INSTALLATION MANUAL

TRE ECO STRONG

arched polycarbonate greenhouse

Galvanised steel frame · roof of whole 2.1 x 6 m sheets
Two doors and two vent windows · 2 m extension

Width 3.0 m **Height 2.1 m** **Length from 4 m**



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General information

The frame of the TRE ECO STRONG greenhouse is made of **galvanised steel** and is assembled with screws and nuts. The greenhouse is anchored by digging the ends of the frame posts into the ground, or it is fixed to a foundation with mounting brackets.

The main kit is 4 m long. For a longer greenhouse, buy extension modules – each module adds 2 m to the length. Both end walls have a door and a vent window. The kit includes all fasteners needed to fix the covering.

Parameter	Value
Width	3.0 m
Height	2.1 m
Length	4 m (+ 2 m with each extension module)
Frame	galvanised steel, screw connections
Doors and windows	door and vent window in both end walls
Covering	multiwall polycarbonate 4 mm, sheets 2.1 x 6 m
Polycarbonate quantity	main kit 3 sheets, each extension 1 sheet
Wind resistance	up to 24 m/s
Snow load	frame load limit 60 kg/m²

Attention! Strictly follow the rules in this manual when assembling and using the greenhouse. Keep this manual.

Before installation

- Before use, the greenhouse must be assembled and installed according to this manual. If the greenhouse is installed by a third party, the buyer must check that the installation complies with the manual.
- As some parts are identical, some holes will remain unused. Be careful not to damage the parts during assembly – they are not rigid enough until final assembly.
- During intermediate stages, support the frame (e.g. with chairs) so that it can be raised evenly. To align holes, use a 4 mm nail or a tapered punch.
- **All holes provided** must be used when assembling the frame. “Simplified” joining of parts is a breach of the assembly rules and voids the warranty.
- Do not install the greenhouse near buildings or trees from which snow or ice may fall onto it. The recommended distance is 2 m.
- The greenhouse withstands winds of up to 24 m/s. The covering does not need to be removed for the winter if snow is regularly cleared from the roof. If the greenhouse is left unattended over the winter, remove the covering or assess the possible snow load – the frame load limit is 60 kg per m² of horizontal ground area.

Cleaning the polycarbonate

1. Rinse the sheet with warm water.
2. To remove dirt, wash the sheet with warm water and a mild soap solution or washing-up liquid, using a soft cloth or sponge.
3. Rinse with cold water and dry with a soft cloth.

Do not clean the polycarbonate with abrasive or strongly alkaline cleaners, wire brushes or cloths containing metal fibres. Wiping with a dry cloth damages the protective layer and shortens the life of the sheet. **Do not use sulphur candles to disinfect the greenhouse** – they cause corrosion (dulling) of the frame.

Warranty

The manufacturer is responsible for the completeness of the kit, for the structure being assemblable according to the manual, and for its strength within the limits of the rules of use. **Claims may be submitted within 24 months of the date of purchase.**

The warranty does not apply if:

- the requirements of the manual were not followed during installation;
- the rules of use have been breached;
- the greenhouse has not been used for its intended purpose;
- the greenhouse has been deformed by ground movement;
- damage was caused by a flood, storm or other natural disaster.

Parts list

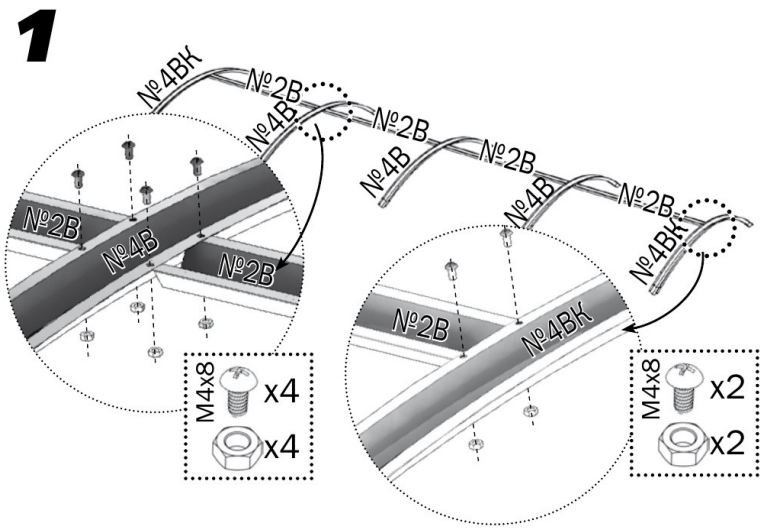
The part codes correspond to the codes in the figures (e.g. №4н, №2в, №9-1). Lengths are in metres.

Code	Description	Length, m	Qty
Package 1			
11-п	End-wall middle tie, right	1.02	2
11-л	End-wall middle tie, left	1.02	2
12д	Door vertical profile	0.756	8
12ф	Vent window vertical profile	0.320	4
13д	Door horizontal profile	0.713	6
13ф	Vent window horizontal profile	0.713	4
14	Door small diagonal	0.958	4
15	Door large diagonal	1.0	4
16	Vent window diagonal	0.737	2
2	Purlin	0.96	16
3	Base support	0.14	14
8	End-wall bottom tie	1.04	4
10	Doorway tie	0.82	4
17	Hook for doors and vent windows		4
5	Turn plate	0.09	4
Package 2			
4н	Lower arch	1.62	6
4в	Upper arch	1.62	3
4вк	Upper end arch	1.62	2
4нкп	Lower end arch, right	1.62	2
4нкл	Lower end arch, left	1.62	2
Package 3			
1	Post	0.92	10
2в	Upper purlin	0.96	12
9-1	Lower opening post	0.981	4
9-2л	Upper opening post, left	1.4	2
9-2п	Upper opening post, right	1.4	2
18	End-wall reinforcement		4
Package 4			
19	Bracket		8
20	Hook bracket		8
21	Hinges for doors and vent windows		8
22	Latch (turn catch with two rubber tips)		4
23	Tube for bending the latch		1
24	Knob handle		8
25	Threaded rod		4
26	Screw M4 x 8		398
27	Screw M4 x 10		56
28	Screw M4 x 25		100
29	Screw M4 x 35		76
30	Nut M4		630
31	Washer 32 x 4		188

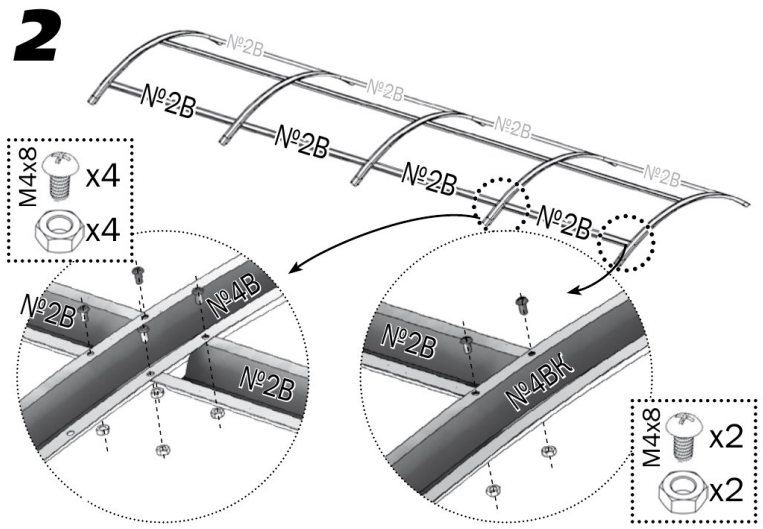
Code	Description	Length, m	Qty
32	Adhesive tape		1
Extension module (2 m), package 1			
1	Post	0.92	4
2	Purlin	0.96	8
2в	Upper purlin	0.96	6
3	Base support	0.14	4
26	Screw M4 x 8		96
28	Screw M4 x 25		8
29	Screw M4 x 35		14
30	Nut M4		118
31	Washer		22
Extension module (2 m), package 2			
4н	Lower arch	1.62	4
4в	Upper arch	1.62	2

Assembly: roof frame

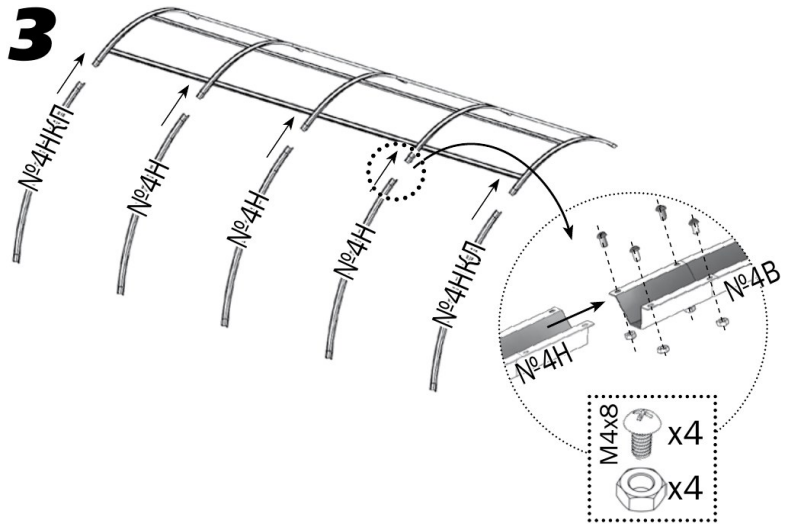
The assembly steps are numbered in the figures. The number of screws and nuts needed is shown at each joint (e.g. **M4x8 x4** = 4 screws M4 x 8 and 4 nuts). Do not tighten the screws fully until the frame is assembled and the diagonals have been checked.



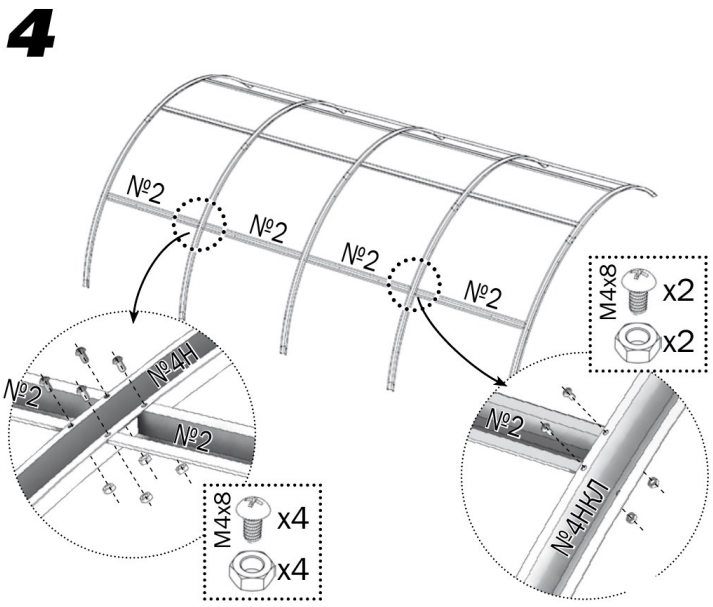
1. Lay the upper arches on the ground: upper end arches (№4BK) at the ends and upper arches (№4B) in the middle. Join the arches with upper purlins (№2B) using M4x8 screws and nuts.



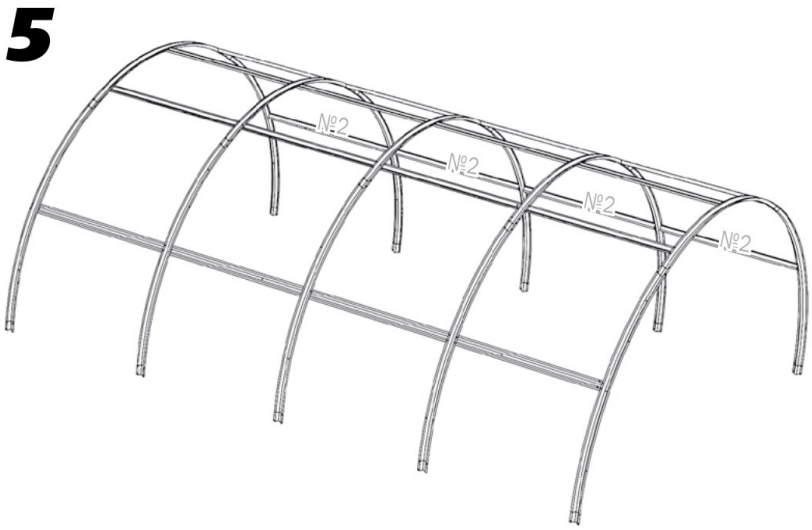
2. Fit the second row of upper purlins (№2B) in the same way.



3. On one side, join the lower arches to the ends of the upper arches: lower end arches (№4нкп) at the ends and lower arches (№4н) in the middle. 4 M4x8 screws and 4 nuts in each joint.

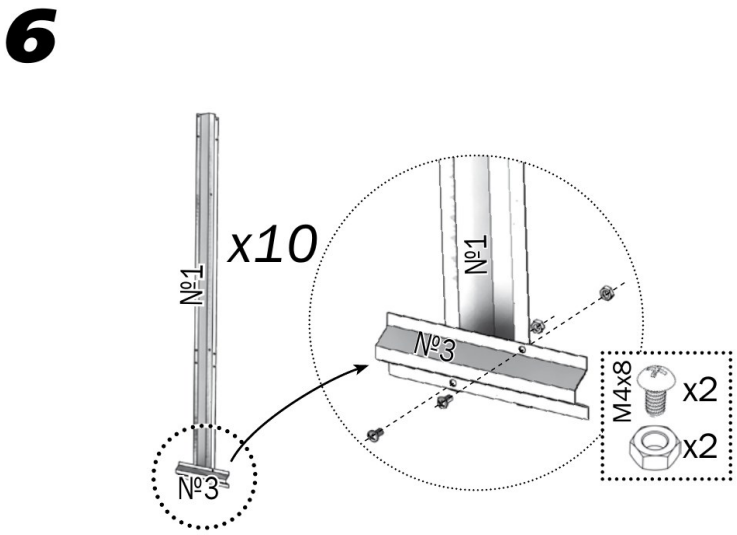


4. Join the lower arches with purlins (№2). Use 4 screws at the middle arches and 2 M4x8 screws with nuts at the end arches.

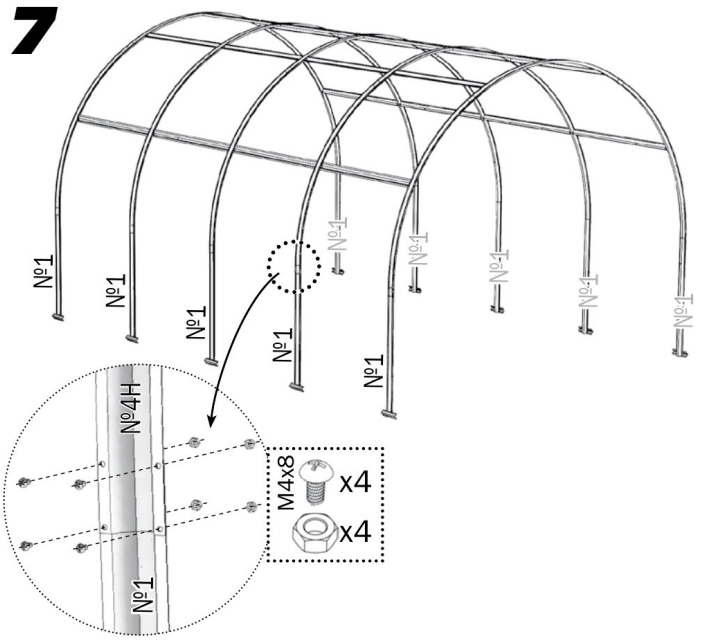


5. Assemble the other side in the same way: lower end arches (№4нкл) at the ends and lower arches (№4н) in the middle, and join them with purlins (№2).

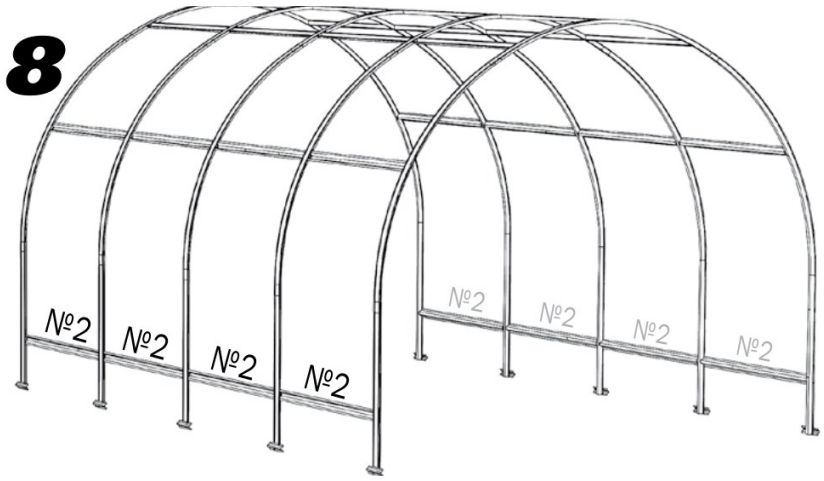
Assembly: posts and end walls



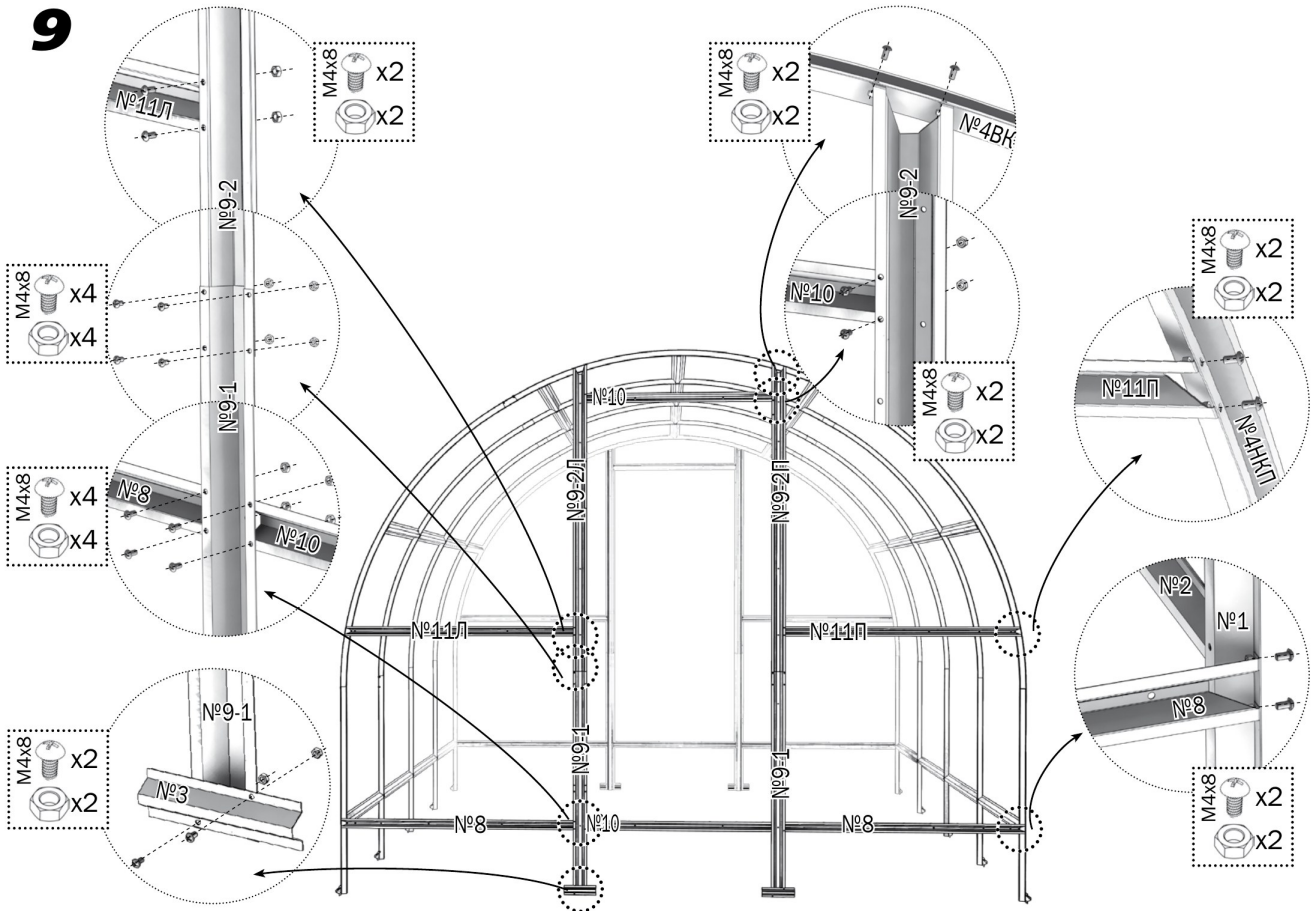
6. Fix a base support (№3) to the lower end of all 10 posts (№1) – 2 M4x8 screws and 2 nuts.



7. Fix the posts (№1) to the ends of the lower arches – 4 M4x8 screws and 4 nuts per joint.

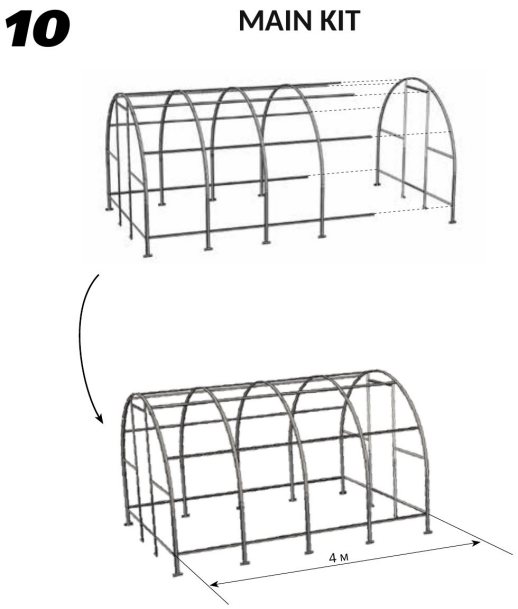


8. Join the posts on both sides with lower purlins (№2).



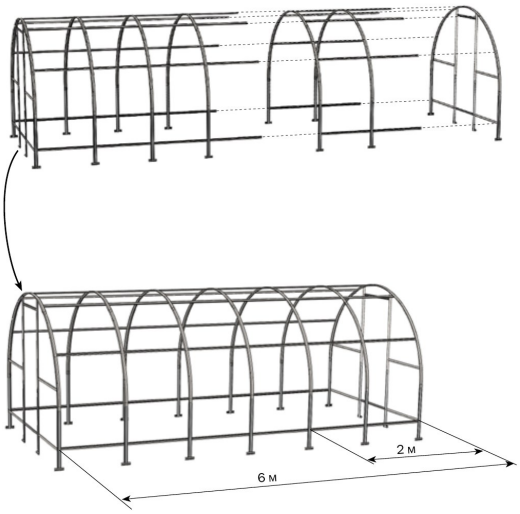
9. Assemble the end-wall frame. Fix the lower opening posts (№9-1) to the base supports (№3) and join them to the upper opening posts (№9-2л and №9-2п), which are fixed at the top to the upper end arch (№4вк). Fit the doorway ties (№10) at the top and bottom of the opening.

Fit the end-wall middle ties (№11-л and №11-п) between the opening posts and the lower end arches, and the bottom ties (№8) between the opening posts and the posts (№1). The number of screws and nuts is shown in the figure. Assemble the other end wall in the same way.

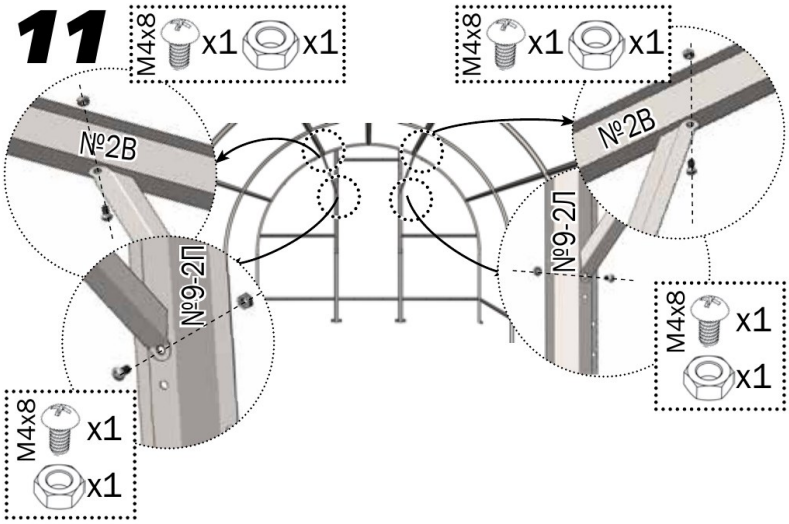


10. Main kit (MAIN KIT): the assembled frame is 4 m long.

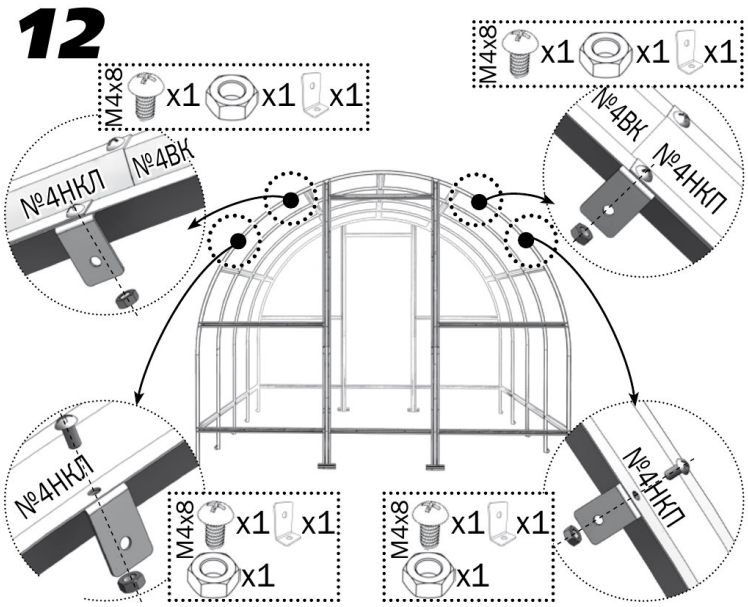
10-A EXTENSION



10-A. Greenhouse with extension module (EXTENSION): each extension module is fitted between the main part and the end wall and adds 2 m to the length (e.g. 6 m).

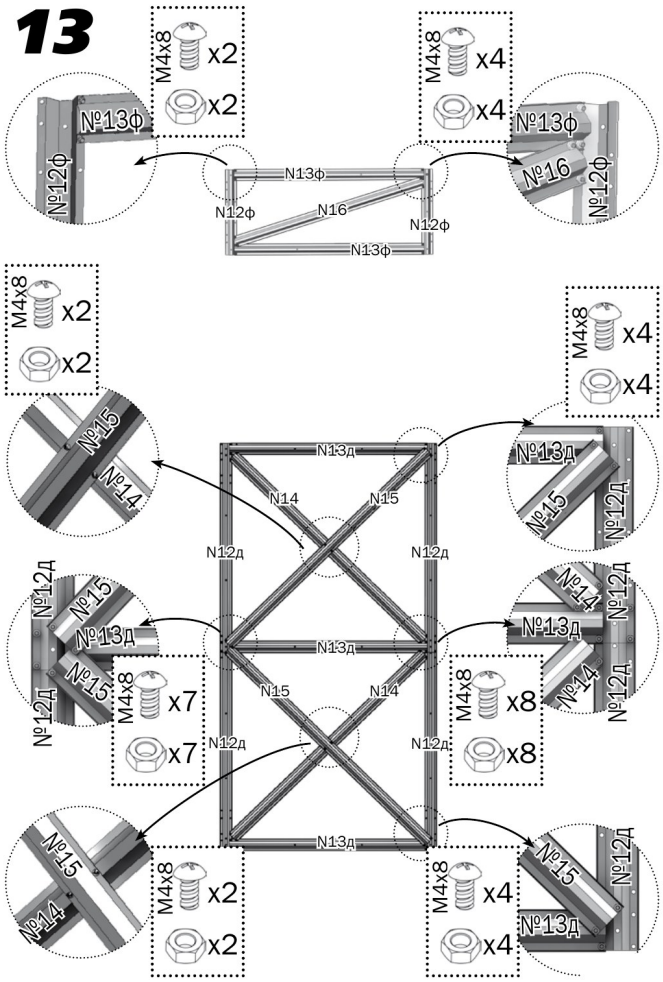


11. Fix the upper opening posts (№9-2л and №9-2п) at the top to the upper purlins (№2в) – 1 M4x8 screw and 1 nut on each side.



12. Fix the brackets (№19) to the end arches of the end wall (№4вк, №4нкл, №4нкп) with M4x8 screws and nuts – 4 per end wall.

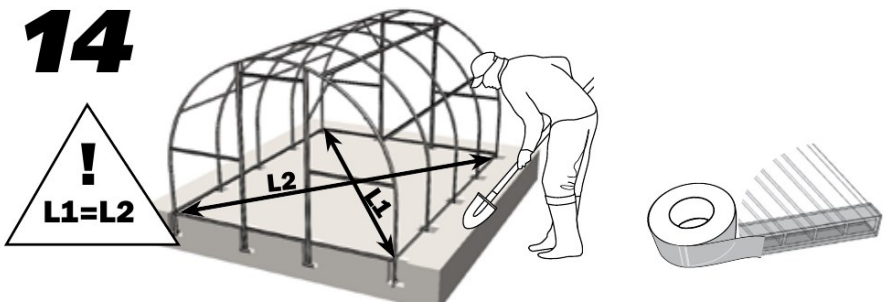
Doors and vent windows



13. Assemble the vent windows: vertical profiles (№12ф), horizontal profiles (№13ф) and diagonal (№16).

Assemble the doors: vertical profiles (№12д), horizontal profiles (№13д) and diagonals (№14 and №15). The number of M4x8 screws and nuts at each joint is shown in the figure.

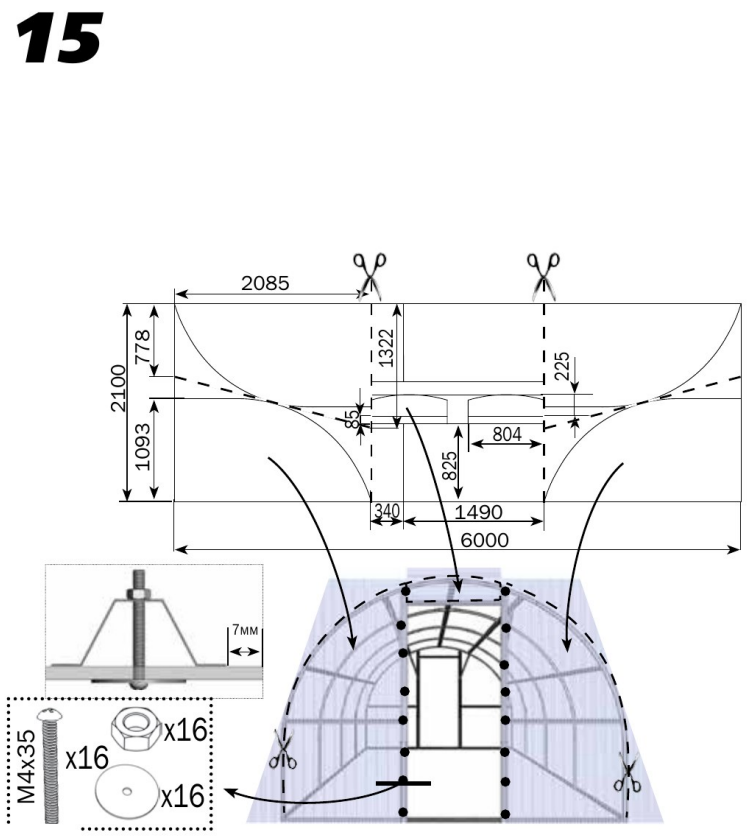
Installing the polycarbonate



14. Before covering, check that the diagonals of the frame are equal (L1 = L2) and tighten all screws.

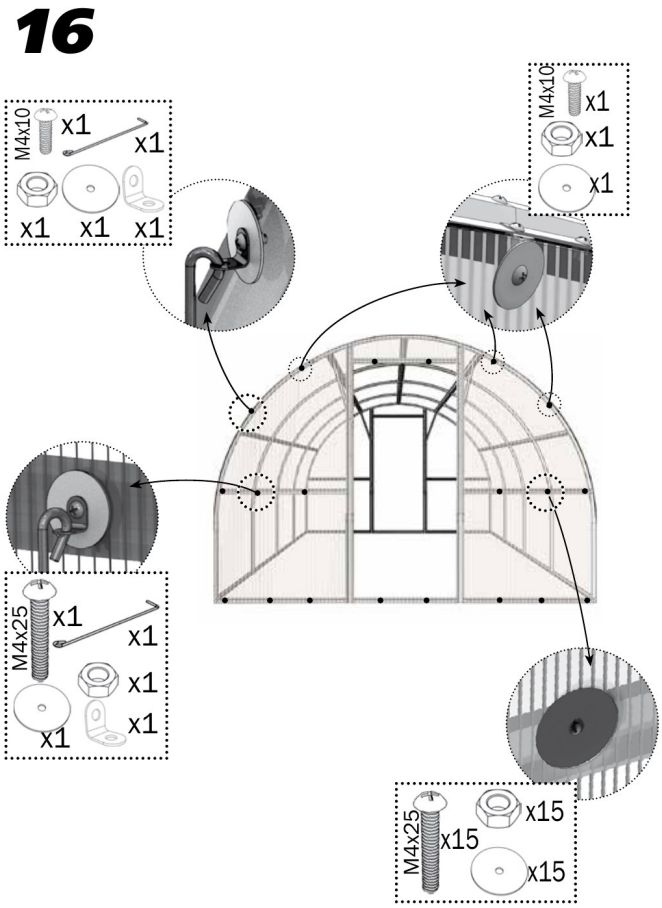
Seal the cut edges of the polycarbonate where the channels are open with adhesive tape (№32).

NOTE! Do not mix up the sides of the polycarbonate! The side with the UV-protective layer (the printed side) must face outwards; the other side is covered with a clear film and faces inwards. **Wear gloves when cutting the sheets!** We recommend cutting the sheets with a jigsaw, a fine-toothed hand saw or a sharp knife. The UV-protected side is usually marked on the transport film; the film on the other side is clear. Mark the UV-protected side on each piece before cutting – once the film is removed, the sides cannot be told apart. Remove the transport film from both sides immediately before fixing the sheet to the frame.

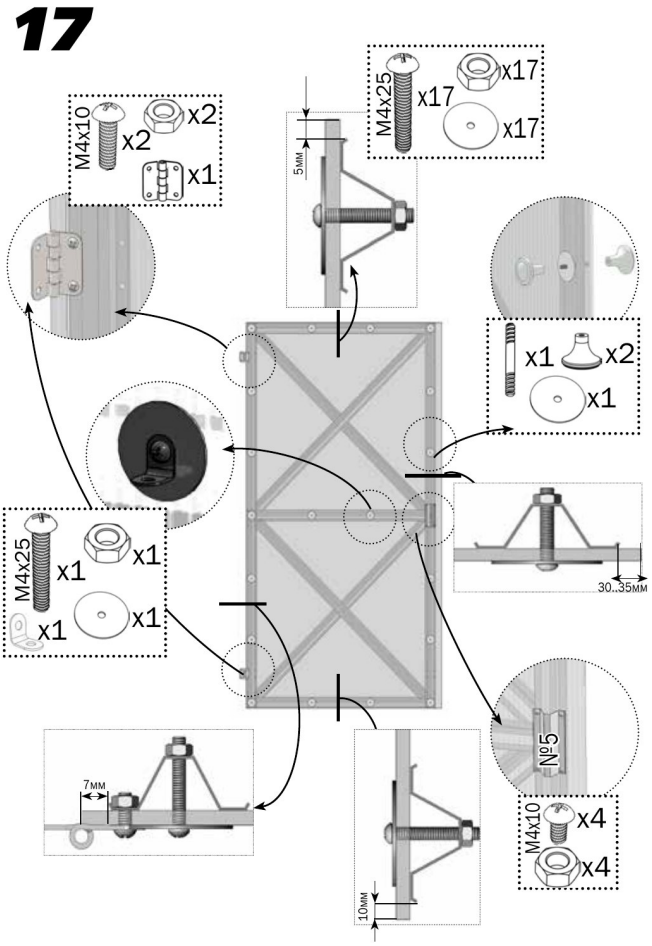


15. Cut the end-wall covering from a 2.1 x 6 m sheet according to the cutting diagram. **4 mm polycarbonate is used for the end walls.**

Fix the polycarbonate to the end-wall frame with M4x35 screws, nuts and washers (16 per end wall). Trim the parts protruding beyond the arches flush with the frame.

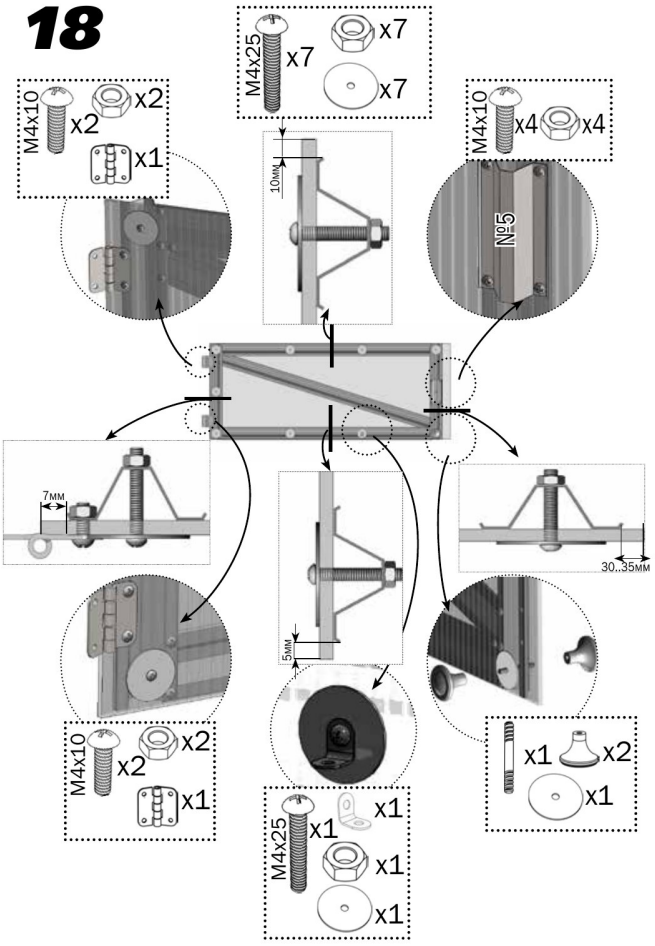


16. Fit the hooks for doors and vent windows (№17) and the hook brackets (№20) so that open doors and windows can be held in place. Fix the end-wall polycarbonate at the bottom with M4x25 screws, nuts and washers (15 pcs).

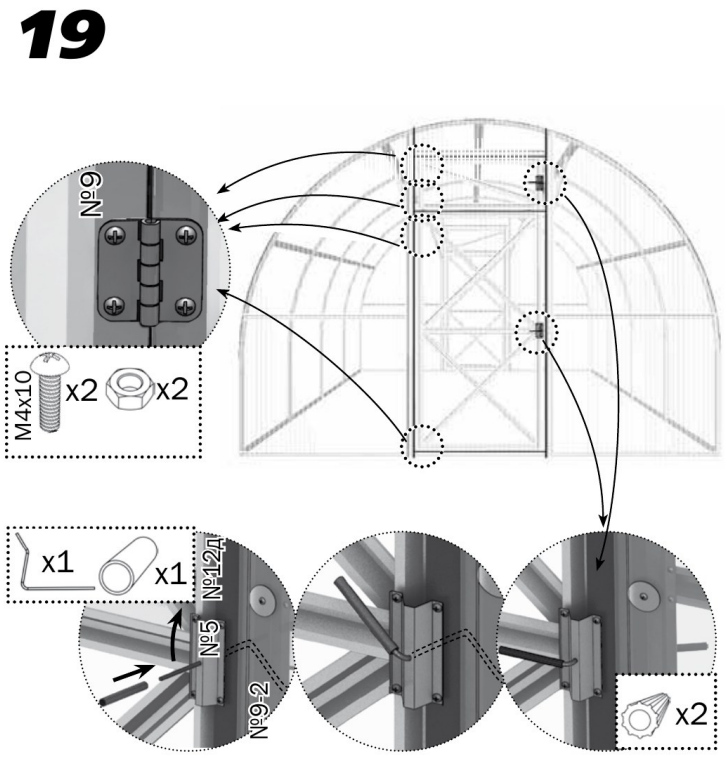


17. Cover the door with polycarbonate and fix the sheet with M4x25 screws, nuts and washers (17 pcs).

Fit the hinges (№21) with M4x10 screws, the knob handle (№24) with threaded rod (№25) and the latch (№22). Fit the turn plate (№5) with M4x10 screws. Keep the gaps shown in the figure (5 mm, 7 mm, 10 mm and 30–35 mm).

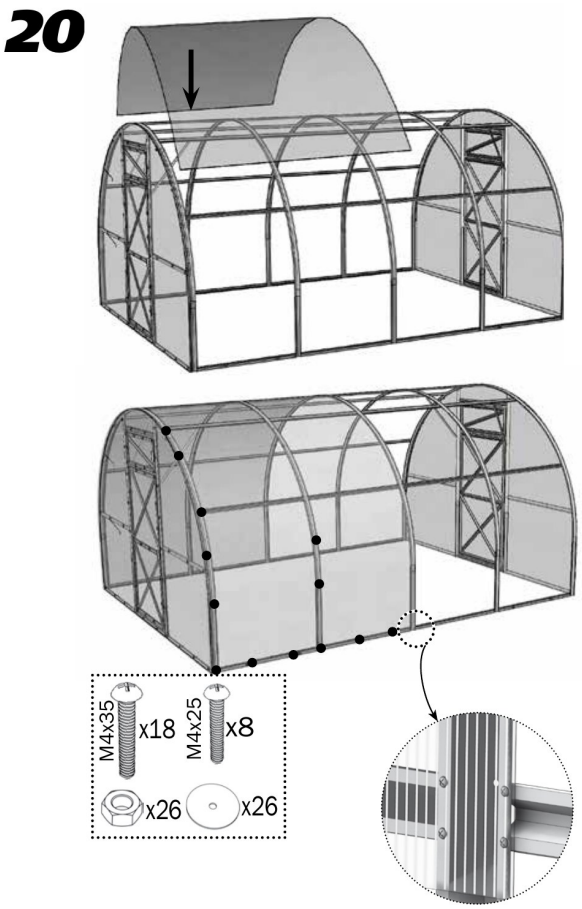


18. Cover the vent window with polycarbonate and fix the sheet with M4x25 screws, nuts and washers (7 pcs). Fit the hinges (№21), knob handle (№24) with threaded rod (№25), latch (№22) and turn plate (№5) in the same way as on the door.

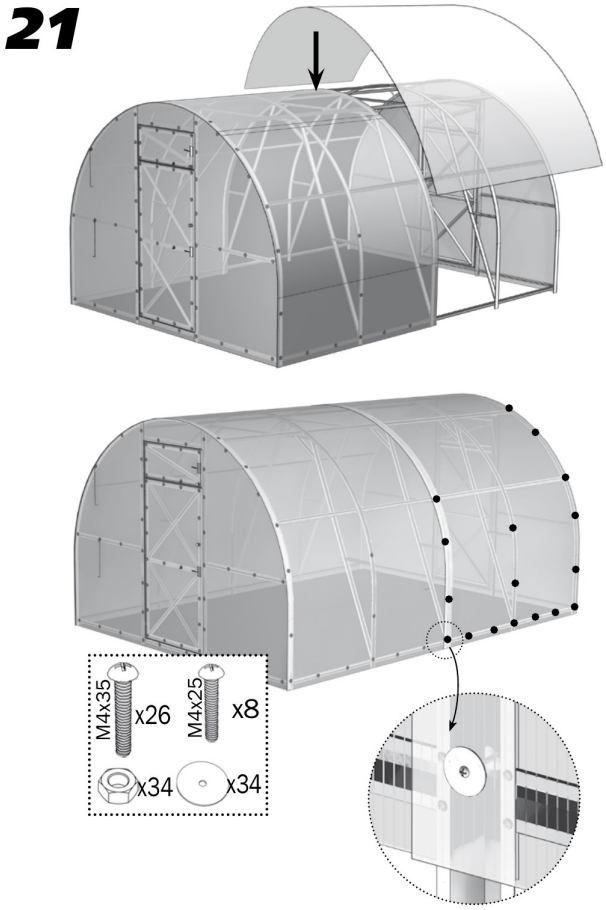


19. Hang the door and vent window on their hinges on the opening posts (№9) – 2 M4x10 screws and 2 nuts per hinge. Fit the latches and hooks as shown in the figure.

Covering the roof



20. The roof is covered with **whole 2.1 x 6 m polycarbonate sheets**, laid lengthwise over the arches. Fix the first sheet with M4x35 (18 pcs) and M4x25 (8 pcs) screws, nuts and washers (26 pcs) in the same way as on the end wall.



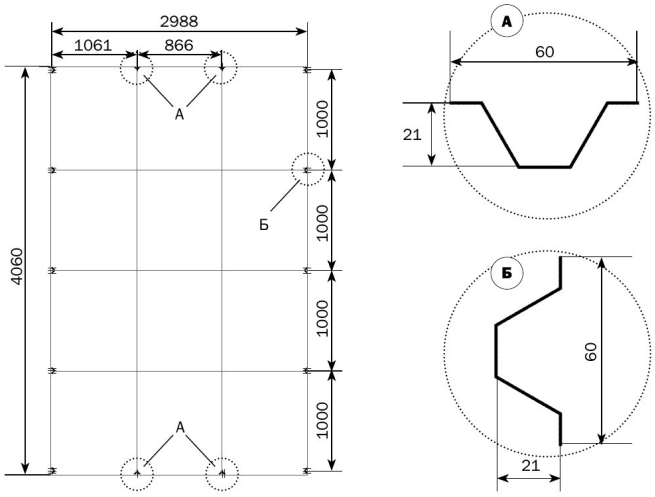
21. Lay the next sheet overlapping the previous one and fix it with M4x35 (26 pcs) and M4x25 (8 pcs) screws, nuts and washers (34 pcs). For each extension module, fit one sheet in the same way.

Installation on a foundation

The greenhouse can also be installed on a foundation. The figure shows the foundation dimensions for a 4 m greenhouse (2988 x 4060 mm), the post positions at 1 m spacing and the bracket profiles A and B.

For installation on a foundation





Foundation dimensions and fixing points

For more information and questions, please contact: **www.interbauen.ee** · **info@interbauen.ee**