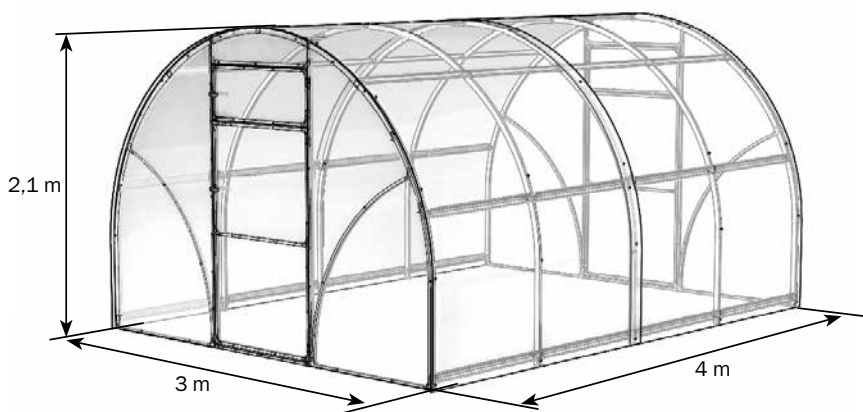




**Planta**  
GREENHOUSES

# **SIGMA 2021 EURO**

Cellular Polycarbonate Greenhouse



**Technical certificate**

p. 2-9

**Assembling manual**

p. 11-43



**! Perform assembling and operation of the greenhouse in strict accordance with the manual and operating rules stated in the technical certificate. Please keep this technical certificate for further reference.**

### Description

The greenhouse is intended to create a favorable microclimate for growing garden crops in allotments and kitchen gardens.

The greenhouse is available in different lengths depending on the buyer's choice. The required length of the greenhouse is attained by buying additional packages with extension inserts. Each insert lengthens the standard supply set of the greenhouse by 2 m. The length of the standard supply set is 4 m. The height of the installed frame of the greenhouse is 2.1 m.

The frame of the greenhouse is made of galvanized steel pipes and profiles. It is assembled with screws and nuts. The kit comprises everything needed for fixing the glazing. The complete set of the greenhouse includes the glazing at the request of the buyer.

### Operation rules

Before starting the operation, the greenhouse should be assembled and installed according to the instruction. When installing the greenhouse by third parties, the buyer should check the assembly quality for compliance with the instruction.

Do not install the greenhouse close to buildings and trees from which snow or ice may fall. The distance of at least 2 m is recommended.

The greenhouse is designed to withstand the wind speed no more than 24 m/s.

The maximum snow load for the framework occurs when the weight of a snow cover is 160 kg per 1 m<sup>2</sup> of the horizontal surface of the ground surface corresponding to 0.4 m packed snow layer. To increase the bearing capacity under the snow load of the frame of the entire greenhouse up to 360 kg/m<sup>2</sup>, arch reinforcement should be installed on each greenhouse arch, with the exception of the doorway arches (see para.24). The dismantling of the arch reinforcement from the greenhouse frame after the winter period is carried out using one bolted connection.

It is necessary to avoid exceeding the snow load on the greenhouse: either to remove snow from the greenhouse after each snowfall, or remove the greenhouse glazing for winter.

### Cleaning and washing sheets of polycarbonate

1. Rinse the sheet with warm water.
2. Wash the sheet with a solution of mild soap or with a household detergent and warm water, using a soft rag or a sponge to remove dirt.
3. Rinse with cold water and wipe with a soft cloth.

Never use abrasives or highly alkaline cleaning compositions for cleaning polycarbonate sheets. Dry rubbing of the surface will damage the protective layer of the cladding and shorten its shelf life. Never rub the surface of polycarbonate sheets with brushes, metallic cloth or other abrasive materials.

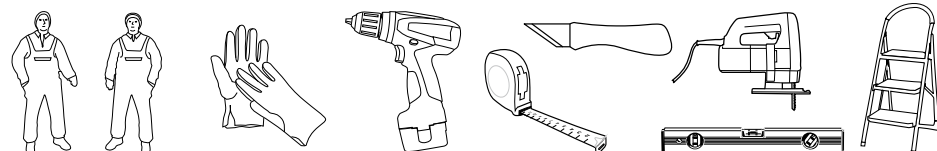
When disinfecting the greenhouse from pathogens causing fungal and bacterial diseases, do not use «sulfur blocks» to avoid frame corrosion (blackening).

### Warranty liabilities



Term for making claims is 24 months from the day of purchase.

Warranty does not apply to cases of:



















1. Greenhouse installation in violation of instruction requirements
2. Violation of the rules of operation.
3. Inappropriate use of the greenhouse.
4. Deformation of the greenhouse as a result of ground movement.
5. Floods, hurricanes and other natural disasters.











## LIST OF PARTS FOR ASSEMBLY











GREENHOUSE	BOX 1	BOX 2	BOX EXTENTION
<p>SIGMA 3 m x 4 m BASELINE MODEL</p> 	+	+	-
<p>EXTENTION FOR GREENHOUSE 2m</p> 	-	-	+











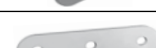










## STANDARD SUPPLY SET BOX 1














Nº	marking	denomination	q-ty. pcs
1	<b>1</b>	Leg 	10
2	<b>1-2</b>	End wall leg 	4
3	<b>2</b>	Purlin 	28
4	<b>8-2</b>	End wall corrugated connecting bar 	2
5	<b>8-1</b>	End wall connecting bar 	2
6	<b>9-2</b>	Doorway post for hinges 	2
7	<b>9-1</b>	Doorway post 	2
8	<b>10</b>	Doorway tie 	2
9	<b>12</b>	Door vertical element for hinges 	2
10	<b>12-1</b>	Door vertical element 	2
11	<b>12-2</b>	Window vertical element for hinges 	2
12	<b>12-3</b>	Window vertical element 	2
13	<b>13-1</b>	Door/window horizontal element 	6
14	<b>13</b>	Door horizontal element medium 	2
15	<b>13-2</b>	Window horizontal element 	2
16	-	Profile L=1050 mm 	4
17	-	Profile L=1000 mm 	4
18	<b>y1</b>	Door lining 	2

Nº	marking	denomination	q-ty, pcs
19	<b>Y2</b>	Door lining 	2
20	<b>Y8</b>	Door lining 	2
21	<b>Y9</b>	Door lining 	2
22	<b>Y10</b>	Window lining 	2
23	<b>Y12</b>	Window lining 	2
24	<b>Y7</b>	Window lining 	4
25	<b>O.2</b>	Stand bottom 25x25 	3
26	<b>O.1</b>	Stand 20x20 	3

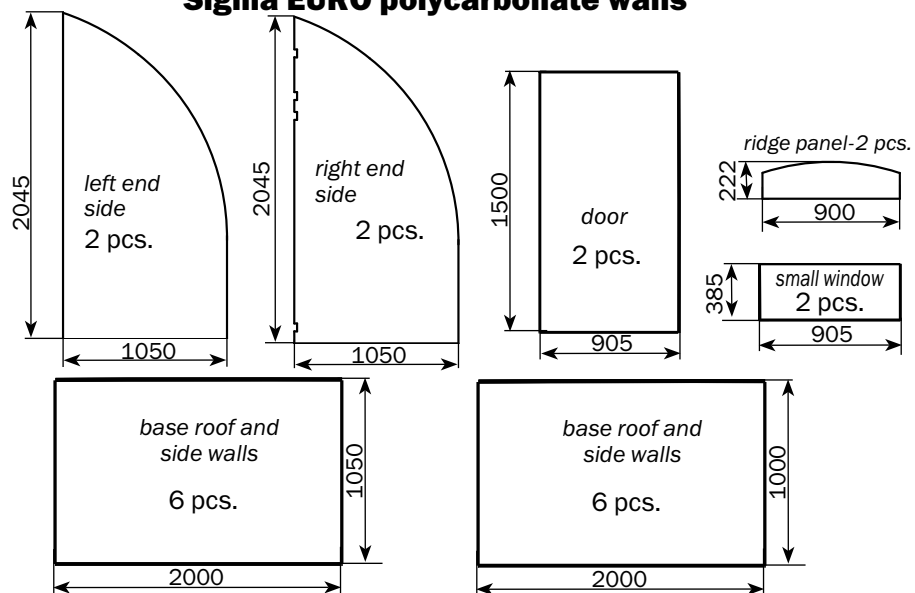
### BOX 2

Nº	marking	denomination	q-ty, pcs
27	<b>4T</b>	End wall arch 	4
28	<b>4BT</b>	Upper end wall arch 	2
29	<b>4HT</b>	Lower end wall arch right 	2
30	<b>4HT-1</b>	Lower end wall arch left 	2
31	<b>4B</b>	Upper arch 	3
32	<b>4H</b>	Lower arch 	6
33	-	Inner clamp 	21
34	-	Outer clamp 	21
35	-	End wall clamp 	14
36	-	Bracket 	3




























Nº	marking	denomination	q-ty, pcs
37	-	Coupler 	3
38	-	40x20 clamp 	12
39	-	40x20 clamp 	12
40	-	20x20 clamp 	24
41	-	20x20 angle clamp 	32
42	-	Hinge 	8
43	-	Handle kit 	4
44	<b>3</b>	Support 	14
45	-	Handle bushing 	4
46	-	Latch 	4
47	-	Stop bar 	4
48	-	Door holder kit (hooks) 	4
49	-	Washer 10 	4
50	-	Adhesive tape 	1
51	-	Double-sided tape L=10 m 	1
52	-	M4x12 screw 	56
53	-	M4x25 screw 	16
54	-	M4x35 screw 	16
55	-	M5x30 screw 	34
56	-	M6x16 screw 	40
57	-	M6x30 bolt 	3

Nº	marking	denomination	q-ty, pcs
58	-	M6x60 bolt 	10
59	-	4.8x19 self drilling screw 	286
60	-	4.8x11 sharp-tipped screw 	4
61	-	32x4 washer 	16
62	-	M4 nut 	88
63	-	M5 nut 	40
64	-	M6 nut 	53
65	-	6 washer 	20
66	-	5 washer 	168
67	-	Top metal fastening band 	5
68	-	Bottom metal fastening band 	10
69	-	Angle bracket 	14
70	-	Self-tapping screw 	28

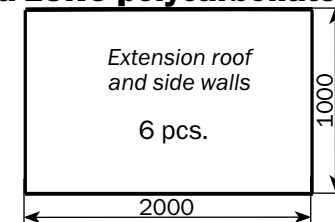
### Sigma EURO polycarbonate walls

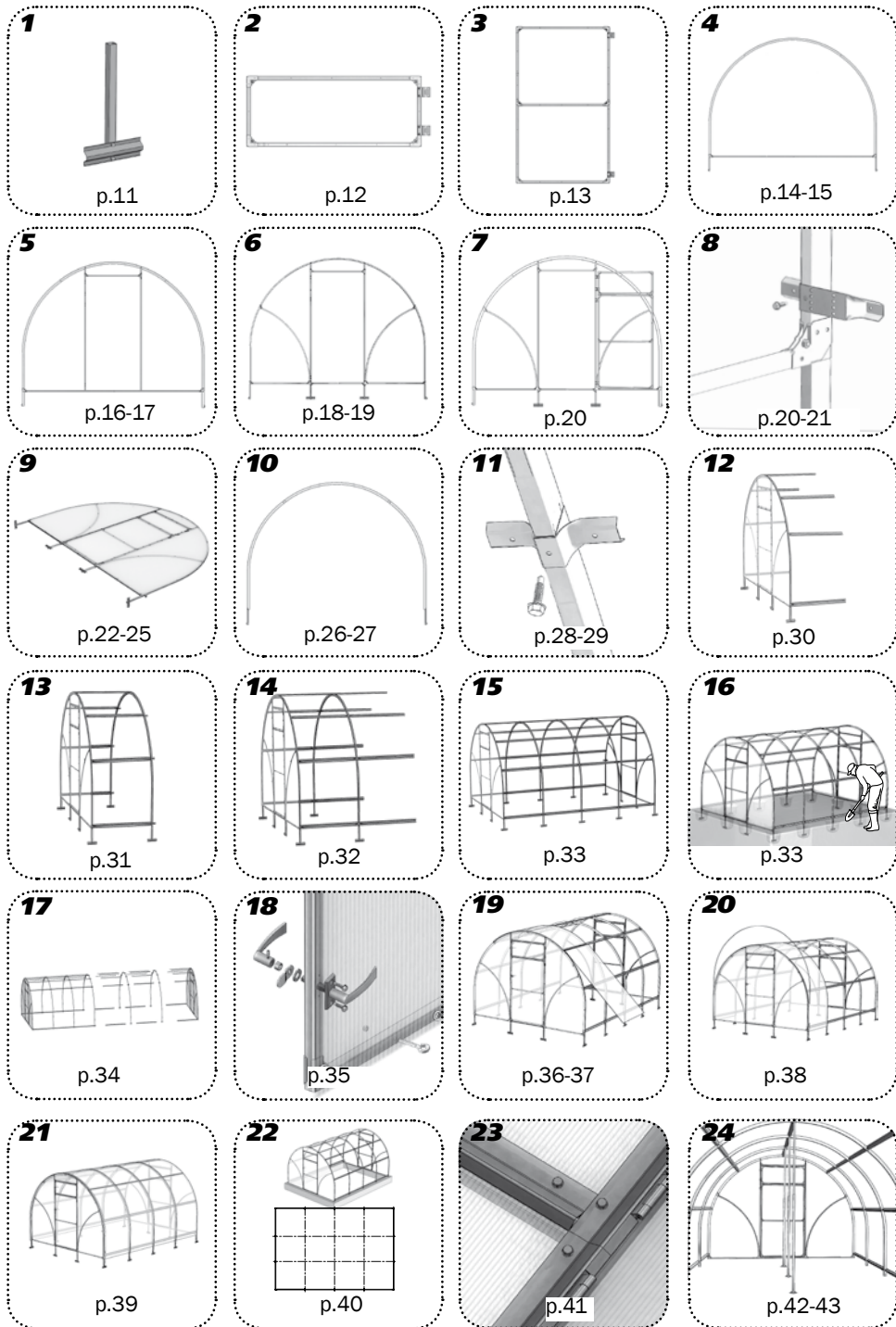


### BOX EXTENTION

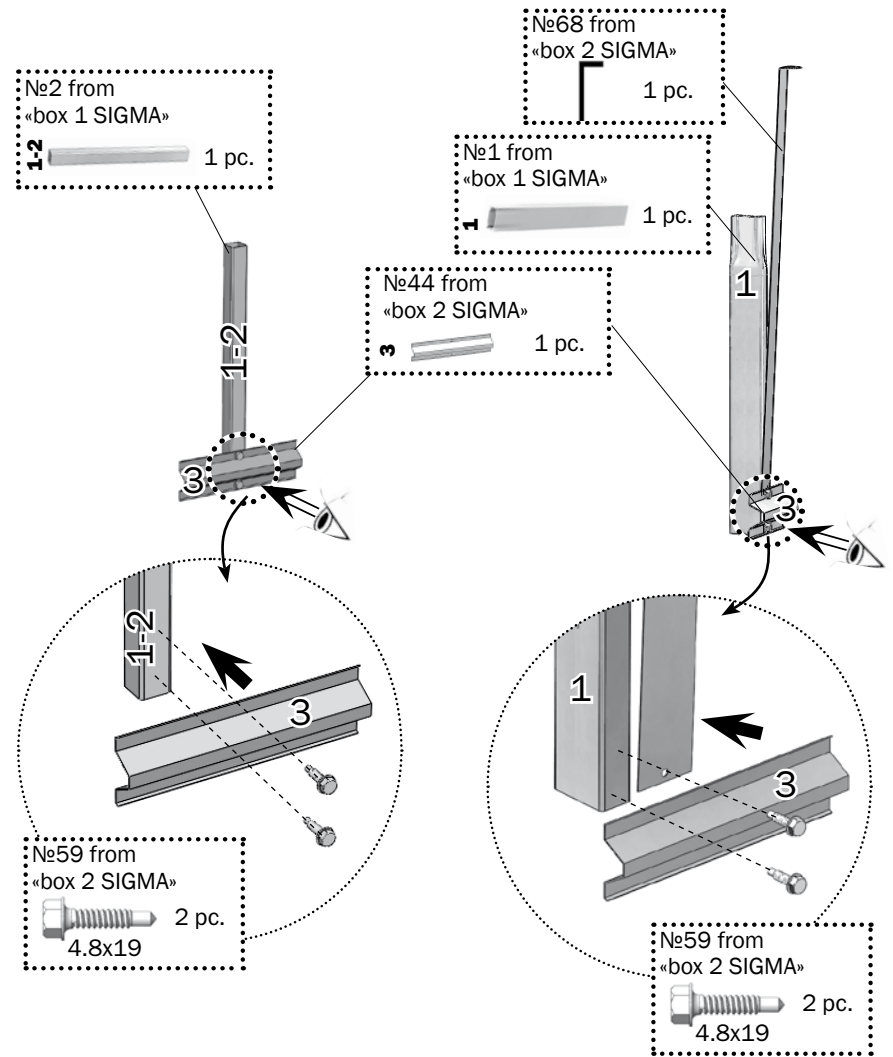
Nº	marking	denomination	q-ty, pcs
1	<b>4B</b>	Upper arch 	2
2	<b>4H</b>	Lower arch 	4
3	<b>1</b>	Leg 	4
4	<b>2</b>	Purlin 	14
5	<b>3</b>	Support 	4
6	-	Inner clamp 	14
7	-	Stand bottom 25x25 	2
8	-	Stand 20x20 	2
9	-	Bracket 	2
10	-	Coupler 	2
11	-	Outer clamp 	14
12	-	M4x12 screw 	28
13	-	M4x25 screw 	8
14	-	M4x35 screw 	8
15	-	M6x30 bolt 	2
16	-	M6x60 bolt 	4
17	-	M4 nut 	44
18	-	M6 nut 	6
19	-	32x4 washer 	8
20	-	4.8x19 self drilling screw 	44
21	-	6 washer 	8
22	-	Top metal fastening band 	2
23	-	Bottom metal fastening band 	4
24	-	Profile L-1000 mm 	4
25	-	Angle bracket 	4
26	-	Self-tapping screw 	8
27	-	Double-sided tape L=5 m 	1

### Sigma EURO polycarbonate walls

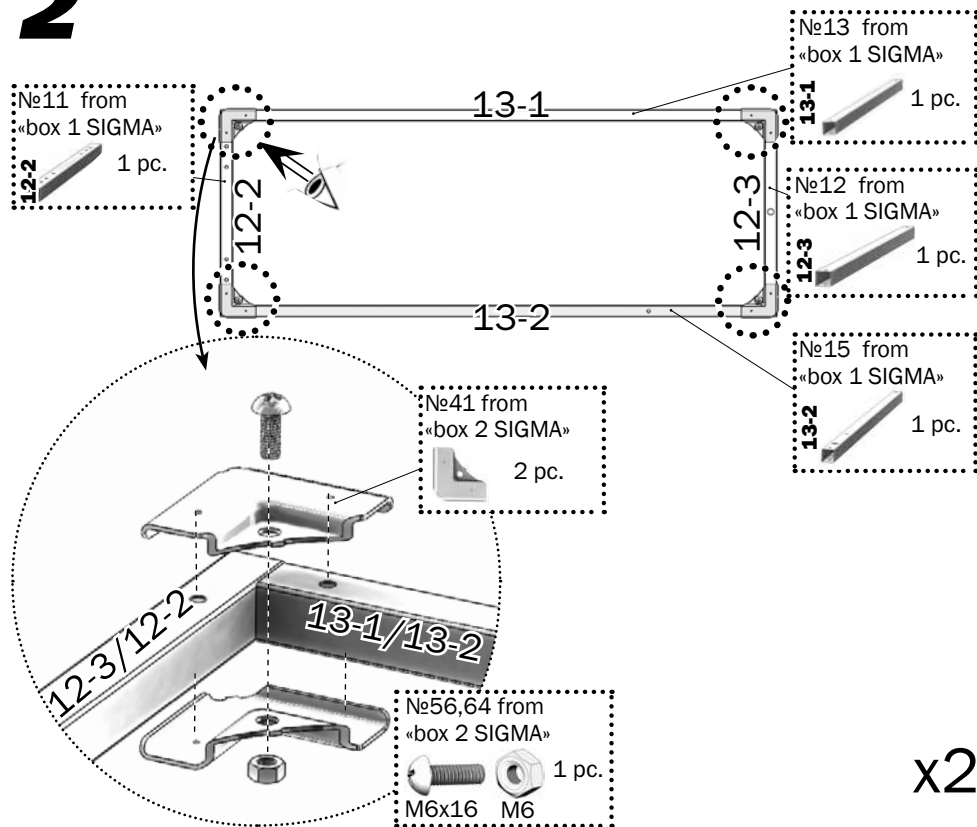




**1** If the greenhouse is mounted on a foundation (see para.22), the elements **1** and **3** are not assembled and are not mounted in the subsequent assembly.

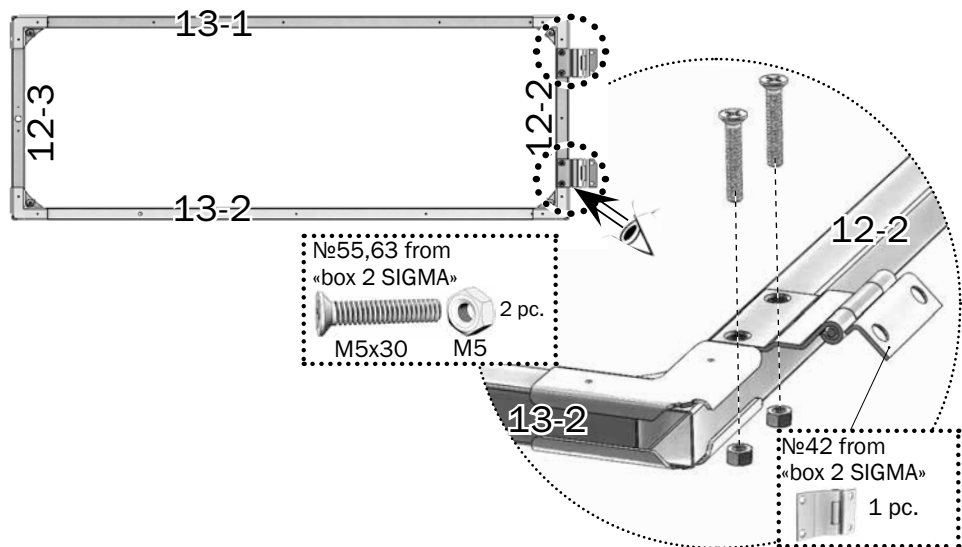


## 2 Inner side of the window. Perforation on the elements from the backside:

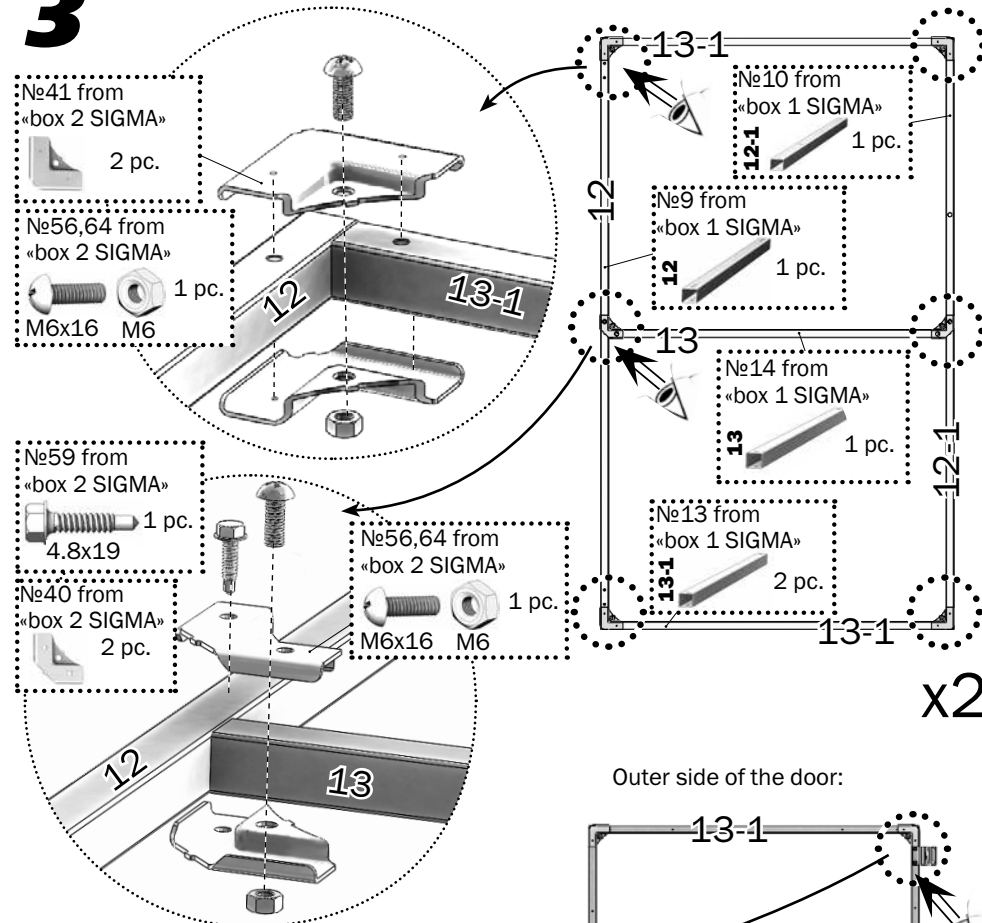


x2

### Outer side of the window:

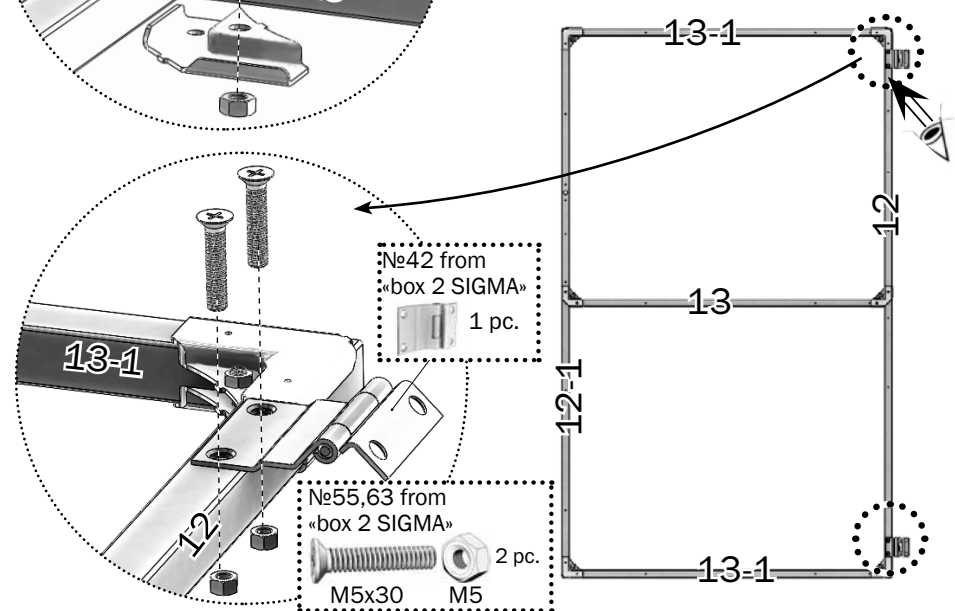


## 3 Inner side of the door. Perforation on the elements from the backside:

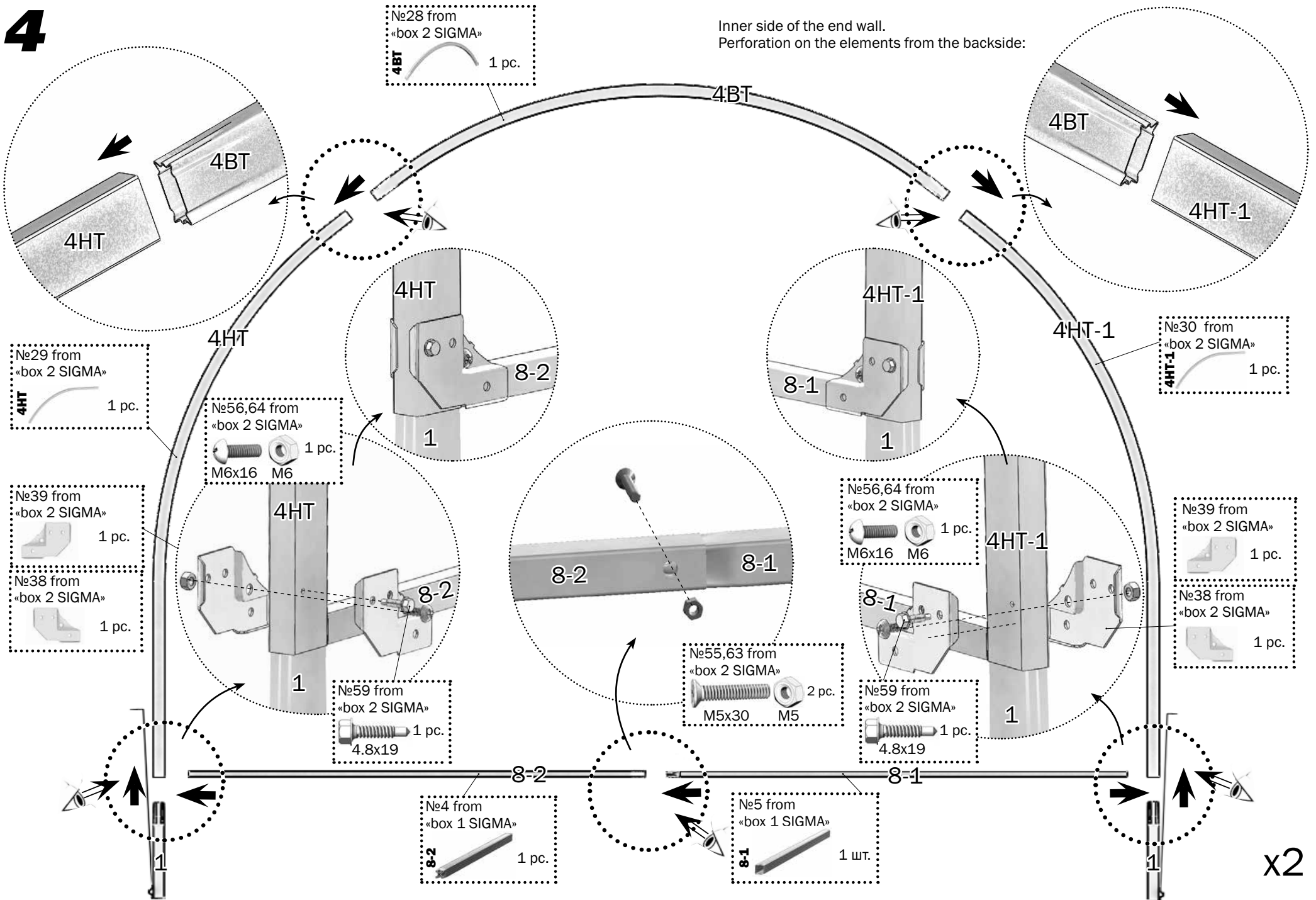


x2

### Outer side of the door:

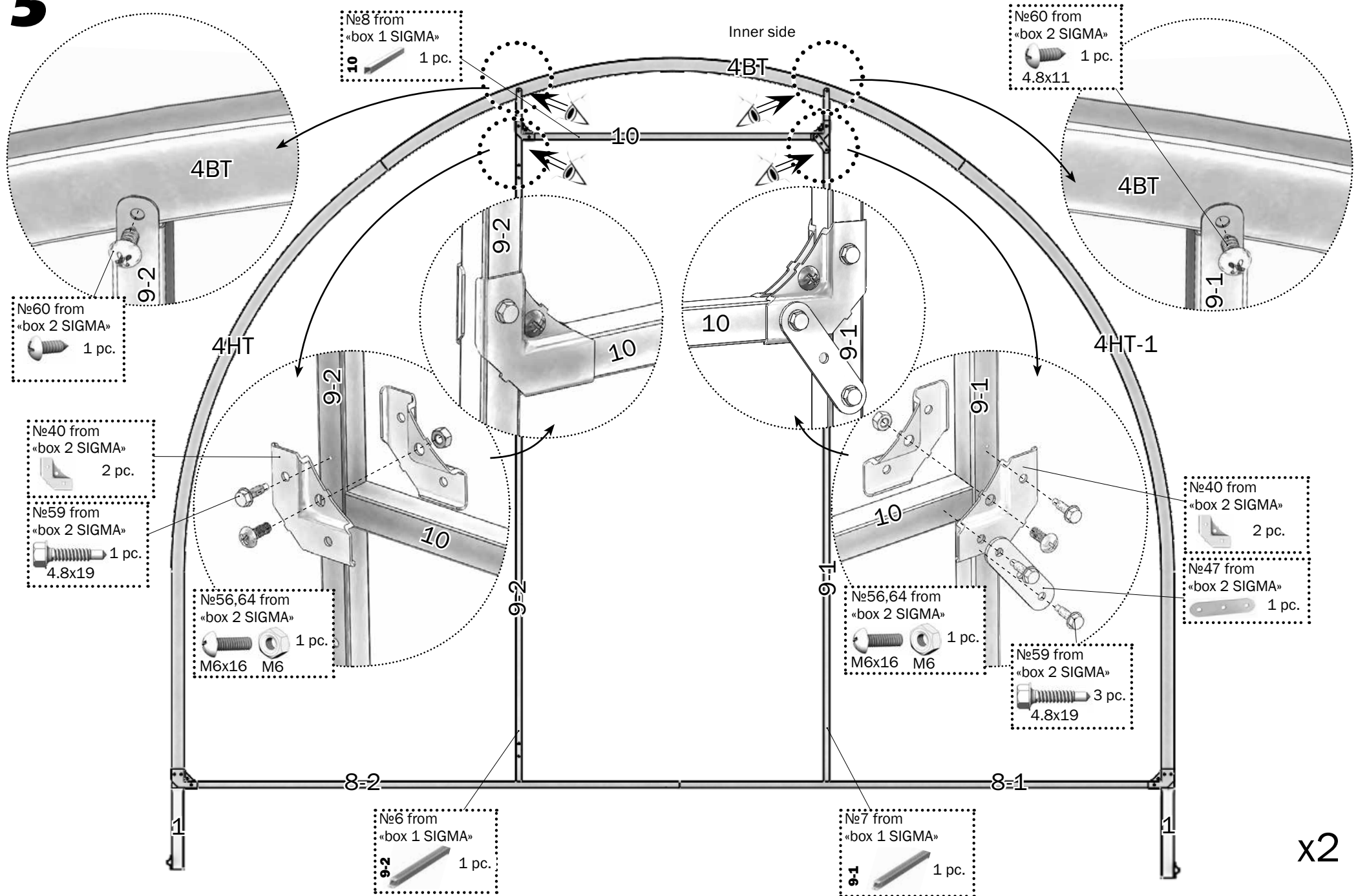


# 4





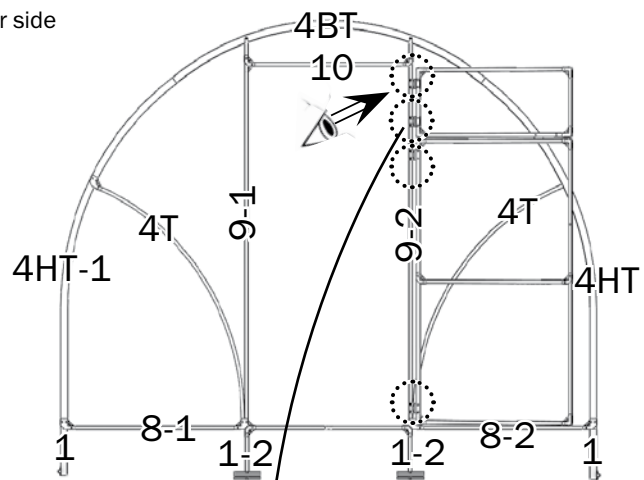
5



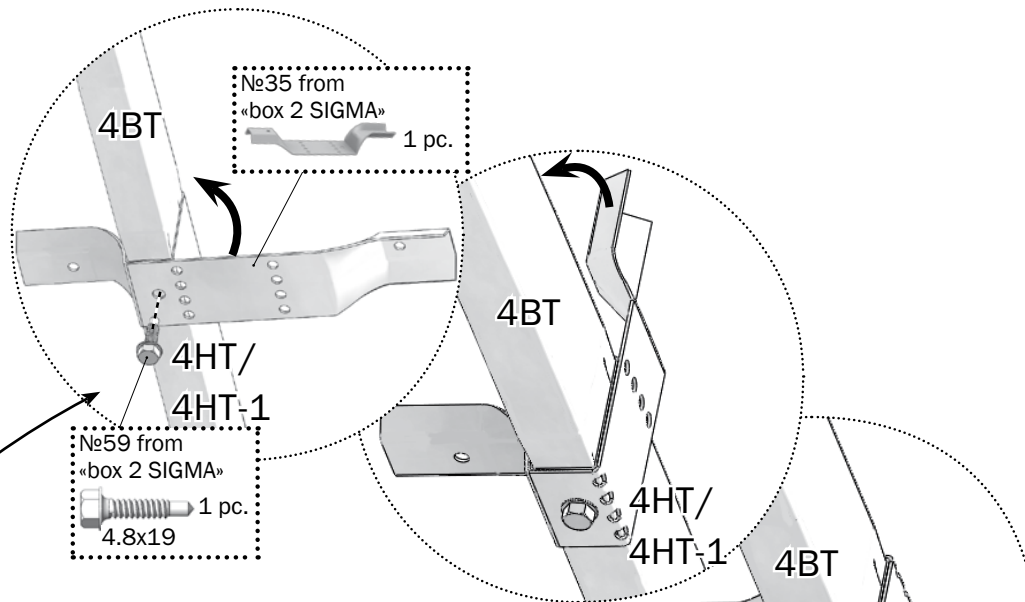


**7**

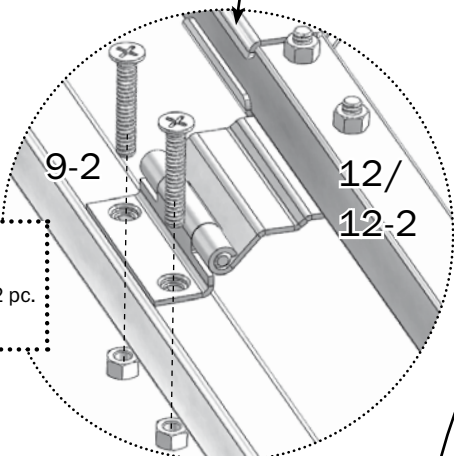
Outer side



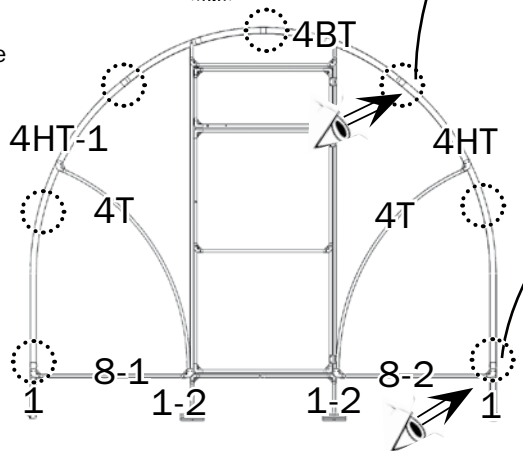
x2



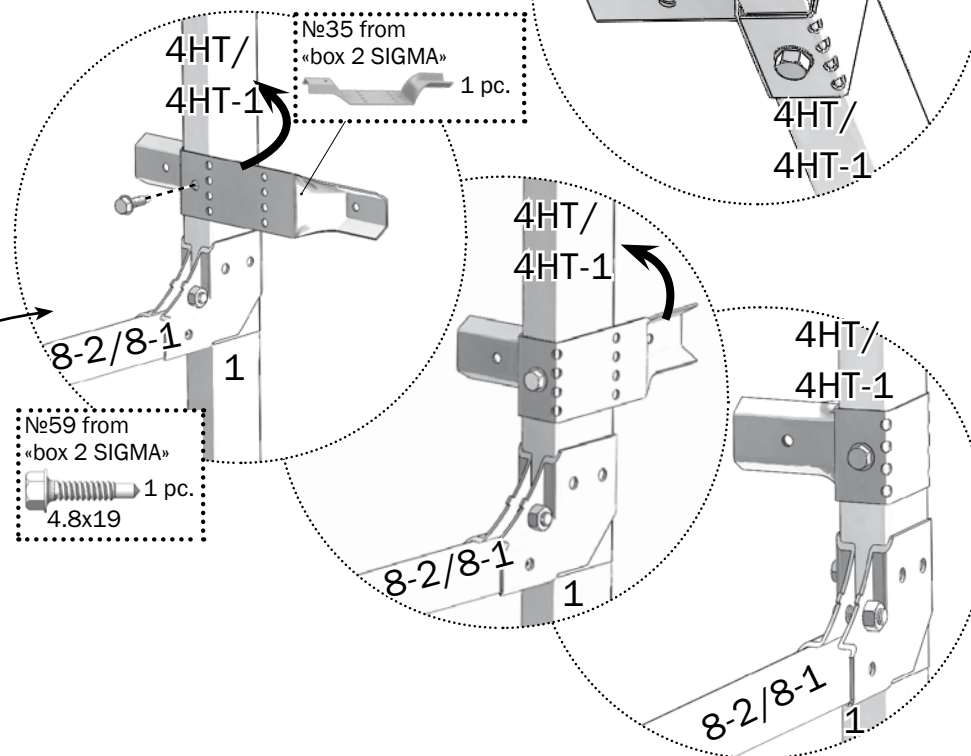
№55,63 from  
«box 2 SIGMA»  
2 pc.  
M5x30 M5

**8**

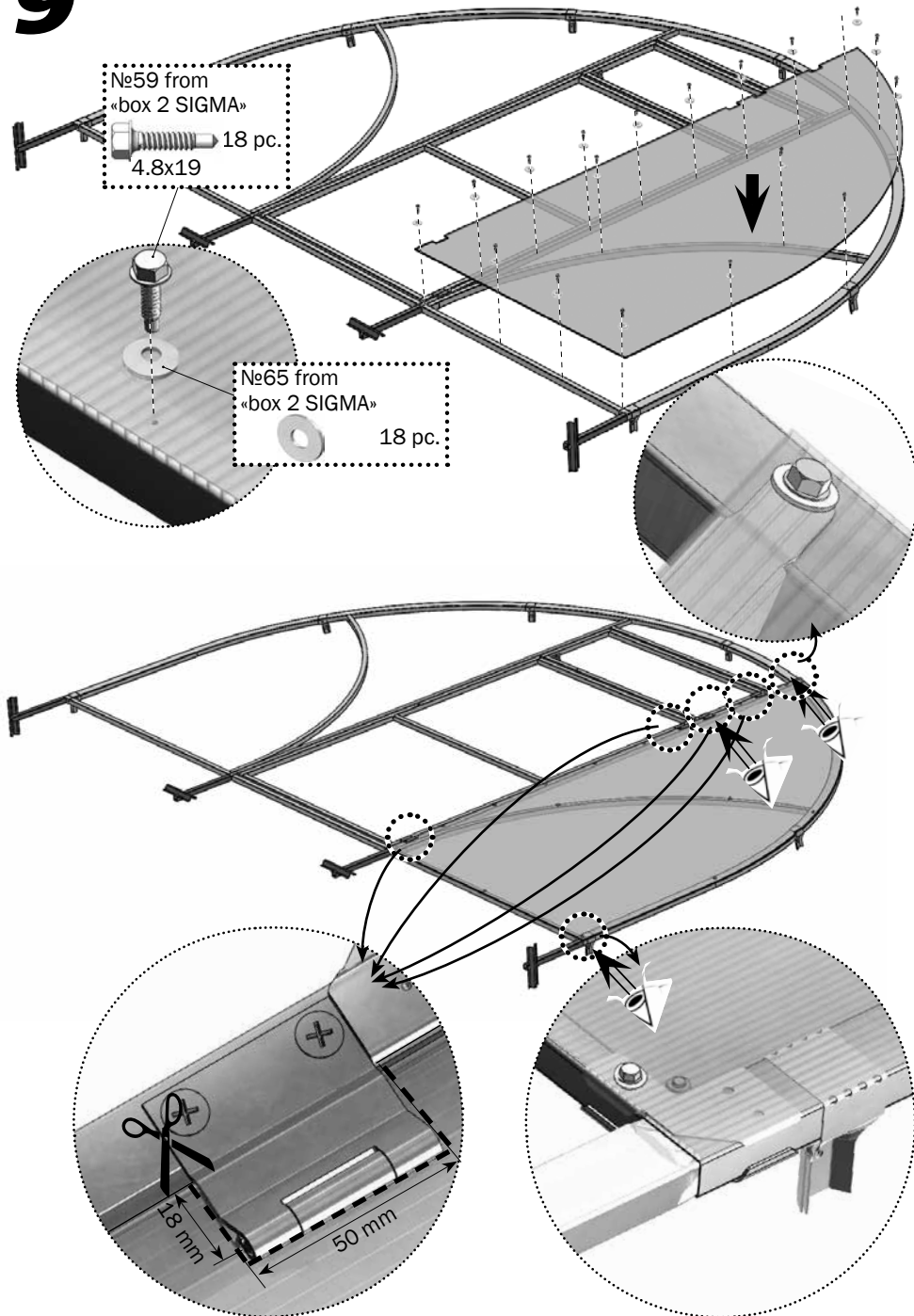
Outer side



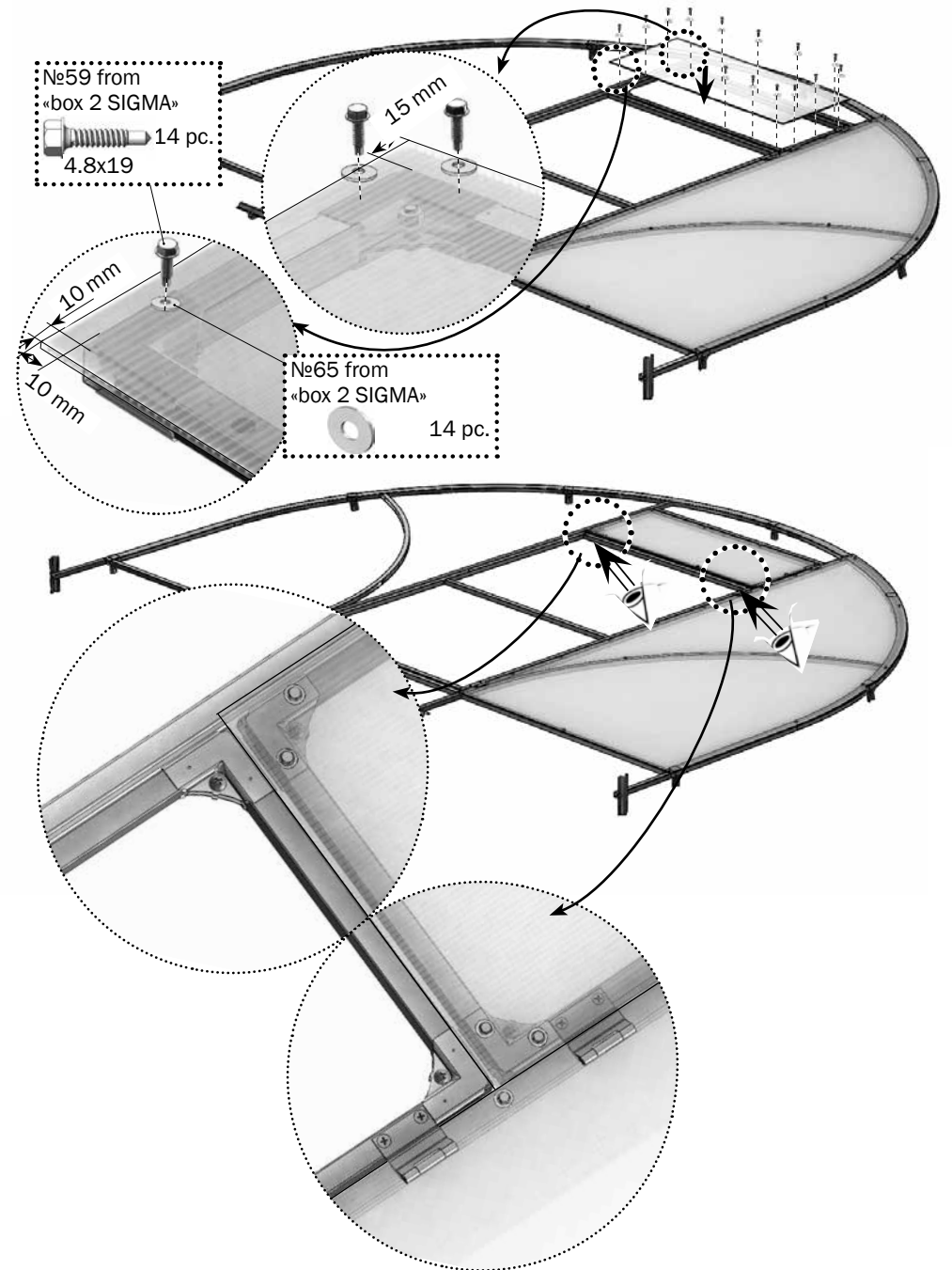
x2



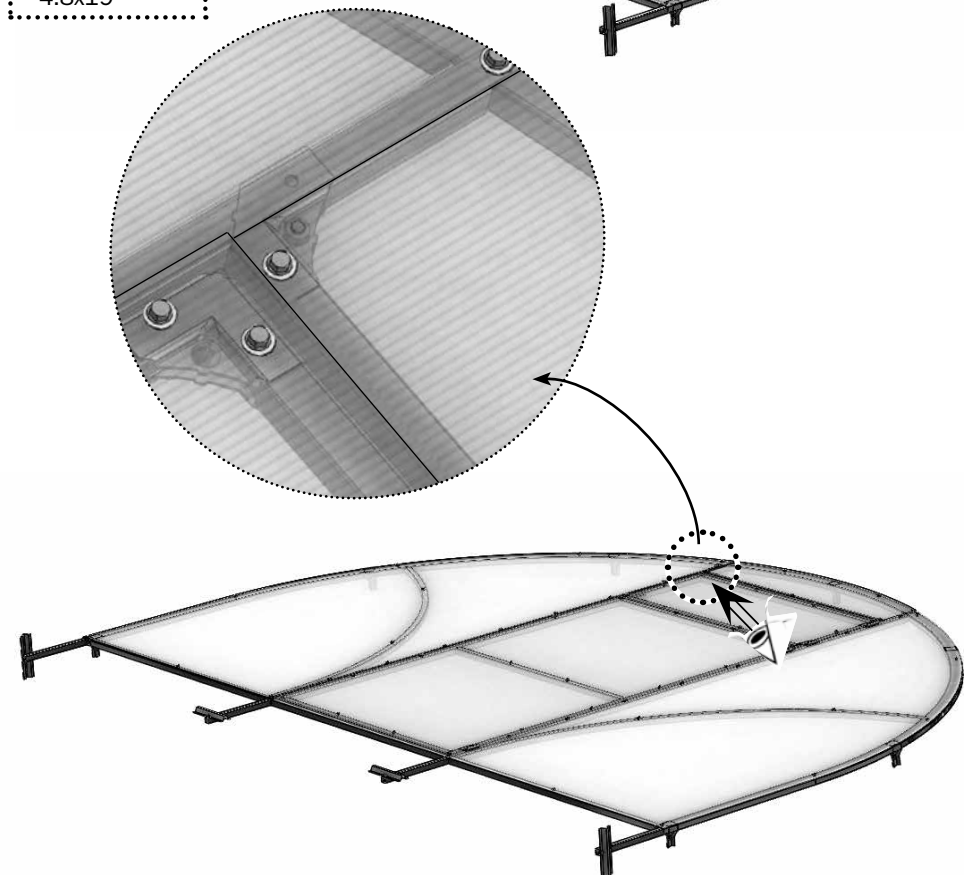
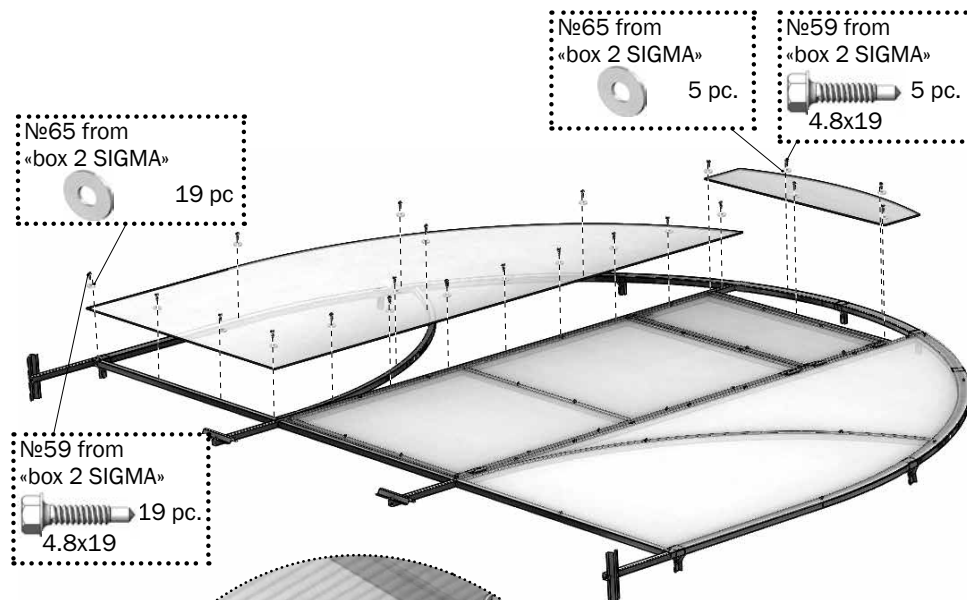
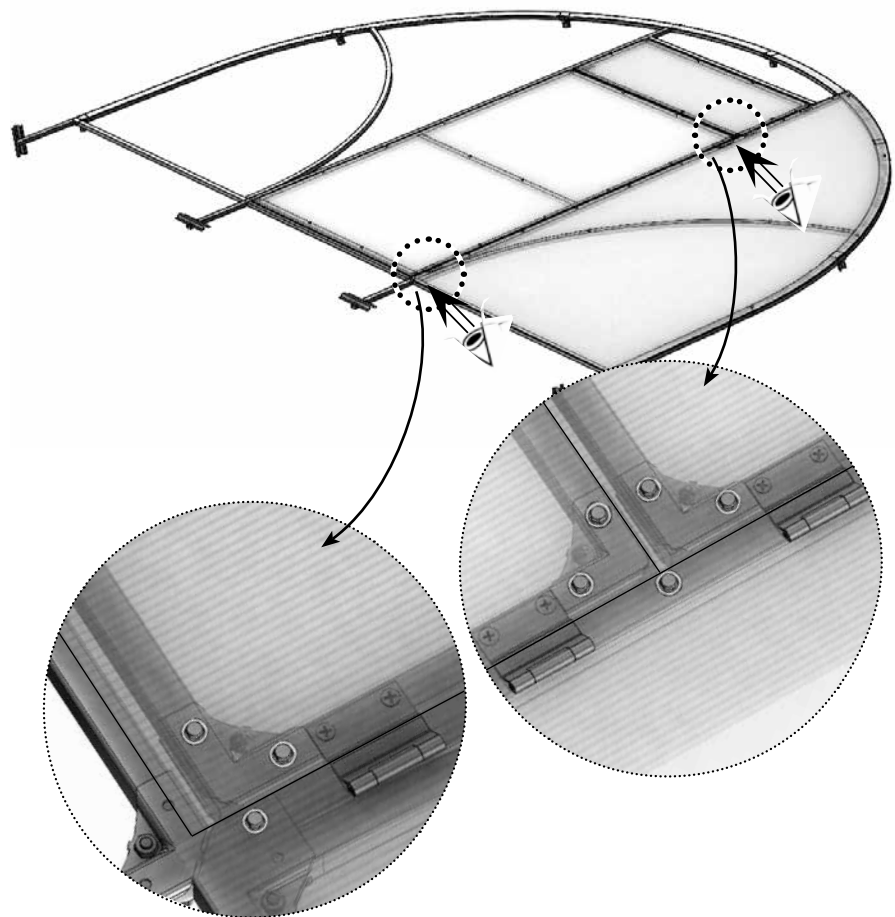
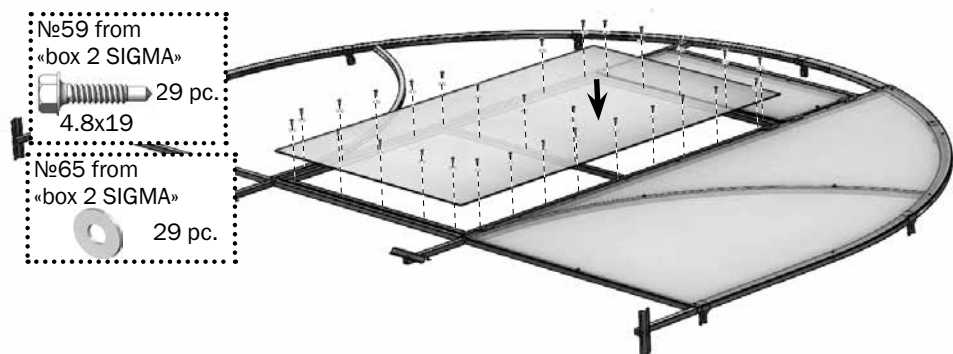
# 9



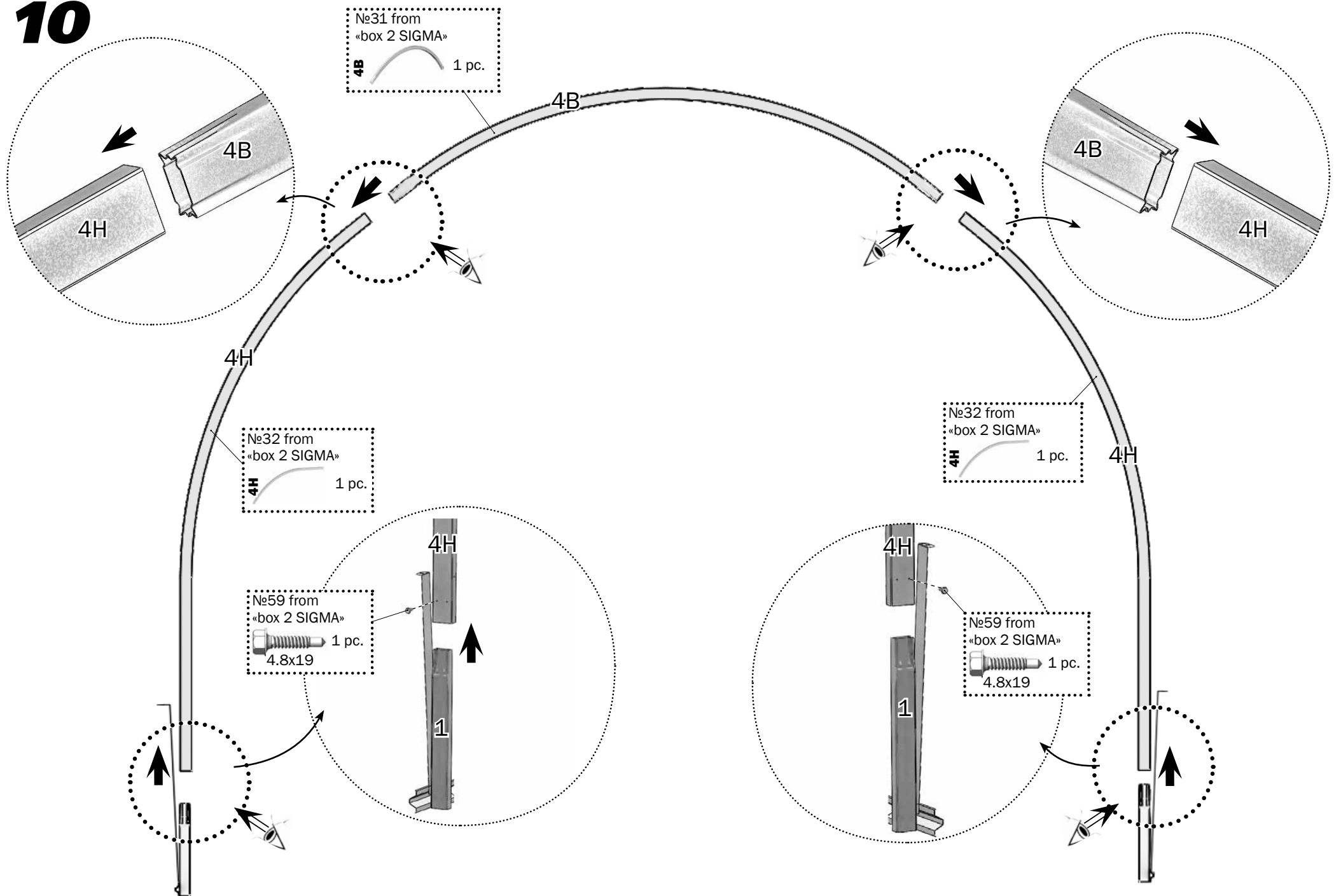
In case the decorative steel lining (seal) from the additional kit is installed on the doors and windows see para.23

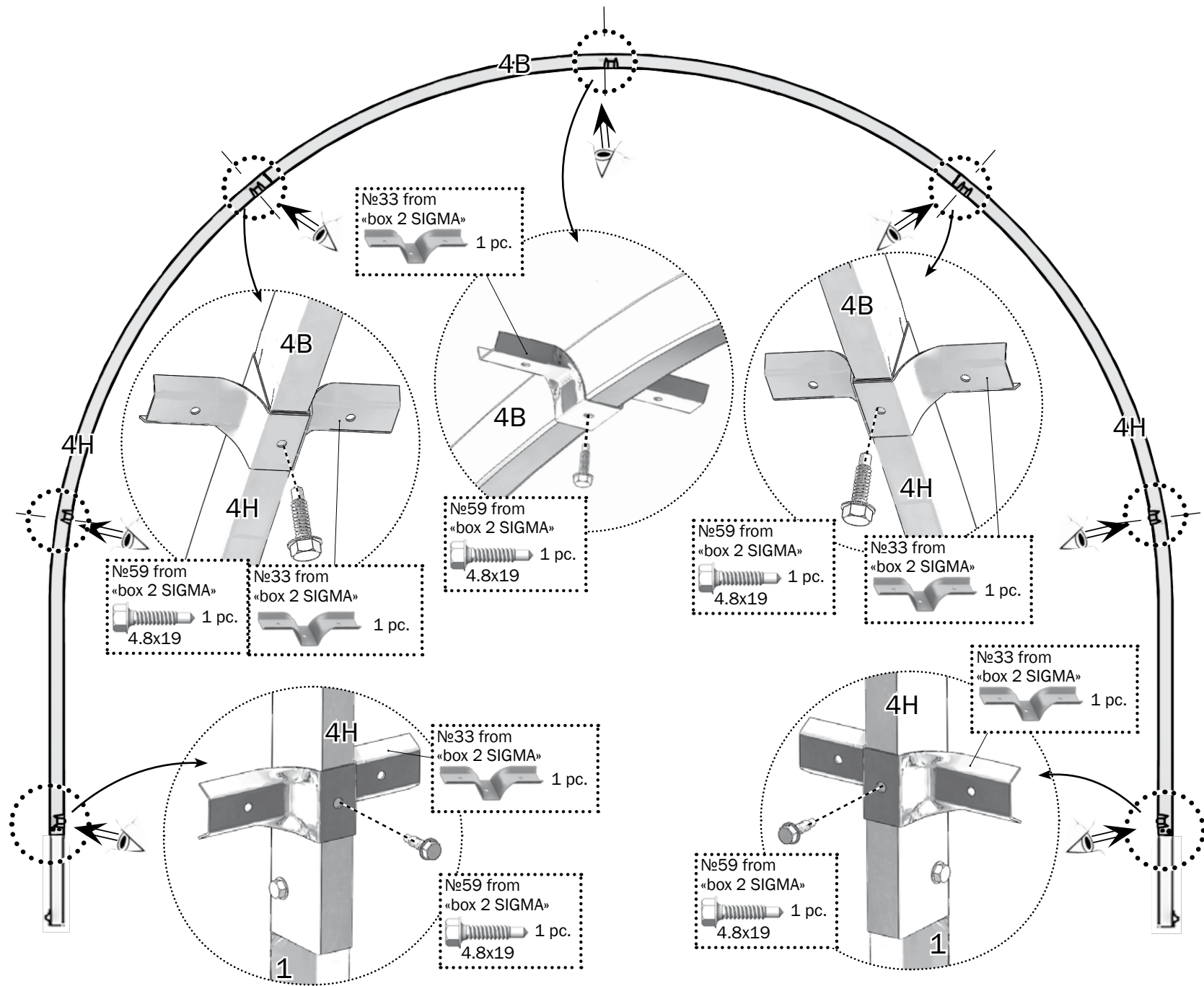


In case the decorative steel lining (seal) from the additional kit is installed on the doors and windows see para.23

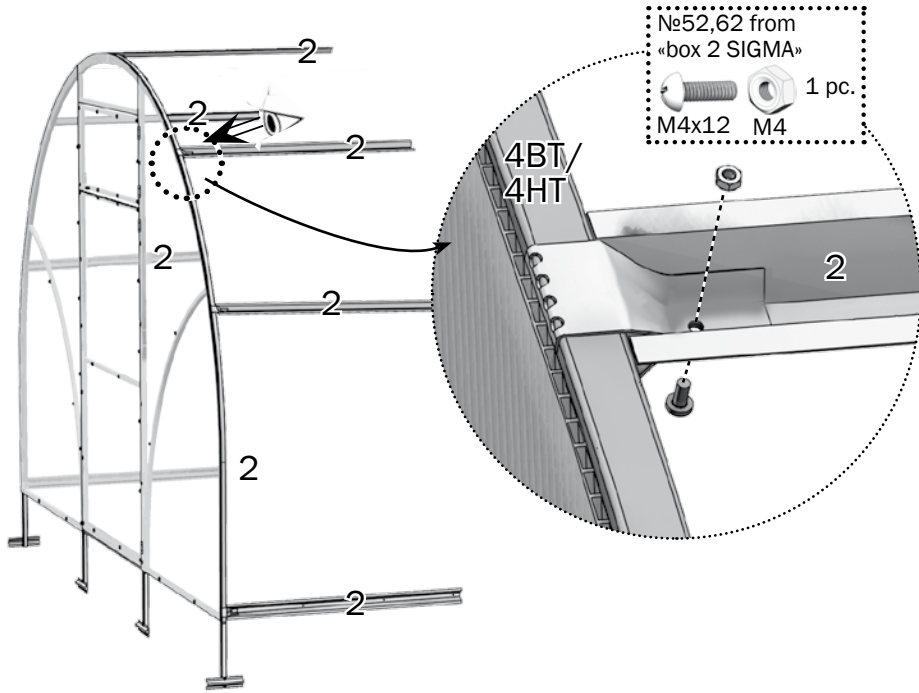
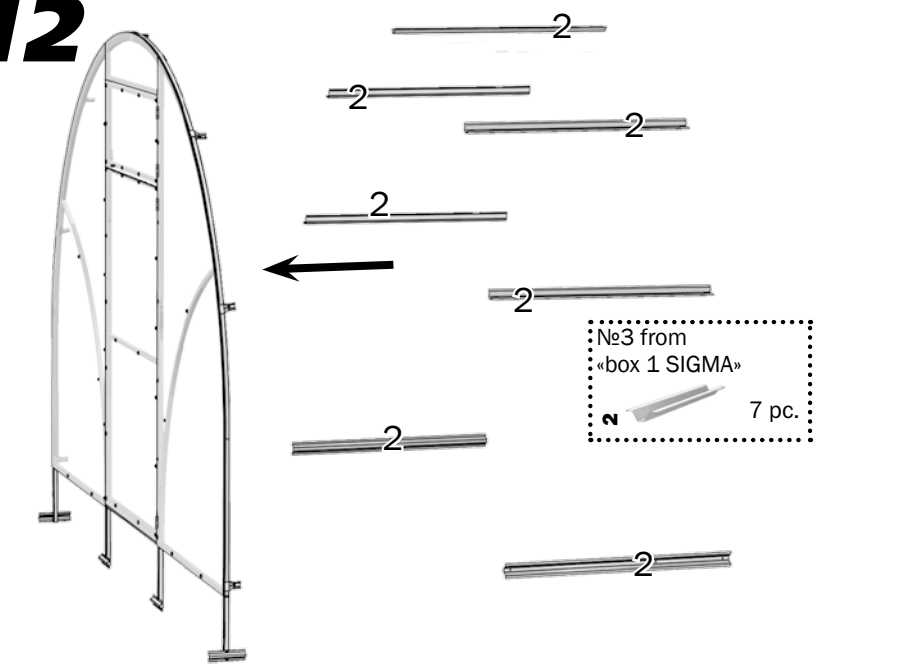


# 10

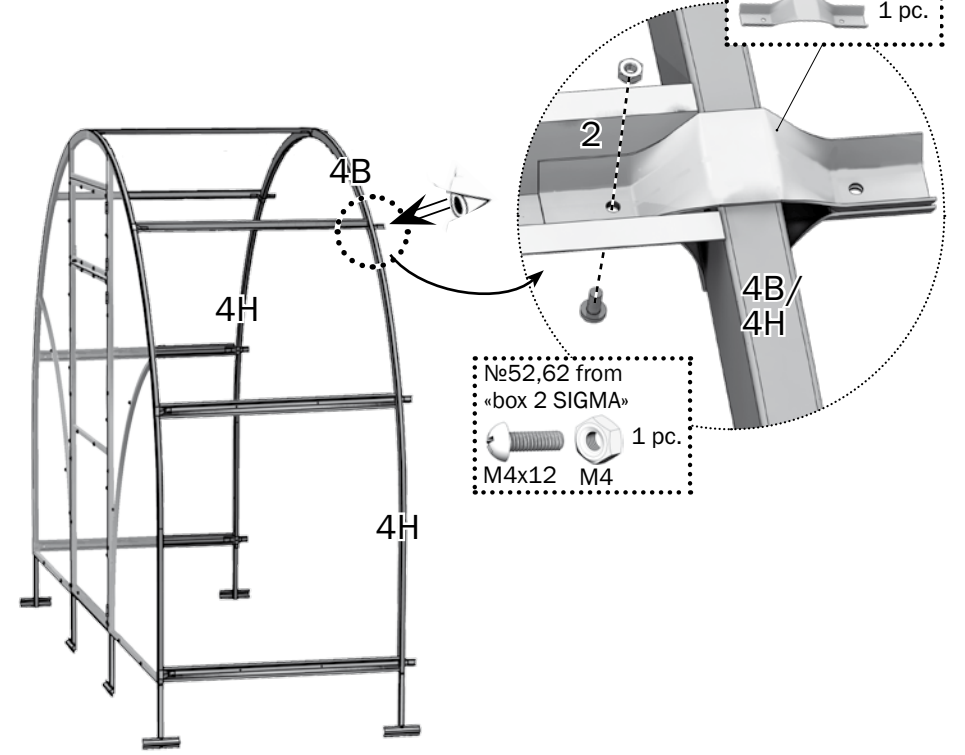
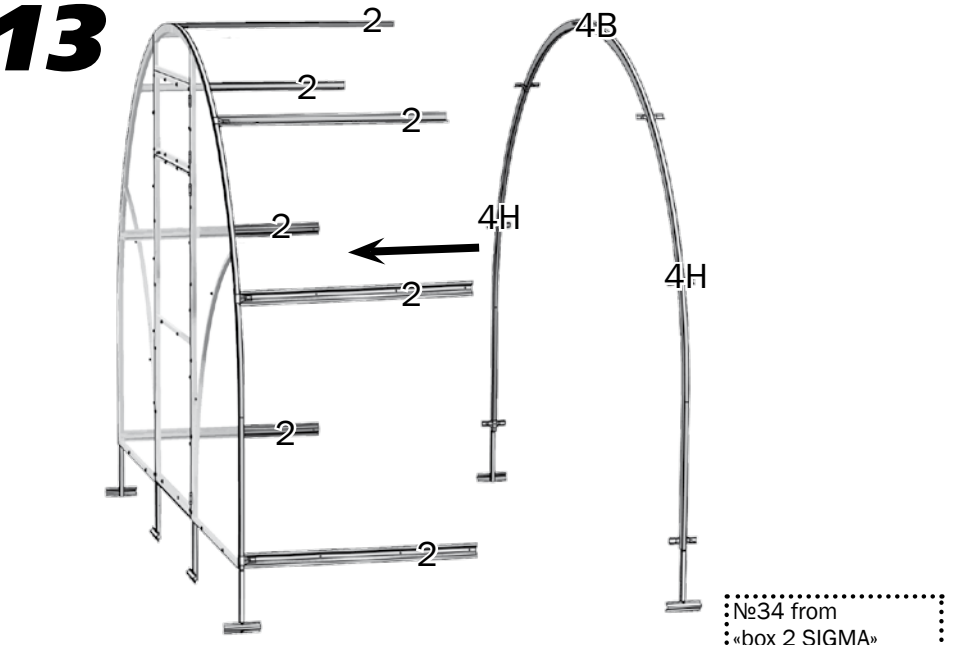




# 12

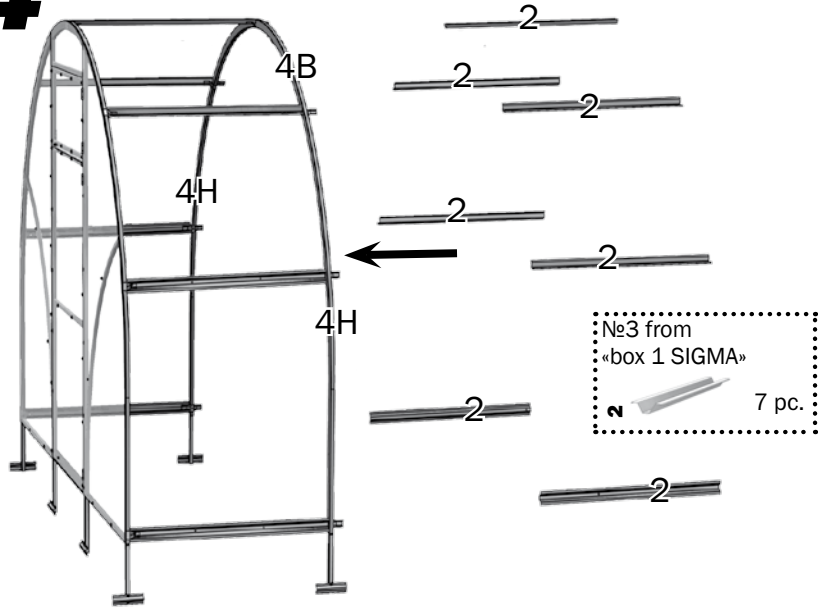


# 13

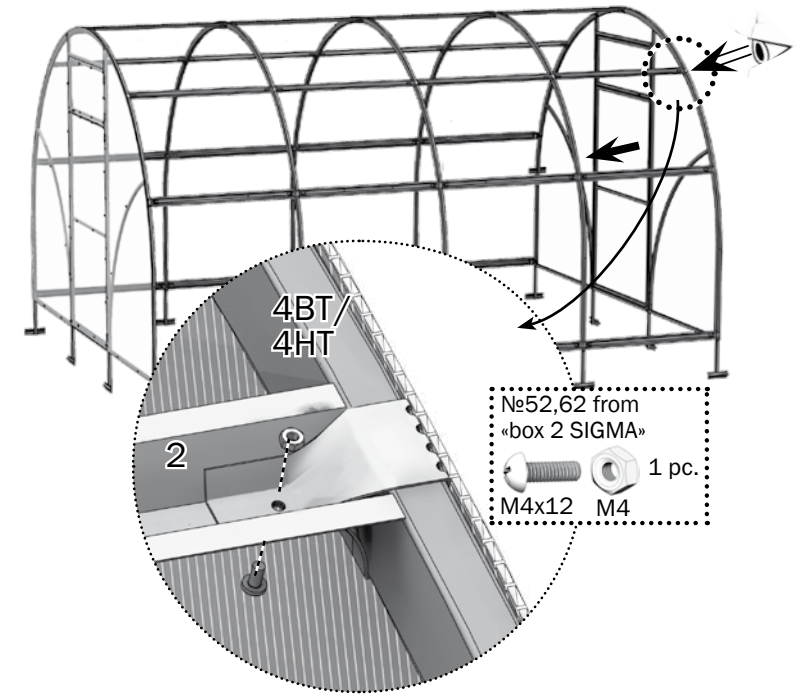




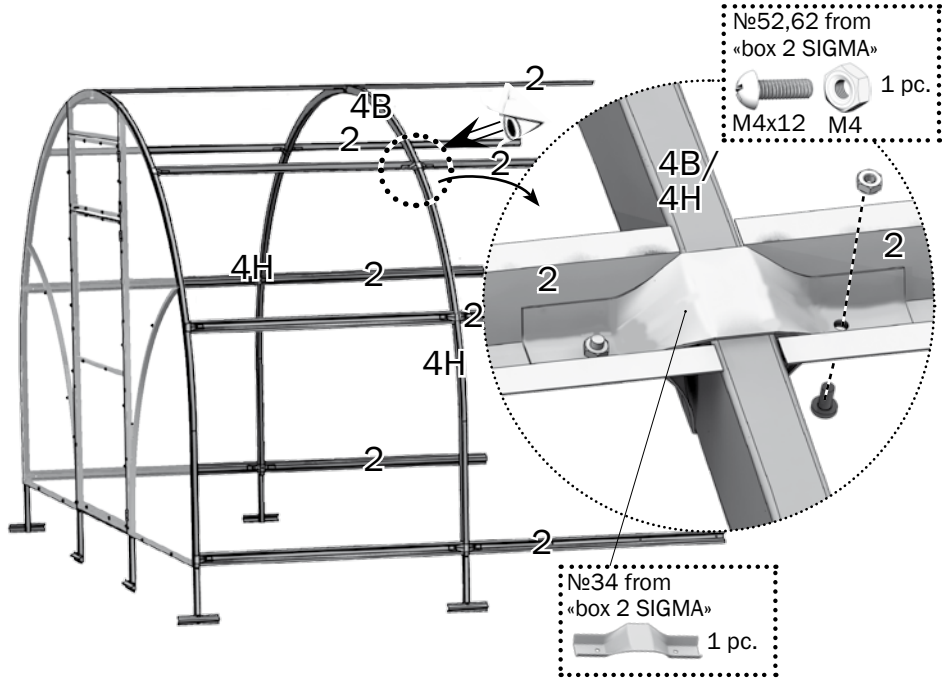
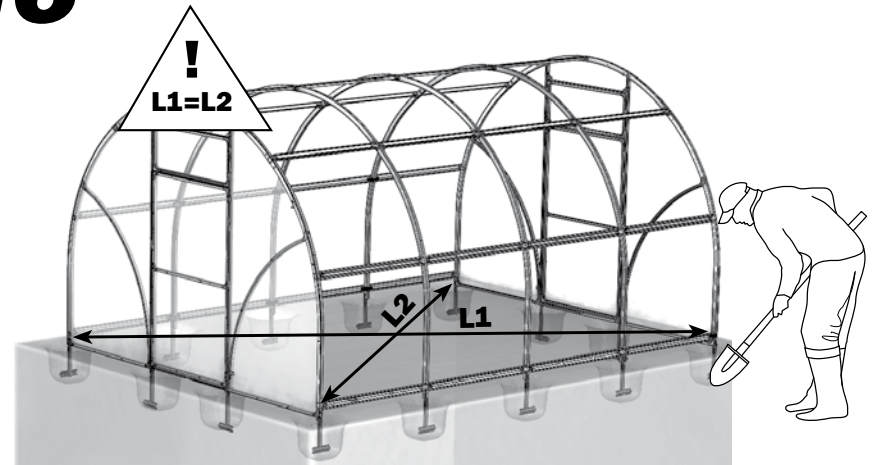
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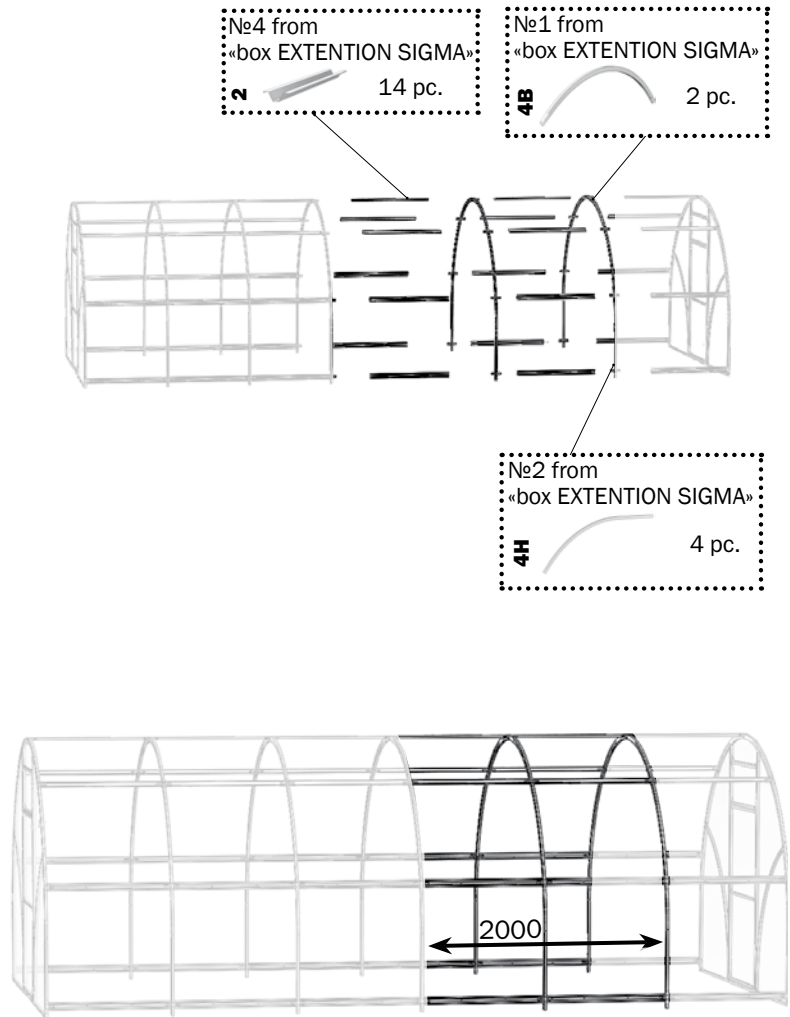
# 15



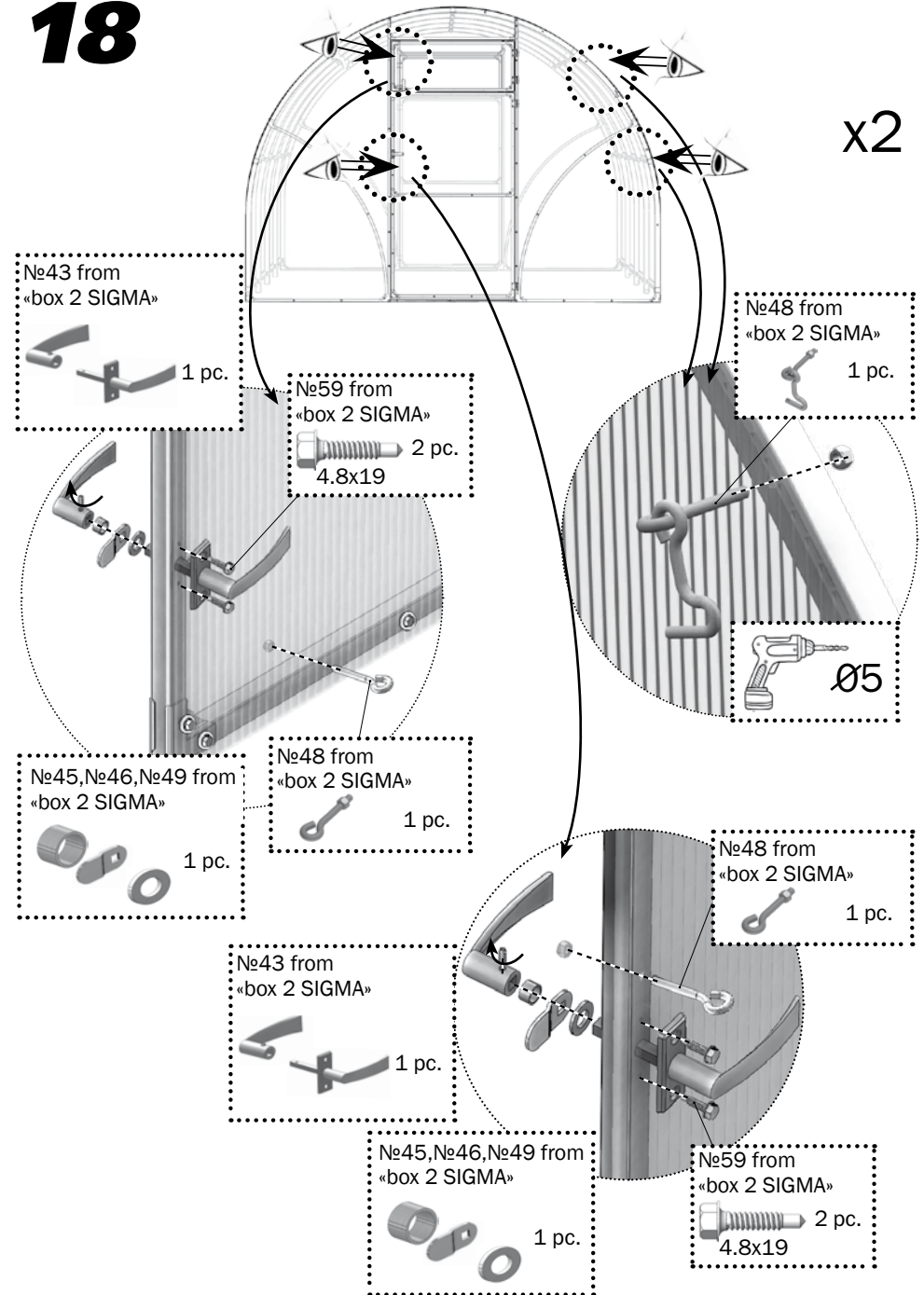
# 16



# 17 LENGTHENING OF THE BASE WITH THE INSERT

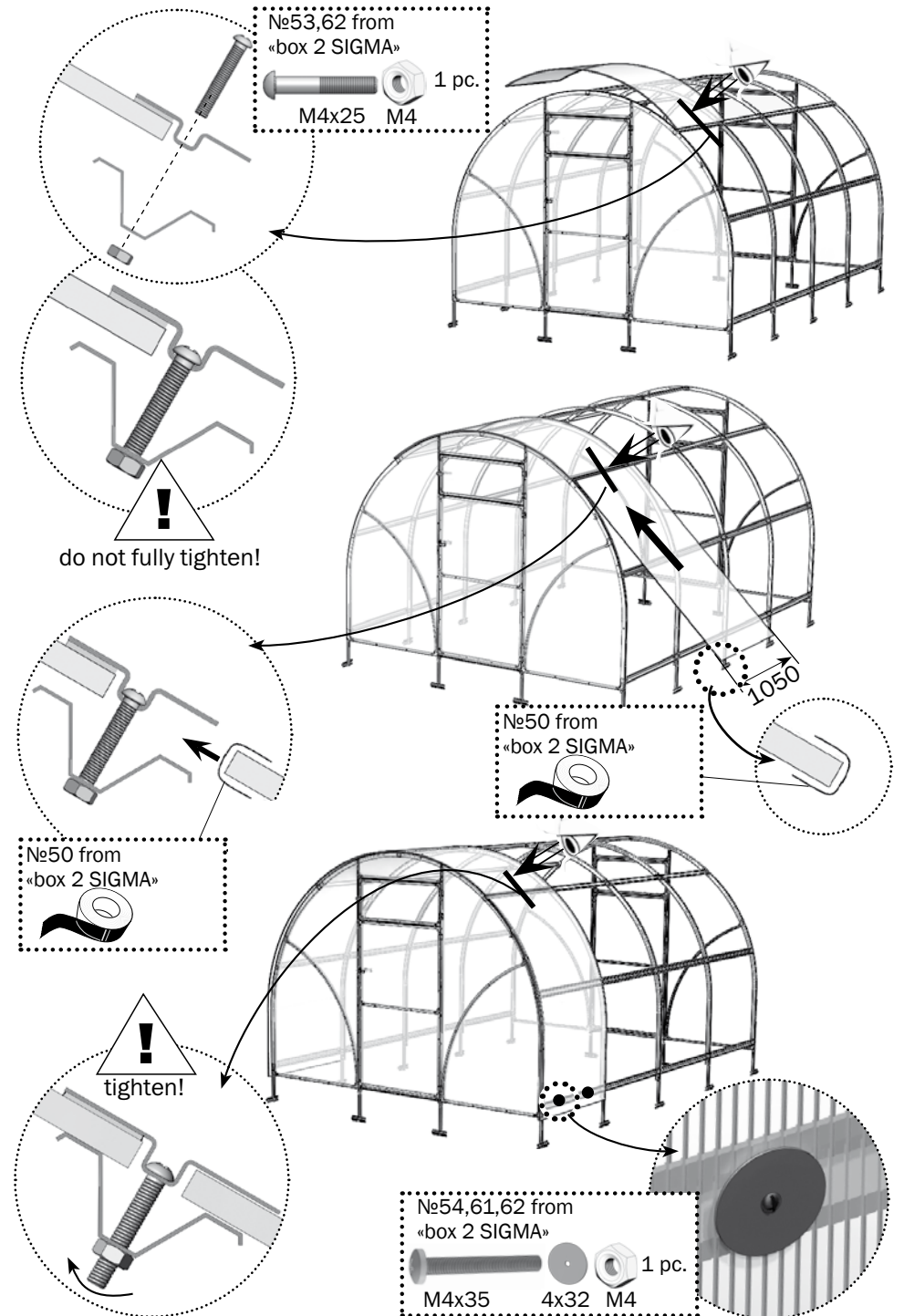
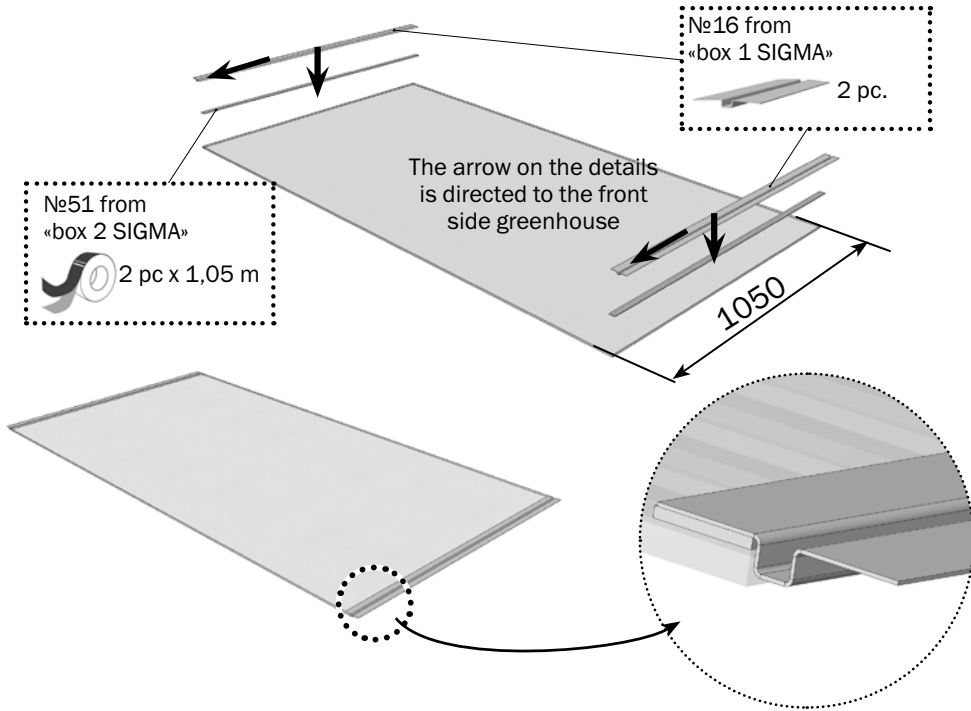
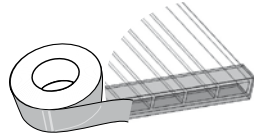


# 18

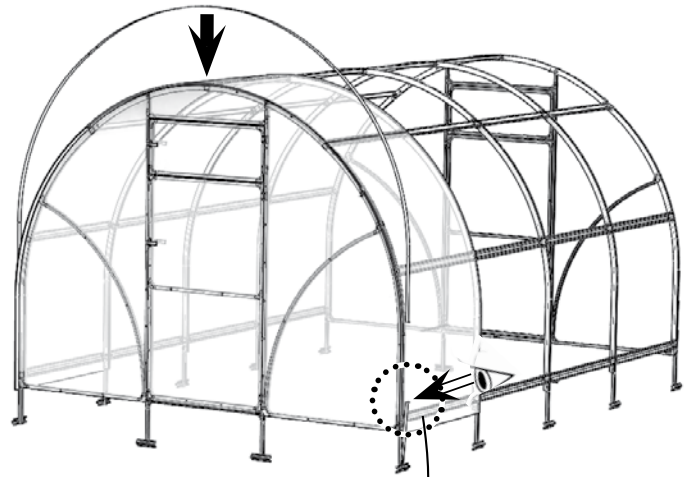


**19** Cellular polycarbonate panels are installed with a certain surface, which has a protective layer, outside (towards the sun). The protective layer usually has a side with the inscriptions on the transportation film. The other side of the film is transparent. Mark the protective side of the sheet in each panel because after removing the transportation film, the sides of the panel do not visually differ. The transportation film should be removed from both surfaces before fixing the glazing on the frame.

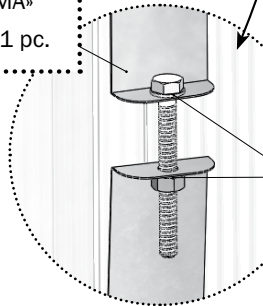
It is necessary to stick the adhesive tape over the open polycarbonate shearing surfaces



# 20



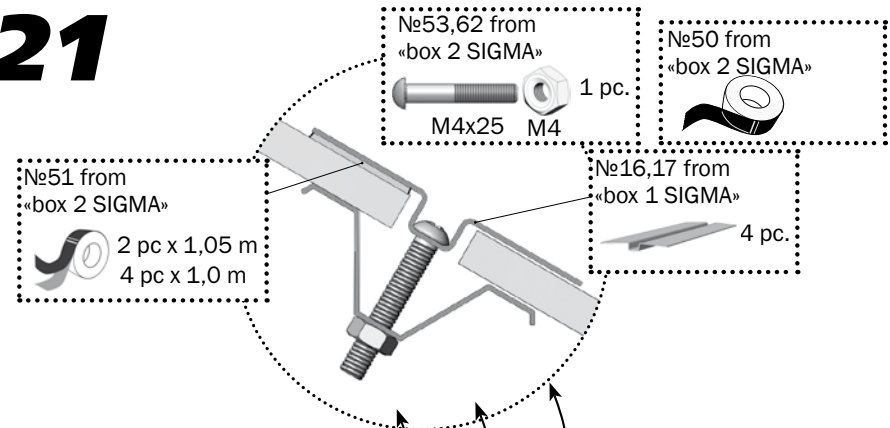
№67 from  
«box 2 SIGMA»  
1 pc.



№58,64 from  
«box 2 SIGMA»  
M6x60 1 pc.

№65 from  
«box 2 SIGMA»  
2 pc.

# 21

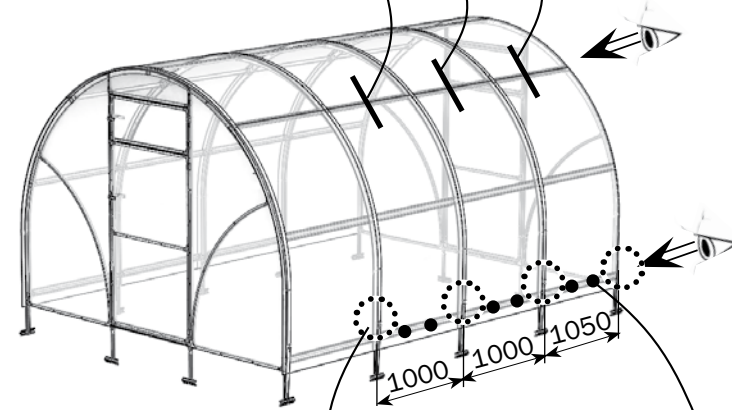


№53,62 from  
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M4x25 1 pc.

№50 from  
«box 2 SIGMA»  
1 pc.

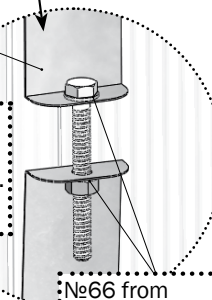
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2 pc x 1,05 m  
4 pc x 1,0 m

№16,17 from  
«box 1 SIGMA»  
4 pc.



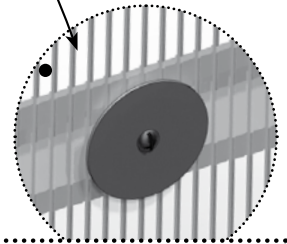
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1 pc.

№58,64 from  
«box 2 SIGMA»  
M6x60 1 pc.



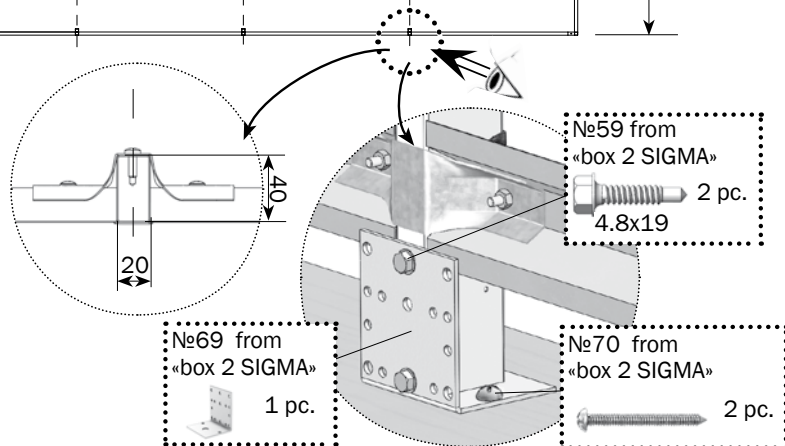
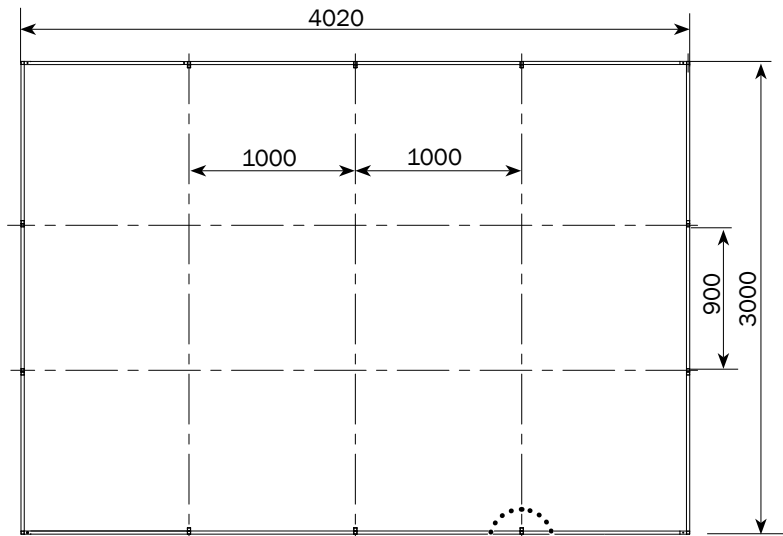
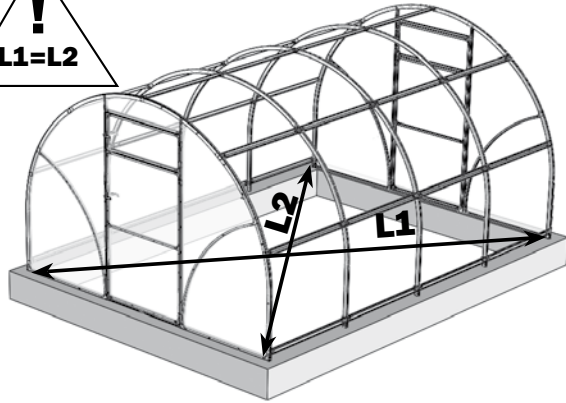
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2 pc.

№54,61,62 from  
«box 2 SIGMA»  
M4x35 4x32 M4 1 pc.



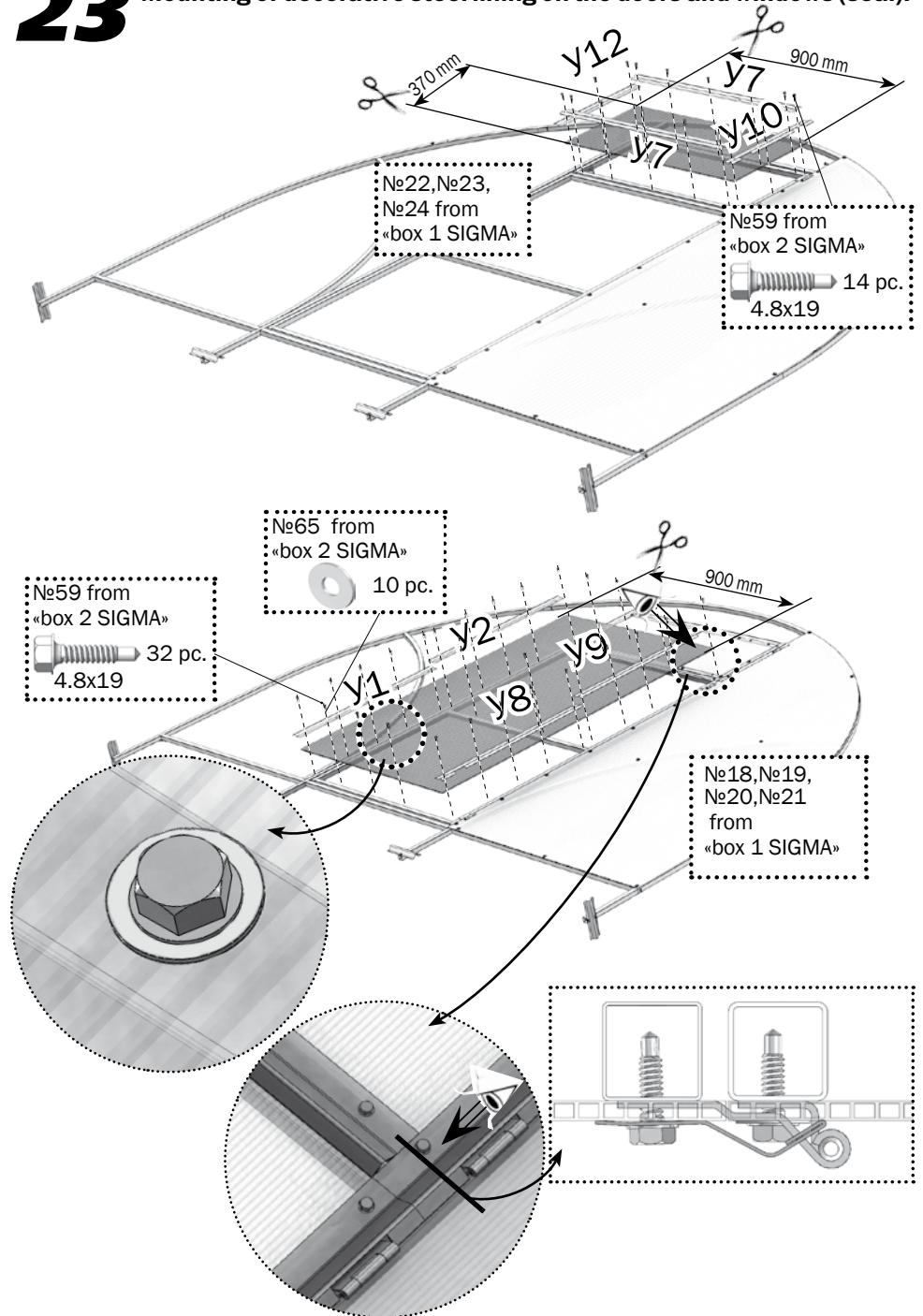
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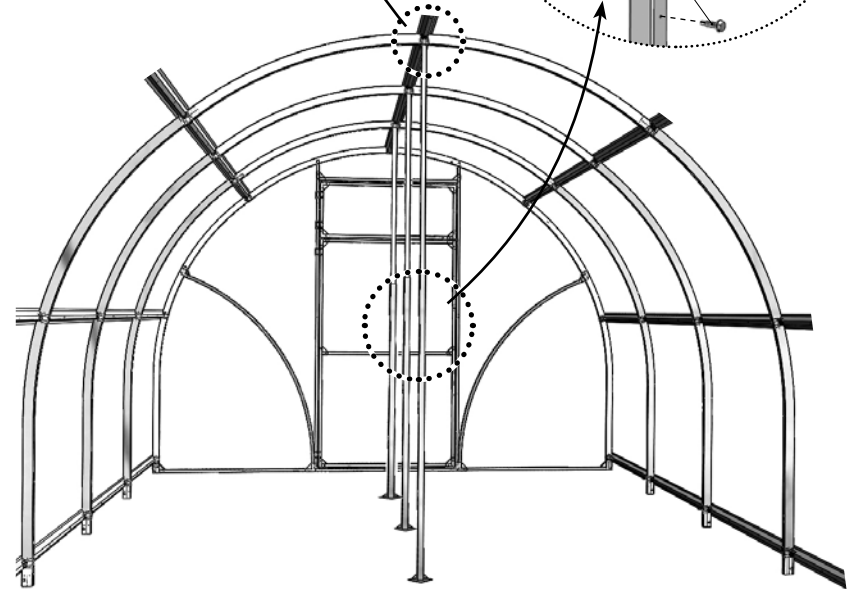
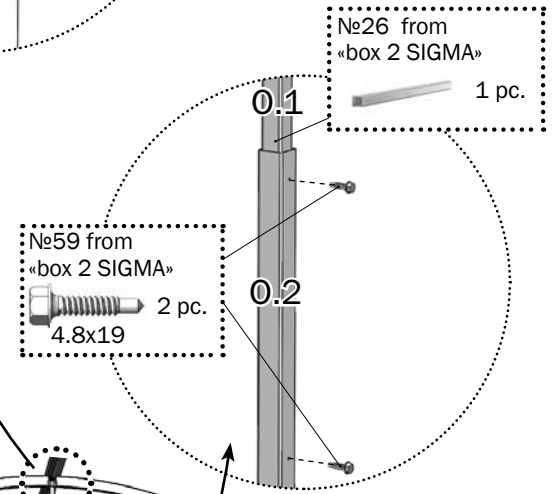
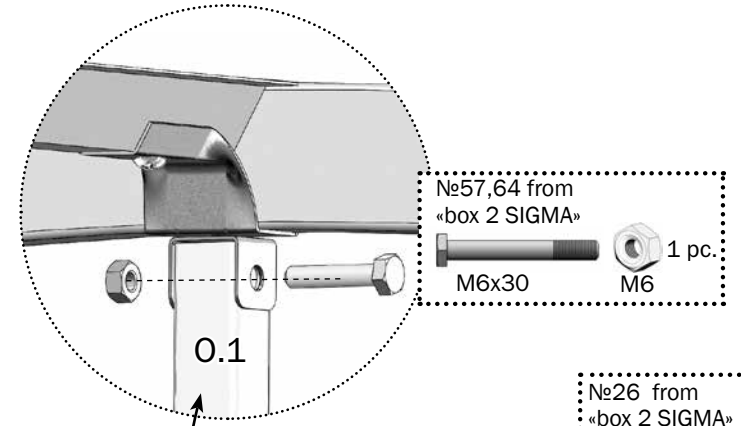
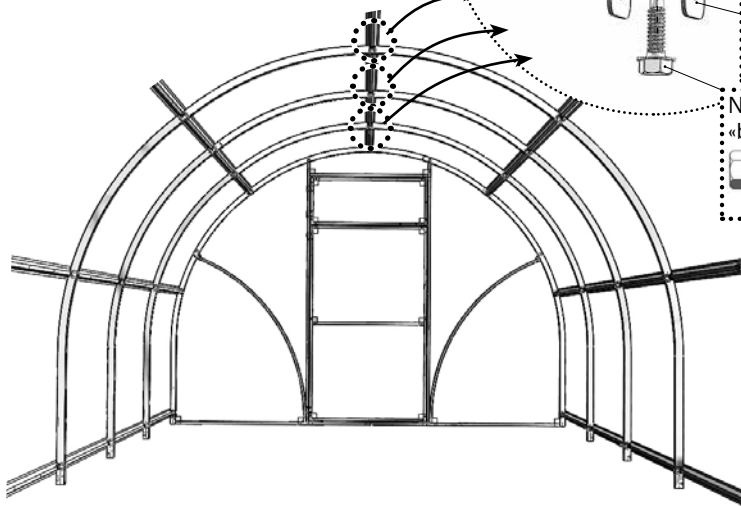
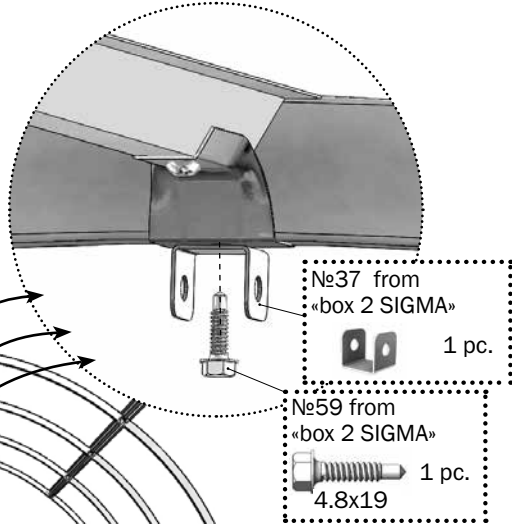
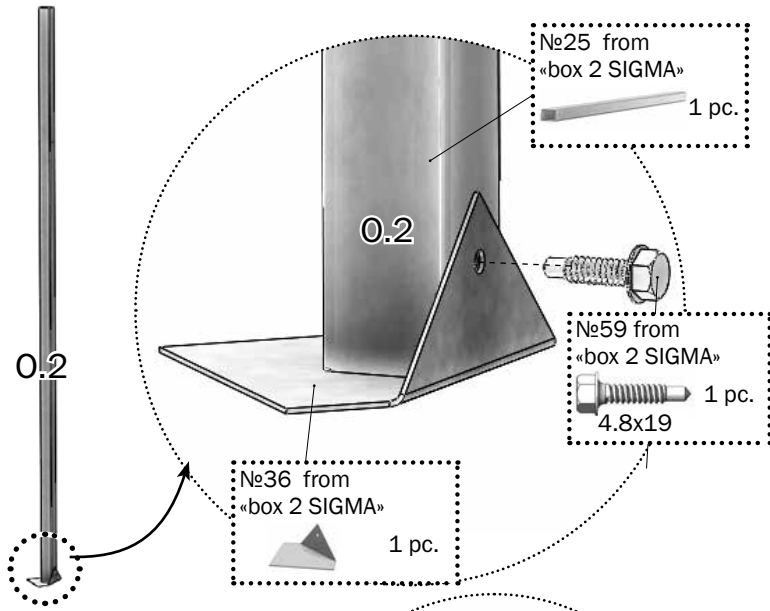
## MOUNTING ON THE FOUNDATION



# 23

## Mounting of decorative steel lining on the doors and windows (seal).







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telephone: 1(877) 669-1286  
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