


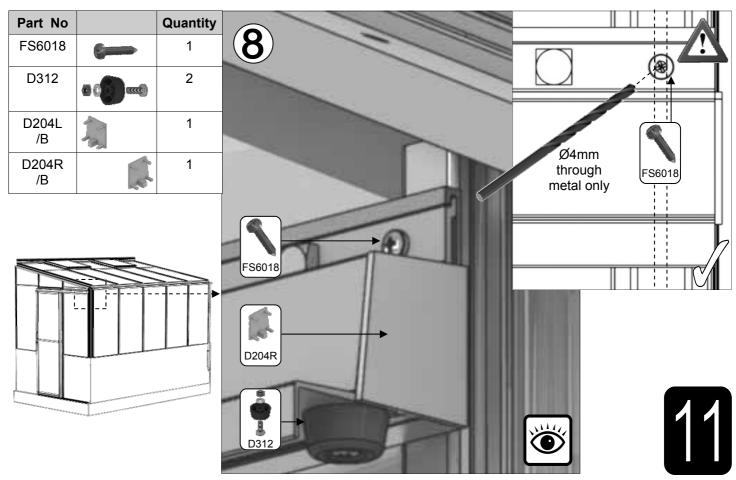




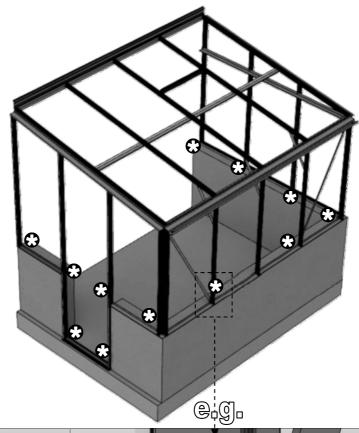


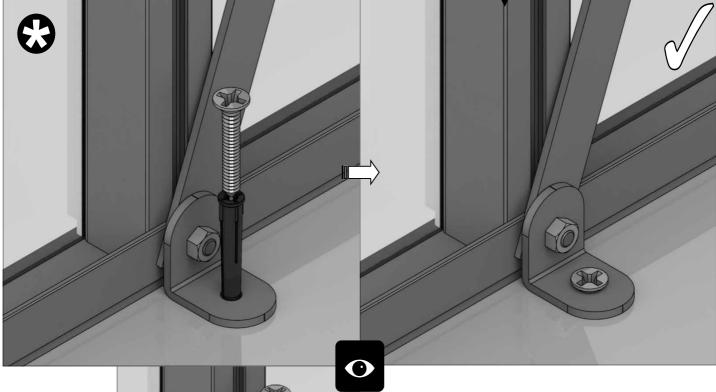




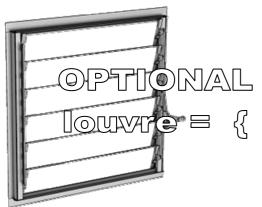






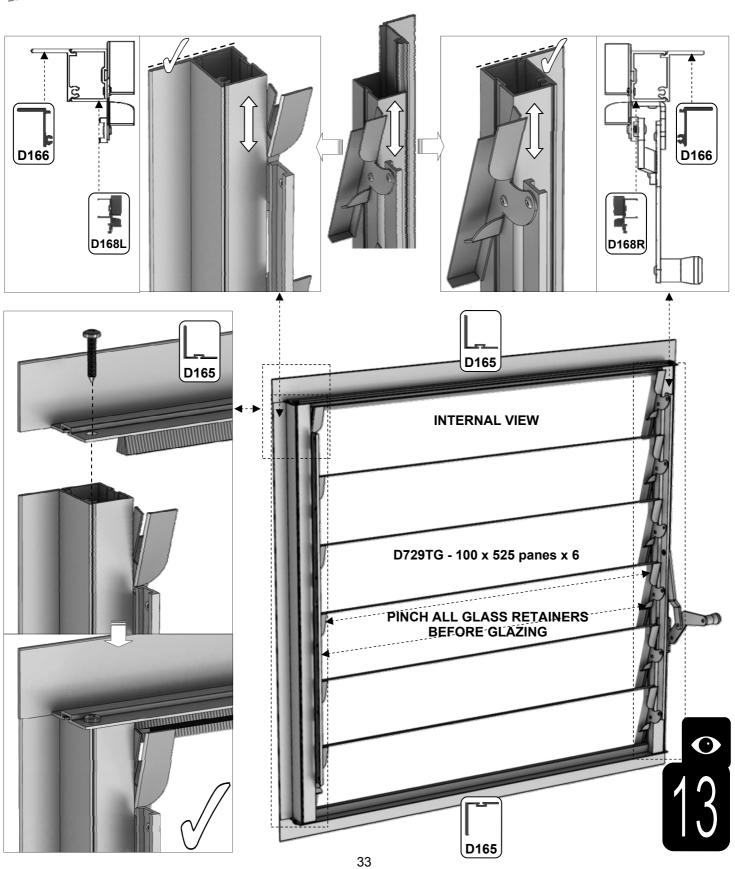


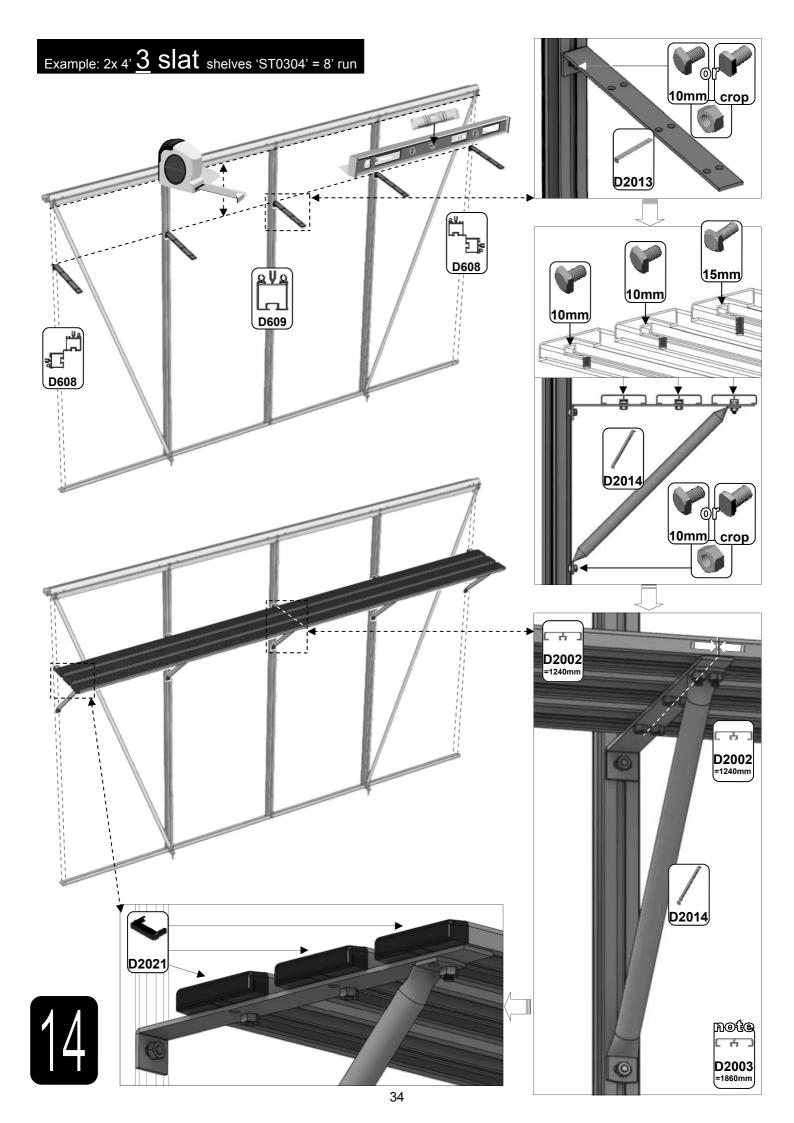


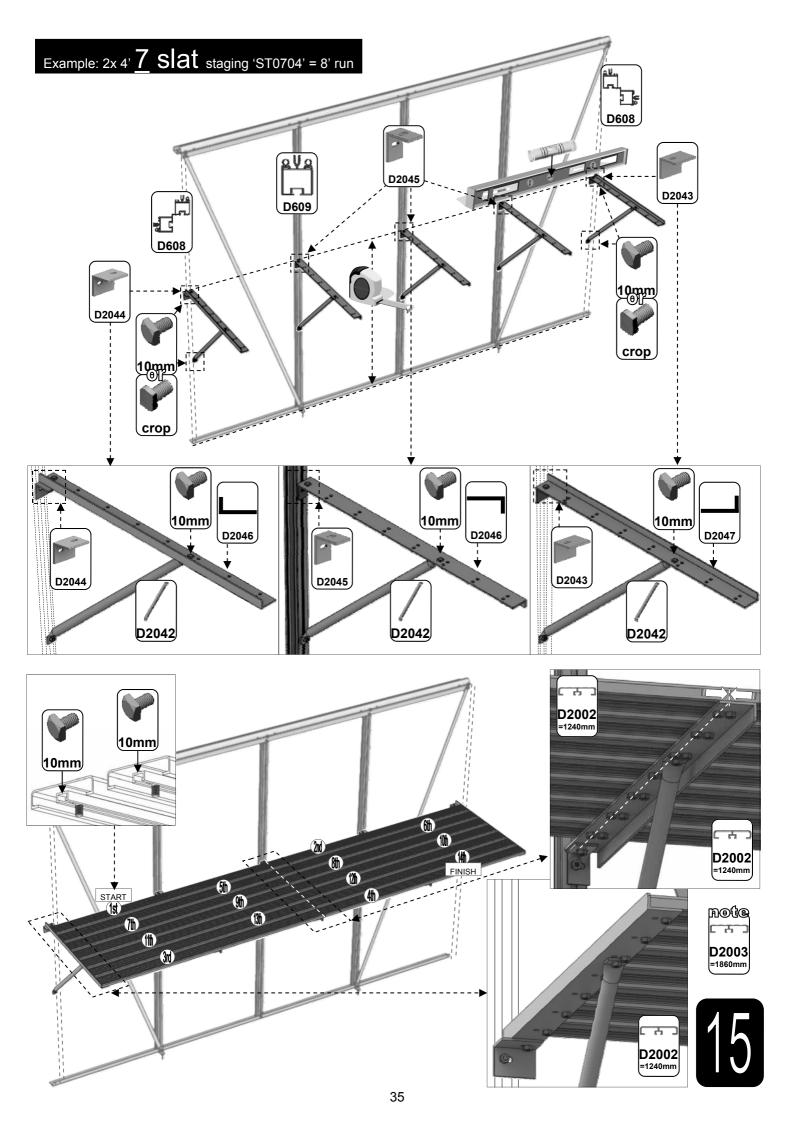


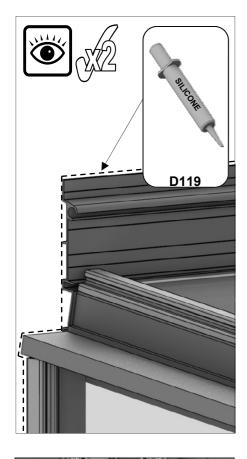
Part No		mm	Quantity
D168L	7 1	552	1
D168R (handle)	手手	552	1
D165		612	2
D166	1	552	2
FS6013		12	4

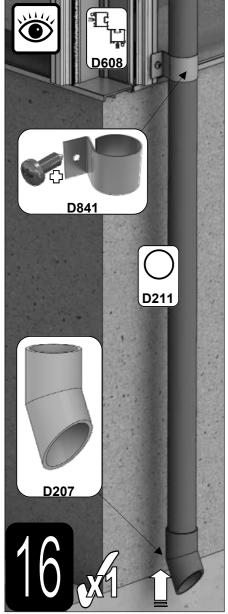


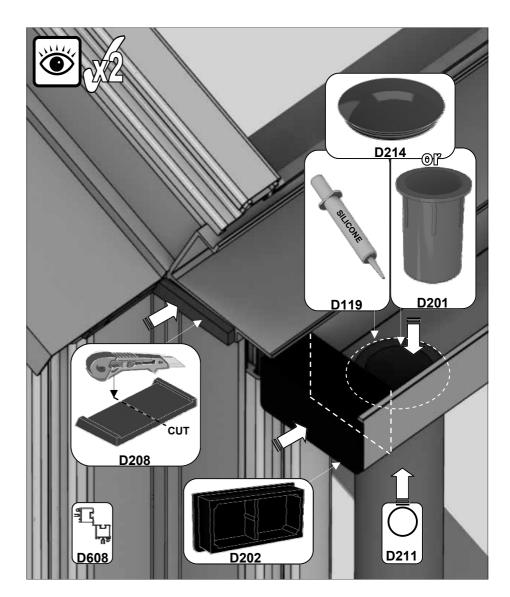


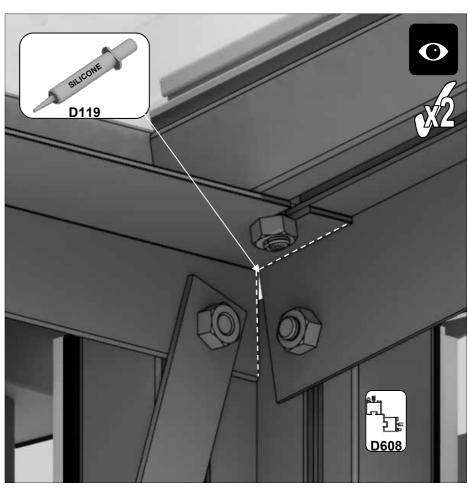






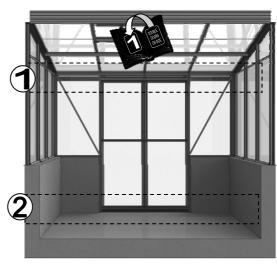


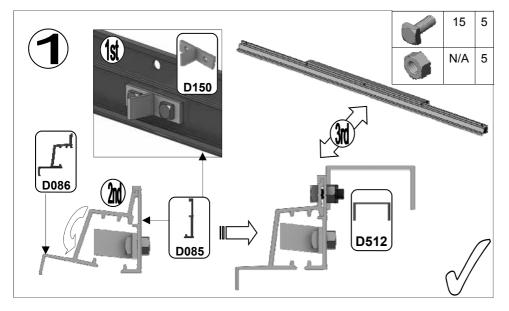


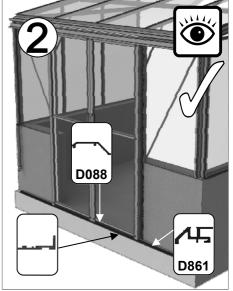


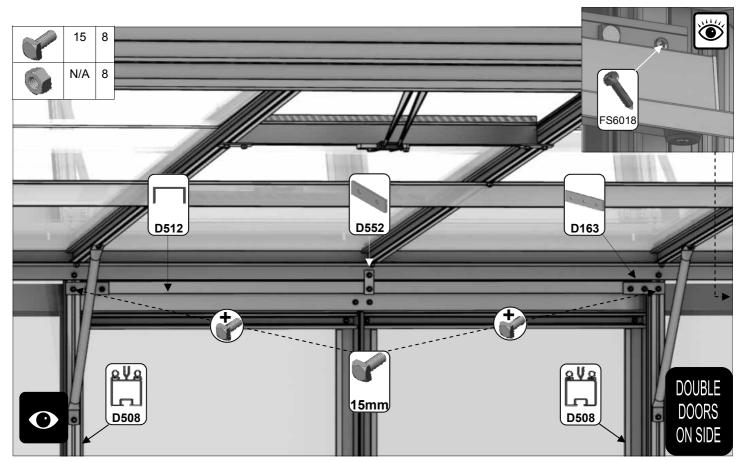
Part No		mm	Q
D512		1210	1
D086	۲τ	2510	1
D085		2510	1

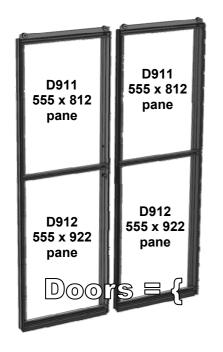
Part No		mm	Q
D522	50		1
D163	90		2
D150	90		1
D845	Ĵ		2
SY- BOLM6X15	G.		13
SYNUTM6			13





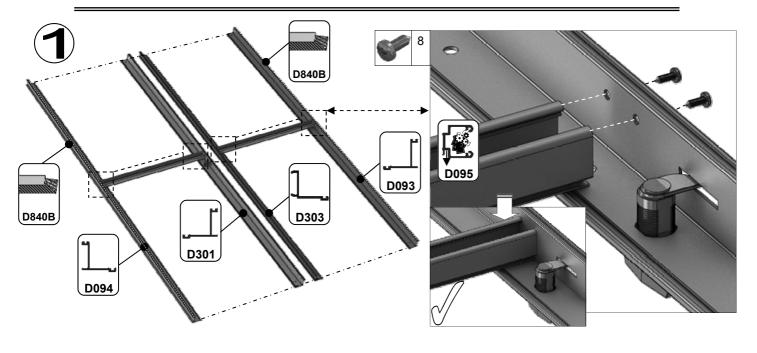


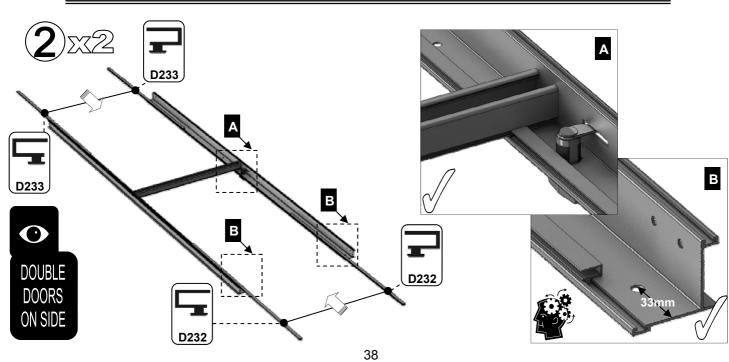


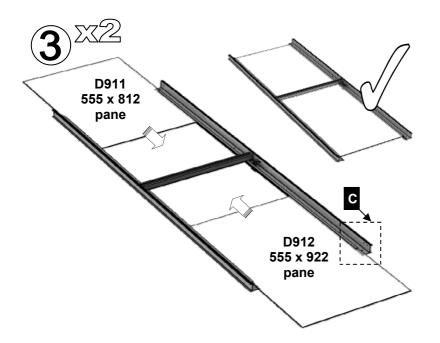


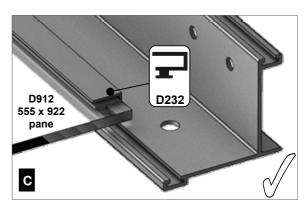
Part No		mm	Q
D094		1824	1
D090 + D347 lock = D301		1824	1
D092 + D156 strike = D303		1824	1
D093		1824	1
D096 + D217 wheel = D307		611	2
D095	[]	611	2
D097	۲	611	2

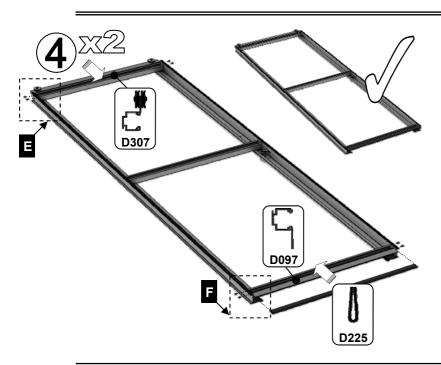
Part No		mm	Q
D232		905	4
D233	I	797	4
P053	5	N/A	2
D225	0	610	2
D840B		4000	1
D263		N/A	14
PACK x 2		N/A	14
D261 PACK		N/A	24

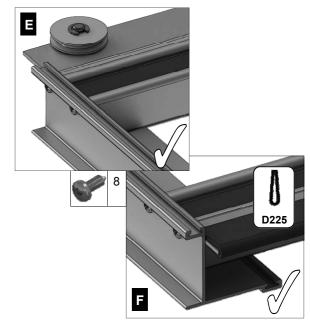


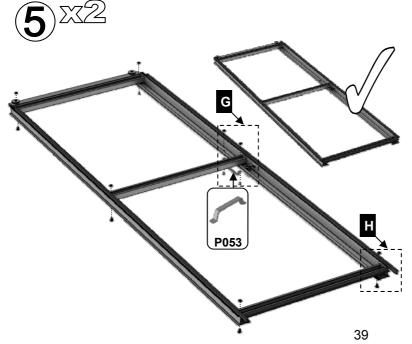


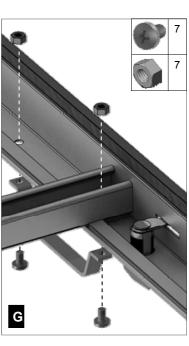














Please be aware that this is a multi-national manual, if you spot any errors or have any constructive comments regarding the manual please email james.spooner@greenhousepeople.co.uk and I will make the necessary amendments. Whilst the information contained in this booklet is accurate at the time of publication, 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.

THIS GREENHOUSE BOX WAS PACKED BY:	DATE:



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To contact Robinsons Customer Services email us at sales@robinsonsgreenhouses.co.uk or call us on 01782 385 409.

Our address is Robinsons Greenhouses, Unit 19 Blythe Park, Cresswell, Stoke-on-Trent, Staffordshire, ST11 9RD