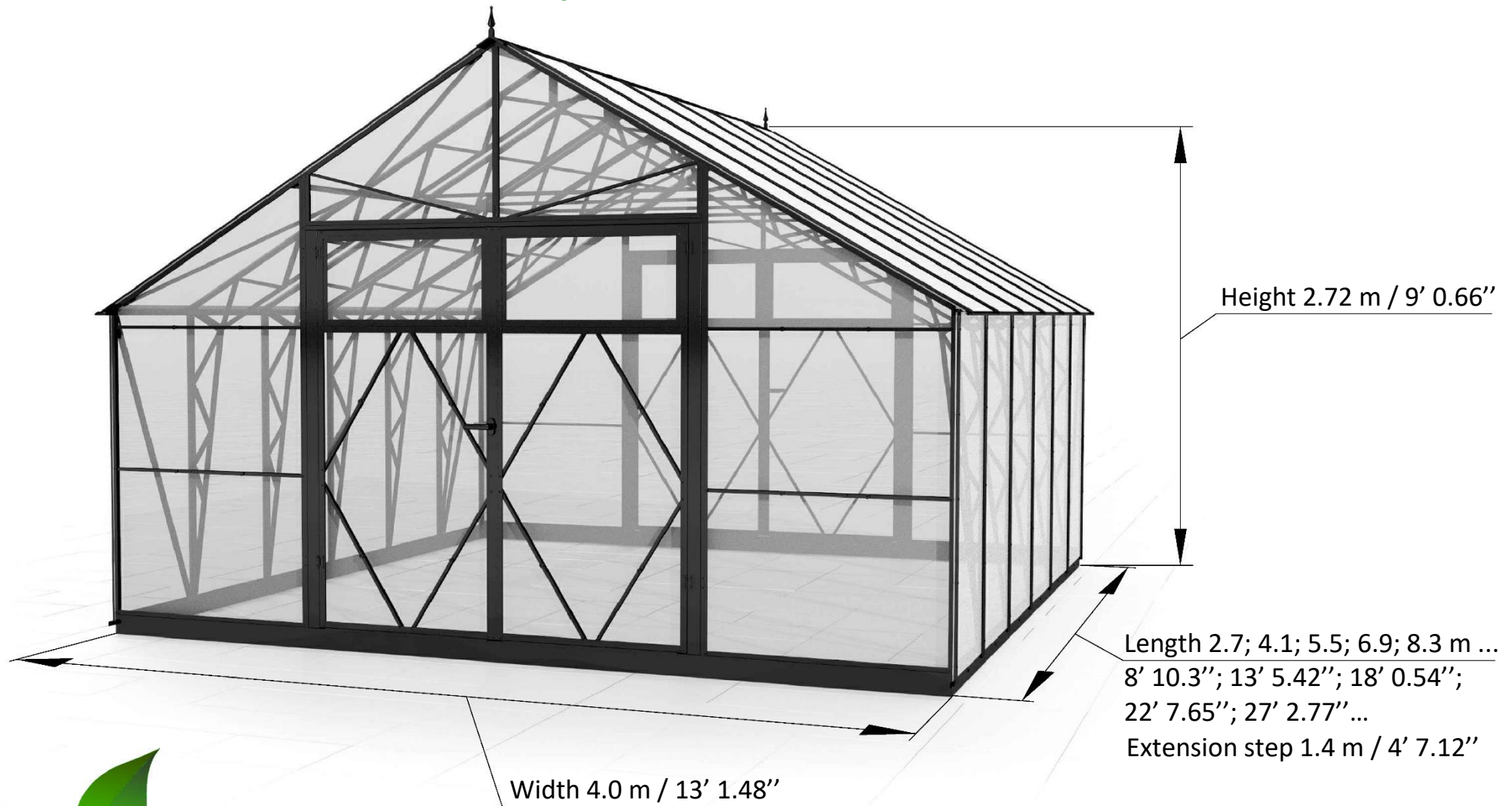


Greenhouse EHL 4.0 DD / 13' 1.48''

Assembly and Installation Guide



Dear Customer,
Thank you for choosing Ecoslider Greenhouses!

Description:

Ecoslider Greenhouses are designed to create a microclimate favorable for plant growth.

The length of the greenhouse can vary depending on the buyer's preference. The desired length of the greenhouse is achieved by purchasing additional extension kits. Each extension kit extends the basic length of the greenhouse by 1.4 (4' 7.12") meters. The length of the basic kit is 2.7 (8' 10.3") meters. The installed frame height of the greenhouse is 2.43 (7' 11.67") meters.

The greenhouse frame is made of galvanized steel profile with a high zinc content, ensuring high strength, reliability, and protection against external factors. The greenhouse is covered with cellular polycarbonate from leading European manufacturers, providing high strength, excellent thermal insulation properties, protection against ultraviolet radiation, and high natural transparency.

Goods acceptance:

Upon receiving the goods, please check the number of boxes you are supposed to receive. If you find any damage to the boxes, please note this on the transport document. Check for any damage to the parts in these boxes. Contact customer support at +(372) 528-4100 or email us at info@ecoslider.com. Photos will help us identify the parts and assess their degree of damage. Please inform us of any issues before starting installation within the shortest possible time (3 days after receiving the goods) to avoid warranty complications.

Minor scratches and paint abrasions on the visible surface of the metal parts of the greenhouse are allowed.

On the polycarbonate sheets, punctures, creases (defects resulting from sharp bending), and dents (damage in the form of a depression with sharp edges) are not allowed.

Should you have any further inquiries or require assistance, please do not hesitate to contact us.



Operating rules:

- Before starting to use the greenhouse, it must be assembled and installed according to the instructions. When installing the greenhouse by third parties, the buyer should ensure the quality of assembly compliance with the instructions.
- Do not install the greenhouse close to buildings and trees from which snow or ice can fall. The recommended distance is at least 2 meters away from such structures or trees.
- The greenhouse is rated to withstand winds of 38 m/s (137 km/h), but the warranty applies to a maximum of 21 m/s (76 km/h).
- Do not leave the greenhouse door open unattended during strong winds.
- If the greenhouse will be unattended for the entire winter, the buyer must either assess the possible snow load or remove snow from the roof.

Warranties:

- The general warranty for our greenhouses, including movable elements such as doors, windows, locks, hinges, etc., is 2 years.
- Manufacturer's warranty for polycarbonate - 10 years.
- Warranty for galvanized trusses - 10 years.
- The manufacturer is responsible for the completeness of the kit.
- The manufacturer is responsible for the ease of assembly of the structure according to the instructions.
- The manufacturer is responsible for the structural strength within the specified operating rules.

Our warranty does not cover instances of:

- Improper installation contrary to instruction requirements.
- Breach of operating guidelines.
- Misuse of the greenhouse for unintended purposes.
- Unauthorized modifications to the greenhouse structure.
- Deformation due to exceeding snow load capacities.
- Structural damage resulting from ground movement.

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Assembly and installation recommendations

Please read the instructions carefully before assembling.

Follow the steps indicated in the instructions. Final assembly and Installation must be performed by at least two people.

Safety:

- Some parts may have sharp edges. Be careful when working with them. Use gloves.
- Pre-assembly of greenhouse parts pp. (11÷18) can be done indoors, for example in a garage. The complete installation of the greenhouses should be done within one day.
- When using ladder and electrical appliances, follow the manufacturer's safety instructions.
- Do not install the greenhouse when the wind is more, then 4÷5 m/s or when it is raining.

Assembly:

- Select a flat surface to assemble the greenhouse components.
- Polycarbonate sheets must be installed with the **UV** protected side, facing out.
- Prior to installation of polycarbonate, remove the protective film from both sides of the sheets.
- If there is a protective film on metal parts, remove the film.
- If there is a protective film on the metal parts of greenhouse, remove it.
- When fastening polycarbonate sheets with screws and nuts, do not apply great effort to avoid leaving dents.
- Secure the greenhouse to a solid leveled surface to ensure proper functioning.

Tools



Equipment			Quantity, pcs.							Note
			(BASE)	Number of extensions in the greenhouse						
			0	1	2	3	4	...	N	
Name	Qty (BASE)	Col. In 1 extend	EHL 4.0 DD/ 13' 1.48" greenhouse length range, m/ft							
			2.7	4.1	5.5	6.9	8.3	...	2.7+(1.4*N)	
			8' 10.3"	13'5.42"	18' 0.54"	22' 7.65"	27' 2.77"		8' 10.3"+(4' 7.12"*N)	
Details										
C3	2	0	2	2	2	2	2		2	frame
C4	2	0	2	2	2	2	2		2	frame
C11	2	0	2	2	2	2	2		2	frame
C12	2	0	2	2	2	2	2		2	frame
C13	2	0	2	2	2	2	2		2	frame
J11	2	0	2	2	2	2	2		2	frame
J11R	2	0	2	2	2	2	2		2	frame
J12	2	0	2	2	2	2	2		2	frame
J13	0	2	0	2	4	6	8		2N	frame
J14	0	2	0	2	4	6	8		2N	frame
J15	2	0	2	2	2	2	2		2	frame
25M1	6	4	6	10	14	18	22		6+4N	trusses
25M2	6	4	6	10	14	18	22		6+4N	trusses
25M3	6	4	6	10	14	18	22		6+4N	trusses
4M7	6	4	6	10	14	18	22		6+4N	trusses
4M2	6	4	6	10	14	18	22		6+4N	trusses
4M3	6	4	6	10	14	18	22		6+4N	trusses
4M4	6	4	6	10	14	18	22		6+4N	trusses
4M5	6	4	6	10	14	18	22		6+4N	trusses
U4	3	2	3	5	7	9	11		3+2N	trusses
MS11	4	0	4	4	4	4	4		4	mauerlat
MS13	0	2	0	2	4	6	8		2N	mauerlat
SK11	2	0	2	2	2	2	2		2	roof ridges
SK12	2	0	2	2	2	2	2		2	roof ridges
SK13	0	1	0	1	2	3	4		N	roof ridges
SK14	0	1	0	1	2	3	4		N	roof ridges
SK15	4	4	4	8	12	16	20		4+4N	reinforcement
SK16	4	0	4	4	4	4	4		4	reinforcement
H1	2	0	2	2	2	2	2		2	end
H2	2	0	2	2	2	2	2		2	end
H3	4	0	4	4	4	4	4		4	end
H4	8	0	8	8	8	8	8		8	end
H5	2	0	2	2	2	2	2		2	end
H6G	2	0	2	2	2	2	2		2	end
H1R	2	0	2	2	2	2	2		2	end
H2R	2	0	2	2	2	2	2		2	end
H5R	2	0	2	2	2	2	2		2	end
H6RG	2	0	2	2	2	2	2		2	end
H8G	2	0	2	2	2	2	2		2	end
H9G	2	0	2	2	2	2	2		2	end

N – number of standard extensions (1.4 m / 4' 7.12") in addition to the base length of the greenhouse. Base length - 2.7 m / 8' 10.3".

* - When using monolithic polycarbonate, UL6 parts and Protective Tape will be missing/ When using polycarbonate in combination, check with managers for the complete set.

Equipment			Quantity, pcs.							Note	
			(BASE)	Number of extensions in the greenhouse							
			0	1	2	3	4	...	N		
Name	Qty (BASE)	Col. In 1 extend	EHL 4.0 DD/ 13' 1.48" greenhouse length range, m/ft								
			2.7	4.1	5.5	6.9	8.3	...	2.7+(1.4*N)		
			8' 10.3"	13'5.42"	18' 0.54"	22' 7.65"	27' 2.77"		8' 10.3"*(4' 7.12"*N)		
Details											
H13G	4	0	4	4	4	4	4		4	end	
H14G	2	0	2	2	2	2	2		2	end	
4T9	2	0	2	2	2	2	2		2	end	
Pillar with hinges	2	0	2	2	2	2	2		2	end	
Pillar_R with hinges	2	0	2	2	2	2	2		2	end	
D1	2	0	2	2	2	2	2		2	door	
D2 with valve	2	0	2	2	2	2	2		2	door	
D2 with hinges	2	0	2	2	2	2	2		2	door	
D2R with hinges	2	0	2	2	2	2	2		2	door	
D3+D6	4	0	4	4	4	4	4		4	door	
D4L with hinges	4	0	4	4	4	4	4		4	door	
D5	16	0	16	16	16	16	16		16	door	
D8	4	0	4	4	4	4	4		4	door	
FD1L with PEM	2	0	2	2	2	2	2		2	door	
FD2	8	0	8	8	8	8	8		8	door	
FD8	2	0	2	2	2	2	2		2	door	
FD5L with PEM	2	0	2	2	2	2	2		2	door	
FD7	2	0	2	2	2	2	2		2	door	
PP1	10	4	10	14	18	22	26		10+4N	wall	
4PP2	10	4	10	14	18	22	26		10+4N	roof	
UL6	16	8	16	24	32	40	48		16+8N	panel	
KR2	8	4	8	12	16	20	24		8+4N	wall	
KR3	8	4	8	12	16	20	24		8+4N	roof	
KR6	10	4	10	14	18	22	26		10+4N	roof	
PL	2	0	2	2	2	2	2		2	reinforcement	
PR	2	0	2	2	2	2	2		2	reinforcement	
4PV1	4	0	4	4	4	4	4		4	reinforcement	
4PV2	4	0	4	4	4	4	4		4	reinforcement	
L_55x75	4	0	4	4	4	4	4		4	frame	
L_40x90	8	2	8	10	12	14	16		8+2N	frame	
Fittings	8	2	8	10	12	14	16		8+2N	frame	
Z6	2	0	2	2	2	2	2		2	roof	
DV12	2	0	2	2	2	2	2		2	door	
Polycarbonate panels											
Panel 3P1 (1050x2060)	2	0	2	2	2	2	2		2	End left	
Panel 3P2 (1050x2060)	2	0	2	2	2	2	2		2	End right	
Panel P4 (820x405)	2	0	2	2	2	2	2		2	Hatch left	
Panel P5 (880x1365)	2	0	2	2	2	2	2		2	Door left	
Panel P5R (880x1365)	2	0	2	2	2	2	2		2	Door right	
Panel P6 (696x1500)	8	4	8	12	16	20	24		8+4N	wall	
Panel 4P7 (696x2360)	8	4	8	12	16	20	24		8+4N	roof	
Panel 4P12 (833x405)	2	0	2	2	2	2	2		2	Hatch right	
Panel 4P13 (1878x776)	2	0	2	2	2	2	2		2	smartventor	

Continued see page 5



Complete set continued

Equipment			Quantity, pcs.							Note
			(BASE)	Number of extensions in the greenhouse						
			0	1	2	3	4	...	N	
Name	Qty (BASE)	Col. In 1 extend	EHL 4.0 DD/ 13' 1.48'' greenhouse length range, m/ft							
			2.7	4.1	5.5	6.9	8.3	...	2.7+(1.4*N)	
			8' 10.3''	13'5.42''	18' 0.54''	22' 7.65''	27' 2.77''		8' 10.3''+(4' 7.12''*N)	
Accessories										
Door handle	4	0	4	4	4	4	4		4	door
Door lock	2	0	2	2	2	2	2		2	door
Square	2	0	2	2	2	2	2		2	door
Lock screw M5x35	4	0	4	4	4	4	4		4	door
Valve	4	0	4	4	4	4	4		4	door
Magnet assembly	4	0	4	4	4	4	4		4	end
Pressure profile, m	76,2	30,5	76,2	106,7	137,2	167,6	198,1		76,2+30,5N	Wall, roof
Rubber profile, m	8	0	8	8	8	8	8		8	door
Protective Tape, m	47	11,2	47	58,2	69,4	80,6	91,8		47+11,2N	panel
Fasteners										
Screw 4.2x13 DIN 7981	876	324	876	1200	1524	1848	2172		876+324N	total
Screw 4.2x19 DIN 7504	162	16	162	178	194	210	226		162+16N	total
Screw 4.2x25 DIN 7981	14	4	14	18	22	26	30		14+4N	panel
Screw 4.2x32 DIN 7981	126	52	126	178	230	282	334		126+52N	PP plank
Washer 20x4.3x1.25	34	0	34	34	34	34	34		34	end
Washer 25x6.5x1.25	36	24	36	60	84	108	132		36+24N	trusses
Washer 15x5.3x1.2	16	0	16	16	16	16	16		16	end
Bolt M6x16 DIN 912	18	12	18	30	42	54	66		18+12N	trusses
Butterfly nut M6	18	12	18	30	42	54	66		18+12N	trusses
Screw M4x12 DIN 7046	8	0	8	8	8	8	8		8	door

Basic configuration

Smartventor
(Additional window)

Left end

Door left

Door right

Right end

4000 / 13' 1.48"

2704 / 8' 10.46"

Right part of the
basic configurationLeft part of the basic
configuration

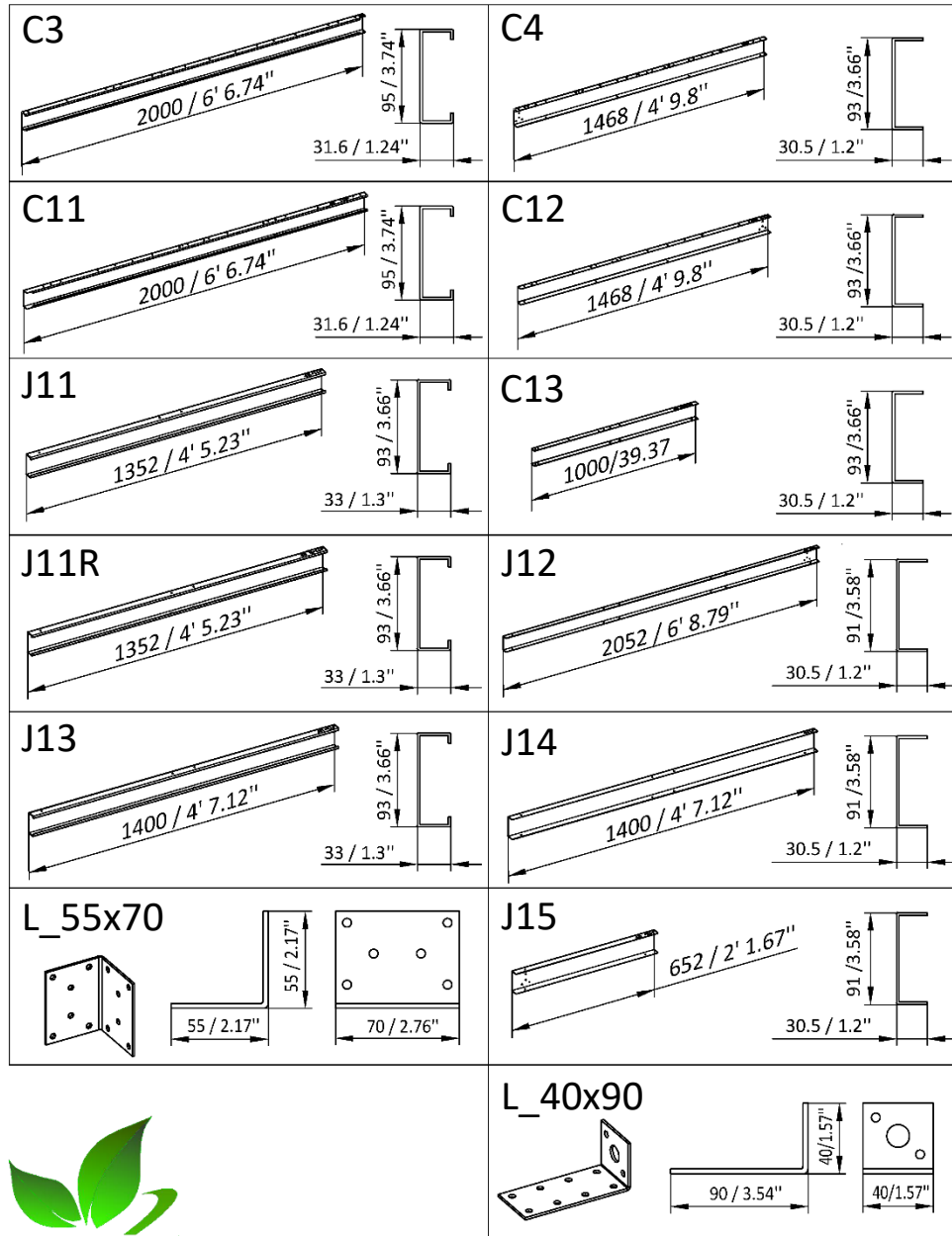
Greenhouse extension

1352 / 4' 5.23"

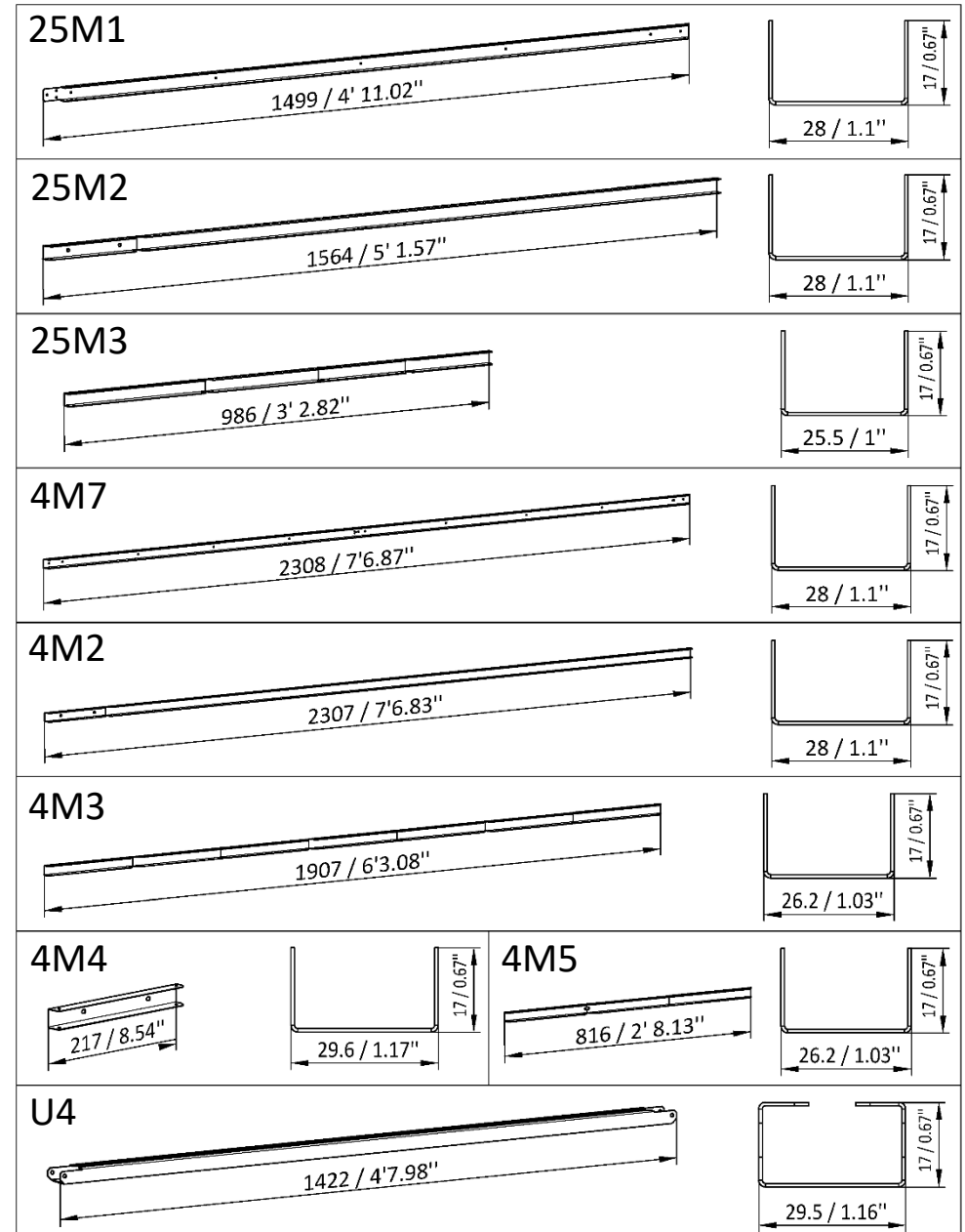
1400 / 4' 7.12"

1352 / 4' 5.23"

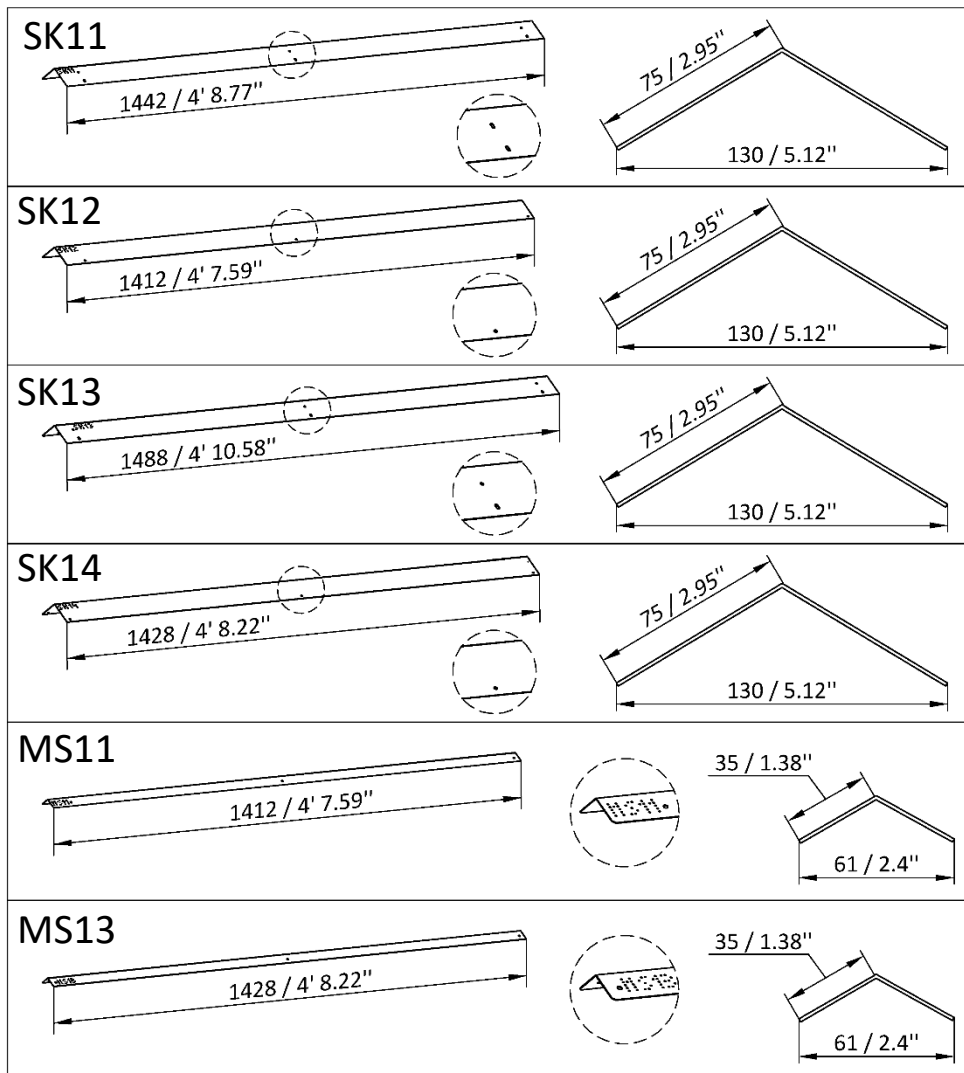
Support frame



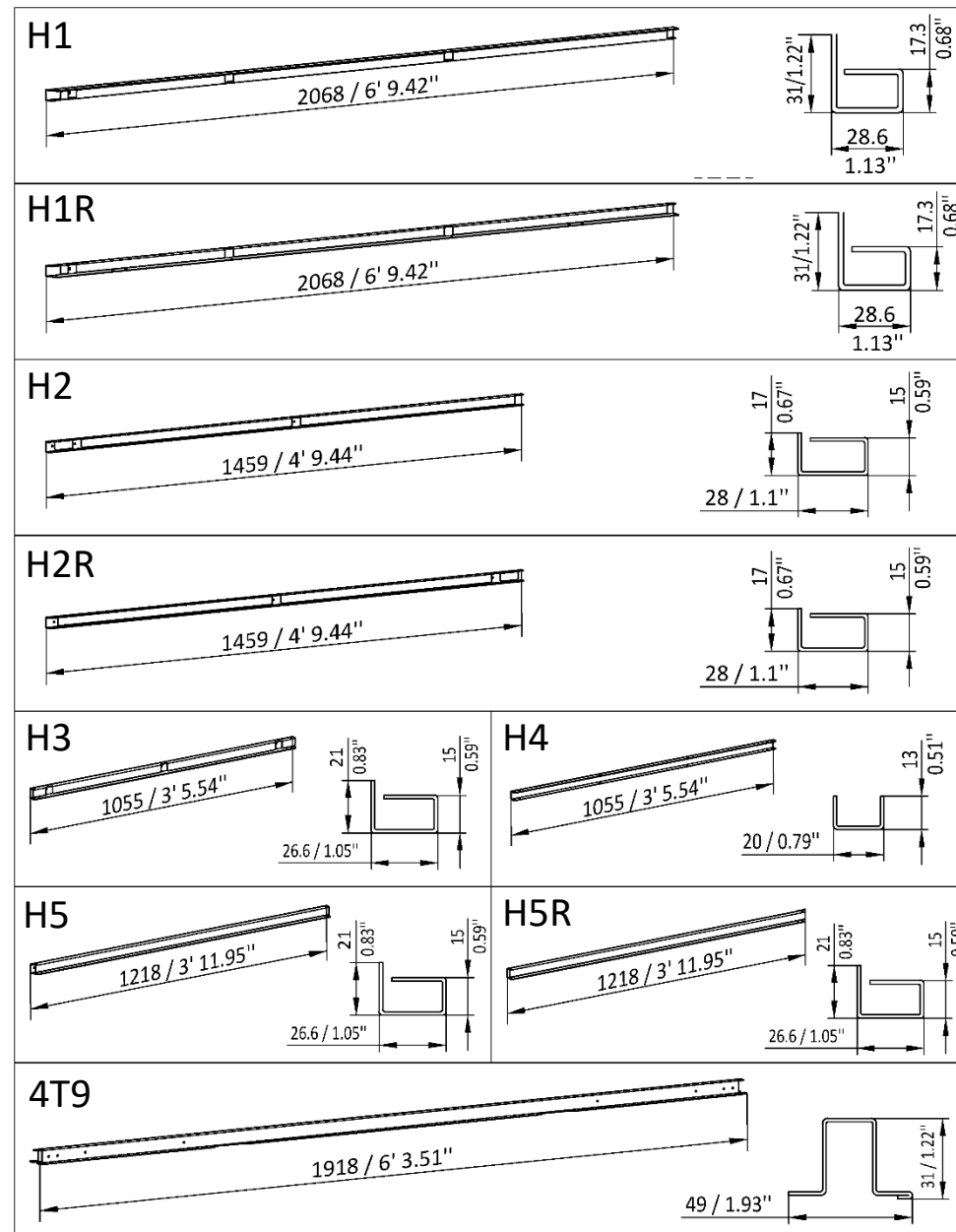
Trusses



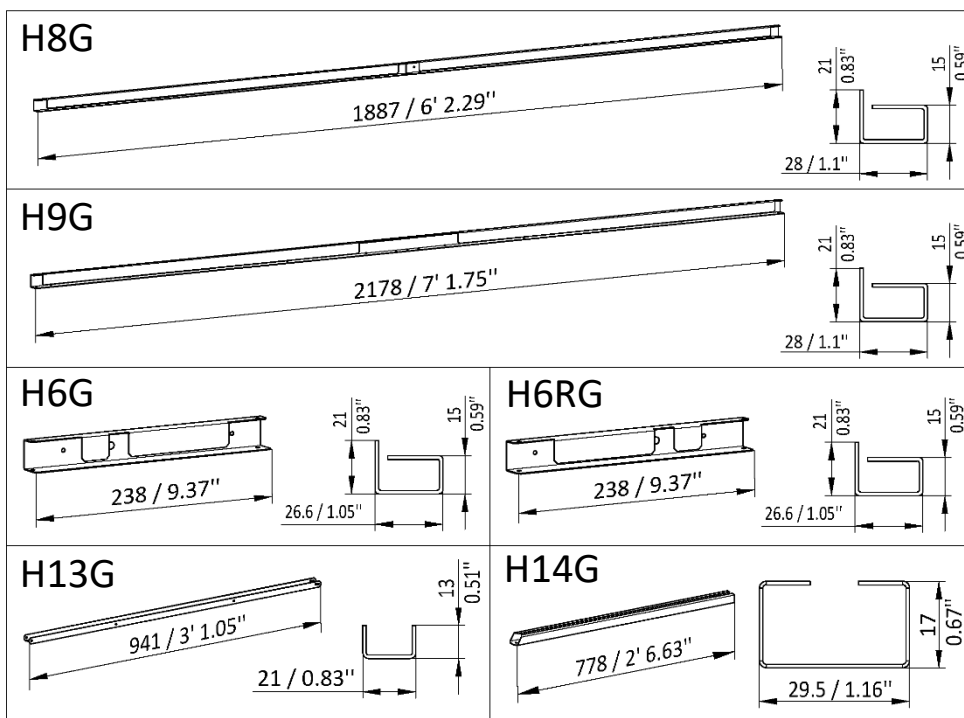
Roof ridges and mauerlat



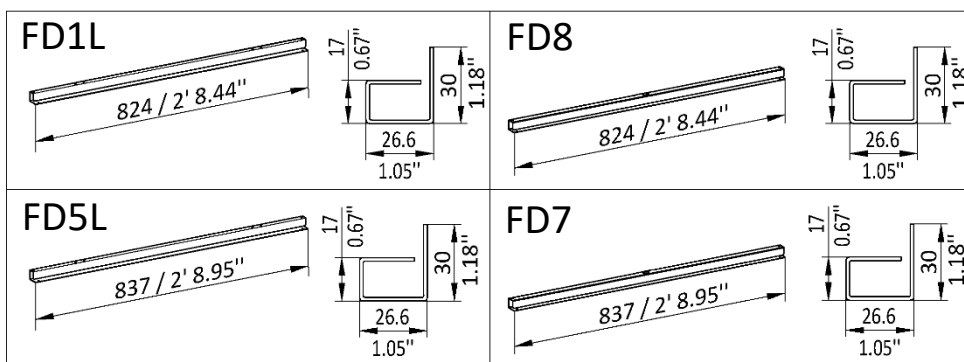
End walls



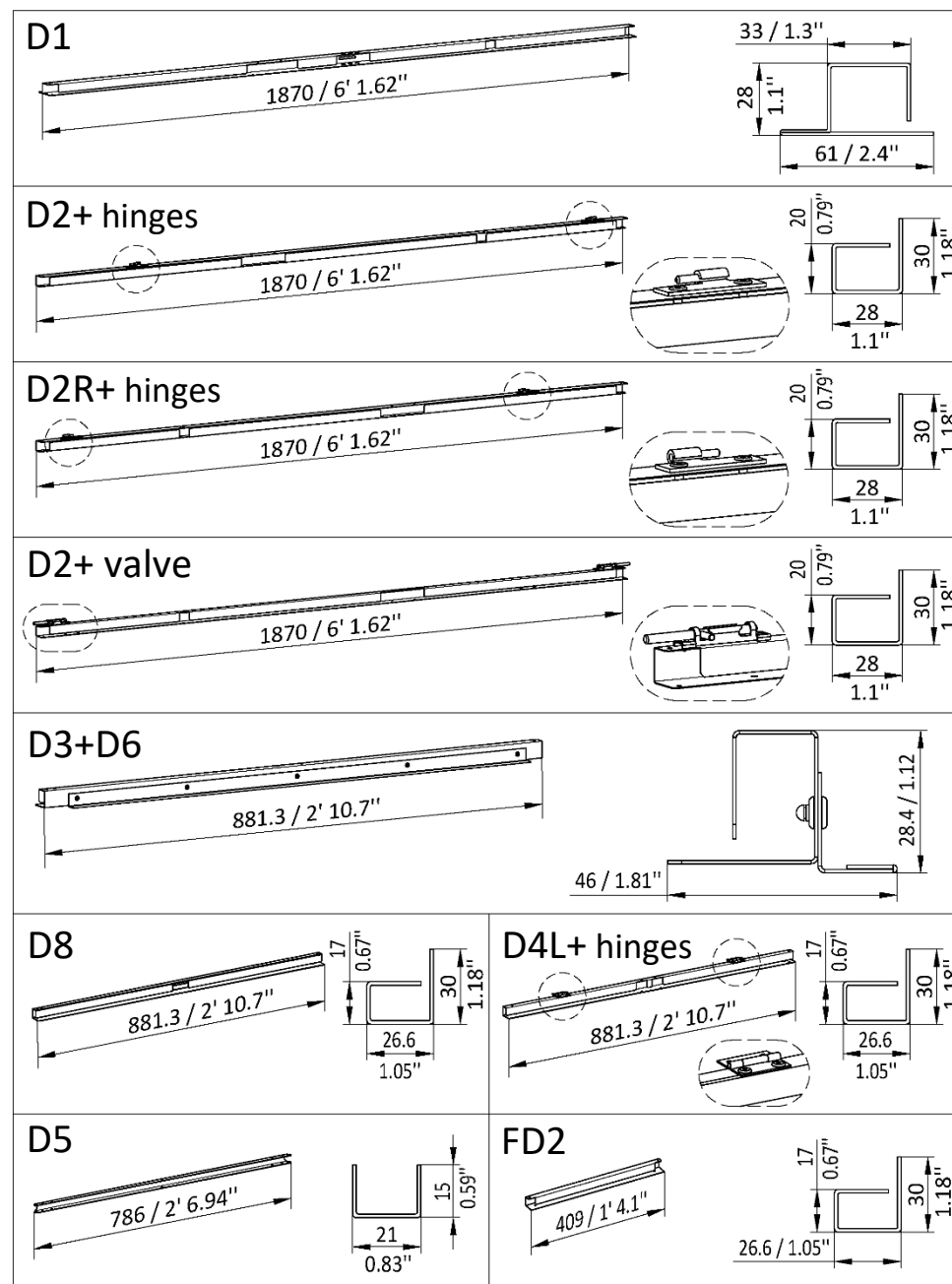
Smartventor



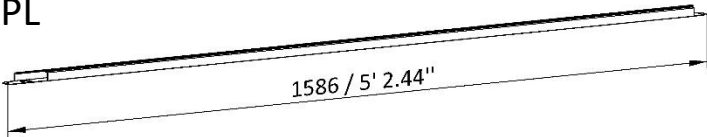
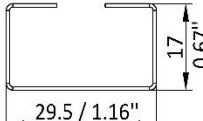
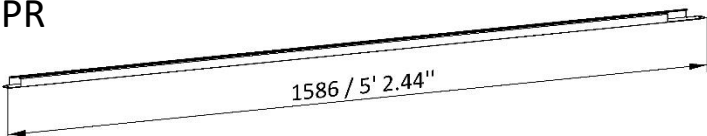
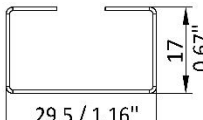
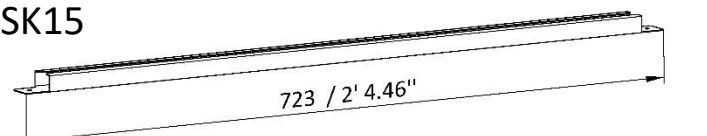
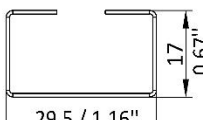
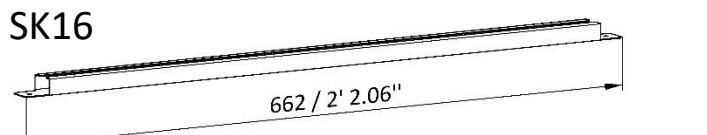
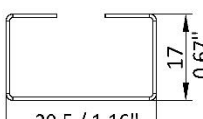
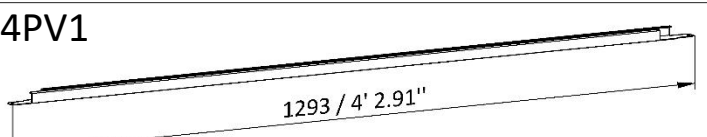
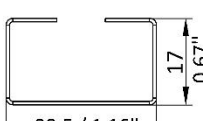
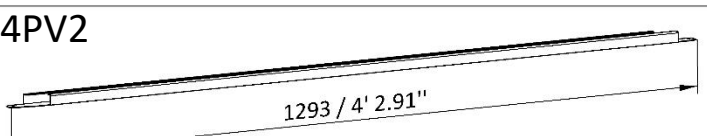
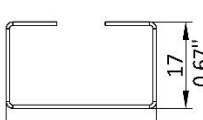
Door



Door

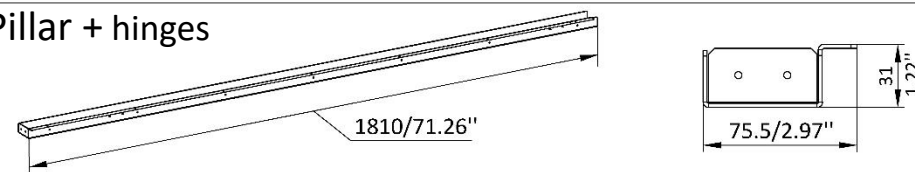


Reinforcement

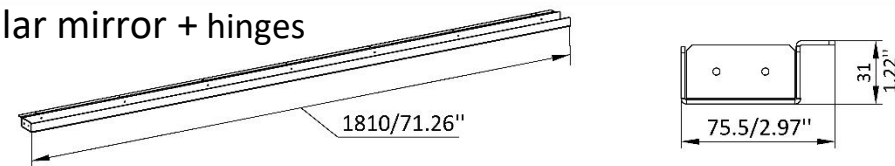
PL		
PR		
SK15		
SK16		
4PV1		
4PV2		

Doors pillars

Pillar + hinges



Pillar mirror + hinges

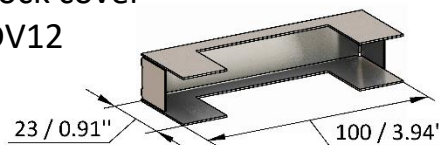


Installation of handles and lock

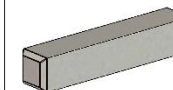
Door handle



Door lock

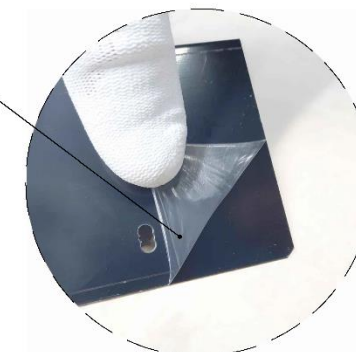
Lock cover
DV12

Square

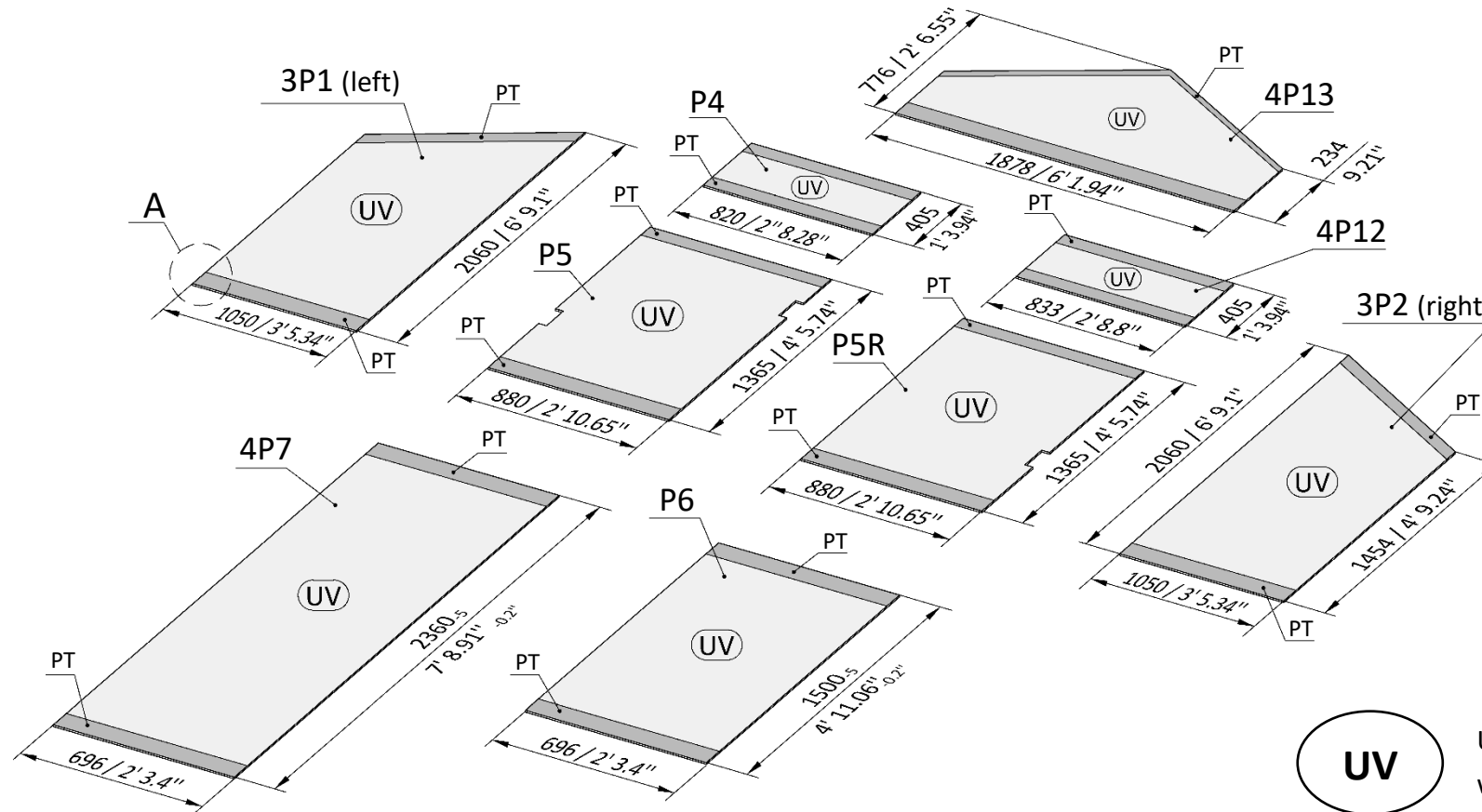
Lock screw
M5x35

Remove the protective film

Metal parts are covered with a polymer film. The film must be removed, as it begins to deteriorate under the influence of UV rays. We recommend using rubberized work gloves to remove the protective film. The film is easily separated from the metal by sliding it from the edge of the part.



Cellular polycarbonate sheets



UV

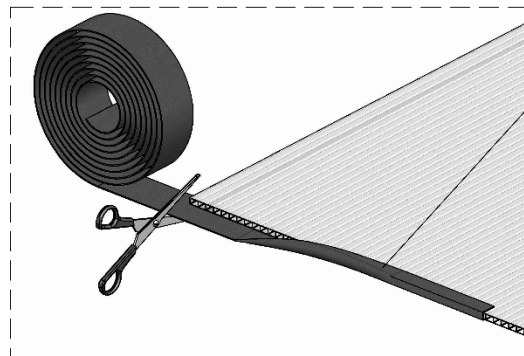
UV protected side (covered with white film) **facing outwards during installation**

UV

side without UV protection

Before installation, remove the film from both sides of the polycarbonate sheet

A



Protective Tape (PT)

- Protects PC against dust, dirt, insects.
- Allows condensation to escape.
- Prevents fungus formation.

Panel fastening details

PP1 	4PP2
UL6 	KR2
KR6 	KR3

Accessories

Valve 	Ridge cap with tip can be ordered additionally
------------------	--

Accessories

Magnet assembly (M) 	Protective Tape (PT)
Ridge cap (Z6) 	Pressure profile
Rubber profile 	Fastening fittings

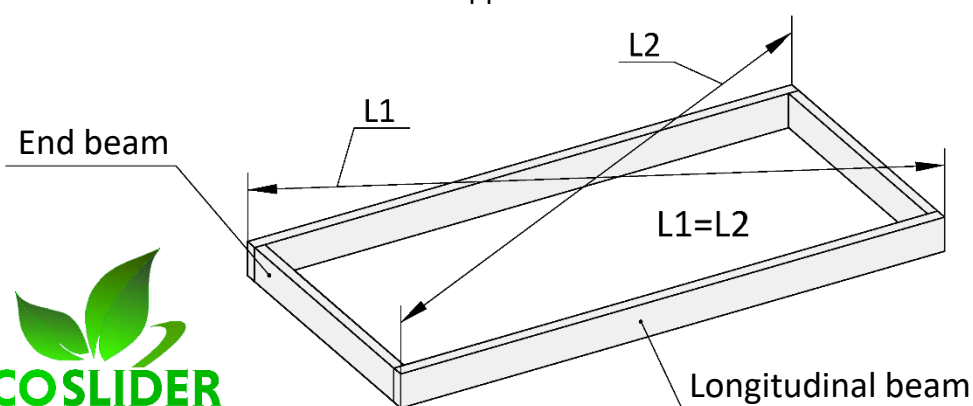
Fasteners

Screw 4,2x13 WURTH k.31314213 	Screw 4,2x19 DIN 7504 T 	Screw 4,2x25 DIN 968 	Screw 4,2x32 DIN 968
Washer 20x4.3x1.25 DIN 522 	Washer 25x6.5x1.25 DIN 522 	Washer 15x5.3x1.2 DIN 522 	Washer plastic 22x8.4x2 DIN 9021
Bolt M6x16 DIN 912 	Butterfly nut M6 DIN 315 	Screw M4x12 DIN 7046 	

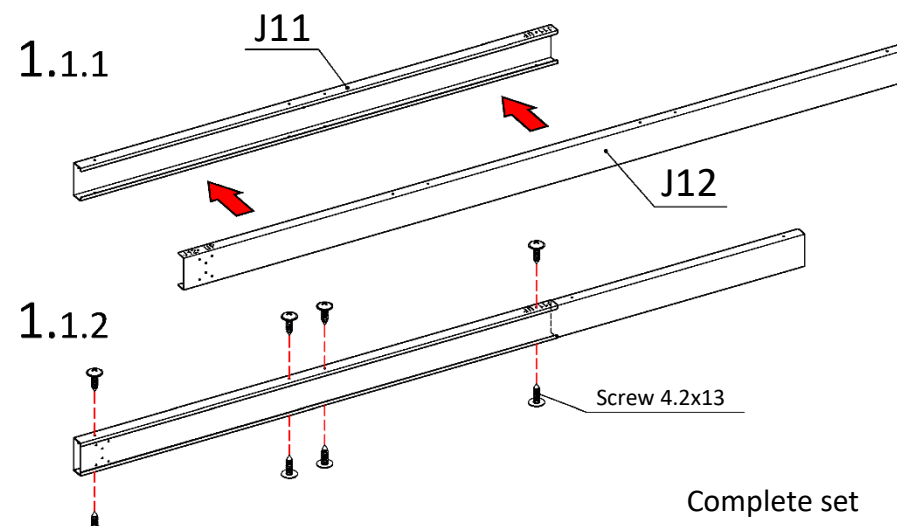
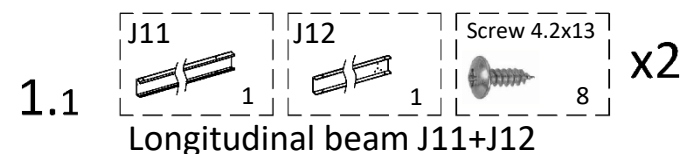
Assembly order:

1. Find a flat surface to assemble the support frame and begin assembly.
2. Assemble the longitudinal and end parts of the support frame according to the specifications outlined in paragraphs 1.1, 1.2, 1.3, and 1.4.
3. Lay out the longitudinal and end parts of the support frame as shown in Figure A on page 12. Note the "UP" marking indicating the top of the beam (Fig. C).
4. Check the equality of the diagonals L1 and L2 of your support frame. L1 = L2 (Figure E).
5. Use a level to verify the horizontal alignment of the support frame. The deviation from the horizontal position should not exceed 2-3 mm over a 3 m length. This ensures proper installation of polycarbonate panels.
6. Connect the longitudinal parts of the support frame using self-tapping screws, as illustrated in Figure A.
7. Secure the longitudinal and end parts of the support frame using corner brackets (55x70) at four locations.
8. Install 40x90 brackets on the outer sides of the support frame. For secure fastening, insert the reinforcement into the hole in the 40x90 bracket and drive it into the ground at a 45-degree angle. The approximate locations of the brackets are shown in Figure A. If the installation is on a solid foundation (e.g., concrete), secure the 40x90 bracket on the inside using appropriate fasteners.
9. It is recommended to attach the support frame after the greenhouse is completely assembled.

E
Support frame

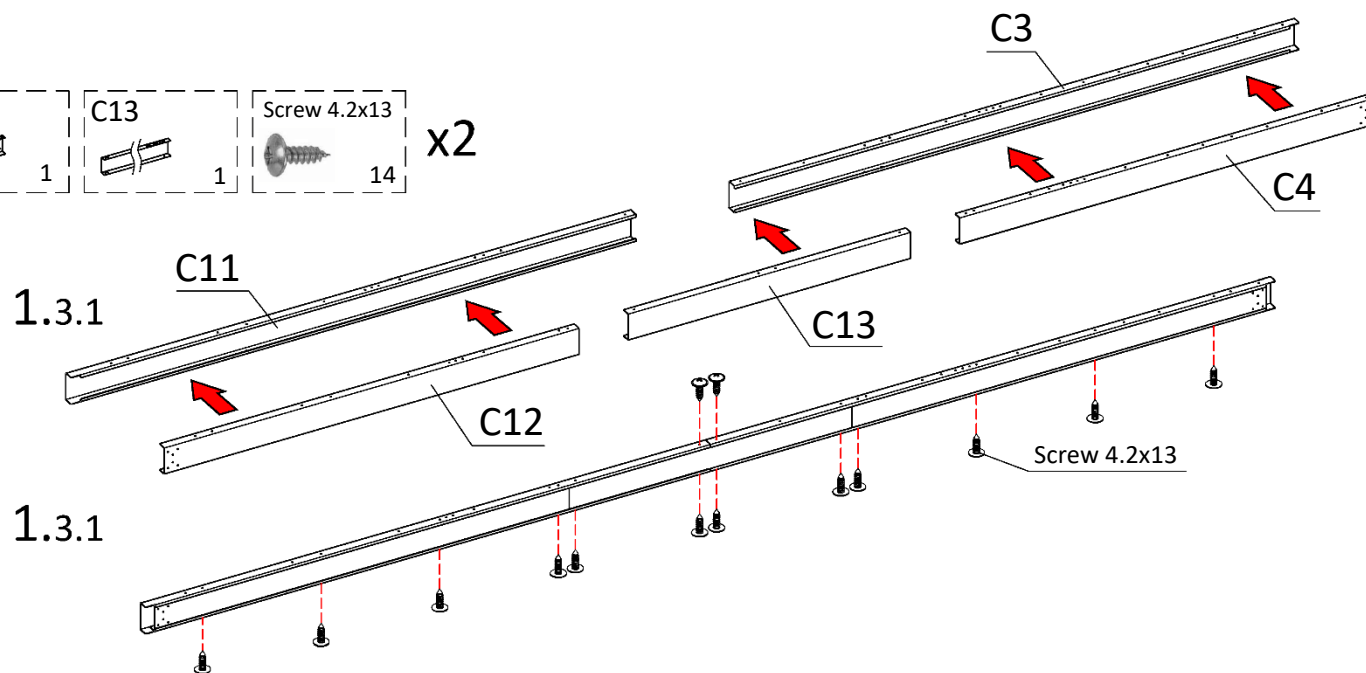
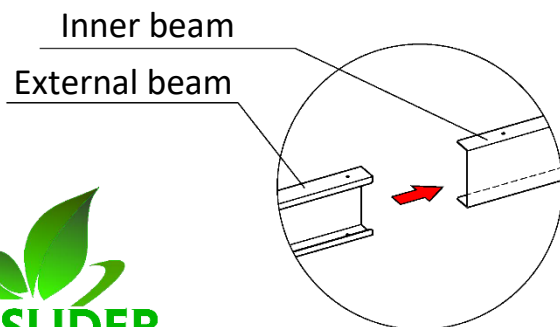
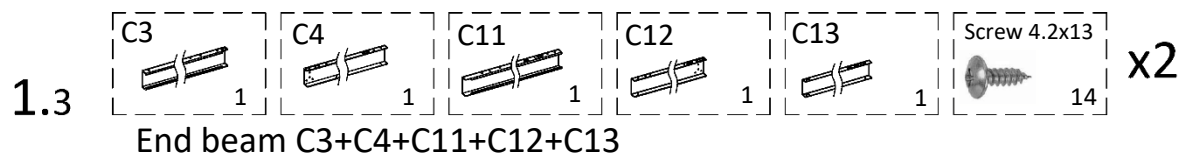
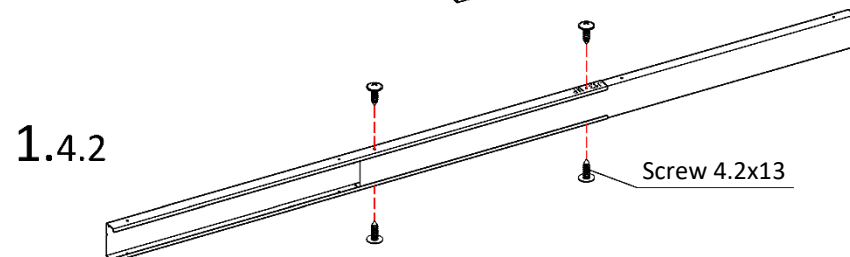
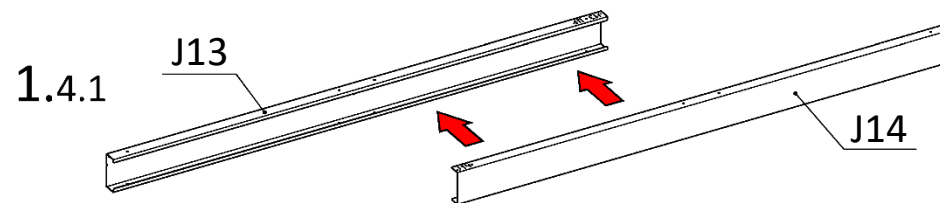
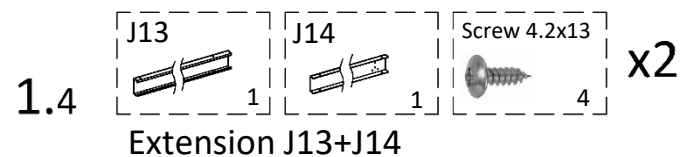
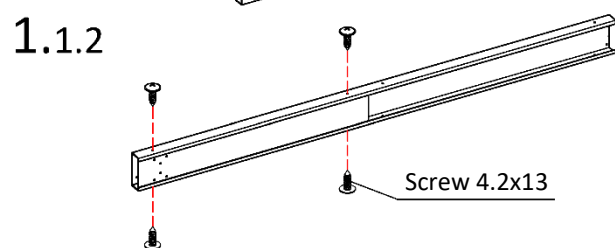
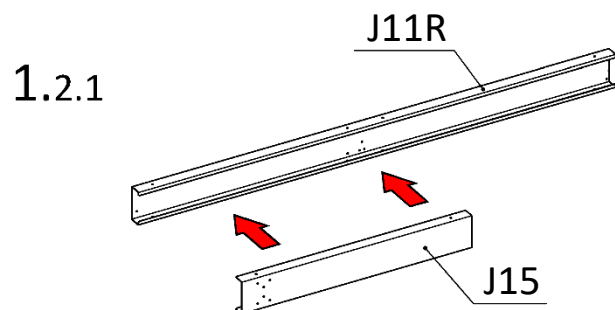
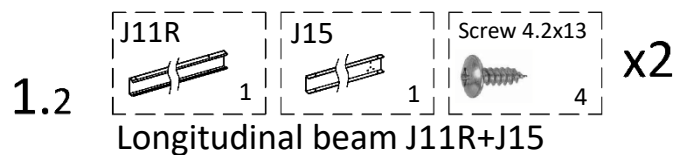


1. Support frame assembly



Complete set

Support frame			EHL 4.0 DD / 13' 1.48" greenhouse length range, m/ft							
			2.7	4.1	5.5	6.9	8.3	...	2.7+(1.4*N)	
			8' 10.3"	13' 5.42"	18' 0.54"	22' 7.65"	27' 2.77"		8' 10.3"+(4' 7.12"*N)	
			(BASE) Number of extensions in the greenhouse							
			0	1	2	3	4	...	N	
Name	Qty (BASE)	Col. in 1 extend	Quantity, pcs.							
C3	2	0	2	2	2	2	2		2	
C4	2	0	2	2	2	2	2		2	
C11	2	0	2	2	2	2	2		2	
C12	2	0	2	2	2	2	2		2	
C13	2	0	2	2	2	2	2		2	
J11	2	0	2	2	2	2	2		2	
J11R	2	0	2	2	2	2	2		2	
J12	2	0	2	2	2	2	2		2	
J13	0	2	0	2	4	6	8		2N	
J14	0	2	0	2	4	6	8		2N	
J15	2	0	2	2	2	2	2		2	
Bracket L_55x70	4	0	4	4	4	4	4		4	
Bracket L_40x90	8	2	8	10	12	14	16		8+2N	
Fastening fittings	8	2	8	10	12	14	16		8+2N	
Screw 4.2x13 WURTH	108	16	108	124	140	156	172		108+16N	
Screw 4.2x19 DIN 7504	64	16	64	80	96	112	128		64+16N	



L_55x70



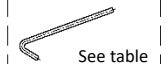
4

L_40x90



See table

Fastening fittings



See table

Screw 4.2x19



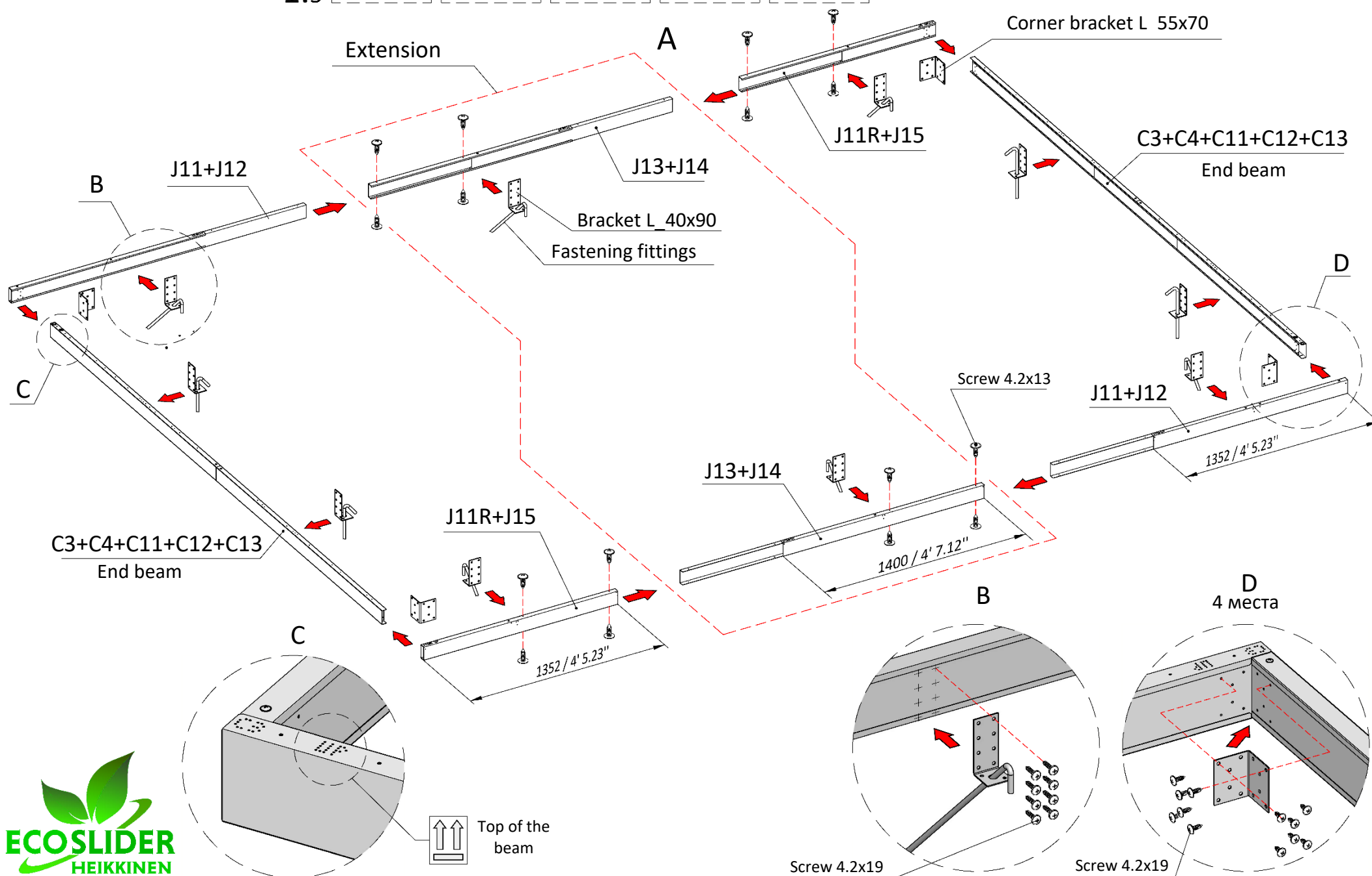
See table

Screw 4.2x19

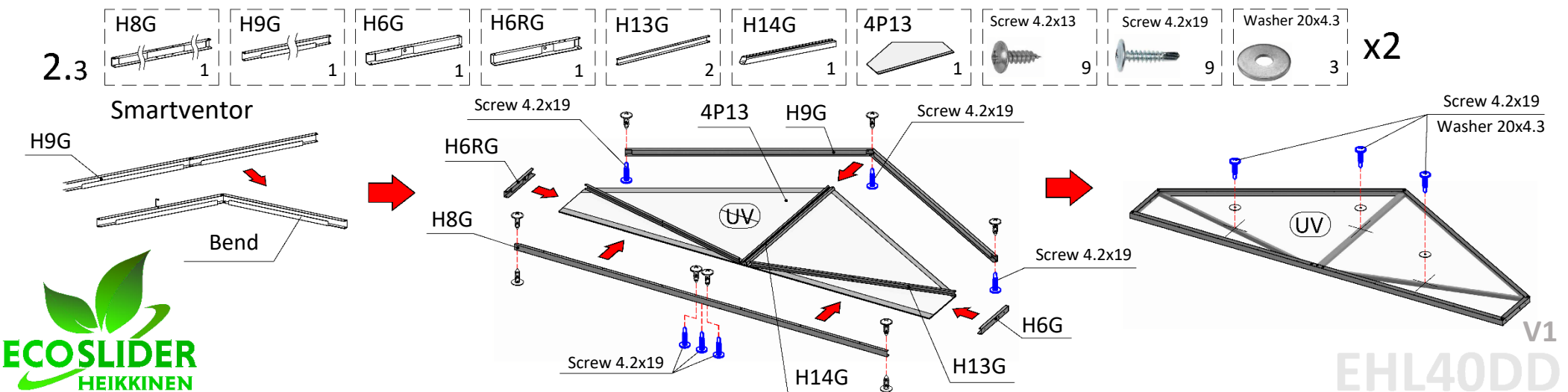
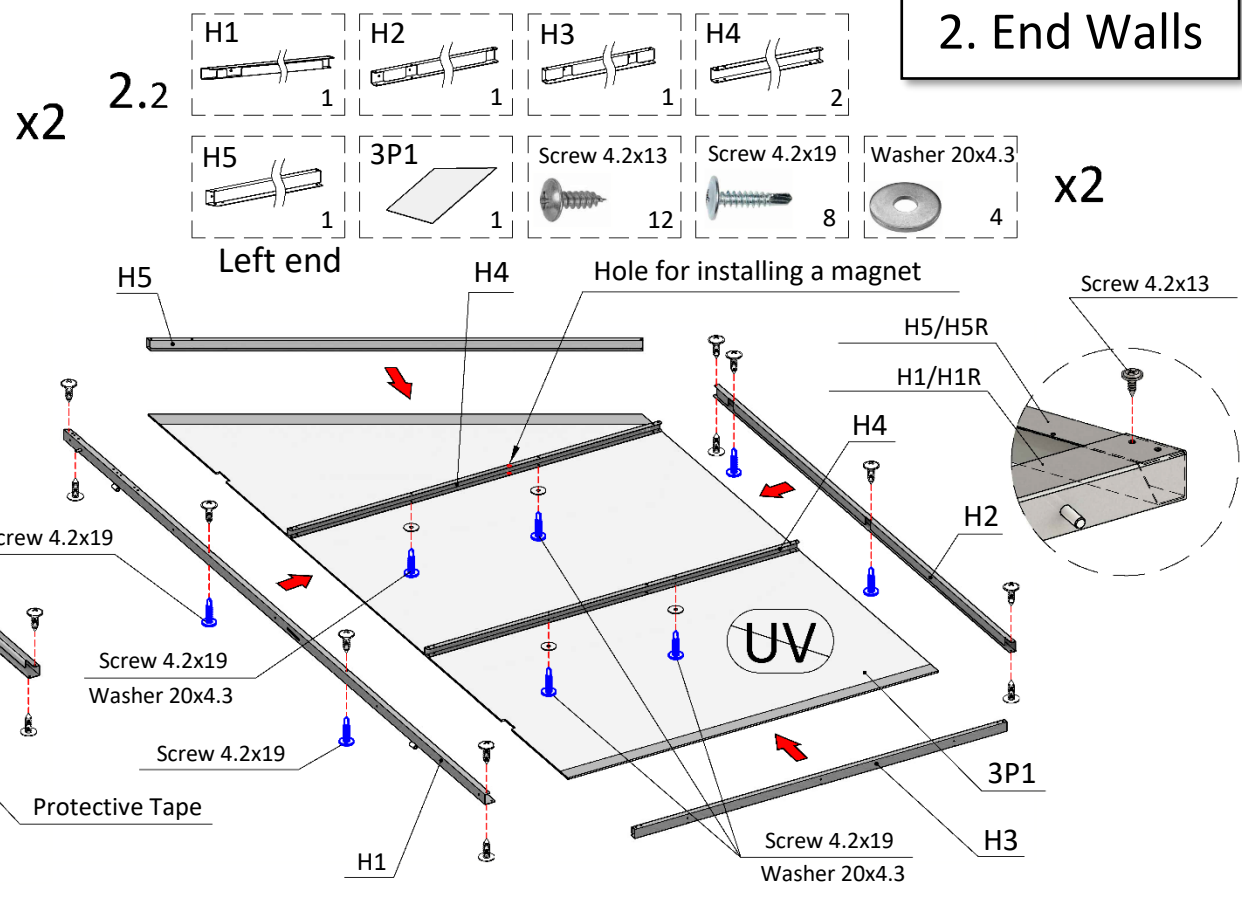
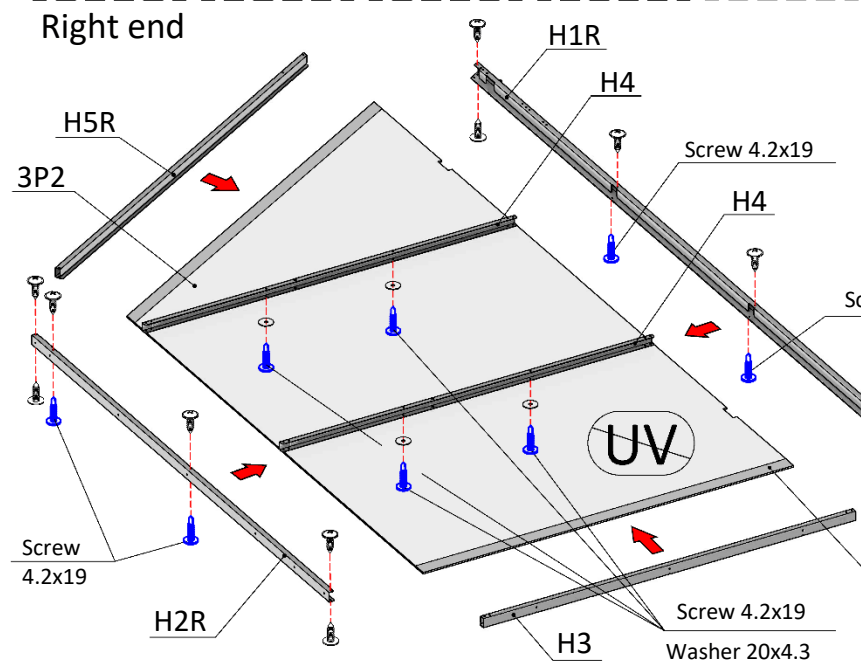


See table

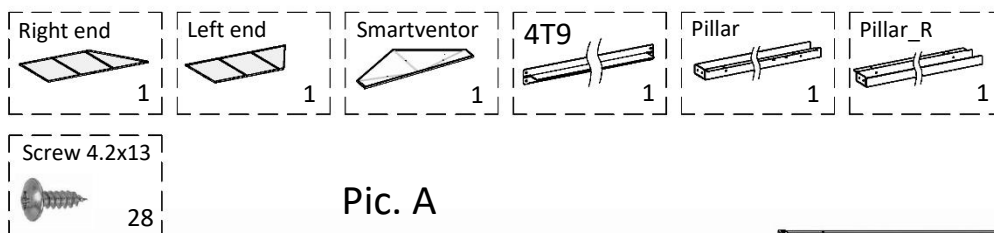
1. Support frame assembly



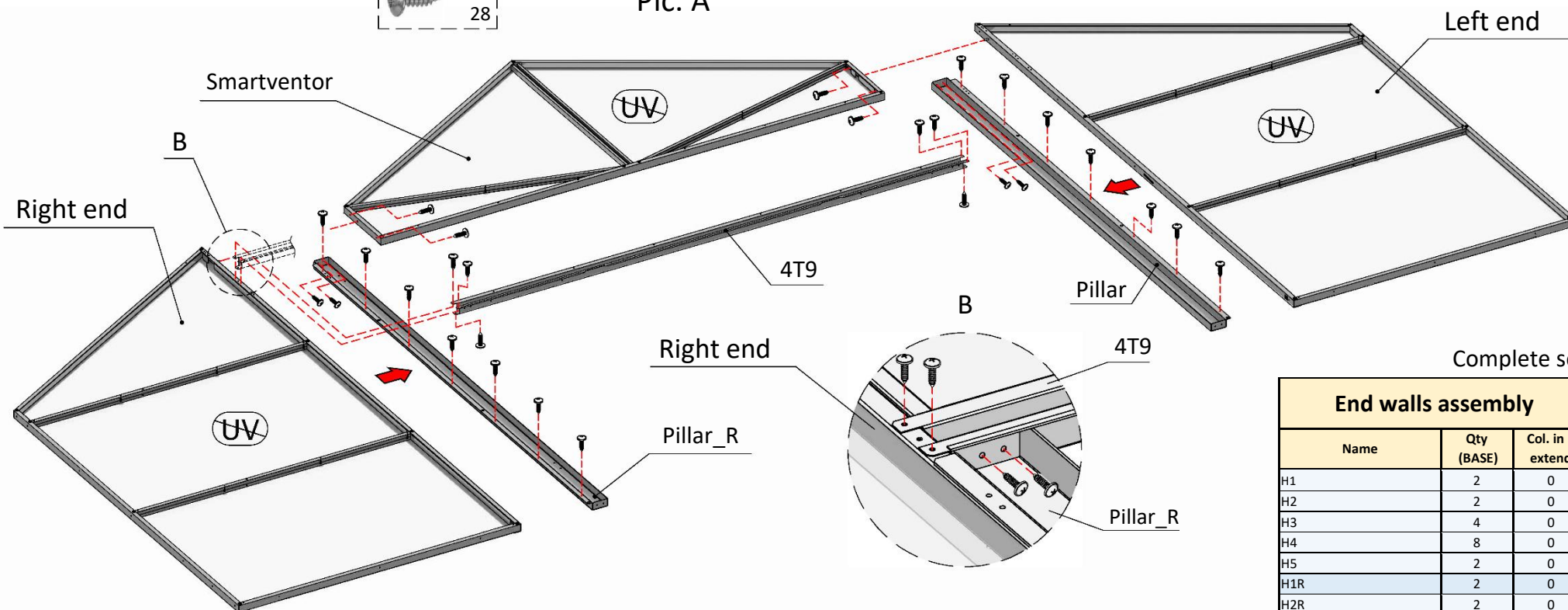
- 2.1
- | | | | |
|-----|-----|----|----|
| H1R | H2R | H3 | H4 |
| 1 | 1 | 1 | 2 |
- x2
- | | | | | |
|-----|-----|--------------|--------------|---------------|
| H5R | 3P2 | Screw 4.2x13 | Screw 4.2x19 | Washer 20x4.3 |
| 1 | 1 | 12 | 8 | 4 |



2.6



Pic. A



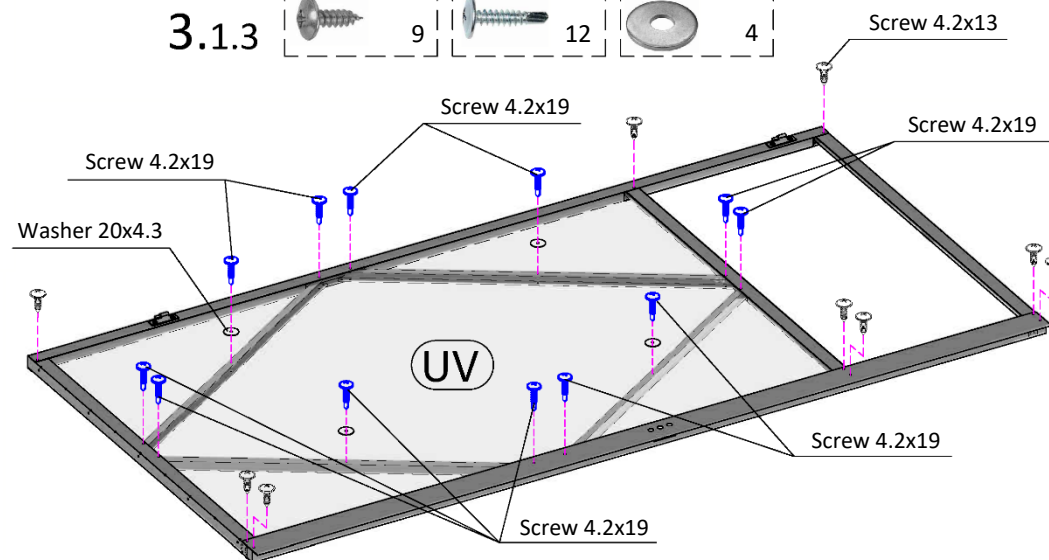
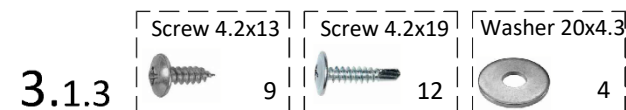
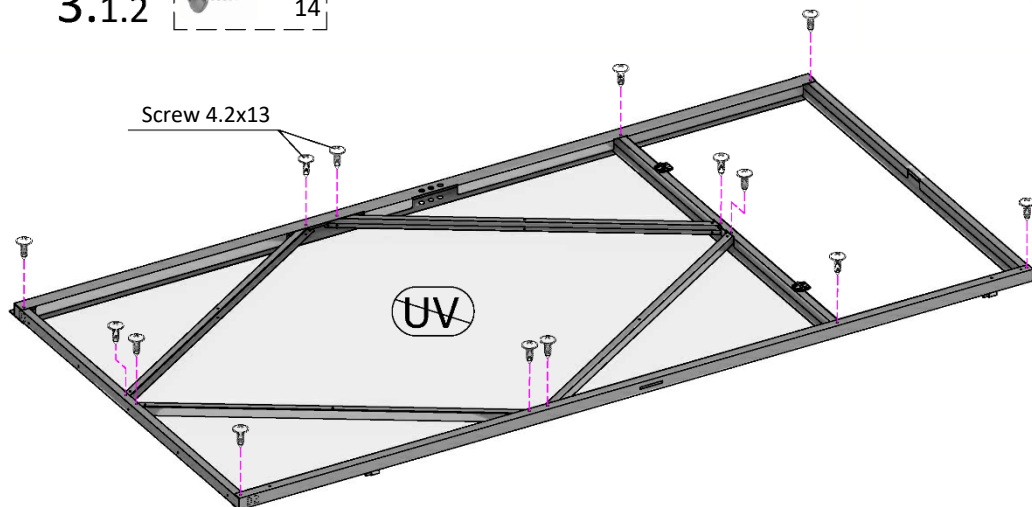
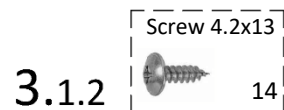
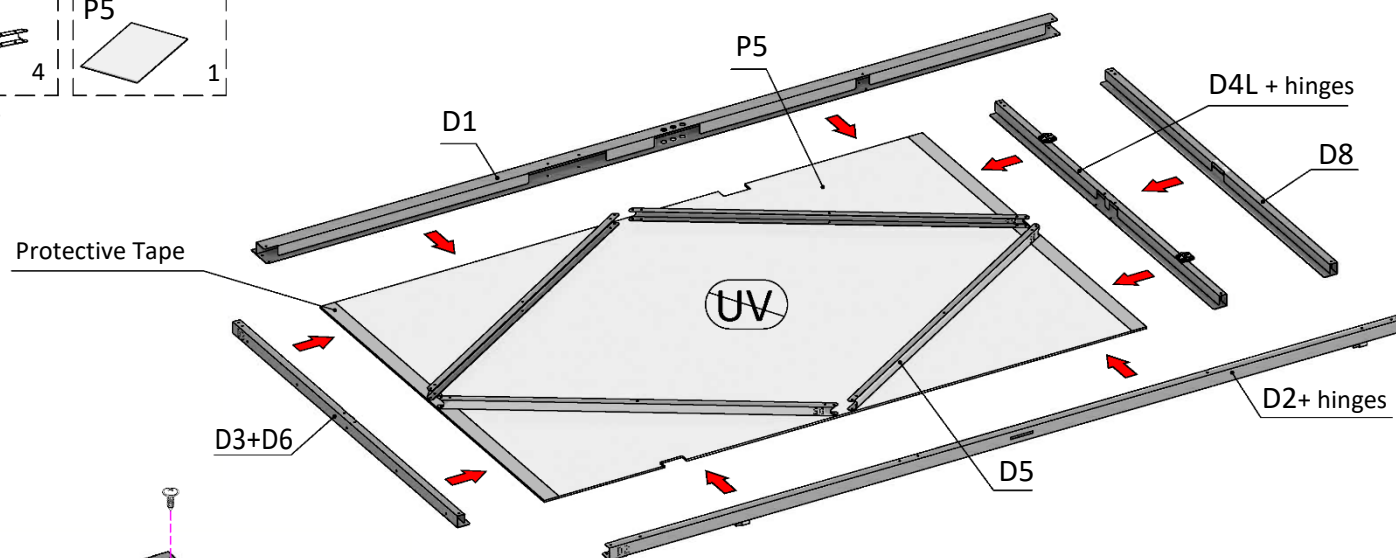
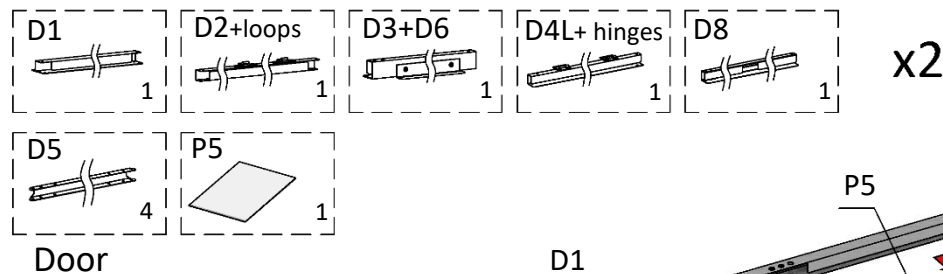
Complete set

End walls assembly

Name	Qty (BASE)	Col. in 1 extend
H1	2	0
H2	2	0
H3	4	0
H4	8	0
H5	2	0
H1R	2	0
H2R	2	0
H5R	2	0
4H6G	2	0
4H6RG	2	0
H8G	2	0
H9G	2	0
4H13G	4	0
4H14G	2	0
4T9	2	0
Pillar with hinges	2	0
Pillar_R with hinges	2	0
Panel 3P1 (1050x2060)	2	0
Panel 3P2 (1050x2060)	2	0
Panel 4P13 (1878x776)	2	0
Screw 4.2x13 WURTH	122	0
Screw 4.2x19 DIN 7504	50	0
Washer 20x4.3x1.25	22	0

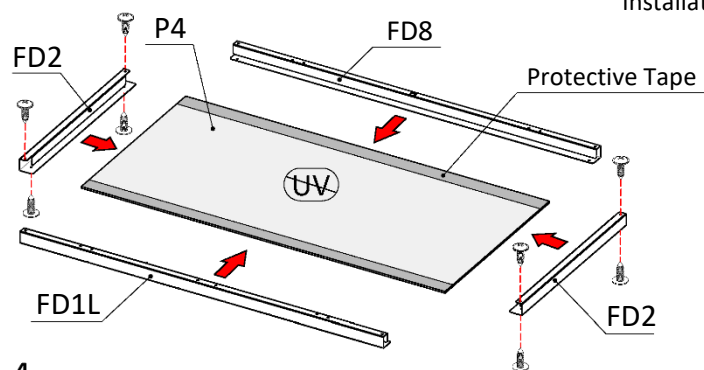
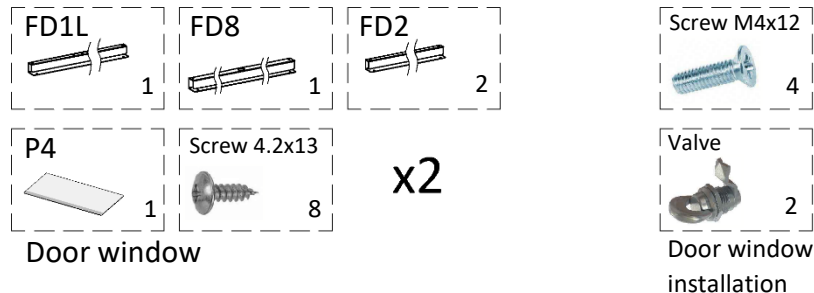
Assembly order:

1. Find a flat surface to assemble the ends on and begin assembling.
2. Assemble the right and left ends and the Smartventor according to paragraphs 2.1, 2.2, and 2.3. We recommend using a square to assemble the units.
3. **IMPORTANT!!!** Polycarbonate sheets should be installed with the **UV** protection side (covered with white film) facing out.
4. Then attach the stand to the left end «Pillar», and stand «Pillar_R» to the right end (see figure A).
5. Next, connect the assembled structures to the smartventor (pic. B). To do this, align the pins at the ends with the holes in the smartventor, install the 4T9 strip and fasten the structure with a screw.

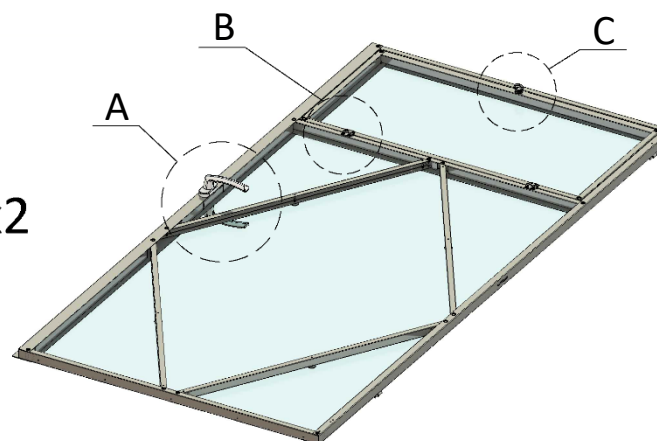


Assembly order:

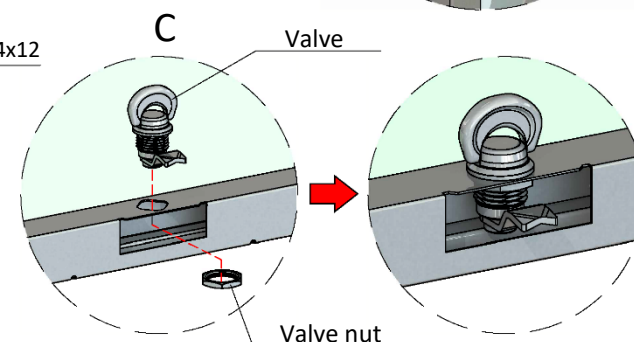
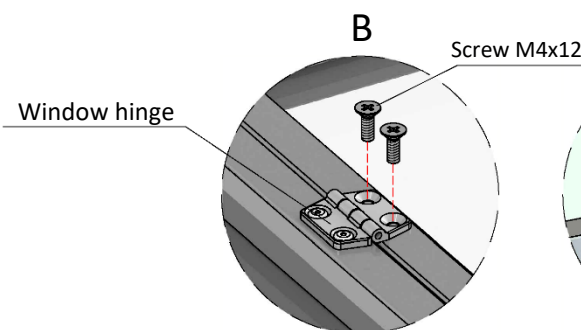
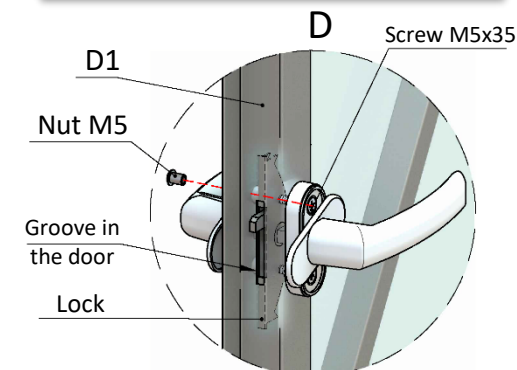
- Assemble the door according to paragraphs 3.1.1, 3.1.2, and 3.1.3. We recommend using a square to assemble the units.
- IMPORTANT!!!** Polycarbonate sheets should be installed with the **UV** protected side facing out.



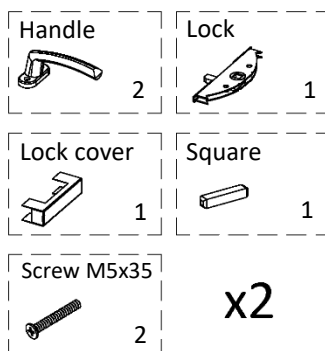
x2



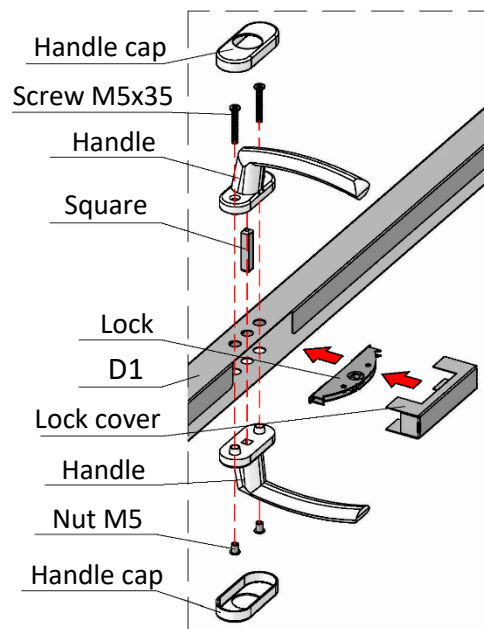
3. Door assembly



3.4



Handles and the lock installation

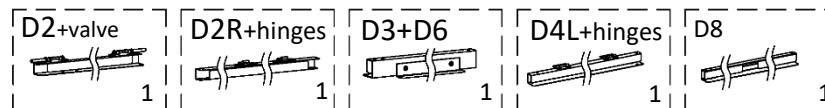


Assembly order (continued):

- Assemble the window according to paragraph 3.2. Install a valve on the door window (pic C). Connect the window to the door screw M4x12 according to Fig. B.
- The window should open freely without jamming.
- Install the door handle with lock as shown in Figure A.
- Before installing the handle, drill 3 holes $\varnothing 10$ mm in the polycarbonate panel P5, located in the door pillar D1, where the handles are installed.
- To simplify installation, it is recommended to assemble the lock mechanism in the closed position (lock latch extended).
- Open position - the handle is directed to the side, closed - the lock handle is directed downwards.
- The handle should turn freely, without jamming. If necessary, adjust the position of the lock latch relative to the groove in the door pillar. To do this, loosen the M5 nuts (Fig. D) and turn the M5x35 lock screws (there is a threaded hole in the Lock). The lock mechanism will shift. After adjustment, fix the M5 nuts.

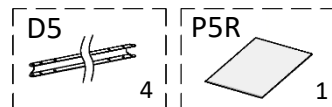
Complete set

Door assembly		
Name	Qty (BASE)	Col. in 1 extend
D1	2	0
D2 with hinges	2	0
D3	2	0
D4L with hinges	2	0
D5	8	0
D8	2	0
FD1L c PEM	2	0
FD2	4	0
FD8	2	0
P4 (820x405)	2	0
P5 (880x1365)	2	0
Handle	4	0
lock	2	0
Lock cover	2	0
Square	2	0
Lock screw M5x35	4	0
Valve	2	0
Screw 4.2x13 WURTH	62	0
Screw 4.2x19DIN 7504	24	0
Screw M4x12 DIN 7046	8	0
Washer 20x4.3 DIN 522	8	0

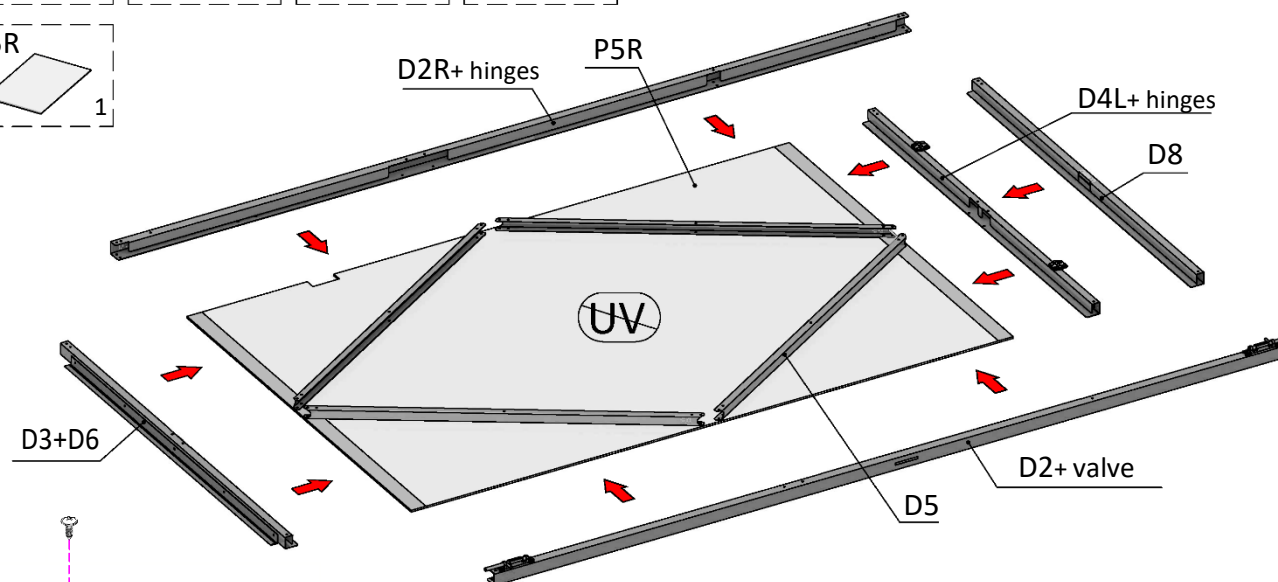


x2

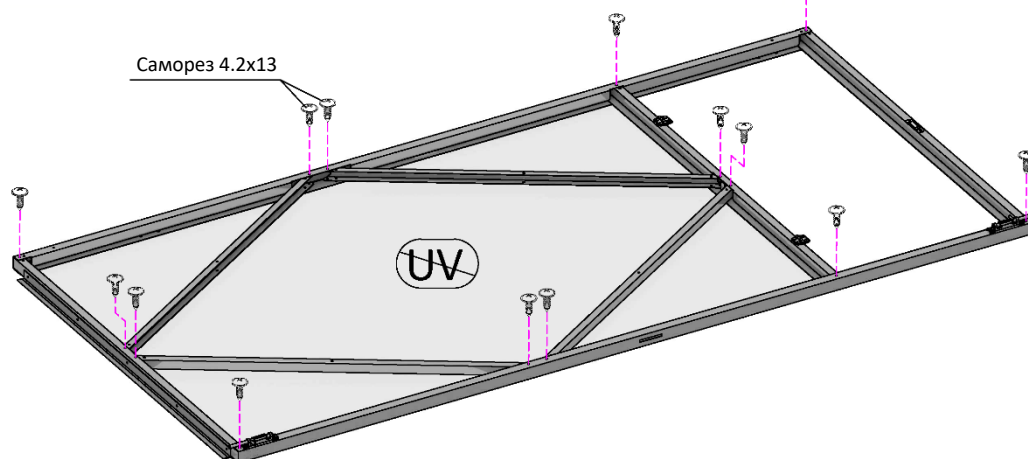
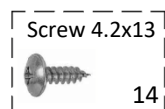
3. Door assembly



Дверь правая

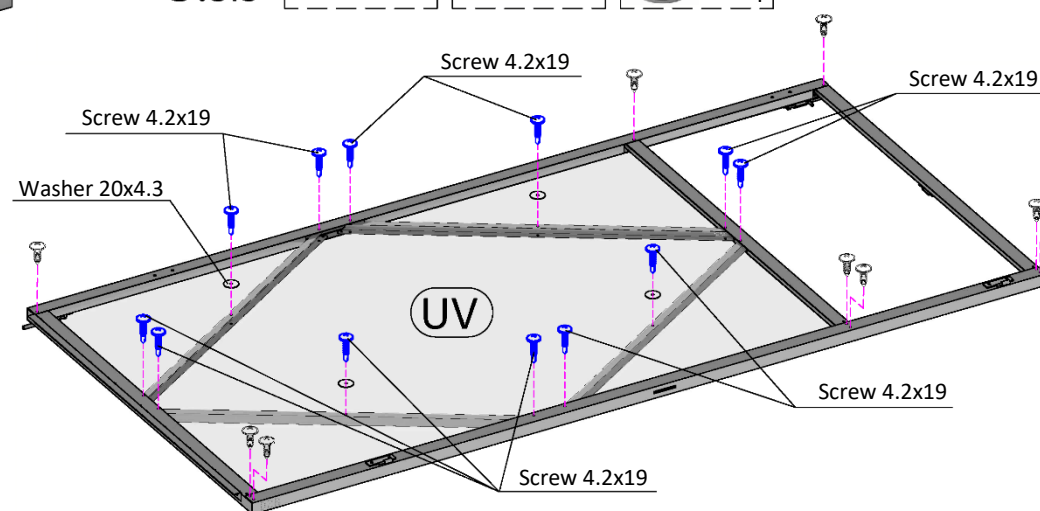


3.5.2



Саморез 4.2x13

3.5.3



Assembly order:

11. Assemble the door according to paragraphs 3.5.1, 3.5.2, and 3.5.3. We recommend using a square to assemble the units.

IMPORTANT!!! Polycarbonate sheets should be installed with the UV protected side facing out.

3. Door assembly

- 3.6.
- FD5L

1

FD7

1

FD2

2
- 4P12

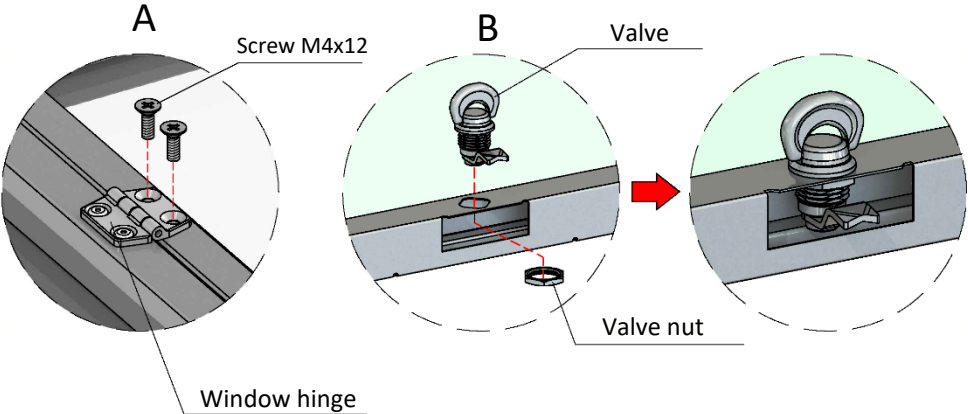
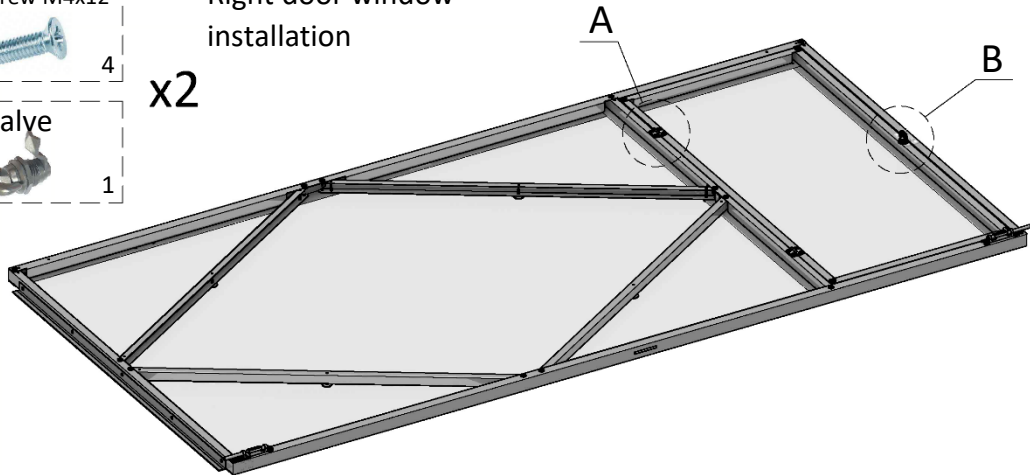
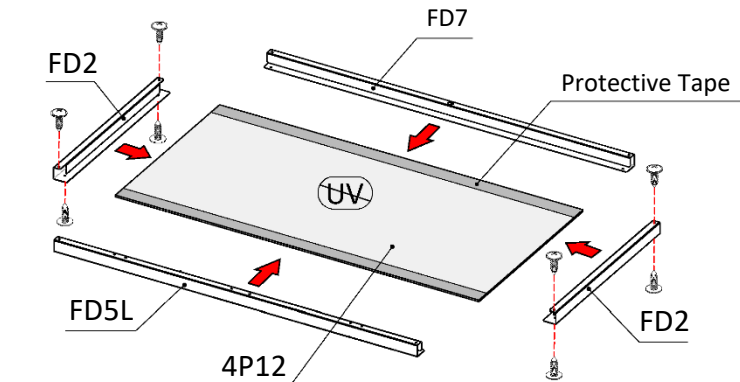
1
- Screw 4.2x13

8
- x2
- Right door window

- 3.7
- Screw M4x12

4
- Valve

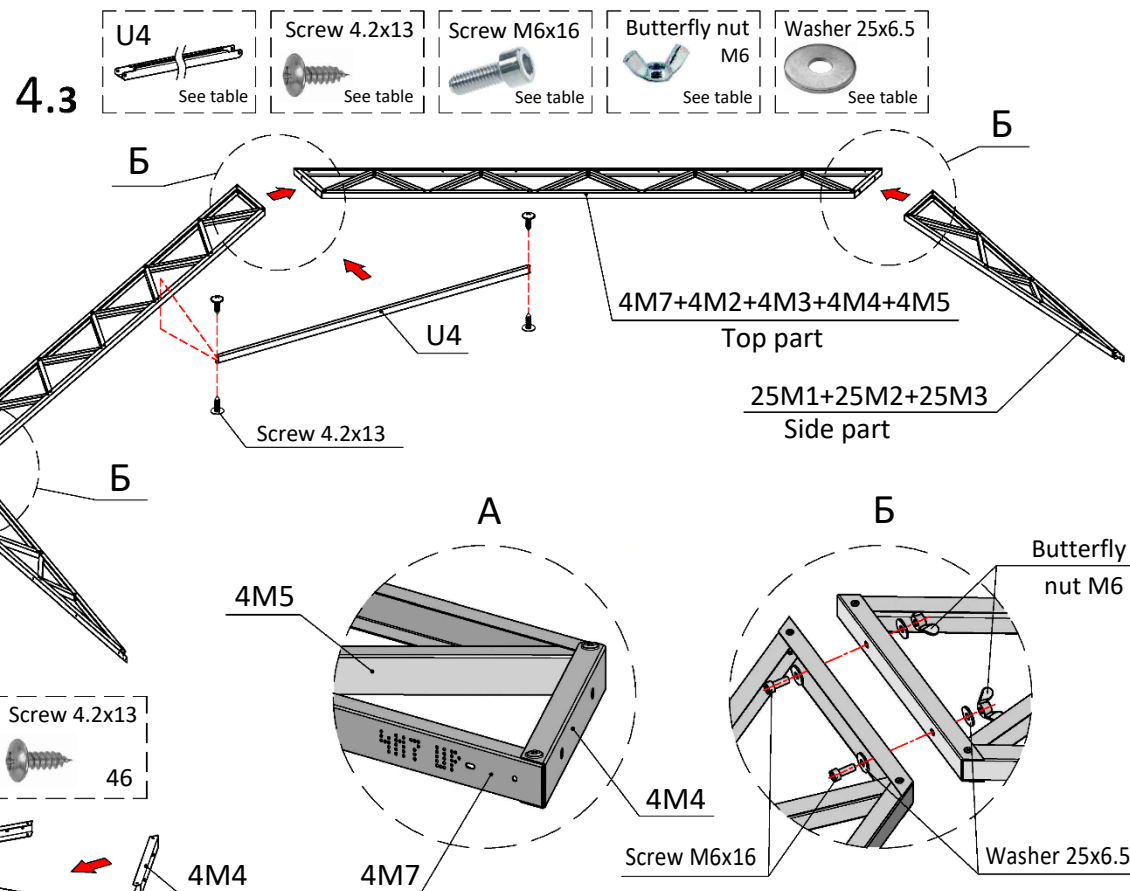
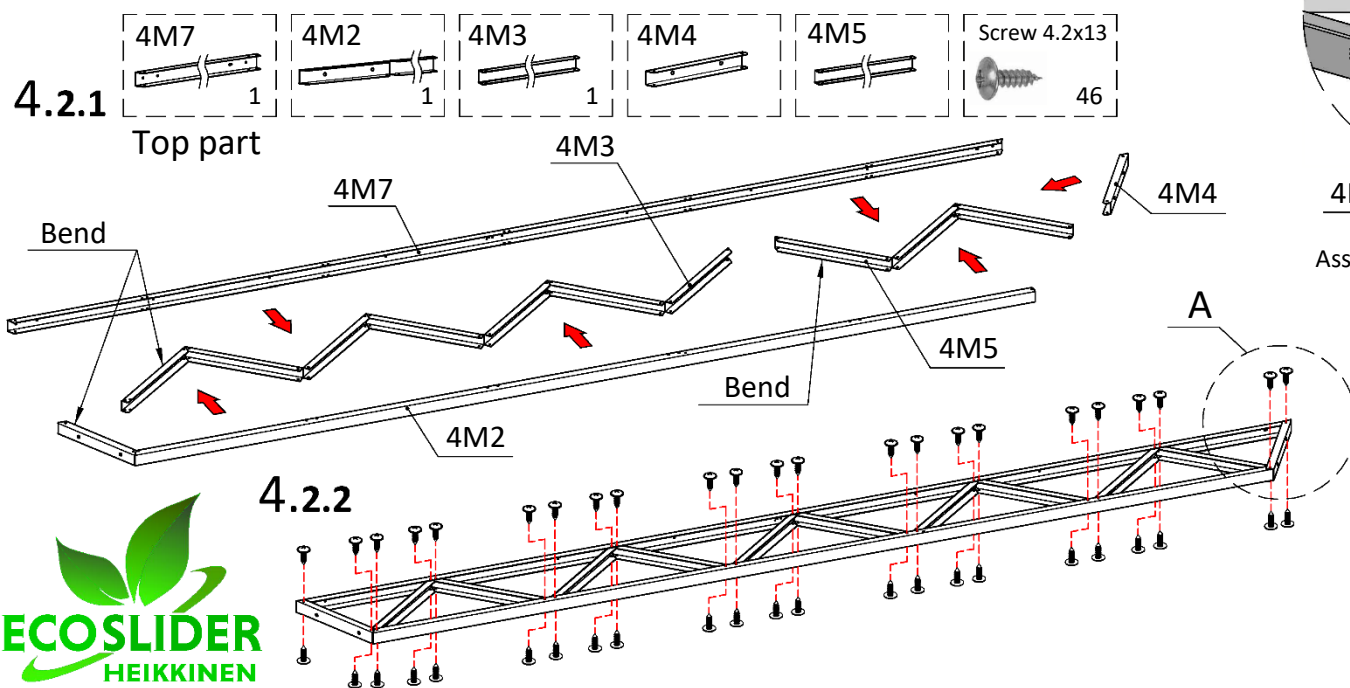
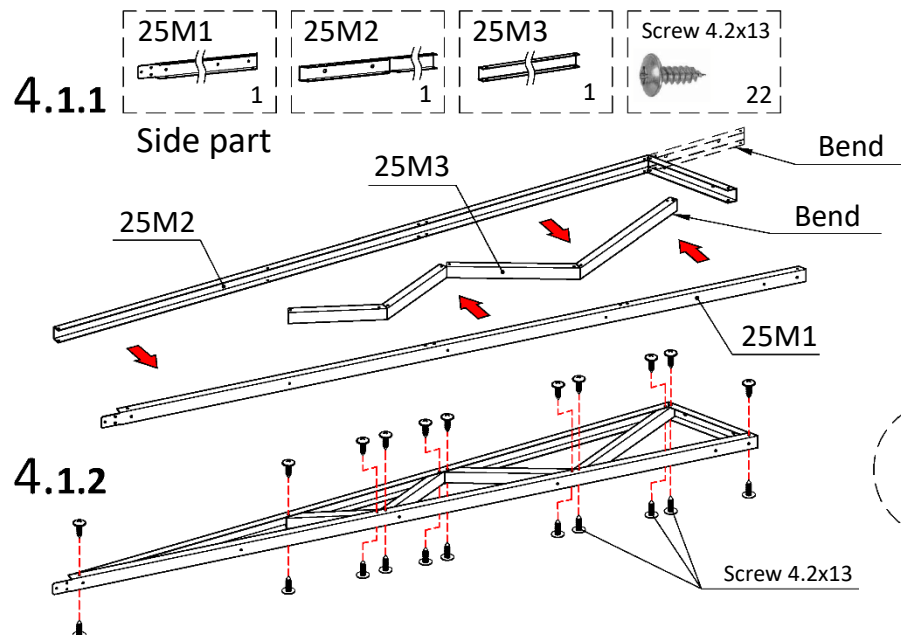
1
- x2
- Right door window installation



- Assembly order (continued):
10. Assemble the window according to paragraph 3.6. Position the window onto the door and secure it to the door with M4x12 screws according to Fig. A. The window should open freely without jamming.
11. Install a valve on the door window (pic B).

Complete set

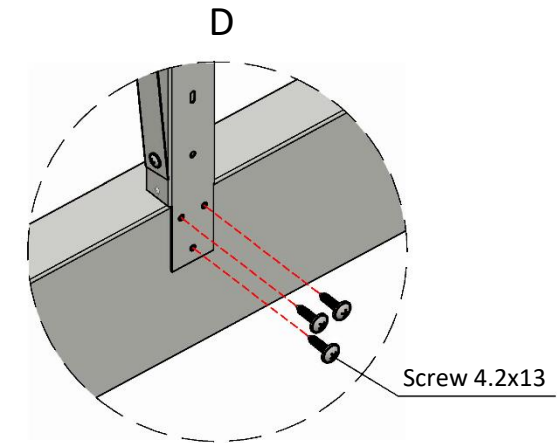
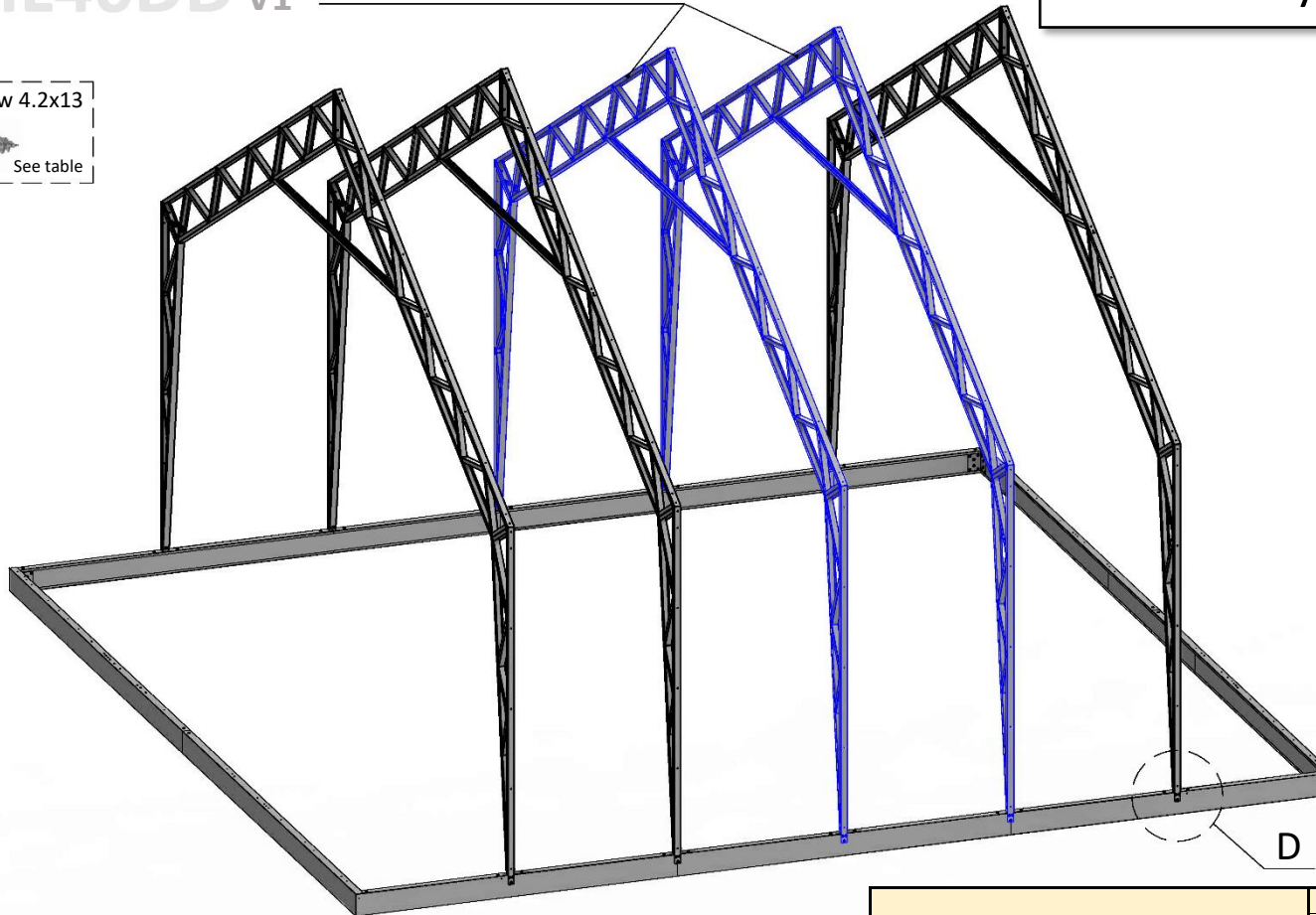
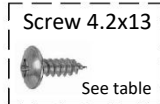
Door assembly (Right door)		
Name	Qty (BASE)	Col. 1 extend
D2 with valve	2	0
D2R with hinges	2	0
D3+D6	2	0
D4L with hinges	2	0
D5	8	0
D8	2	0
FD5L with PEM	2	0
FD2	4	0
FD7	2	0
Valve	2	0
4P12 (833x405)	2	0
P5 (880x1365)	2	0
Screw 4.2x13 WURTH	62	0
Screw 4.2x19DIN 7504	24	0
Screw M4x12 DIN 7046	8	0
Washer 20x4.3 DIN 522	8	0



Assembly order:

1. Assemble the upper and side parts of the truss according to paragraphs 4.1-4.3. **IMPORTANT:** Part 4M7 marked with sign «UP» and must be connected to part 4M4 at thin end (pic. A).
2. Lay out the top and sides on a horizontal surface of sufficient size.
3. Using M6x16 bolts, 25x6.5 washers and M6 self-locking nuts, assemble the top and side parts together as shown in Figure B. The top parts of the truss should be positioned so that sign «UP» is at the top of the greenhouse.
4. Place the U4 profile between the trusses, align the holes on the strip and the half-trusses, and secure the strip with self-tapping screws.

4.6

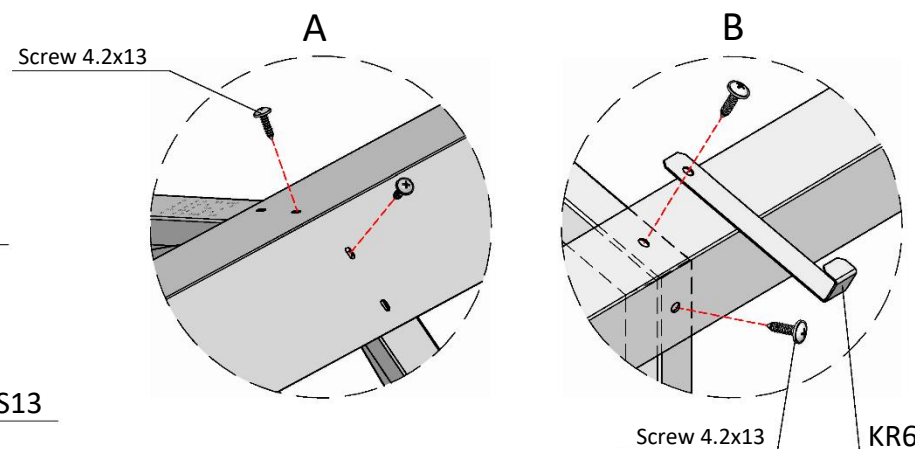
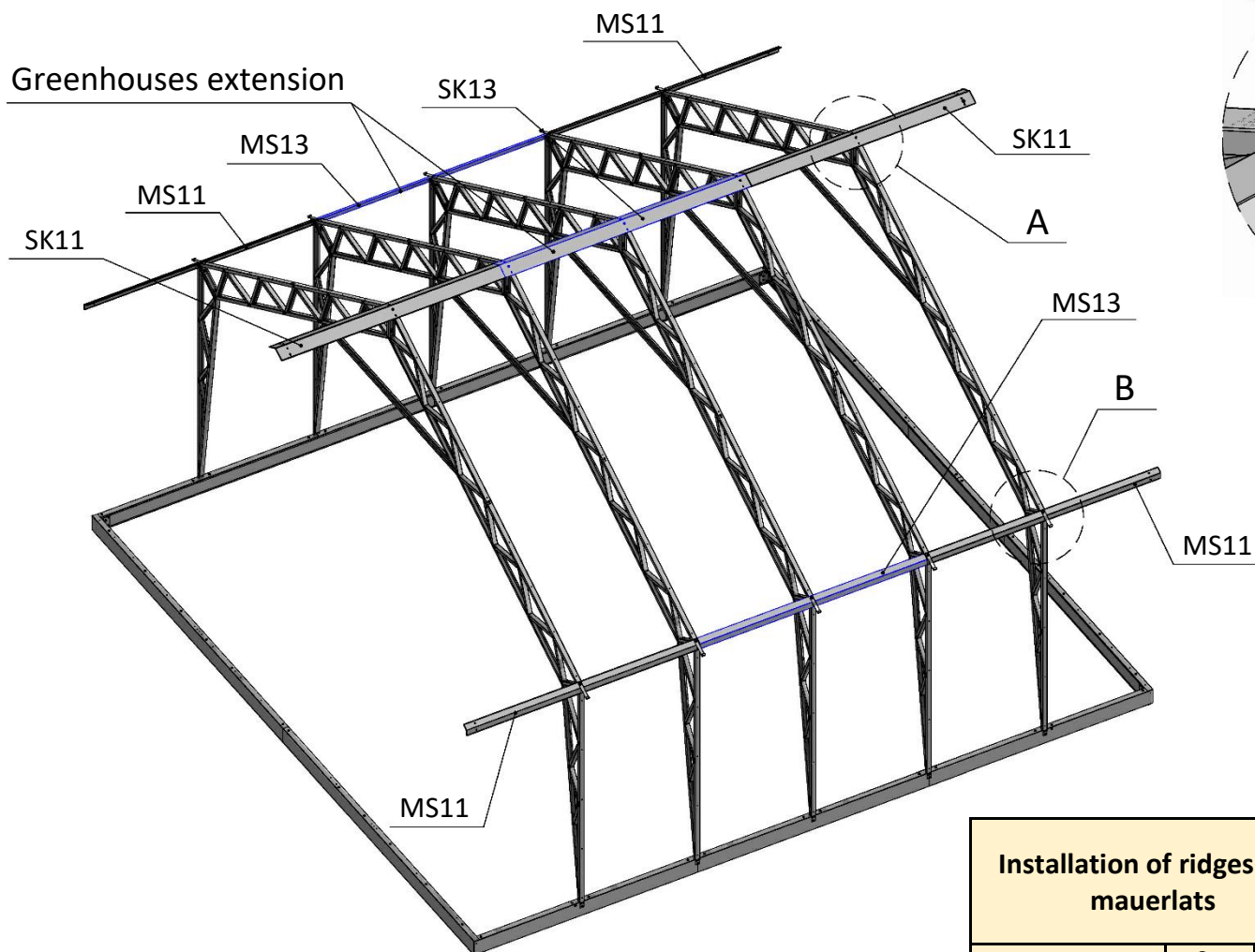
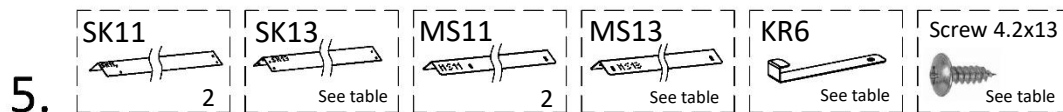


Assembly order (continued):

6. Install the trusses onto the support frame. Align the holes in the truss with those in the frame, and secure the trusses to the frame using screws 4.2x13 (Figure D).

Complete set

Assembly and installation of trusses			EHL 4.0 DD / 13' 1.48" greenhouse length range, m/ft						
			2.7	4.1	5.5	6.9	8.3	...	2.7+(1.4*N)
			8' 10.3"	13' 5.42"	18' 0.54"	22' 7.65"	27' 2.77"		8' 10.3" + (4' 7.12" * N)
			(BASE)	Number of extensions in the greenhouse					
Name	Qty (BASE)	Col. 1 extend	0	1	2	3	4	...	N
25M1	6	4	6	10	14	18	22		6+4N
25M2	6	4	6	10	14	18	22		6+4N
25M3	6	4	6	10	14	18	22		6+4N
4M7	6	4	6	10	14	18	22		6+4N
4M2	6	4	6	10	14	18	22		6+4N
4M3	6	4	6	10	14	18	22		6+4N
4M4	6	4	6	10	14	18	22		6+4N
4M5	6	4	6	10	14	18	22		6+4N
U4	3	2	3	5	7	9	11		3+2N
Screw 4.2x13 WURTH	438	292	438	730	1022	1314	1606		438+229N
Bolt M6x16 DIN 912	18	12	18	30	42	54	66		18+12N
Nut M6 DIN 315	18	12	18	30	42	54	66		18+12N
Washer 25x8.5 DIN 522	36	24	36	60	84	108	132		36+24N

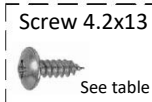
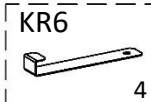
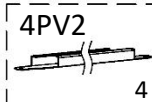
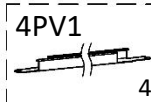
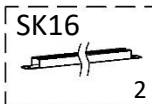
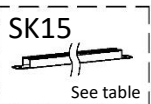
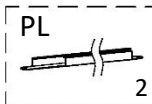


Assembly Order:

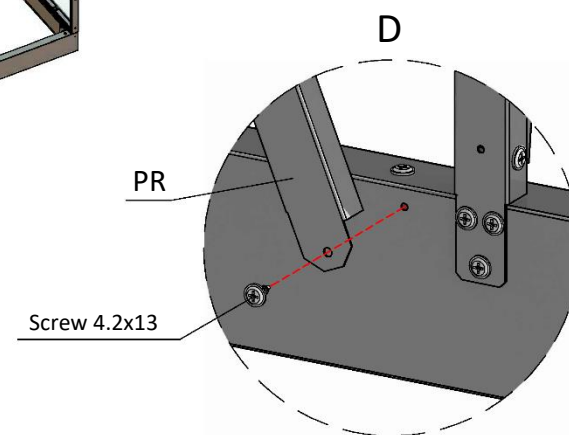
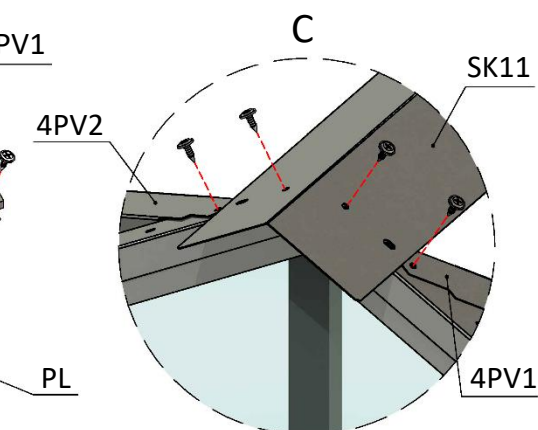
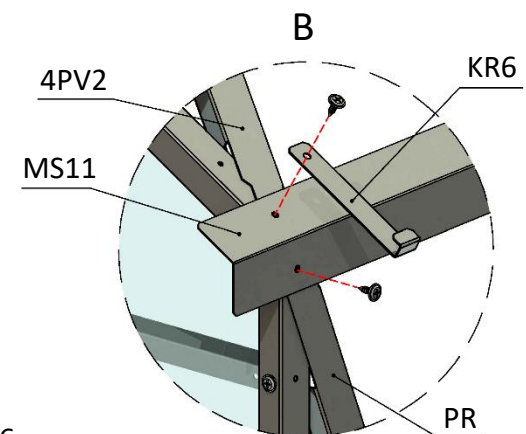
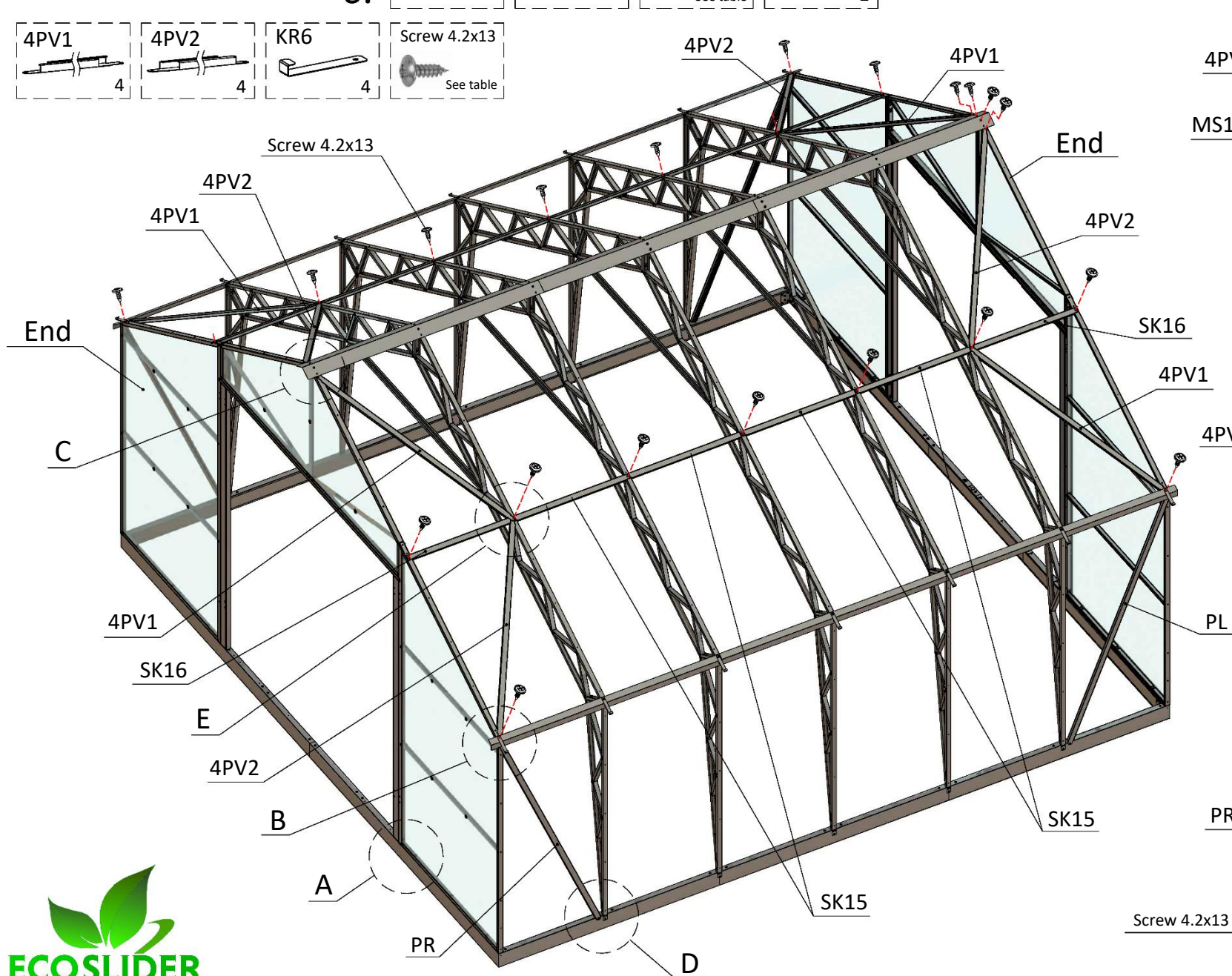
1. Install the ridges and mauerlats (parts SK11, SK13, MS11, and MS13). Align the grooves in the trusses with those in the ridge profiles SK11, SK13, and the mauerlats MS11, MS13. Ensure that the trusses are positioned vertically (at 90° relative to the support frame).
2. Install the KR6 bracket on the mauerlat (Fig. B). Note: Final fixation should be completed after installing the polycarbonate side panels.

Complete set

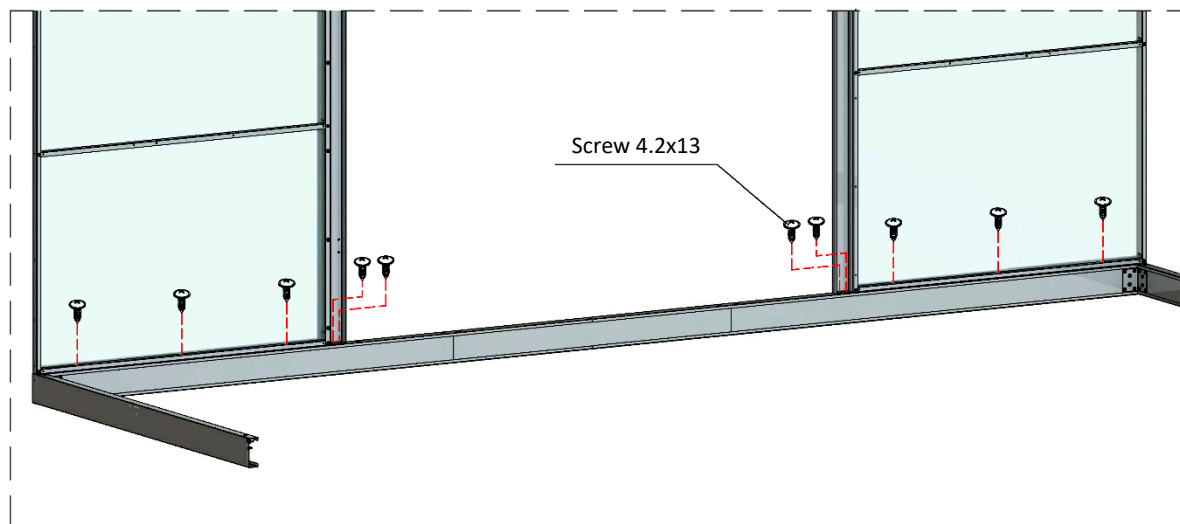
Installation of ridges and mauerlats			EHL 4.0 DD / 13' 1.48" greenhouse length range, m/ft						
			2.7	4.1	5.5	6.9	8.3	...	2.7+(1.4*N)
			8' 10.3"	13' 5.42"	18' 0.54"	22' 7.65"	27' 2.77"		8' 10.3"+(4' 7.12"*N)
			(BASE)	Number of extensions in the greenhouse					
			0	1	2	3	4	...	N
Name	Qty (BASE)	Col. in 1 extend	Quantity, pcs.						
MS11	4	0	4	4	4	4	4		4
MS13	0	2	0	2	4	6	8		2N
SK11	2	0	2	2	2	2	2		2
SK13	0	1	0	1	2	3	4		N
KR6	6	4	6	10	14	18	22		6+4N
Screw 4.2x13 WURTH	18	12	18	30	42	54	66		18+12N



6. Installation end walls and reinforcement



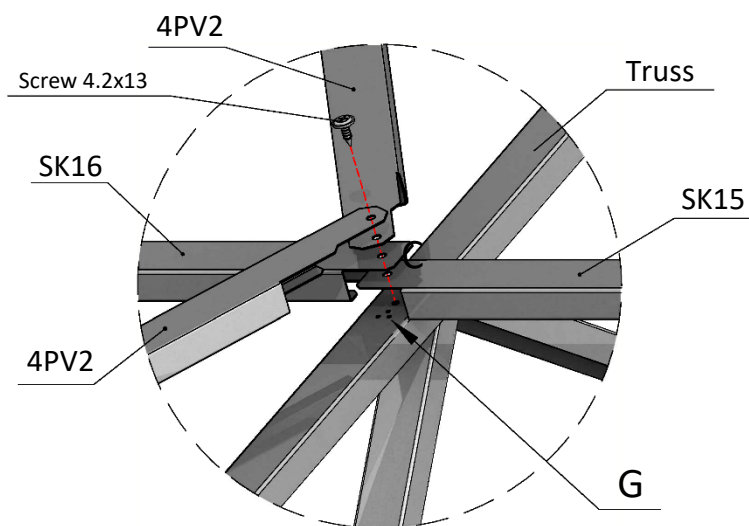
A



Assembly order:

1. Place the end walls on the support frame, aligning them with the frame's edge and ensuring alignment of the holes in the ends and the frame. Hold the end wall in a vertical position and secure it with screws, as shown in Fig. A.
2. Align the grooves in the SK11 skates with the holes in the ends and secure the skates with screws (pic. C, p.24).
3. Install the PL and PR braces onto the support frame. Align the holes in the MS11 Mauerlat, the braces, and the holes in the ends, then secure the braces (Pic. B, p.24). Next, attach the braces to the support frame (Pic. D, p.24).
4. Tie the trusses and ends together using reinforcement SK15 and SK16. The hole on the trusses intended for installing reinforcement is indicated by three points G, as shown in figure E.
5. Set reinforcement 4PV1 and 4PV2. For the correct placement, see pictures on pages 24 и 25.
6. Install the KR6 brackets on the mauerlat and secure them with self-tapping screws (Pic. B, p.24). Do not delay; final fixation must be done after installation of the side panels.

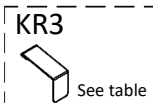
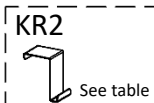
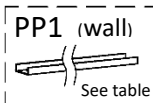
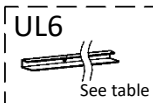
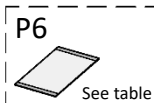
E



Complete set

Installation end walls and reinforcement			EHL 4.0 DD / 13' 1.48" greenhouse length range, m/ft						
			2.7	4.1	5.5	6.9	8.3	...	2.7+(1.4*N)
			8' 10.3"	13' 5.42"	18' 0.54"	22' 7.65"	27' 2.77"	...	8' 10.3"+(4' 7.12"*N)
			(BASE)	Number of extensions in the greenhouse					
			0	1	2	3	4	...	N
Name	Qty (BASE)	Col. in 1 extend	Quantity, pcs.						
PL	2	0	2	2	2	2	2		2
PR	2	0	2	2	2	2	2		2
SK15	4	4	4	8	12	16	20		4+4N
SK16	4	0	4	4	4	4	4		4
4PV1	4	0	4	4	4	4	4		4
4PV2	4	0	4	4	4	4	4		4
KR6	4	0	4	4	4	4	4		4
Screw 4.2x13 WURTH	30	4	30	34	38	42	46		30+4N

7.



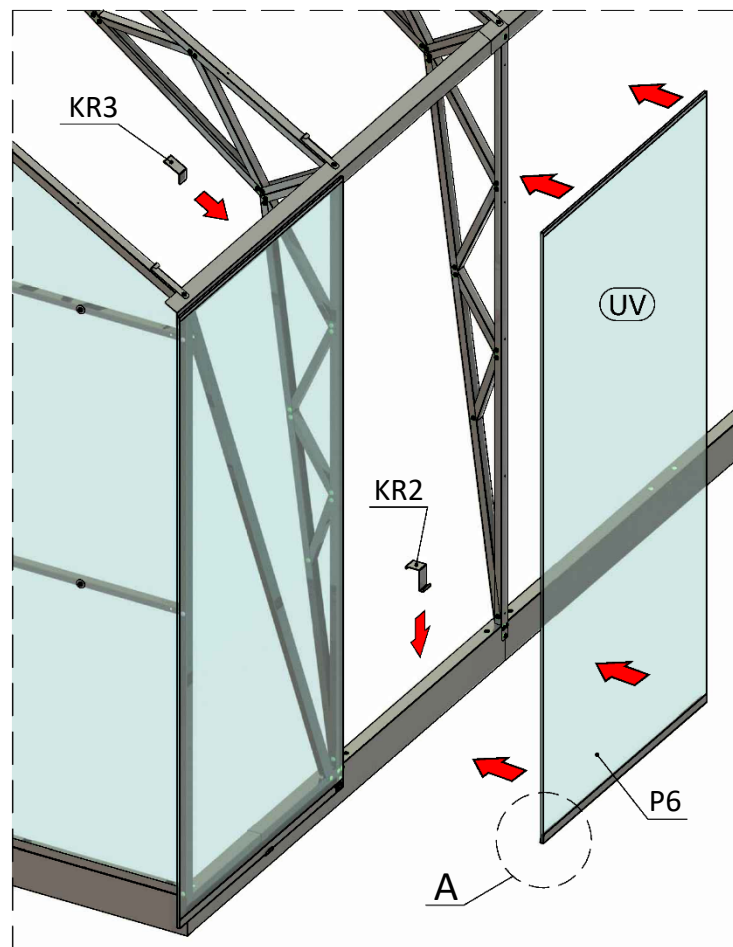
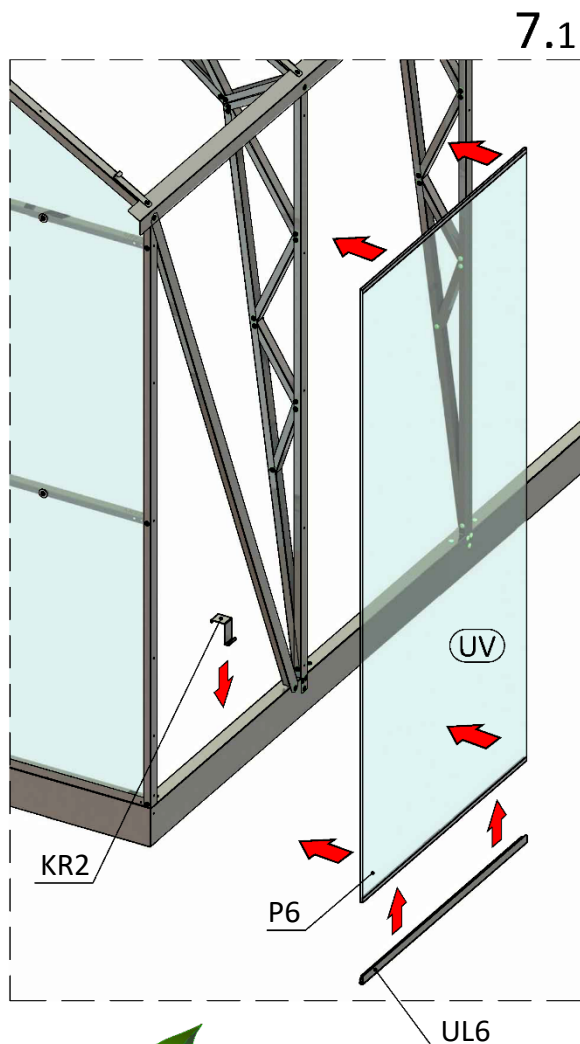
Screw 4.2x32



See table

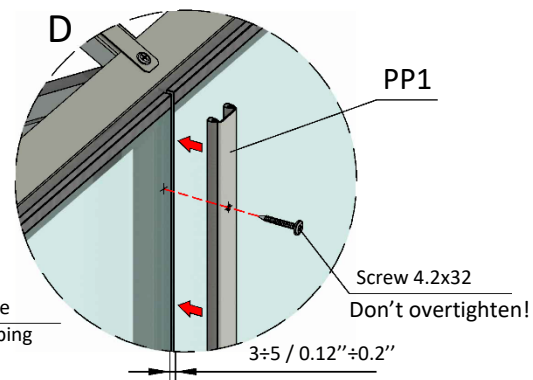
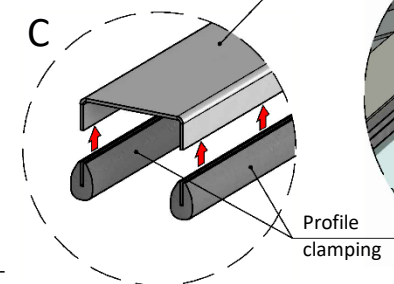
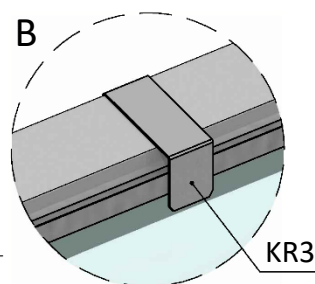
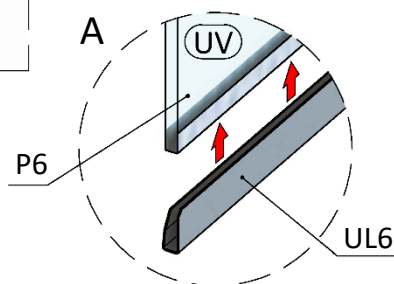
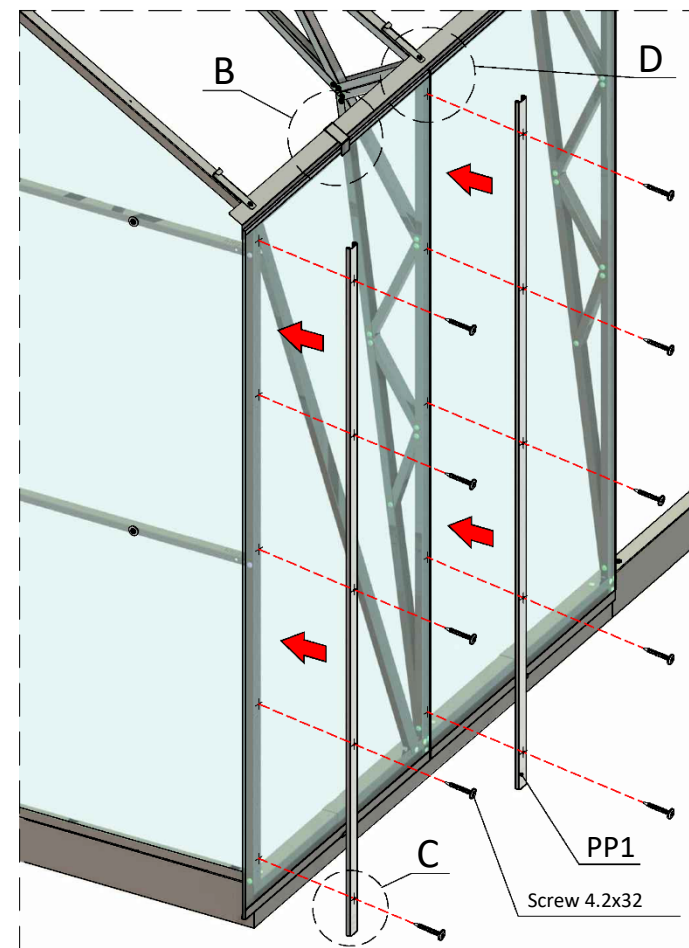
For assembly procedure see page 28

7.2



7. Installation of panels

7.3



7.

4P7
See table

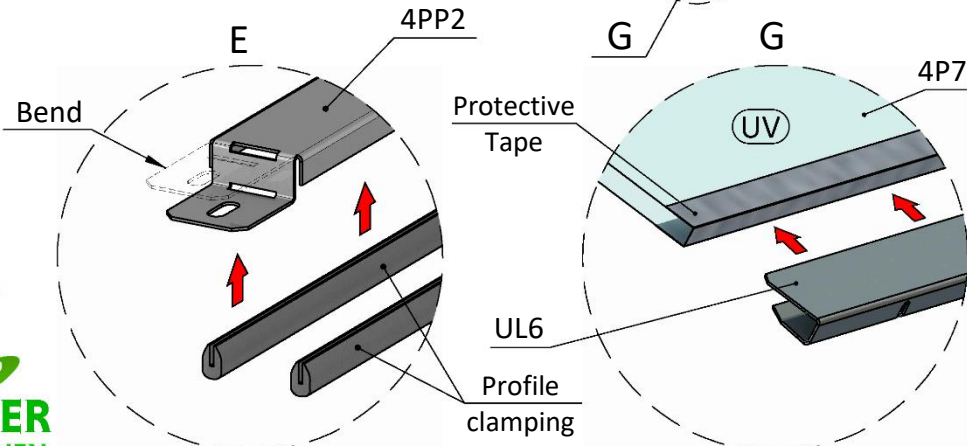
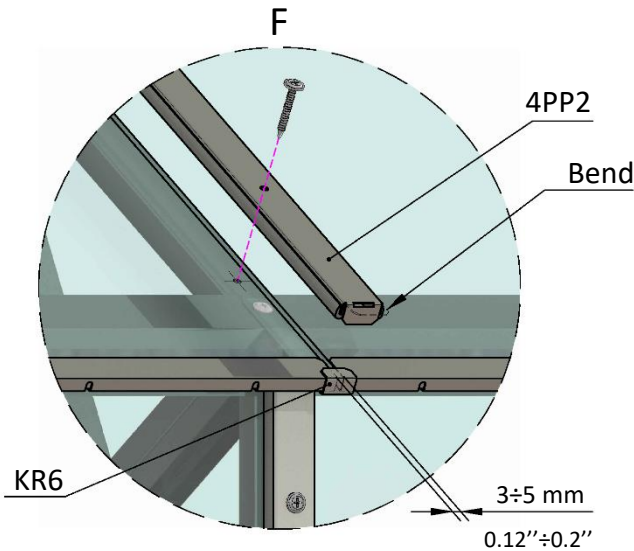
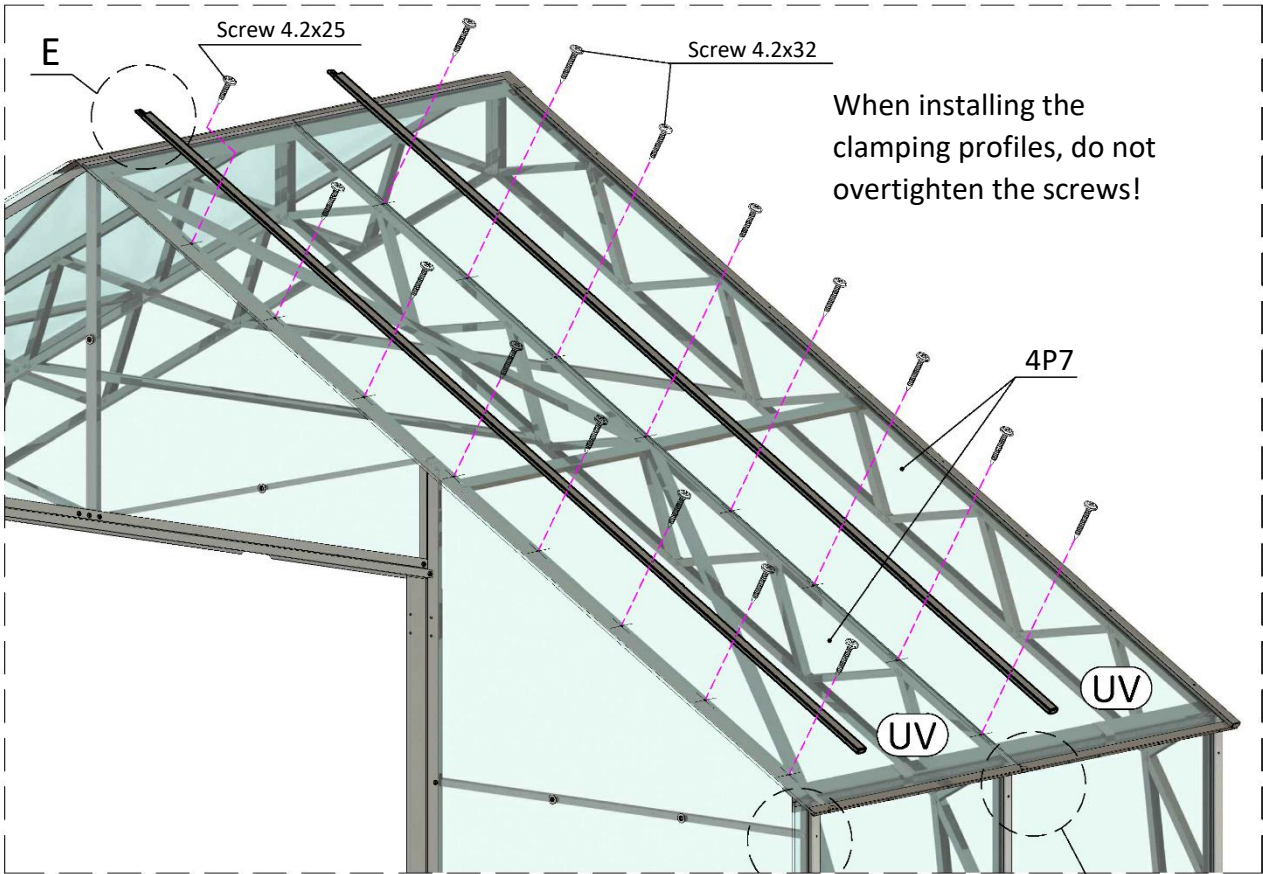
4PP2 (roof)
See table

Screw 4.2x25
4

Screw 4.2x32
See table

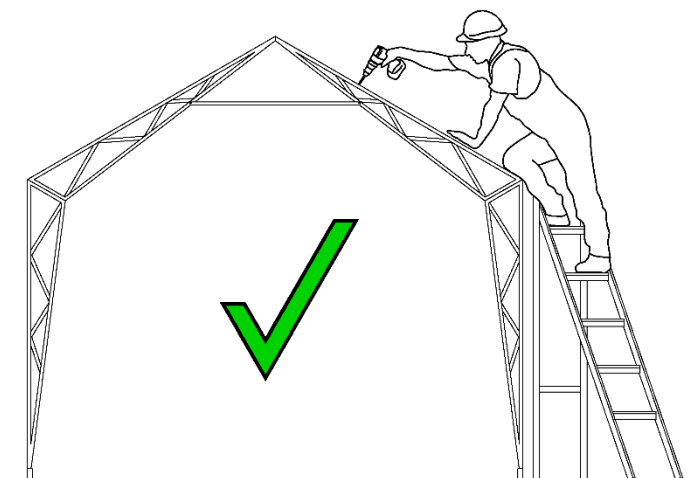
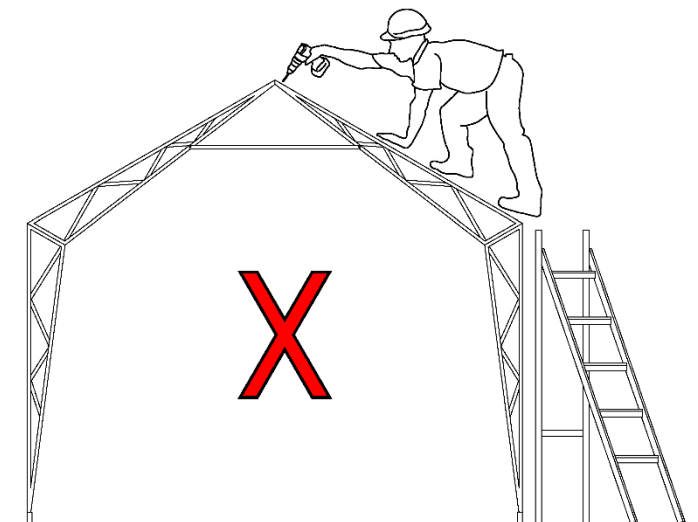
7.4

7. Installation of panels



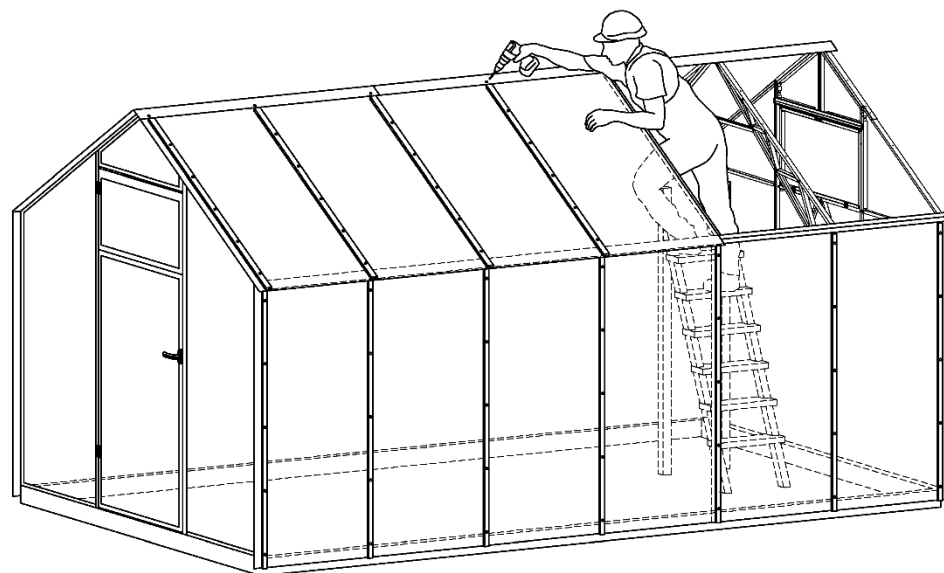
Complete set

Installation of panels			EHL 4.0 DD / 13' 1.48' greenhouse length range, m/ft							
			2.7	4.1	5.5	6.9	8.3	...	2.7+(1.4*N)	
			8' 10.3"	13'5.42"	18' 0.54"	22' 7.65"	27' 2.77"		8' 10.3" +(4' 7.12"*N)	
			(BASE)	Number of extensions in the greenhouse						
			0	1	2	3	4	...	N	
Name	Qty (BASE)	Col. 1 extend	Quantity, pcs.							
Panel P6 (696x1500)	8	4	8	12	16	20	24		8+4N	
Panel 4P7 (696x2360)	8	4	8	12	16	20	24		8+4N	
PP1	10	6	10	16	22	28	34		10+6N	
4PP2	10	6	10	16	22	28	34		10+6N	
UL6	16	8	16	24	32	40	48		16+8N	
Screw 4.2x25 DIN 968	4	0	4	4	4	4	4		4	
Screw 4.2x32 DIN 968	126	52	126	178	230	282	334		126+52N	

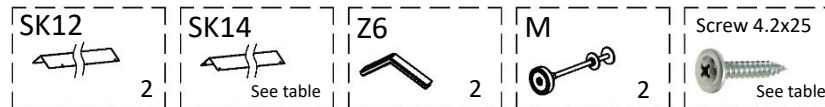


Assembly order:

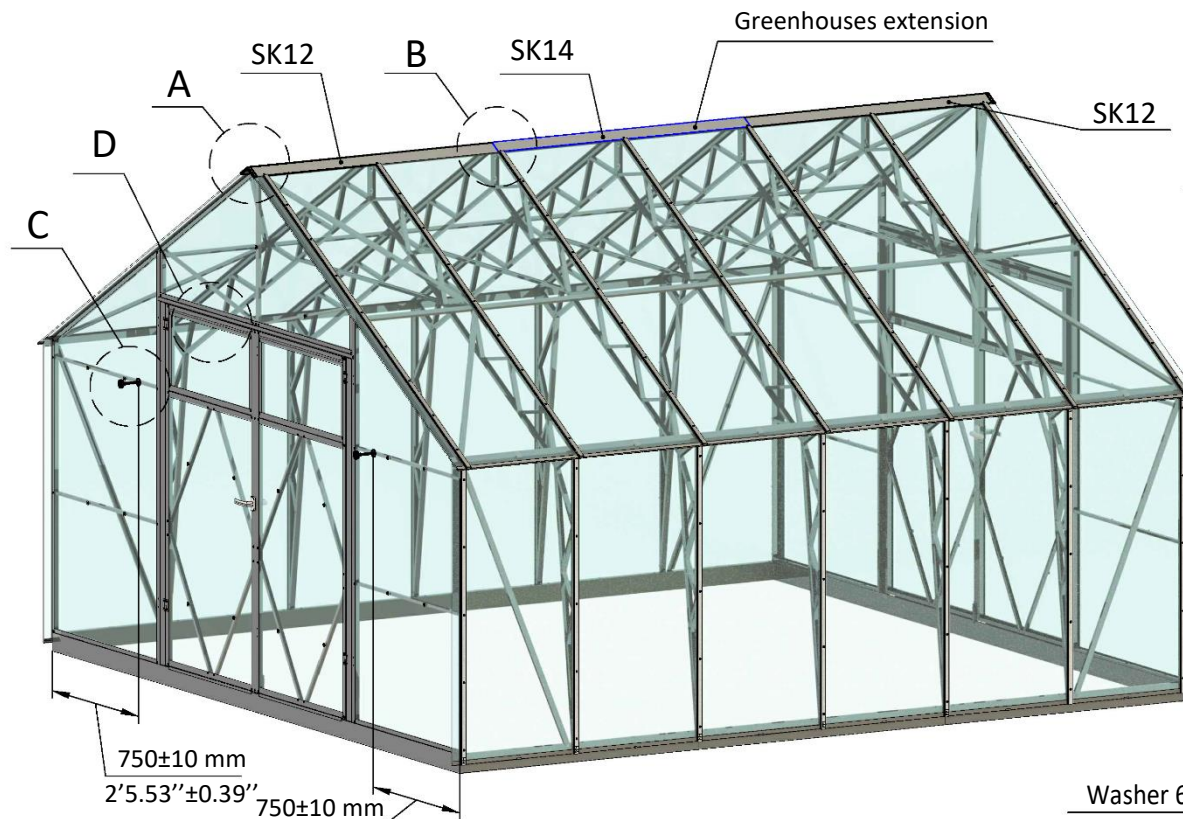
1. **IMPORTANT!** Before installing polycarbonate panels, check the diagonals of the greenhouse support frame and ensure horizontality. The accurate installation of the panels relies on this essential factor.
2. **IMPORTANT!** Polycarbonate sheets should be installed with the UV protected side facing out.
3. **IMPORTANT!** When attaching the planks with screws, do not apply excessive force to avoid denting the planks.
4. **IMPORTANT!** When installing polycarbonate top panels, do not step on the roof.
5. Place UL6 strips on the polycarbonate panels, as shown in fig. A, page 26.
6. Start installing the polycarbonate panels from the edge of the greenhouse, proceeding from left to right.
7. Place KR2 brackets on the support frame in the center between the trusses or the truss and the ends.
8. Install the P6 polycarbonate panel (see Fig. 7.1) onto the KR2 bracket. Place the KR3 bracket on the Mauerlat and secure the sheet with it.
9. Repeat with the next sheet, as shown in Fig. 7.2. Maintain a gap between sheets of 3÷5 mm. (Figure D, page 26). The sheets must be installed evenly, without distortions, parallel to the trusses. If you cannot do this, check the equality of the diagonals and the horizontal level of the support frame.
10. Install the PP1 clamping profile at the joint of the side panels, having previously placed the clamping profile on it (see Fig. C, page 21). The clamping strips are fixed with 4.2x32 self-tapping screws.
11. Install the top polycarbonate panels. Maintain the distance between adjacent panels 3÷5 mm. From below, the sheets rest on brackets KR6 (see Fig. F, p. 27). At the junction of the top panels, install the 4PP2 clamping strip, first bending it and placing the clamping profile on it (Fig. E, p. 27). Secure it with 4.2x32 self-tapping screws. When attaching the polycarbonate panel to the end at the location of the smartventor, fasten the 3PP2 clamping strip with 4.2x25 self-tapping screws. Make sure the smartventor opens freely.
12. **IMPORTANT!** Install the panels onto the roof in two 700mm sections and then attach the SK12 or SK14 top ridges to the roof. Secure them with 4.2x25 screws through the 4PP2 strips to the trusses (See Fig. B, page 27).
13. Install the remaining panels.



8.1

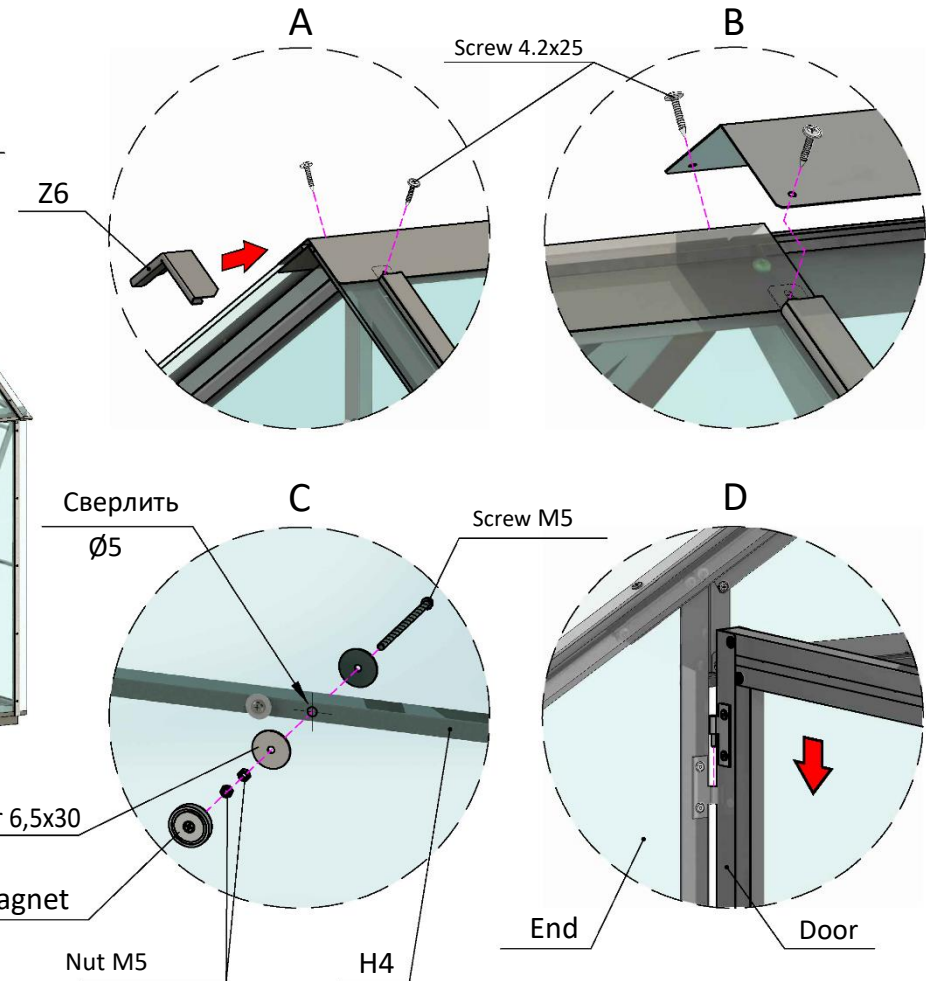


8. Final installation



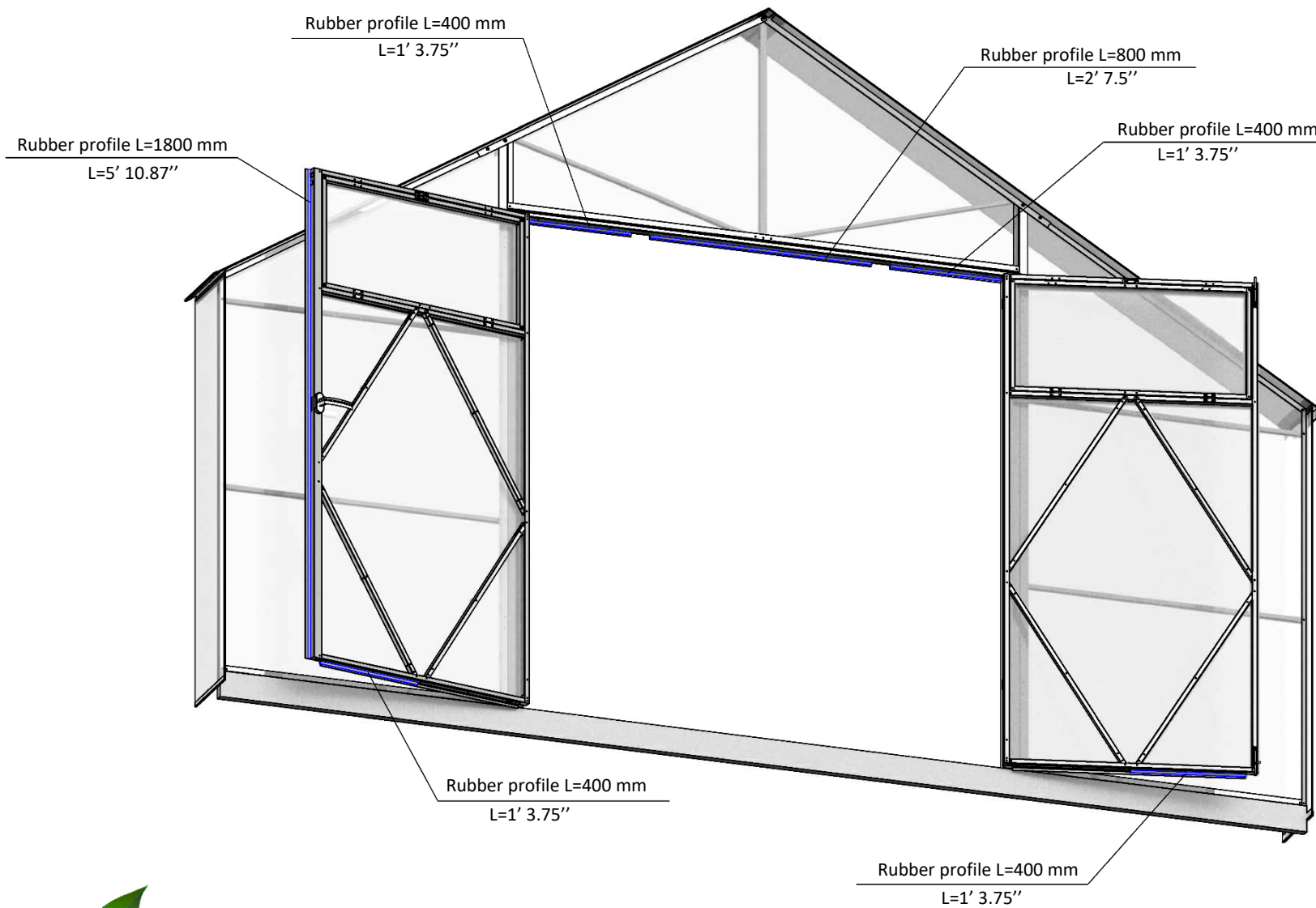
Assembly order:

1. Installation of skates SK12, SK14 on the roof is carried out together with the top panels in two sections of 700 mm each. Secure the upper skates SK12 and SK14 with 4.2x25 self-tapping screws. Do not step on the roof.
2. Secure the greenhouse. Refer to point 8 on page 13 for instructions.
3. Hang the doors on their hinges, ensuring smooth opening and closing (Fig. D). If necessary, adjust the position of the lock latch relative to the groove in the door pillar.
4. Install the magnets to the H4 profiles on the end walls (see figure 2.2., page 14). Pre-drill a hole in the polycarbonate sheet opposite the hole in the profile, and install the magnet as shown in Figure C. Ensure that the magnets securely hold the doors in the open position. Bending the magnet pin, if necessary, is permissible.
5. Install the protective caps (Z6) on the ends of the skates. Ensure they are securely held in place (Figure A).



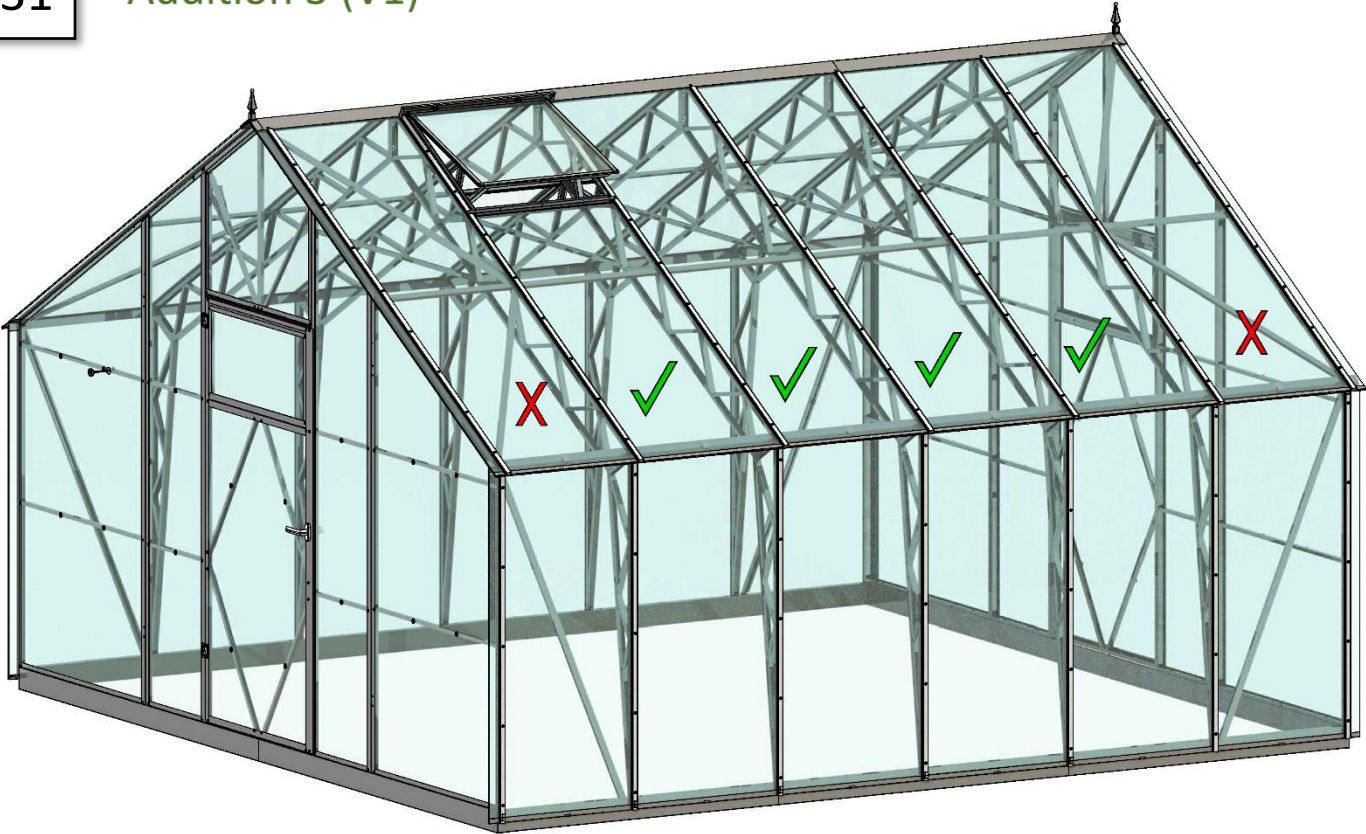
Complete set

Final installation			EHL 4.0 DD / 13' 1.48" greenhouse length range, m/ft							
			2.7	4.1	5.5	6.9	8.3	...	2.7+(1.4*N)	
			8' 10.3"	13' 5.42"	18' 0.54"	22' 7.65"	27' 2.77"		8' 10.3" + (4' 7.12" * N)	
			(BASE) Number of extensions in the greenhouse							
			0	1	2	3	4	...	N	
Name	Qty (BASE)	Col. in 1 extend	Quantity, pcs.							
SK12	2	0	2	2	2	2	2		2	
SK14	0	1	0	1	2	3	4		N	
Ridge cap (Z6)	2	0	2	2	2	2	2		2	
Magnet assembly (M)	4	0	4	4	4	4	4		4	
Screw 4.2x19 DIN 968	26	12	26	38	50	62	74		24+12N	

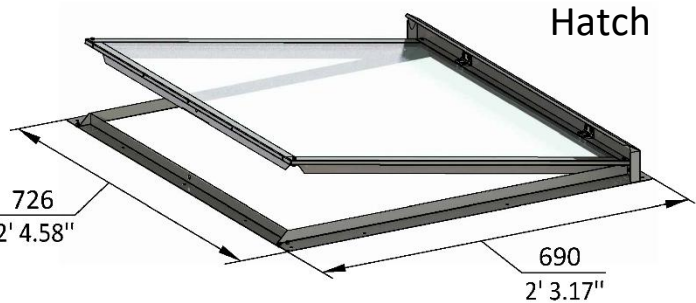


Assembly order (continued):

6. Cut the rubber profile to the dimensions and tape it the areas shown on fig E.



Installation of the hatch



Complete set

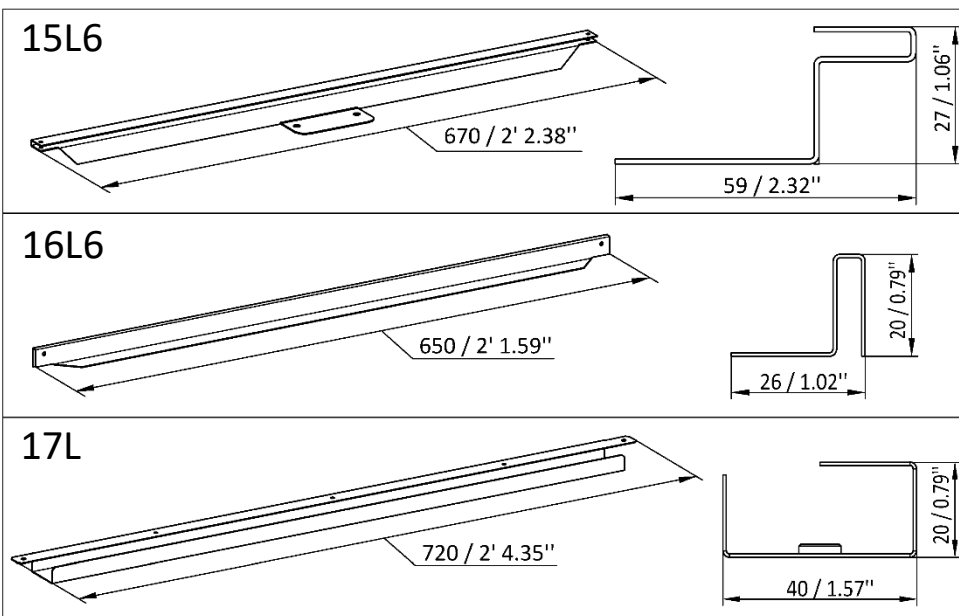
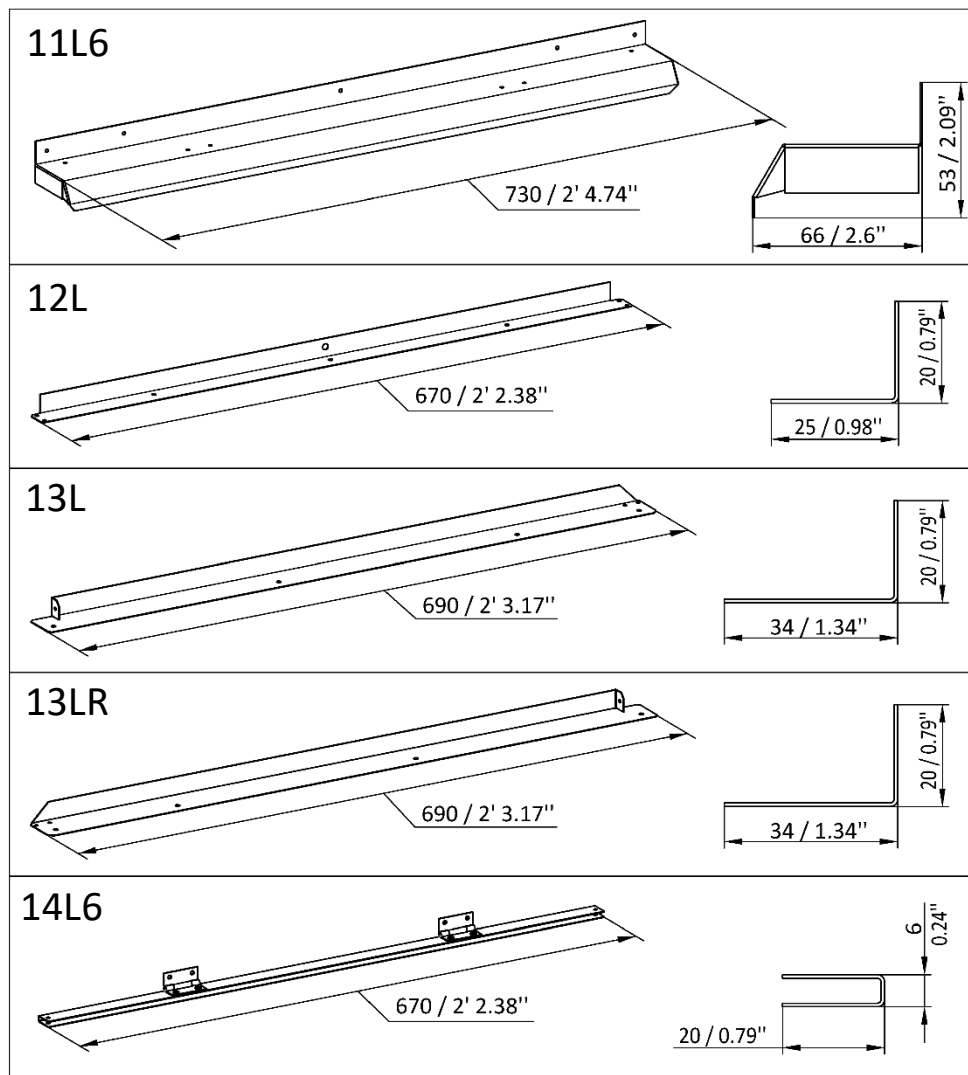
Detail	Qty in 1 hatch
11L6	1
12L	1
13L	1
13LR	1
14L6	1
15L6	1
16L6	2
17L	1
Fasteners	
Screw 4.2x25 DIN 7504	10
Screw M3x6 DIN 7985	10
Screw M3x12 DIN 7985	4
Self-lucking nut M3 DIN 985	14
Protective Tape, m	3

IMPORTANT! The installation of the hatch must be only in areas shown in the figure.

Tools



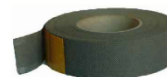
Details



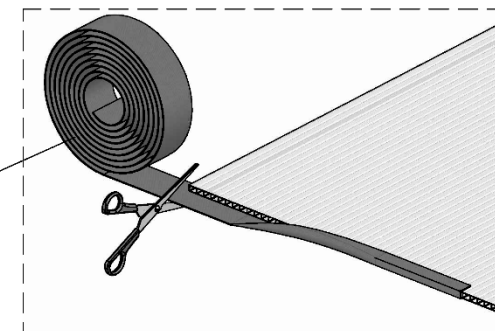
Fastener

Screw 4.2x25
DIN 7504Bolt M3x6 DIN
7985Bolt M3x12
DIN 7985Self-locking nut M3
DIN 985

Protective Tape (PT)



Protective Tape (PT)



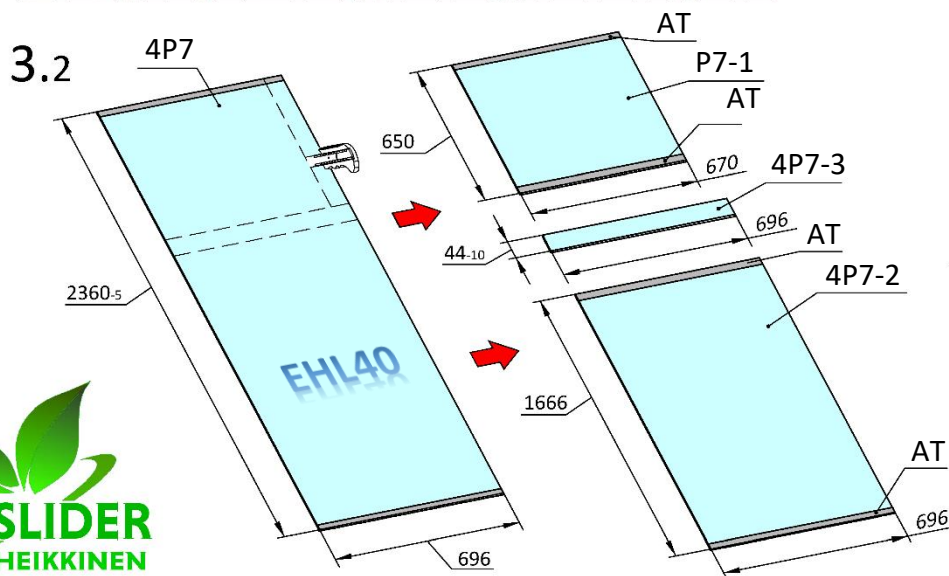
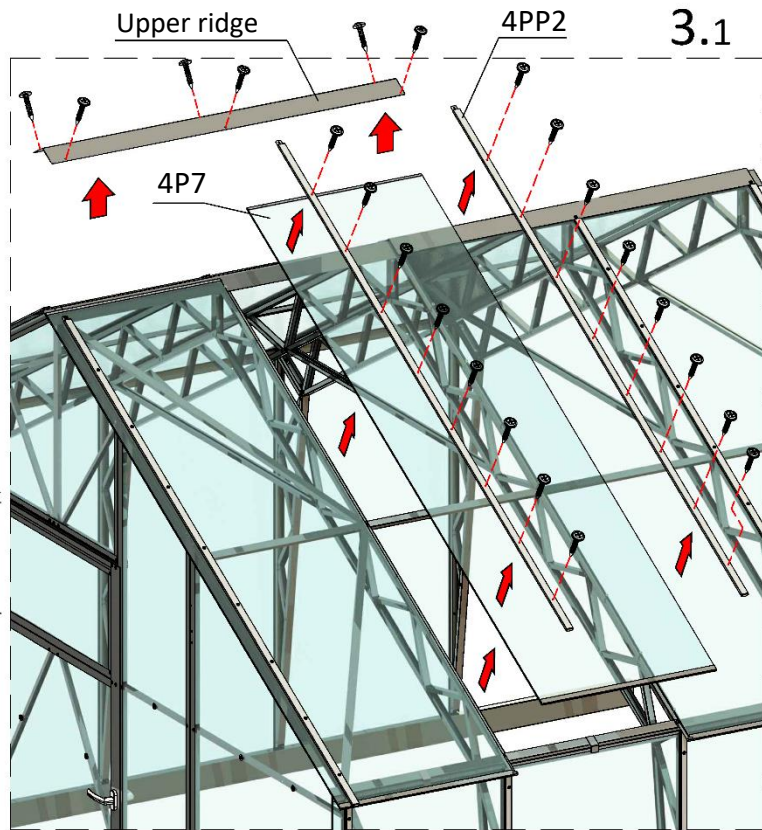
UV

UV protected side (covered with white film) **facing outwards during installation**

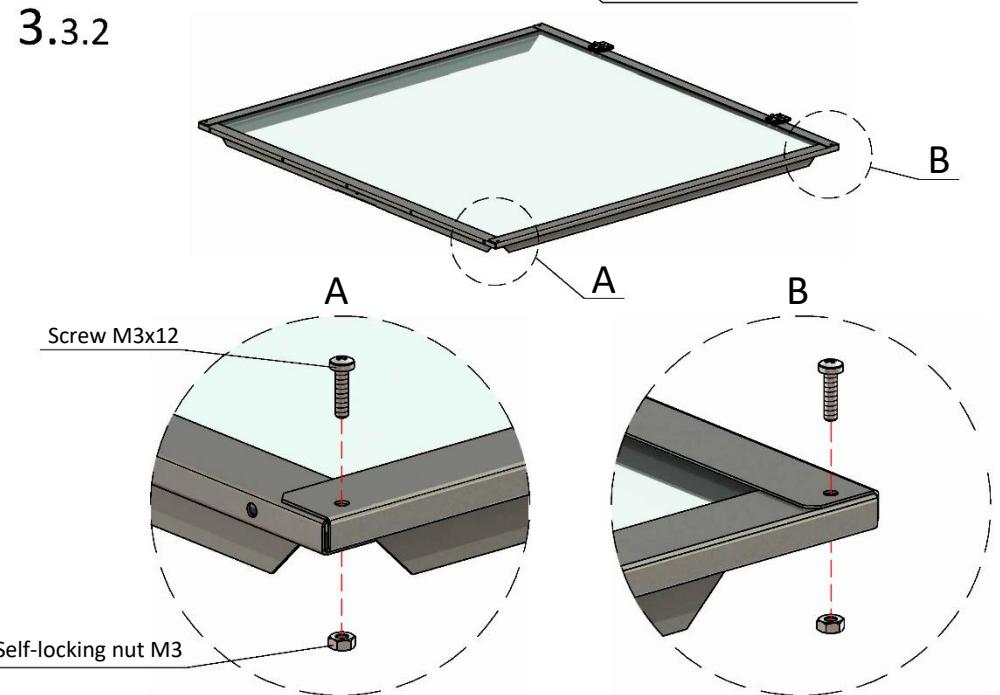
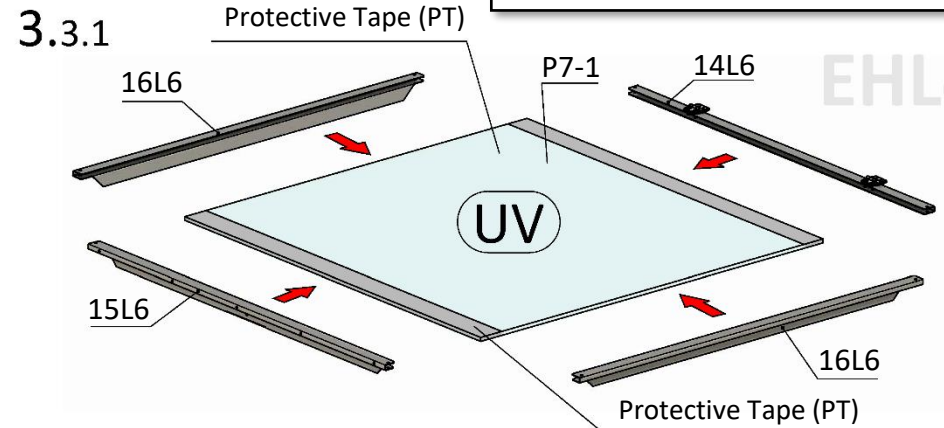
UV

side without UV protection radiation





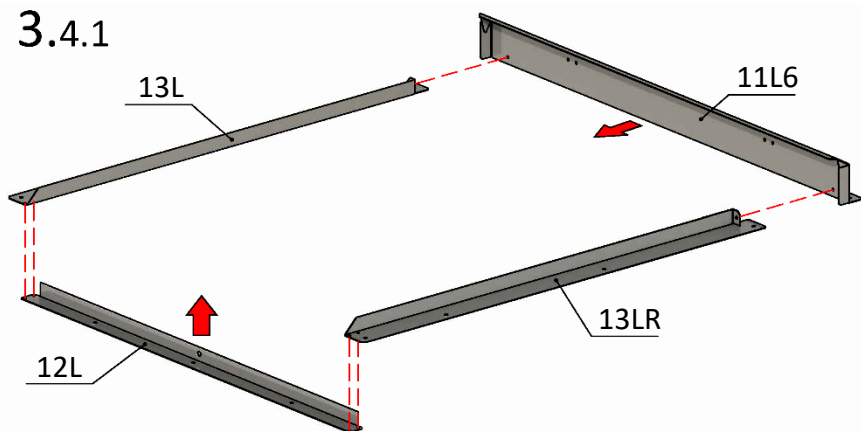
Installation of the hatch



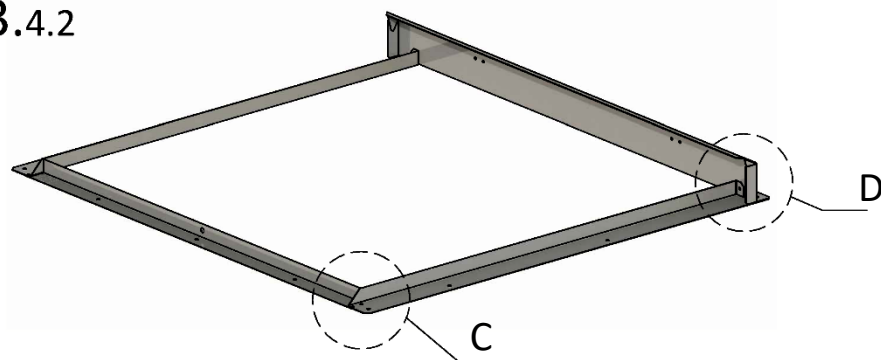
Assembly order:

1. Remove the top ridge of the greenhouse at the window installation site. Remove the 4PP2 clamping profiles from the roof and disassemble the 4P7 polycarbonate panel (Fig. 3.1).
 2. Cut the panel into three parts: P7-1, 4P7-2, and 3P7-3, following Figure 3.2.
 3. Assemble the window according to Figures 3.3.1 and 3.3.2.
- IMPORTANT!** Ensure that the polycarbonate sheets are installed with the UV protection side facing out. When dismantling the panel, mark the UV side to ensure correct installation during reassembly.

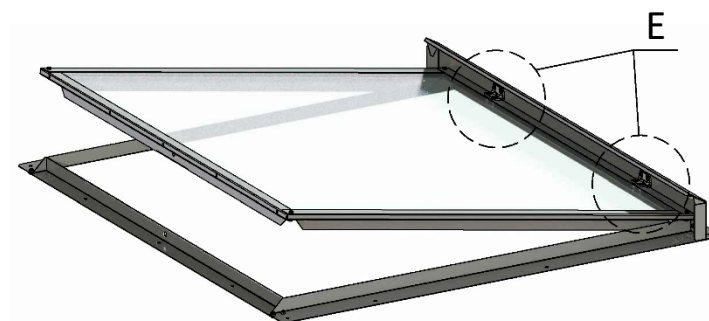
3.4.1



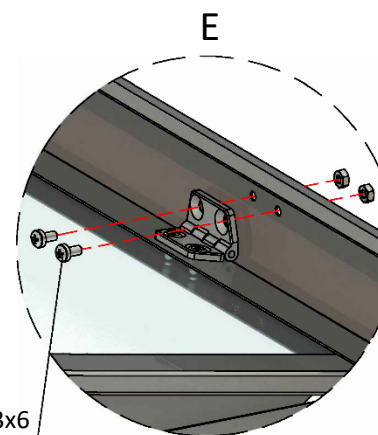
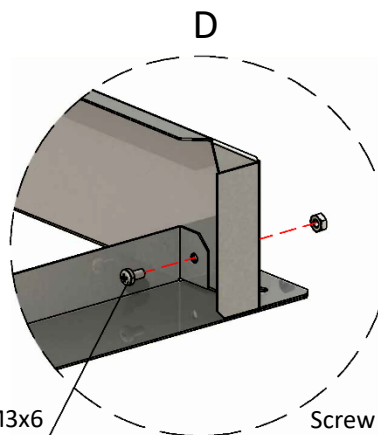
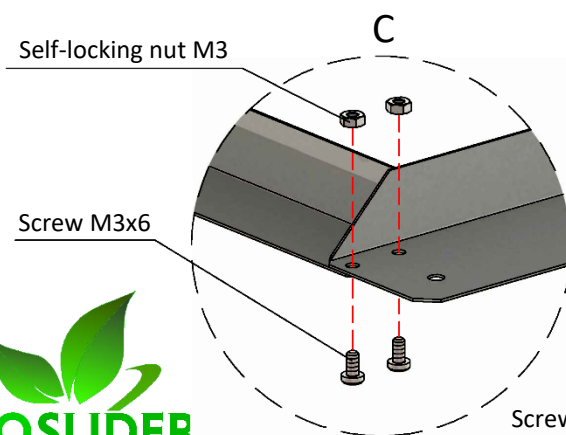
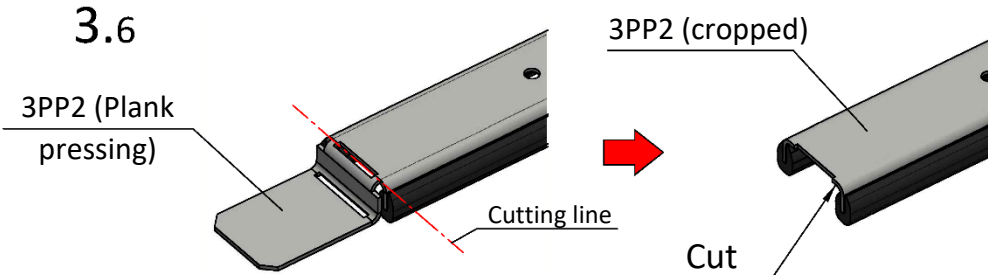
3.4.2



3.5



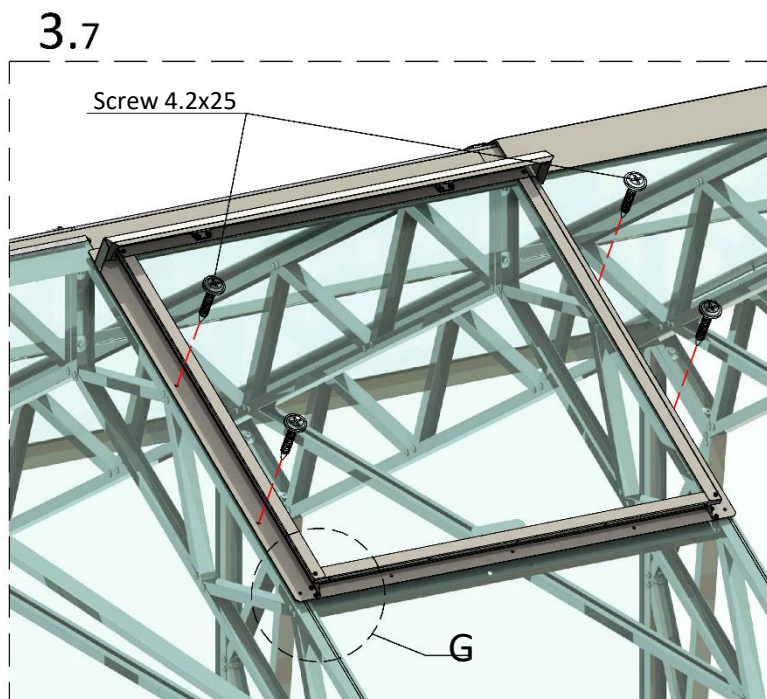
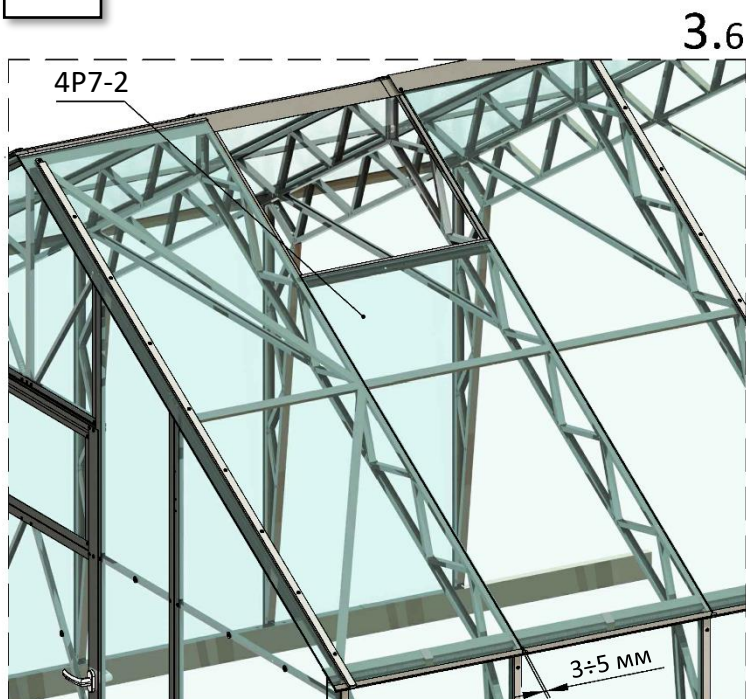
3.6



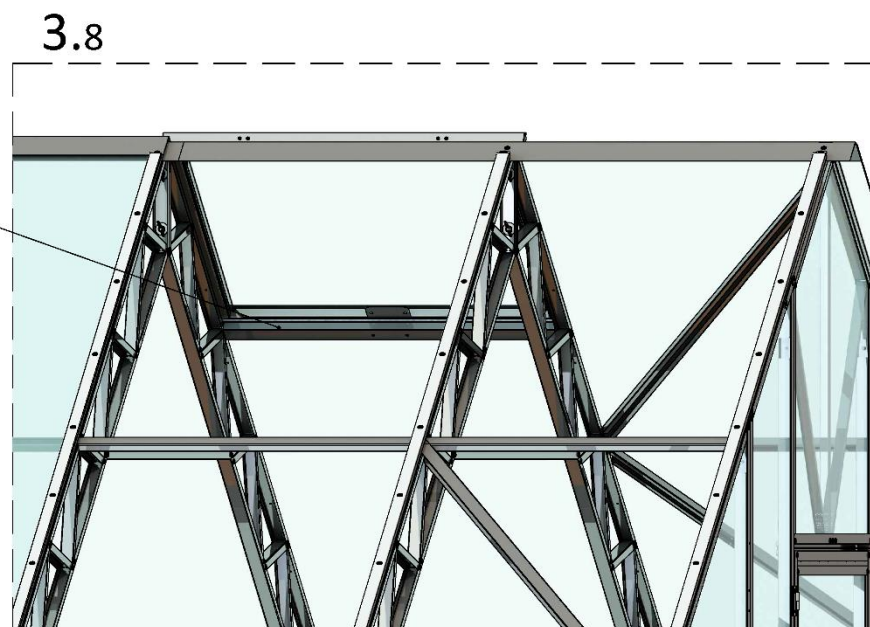
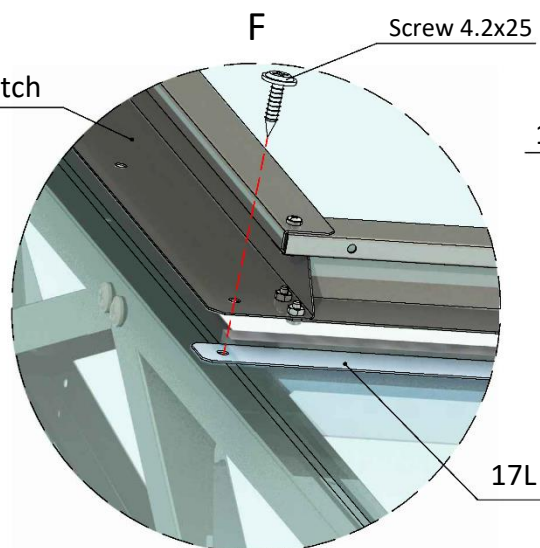
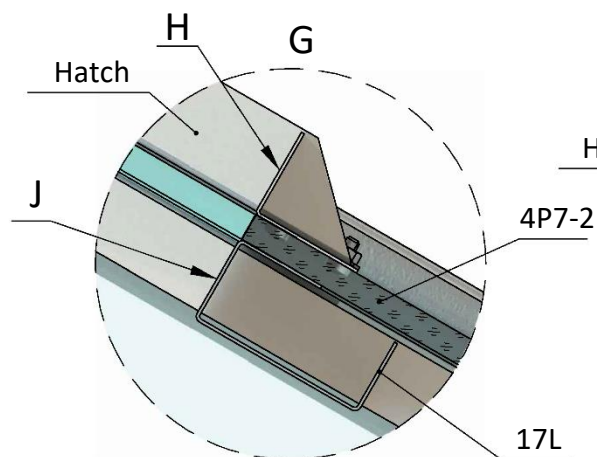
Assembly order:
(continuation)

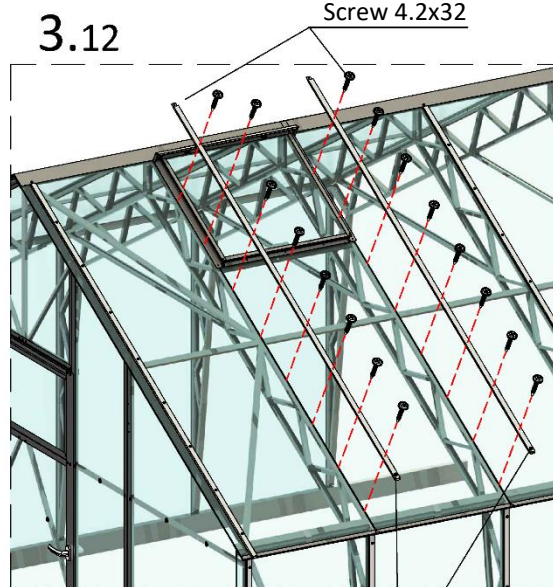
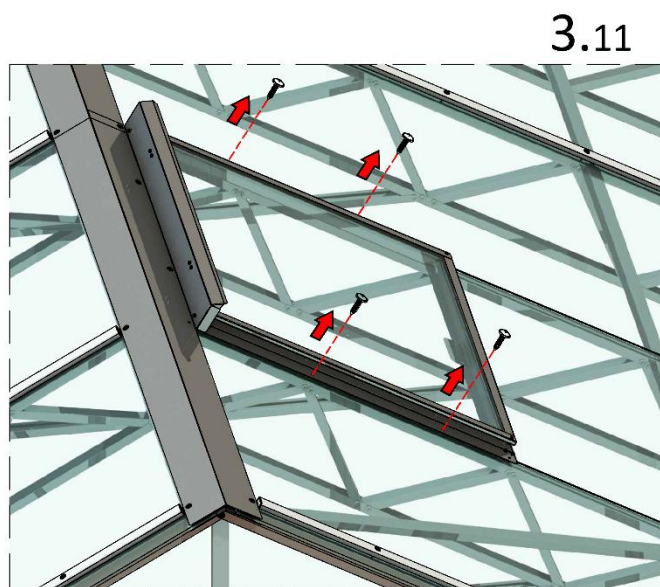
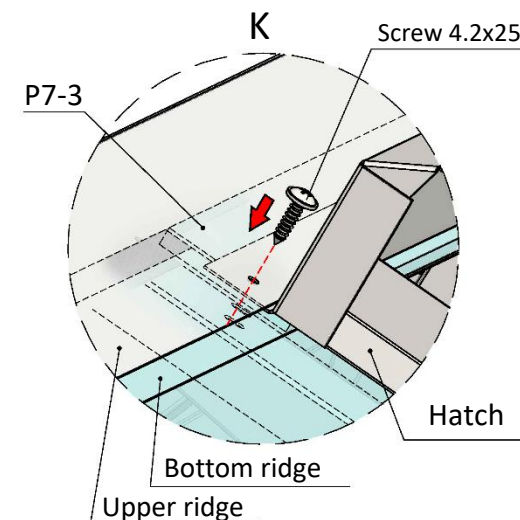
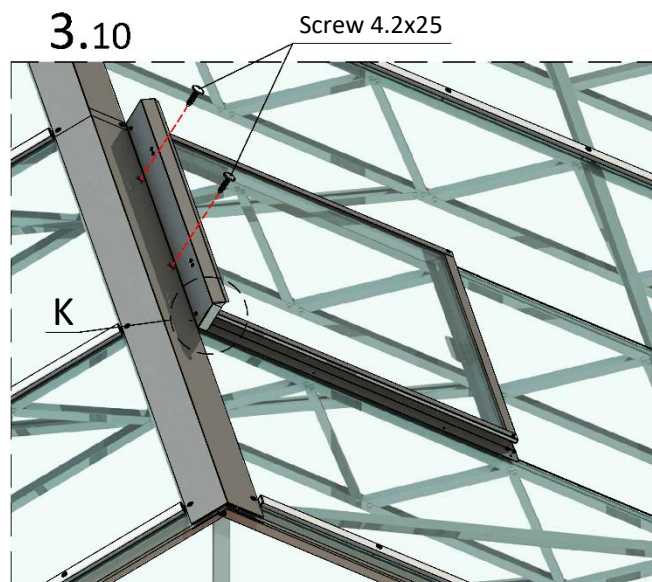
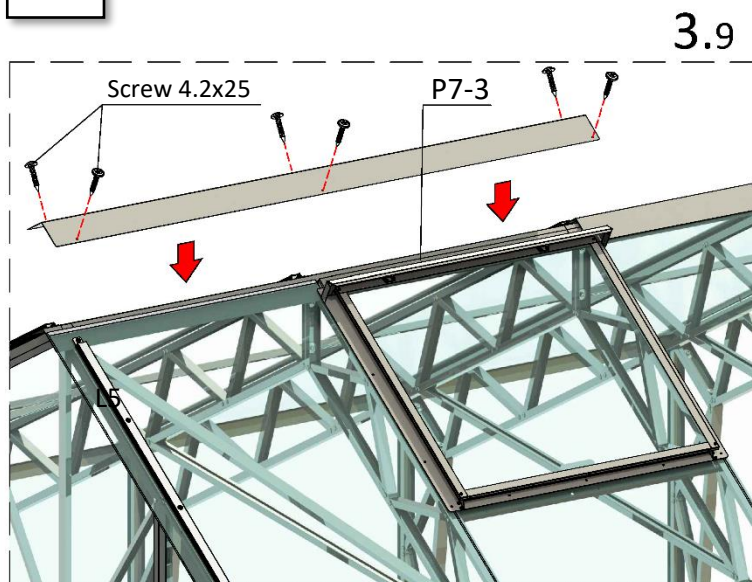
4. Assemble the window frame as shown in Figures 3.4.1 and 3.4.2.
5. Assemble the window with the window frame (Fig. 3.5).
6. Cut the dismantled PP2 strips according to Figure 3.6.

Assembly order:
(continuation)



7. Install the 4P7-2 polycarbonate panel in the location where the window is installed, as shown in Fig. 3.6.
8. Place the window on the roof opening. Align the holes in the window frame and the trusses (Fig. 3.7), secure them with 2.5x25 self-tapping screws.
9. Install part 17L from inside the greenhouse. Place it in between the trusses and the 4P7-2 polycarbonate panel.
10. Align the 17L strip so that the H plane (Fig. G) of the 12L vent piece and the J plane of the 17L strip coincide. Screw it to the trusses as shown in Figure F through the holes in the window frame and strip 17L.



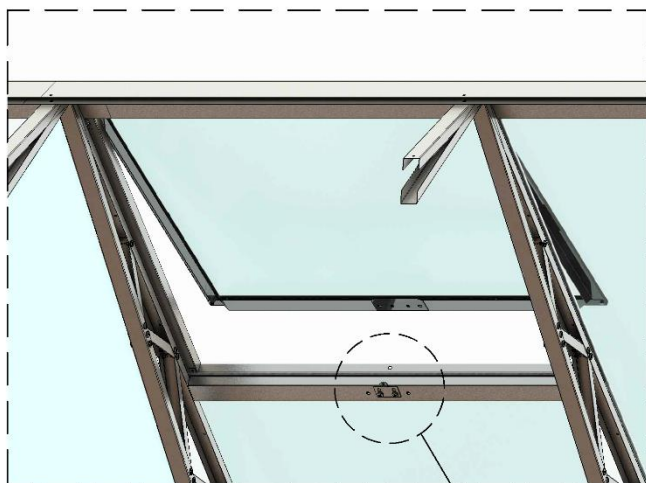


4PP2 (Plank
pressing cropped)

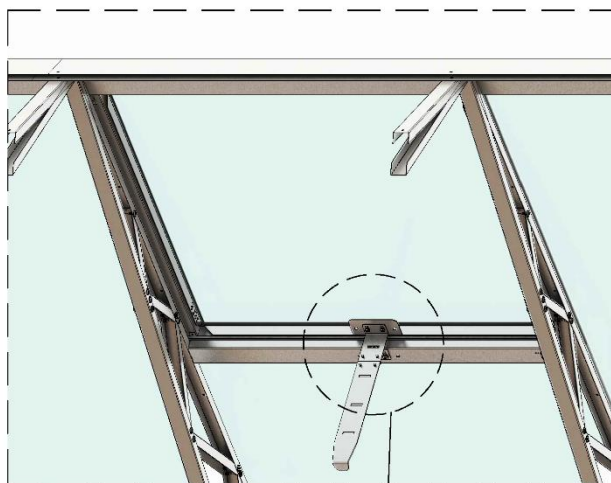
Assembly order:
(continuation)

11. Place 3P7-3 strip between the vent and the lower roof ridge (Fig. K). Reinstall the top ridge of the roof (see greenhouse assembly instructions).
12. Attach the window from below to the 17L strip and from above to the skates as shown in Figures 3.9 and 3.10. Ensure that the holes in the vent match the grooves in the lower and upper roof ridges.
13. Remove the 4.2x25 screws according to Fig. 3.11.
14. Install the cut 4PP2 profiles (cut) and screw them to the trusses using 4.2x32 screws in the corresponding holes.
15. Ensure that the window opens freely, without jamming.

4.1



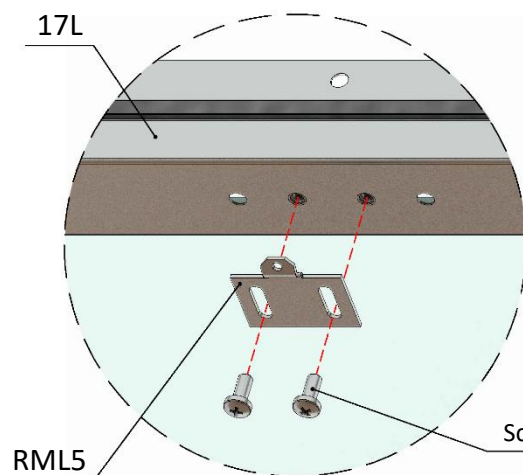
4.2



4.3

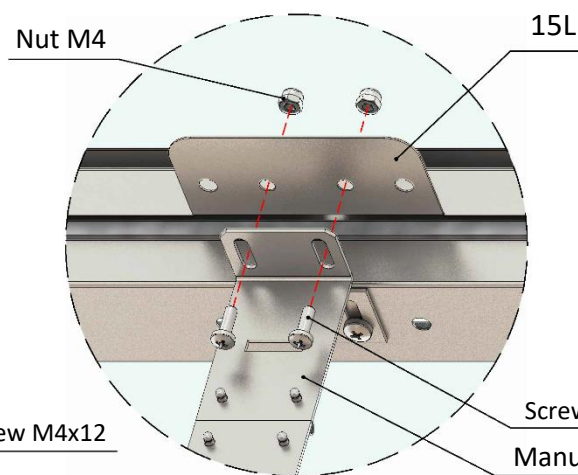


A



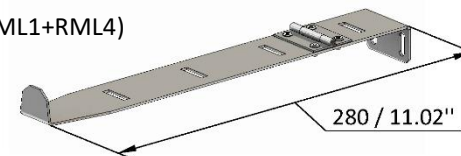
A

B

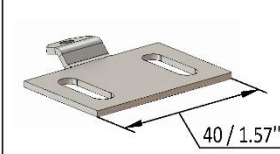


B

Content

Manual mechanism
(det. RML1+RML4)

RML5



Screw M4x12 DIN 7985

Self-locking nut
M4 DIN 985

Assembly order:

1. Install part RML5 on profile 17L, positioned inside the greenhouse under the window, using M4x12 screws, as depicted in Figure A.
2. Secure the manual opener to the bottom profile of the window 15L using M4x12 screws, as shown in Figure B.
3. Adjust the position of the manual opener using the screws so that the window opens freely and was fixed in a free position.

Complete set

Detail	Qty in 1 hatch
Manual mechanism	1
RML5	1
Screw M4x12 DIN 7985	4
Self-locking nut M4 DIN 985	2

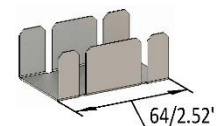


Content

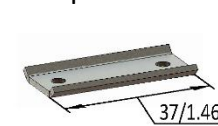
automatic opener
UNIVENT



RM40



Clamp *



Bolt M4x10 *
DIN 7985



Technical data

- Maximum window opening, approx. 45cm (17 23/32 in) - depending on adjustment and load
- Maximum opening at 30 °C(86°F)
- Start opening temperature 17 °C
- Can lift up a window weighing 14 kg

Warranty

The window opener comes with a 2year warranty when it has been fitted and used correctly. In the event that a correctly fitted and used window opener becomes defective and needs to be repaired (despite our meticulous testing and controls.

Components

1. Threaded cylinder (E)
2. Cylinder housing
3. Clutch
4. Arm K
5. Window bracket
6. Arm F
7. Sill bracket with "Easy clip"
8. Pullback spring
9. Hairpin split, see screw bag
10. Clamps x 2, see screw bag
11. Screws x 4, see screw bag

Mounting

- 1: Check that the greenhouse window is able to open freely and is not obstructed
- 2: Fit 1 x clamp (10) loosely onto the sill bracket (7). Choose the most suitable set of holes, so that the uppermost edge of the sill bracket is flush with the sill profile on the greenhouse. Then, fix 1 x clamp (10) loosely on the window bracket (5) (Fig. 2). Use the enclosed screws (11) in the bag.

Complete set

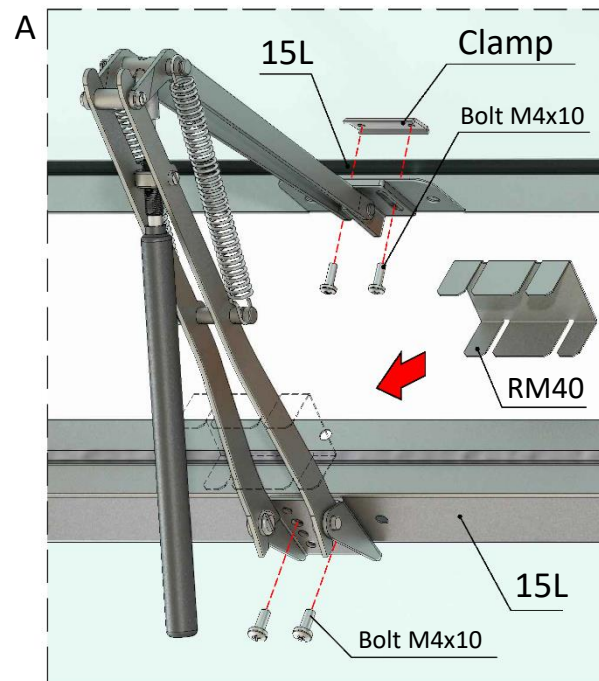
Detail	Qty in 1 hatch
Automatic opener	1
RM40	1
Clamp	1 *
Bolt M4x10 DIN 7985	4 *

Assembly order:

1. Attach the automatic opener to the bottom strip of the vent window 15L and the support strip 17L, located on the inside of the greenhouse under the vent window, using M4x10 screws, as shown in Figure A.

2. Adjust the position of the automatic mechanism using the screws so that the window opens freely.
3. Install the retainer (part RM40) onto the automatic opener as shown in Figure A.
4. For assembly and adjustment of the automatic opener, see the mechanism manufacturer Orbesen Teknik.

* Parts included with opener UNIVENT



3: Push the cylinder with hole A into hole B on the clutch (3), connect hole A and hole B by means of the hairpin split (9). **It is important that hole B is used.** (Fig.1)

4: Clip clamp (10) in between the glass and the sill profile (no holes should be drilled). The sill bracket (7) will be sitting on the other side of profile, acting as a clamp. (Fig.2)

Make sure that the sill bracket is placed in the centre of the window. Then tighten the sill bracket securely.

5: **Close the window**, clip the clamp (10) in between the glass and the window profile (no holes should be drilled) the window bracket (5) will sit on the other side like a clamp. The window bracket (5) is placed in the centre of the window profile. Then tighten the window bracket (5).

6: Open the window just enough for the thread on the cylinder (E) to catch the cylinder housing (2). Now, screw the cylinder (1) in. There should be equal amounts of the thread showing on both sides of the housing (2) (fig. 3).

7: Check that the window is able to open sufficiently for the window opener to be fully open. If not, the opening width of the window opener should be reduced.

Reducing the width of window opening

The window opening can be reduced to a maximum opening of 32 cm (1219/32 in).

Set split (14) to the maximum opening in hole (D), then move the hairpin split (9) from hole A to hole C. **This is important as, otherwise, it can damage the cylinder.**

Adjustment of opening temperature

If a different temperature is required, the cylinder can be turned.

- Turn clockwise, if an earlier start/higher opening temperature is required.
- Turn anti-clockwise, if a later start/lower opening temperature is required.

One twist of the cylinder equates to approximately 5 °C. You should be aware that the temperature can vary somewhat within the same greenhouse.

If there are several windows, this can give varying openings.

It is best to adjust the opener when the temperature is constant - either in full sunlight or when the sky is completely overcast.

Using the winter protection or a source of heat in the greenhouse

When the temperature decreases and the window is no longer to be opened, or when a source of heat is used in the greenhouse:

1. Unscrew the cylinder (1) from the cylinder housing (2). The cylinder is now hanging in the hairpin split (9) and cannot open the window. The cylinder can be left hanging in this position over the winter.
2. Place the winter protection (13) around arm K (4) and arm L (6). The winter protection prevents the wind from blowing the window open.

In the spring

Remove the winter protection (13).

Lubricate all moveable parts with light oil.

Also, lubricate the thread (E) with grease or petroleum jelly (This will extend the life of the opener).

Screw the cylinder (1) into place in the cylinder housing (2).

Concluding remark

This window opener is not suitable for use in places where the temperature exceeds 50 °C (122°F)

