

Quality management system (QMS)  
of LLC «Volya» is certified  
for compliance with  
standard of  
ISO 9001:2008



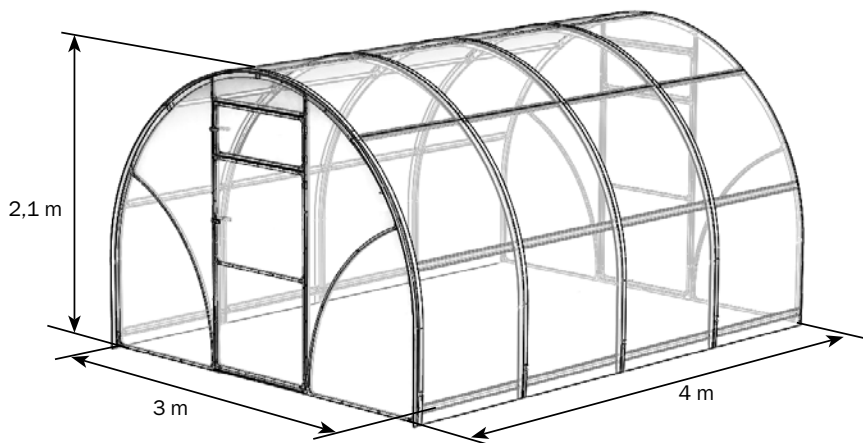
Certified by  
Russian Registry



**VOLYA LLC**

# **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

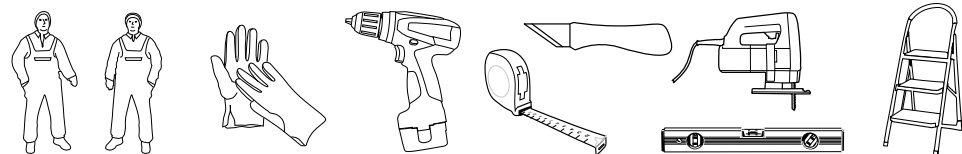
Before starting the operation, the greenhouse should be assembled and installed according to the instruction. When installing the greenhouse by third parties, the buyer should check the assembly quality for compliance with the instruction.

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.

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.

Production date

Manufacturing facility: LLC "Volya"  
141983, Dubna, Moscow region, Severnyi per., 8.


















The manufacturer is responsible for the quality of products in accordance with the RF Civil Code.  
The company reserves the right to make changes in the greenhouse design








## 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















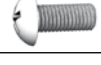





### BOX 1











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

Nº	marking	denomination	q-ty, pcs
18	<b>Y1</b>	Door lining 	2
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

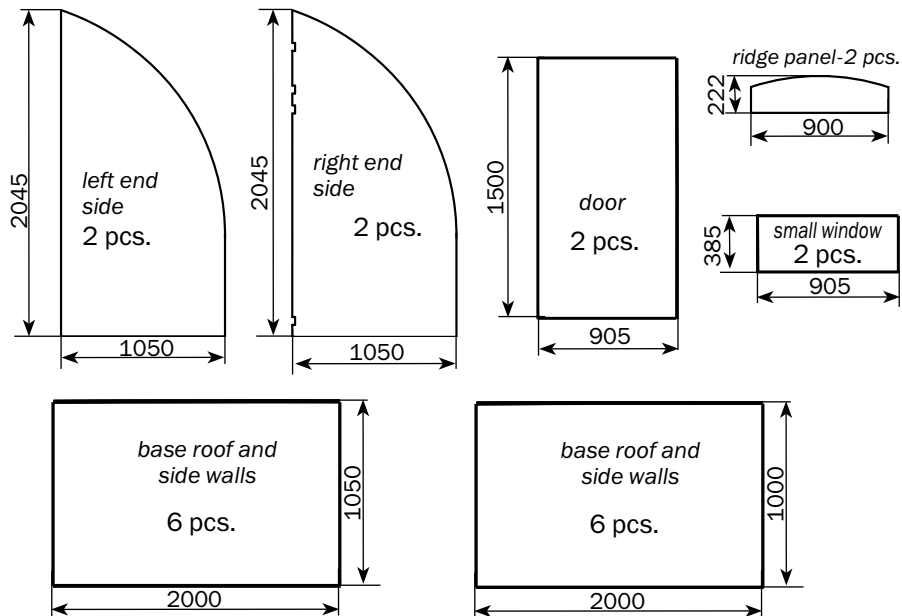
### BOX 2

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





















Nº	marking	denomination	q-ty, pcs
34	-	40x20 clamp 	12
35	-	40x20 clamp 	12
36	-	20x20 clamp 	24
37	-	20x20 angle clamp 	32
38	-	Hinge 	8
39	-	Handle kit 	4
40	<b>3</b>	Support 	14
41	-	Handle bushing 	4
42	-	Latch 	4
43	-	Stop bar 	4
44	-	Door holder kit (hooks) 	4
45	-	Washer 10 	4
46	-	Adhesive tape 	1
47	-	Double-sided tape L=10 m 	1
48	-	M4x12 screw 	56
49	-	M4x25 screw 	16
50	-	M4x35 screw 	16
51	-	M5x30 screw 	36
52	-	M6x16 screw 	40
53	-	M6x60 bolt 	10

54	-	4.8x19 self drilling screw		290
55	-	4.8x11 sharp-tipped screw		4
56	-	32x4 washer		16
57	-	M4 nut		88
58	-	M5 nut		40
59	-	M6 nut		50
60	-	6 washer		20
61	-	5 washer		168
62	-	Top metal fastening band		5
63	-	Bottom metal fastening band		10

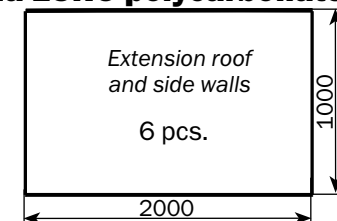
### Sigma EURO polycarbonate walls

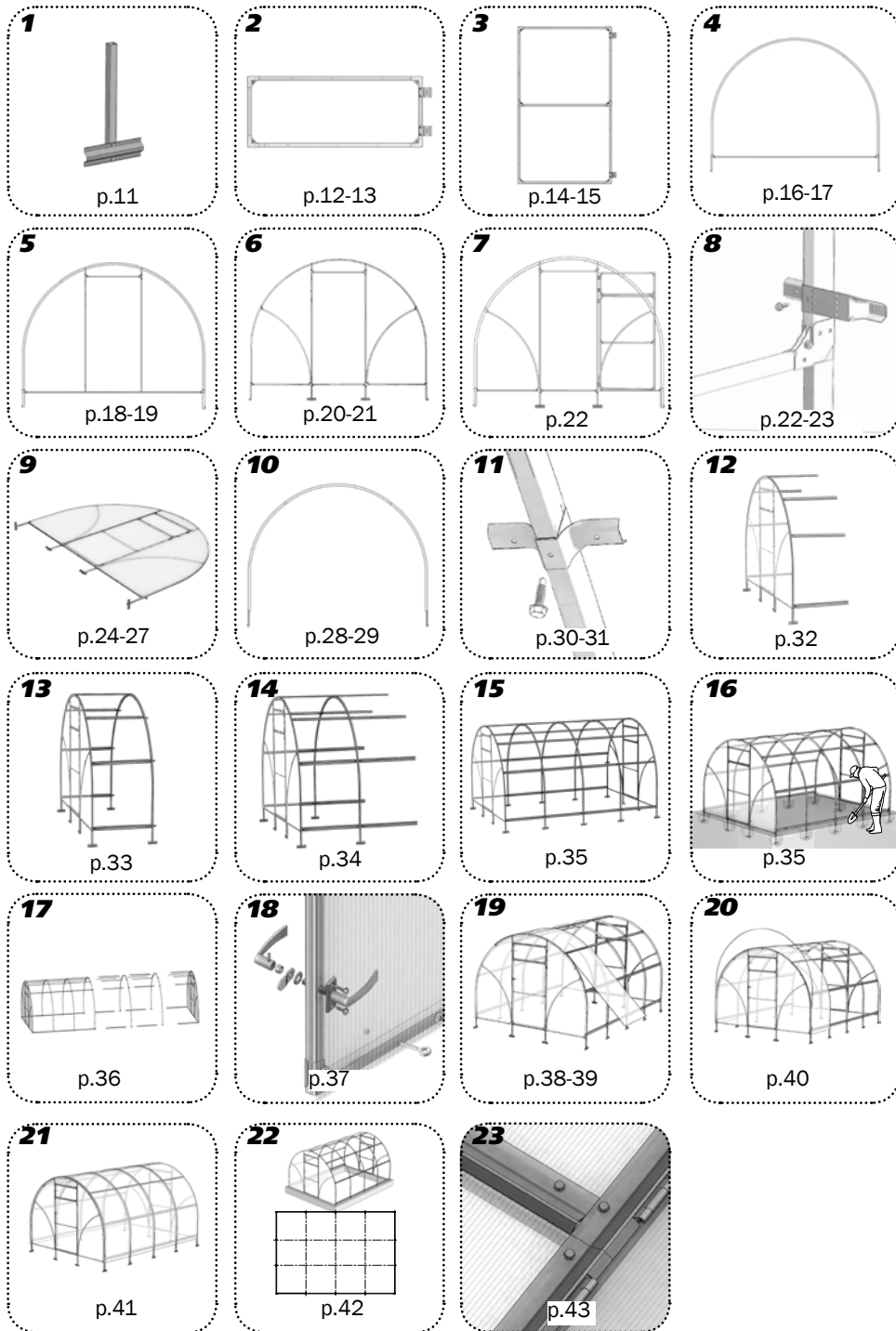


### BOX EXTENTION

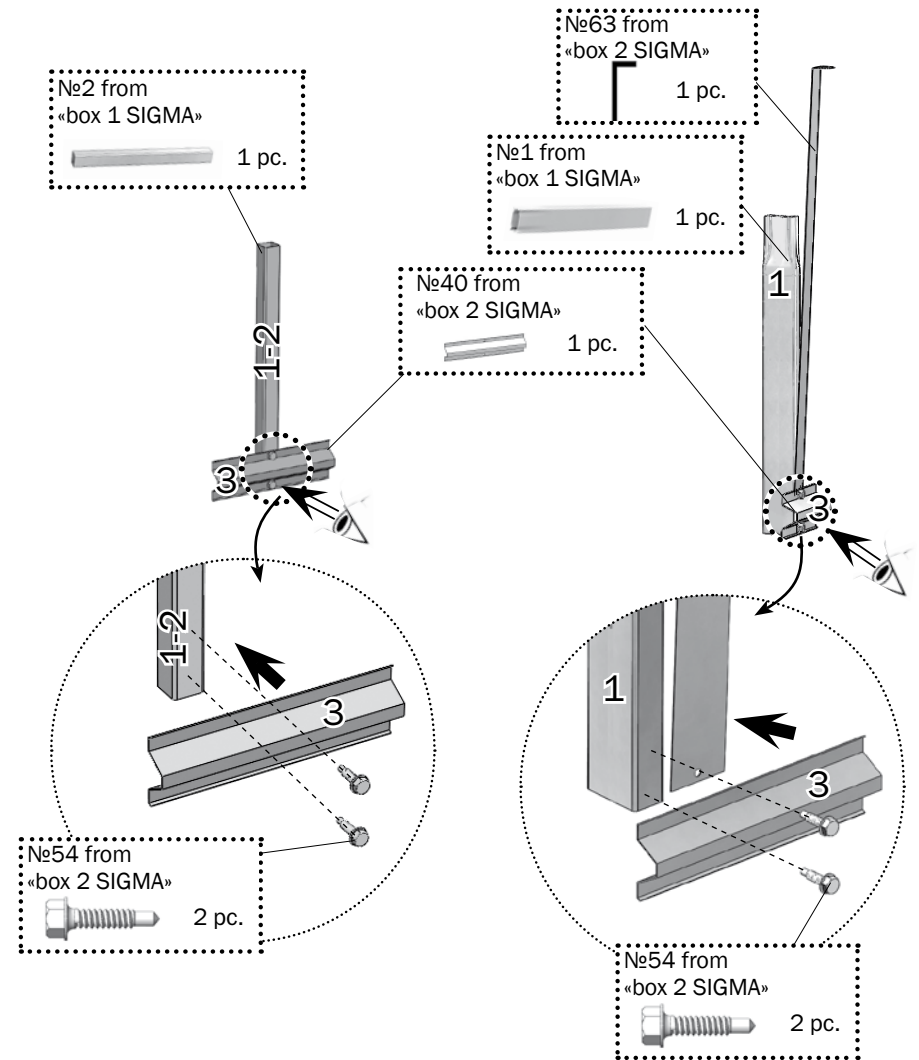
Nº	marking	denomination	q-ty, pcs
64	<b>4B</b>	Upper arch 	2
65	<b>4H</b>	Lower arch 	4
66	<b>1</b>	Leg 	4
67	<b>2</b>	Purlin 	14
68	<b>3</b>	Support 	4
69	-	Inner clamp 	14
70	-	Outer clamp 	14
71	-	M4x12 screw 	28
72	-	M4x25 screw 	8
73	-	M4x35 screw 	8
74	-	M6x60 bolt 	4
75	-	M4 nut 	44
76	-	M6 nut 	4
77	-	32x4 washer 	8
78	-	4.8x19 self drilling screw 	26
79	-	6 washer 	8
80	-	Top metal fastening band 	2
81	-	Bottom metal fastening band 	4
82	-	Profile L-1000 mm 	4
83	-	Double-sided tape L=5 m 	1

### Sigma EURO polycarbonate walls



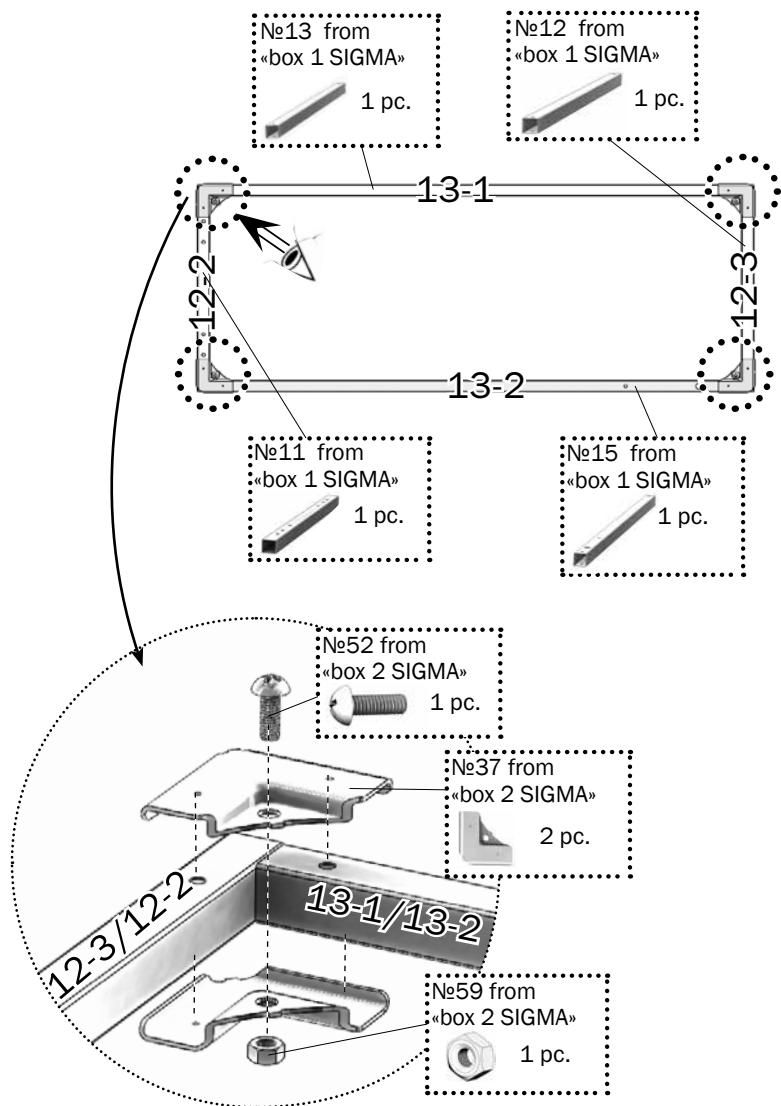


**1** If the greenhouse is mounted on a foundation (see para.22), the elements **1** and **3** are not assembled and are not mounted in the subsequent assembly.

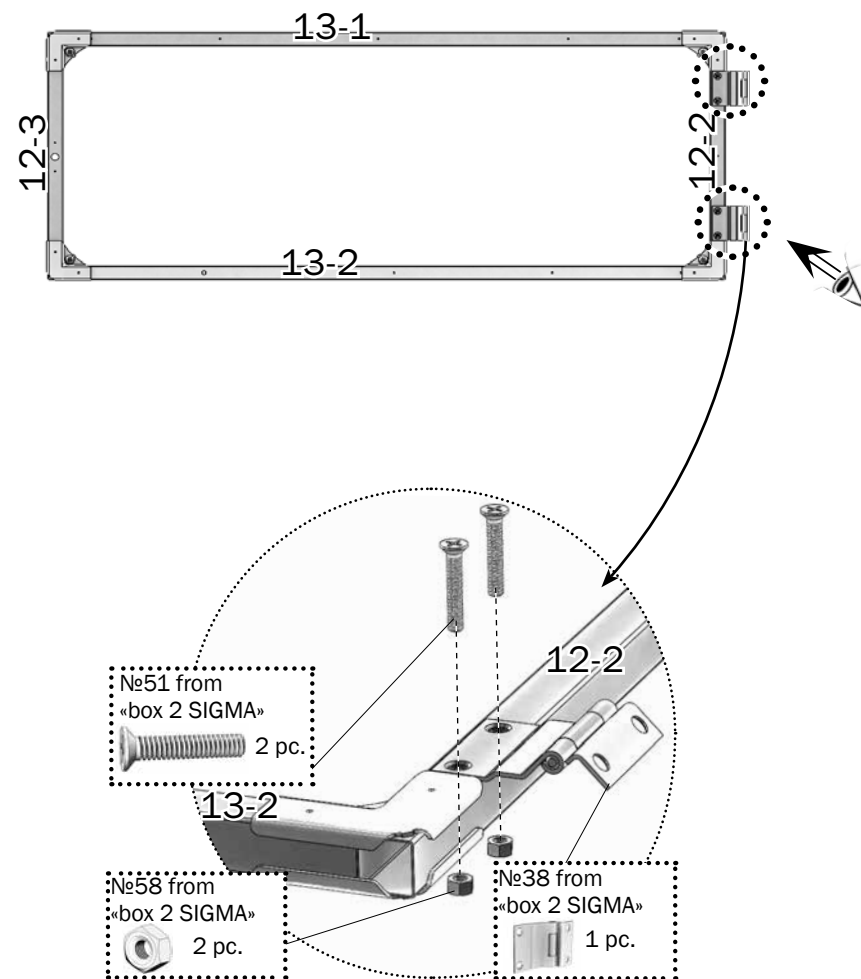


# 2

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



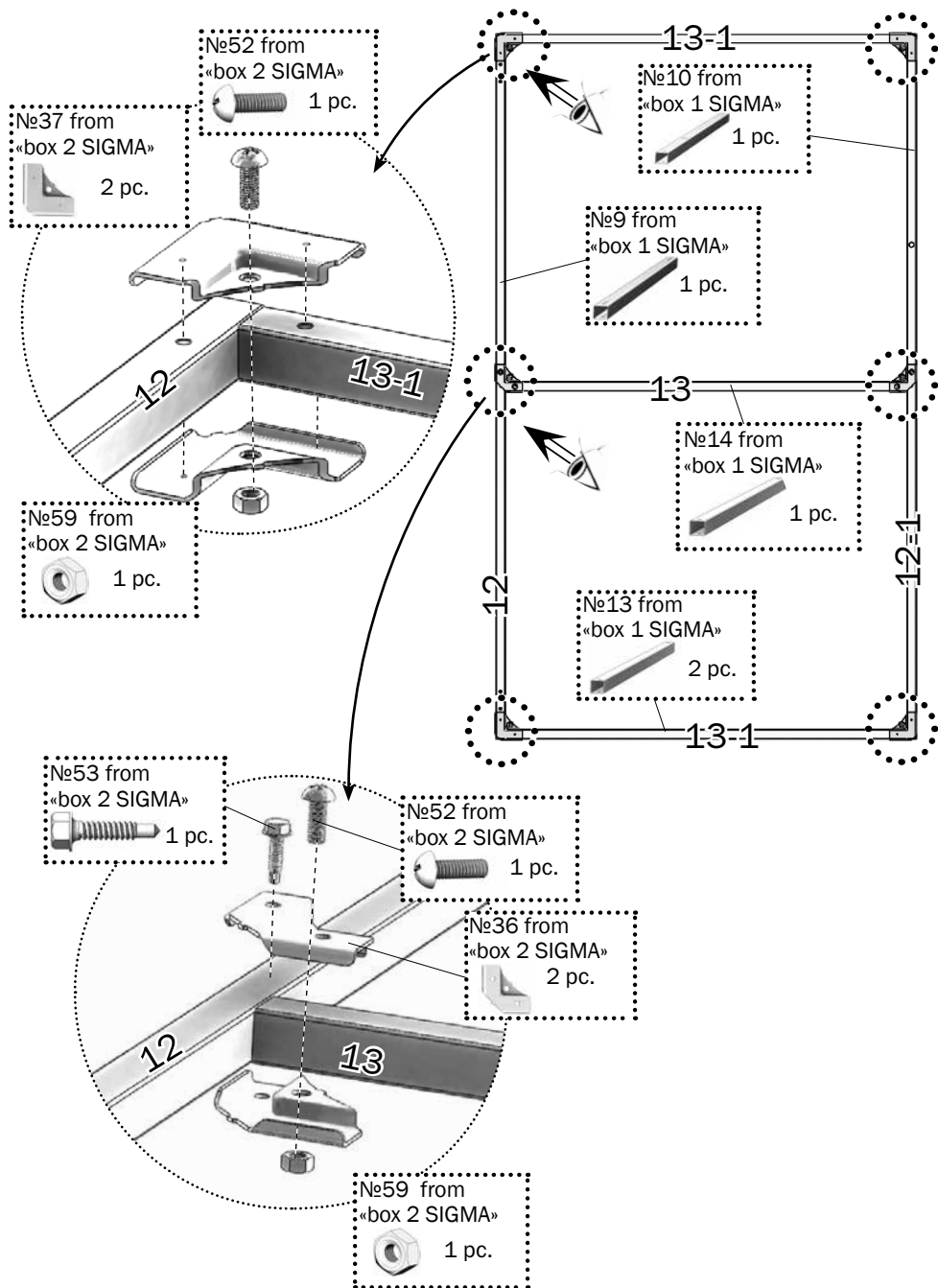
Outer side of the window:



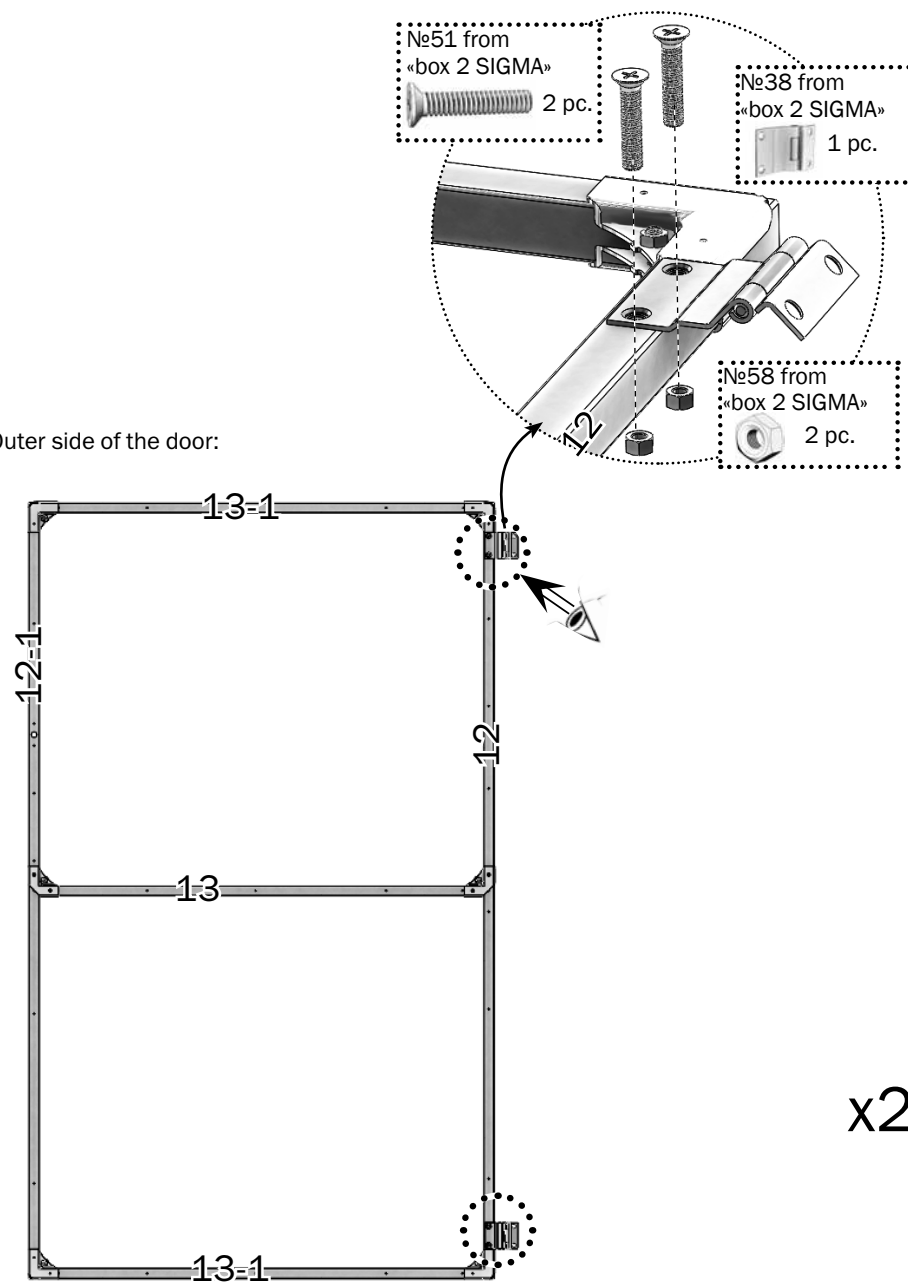
x2

# 3

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



Outer side of the door:



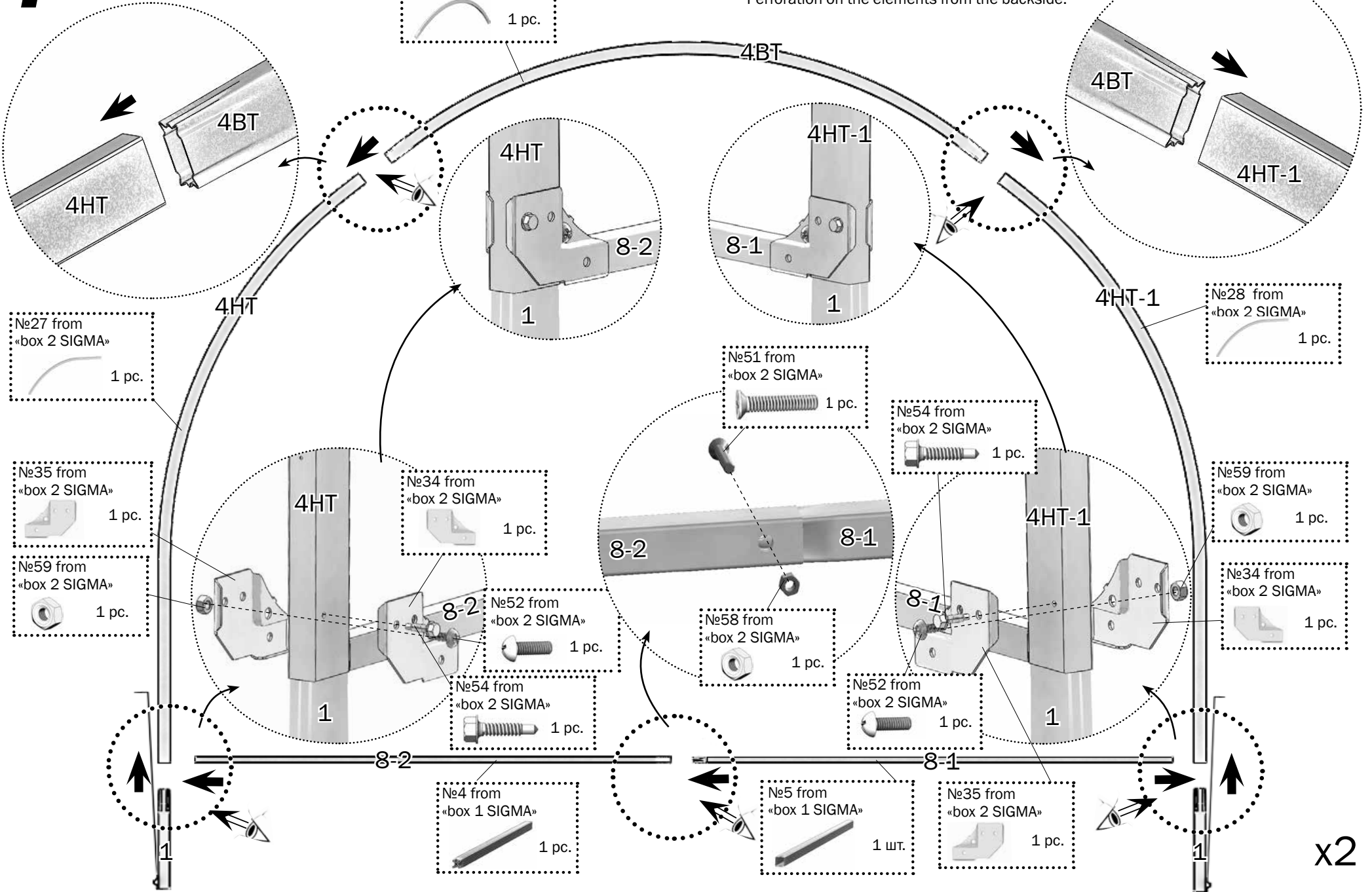
x2



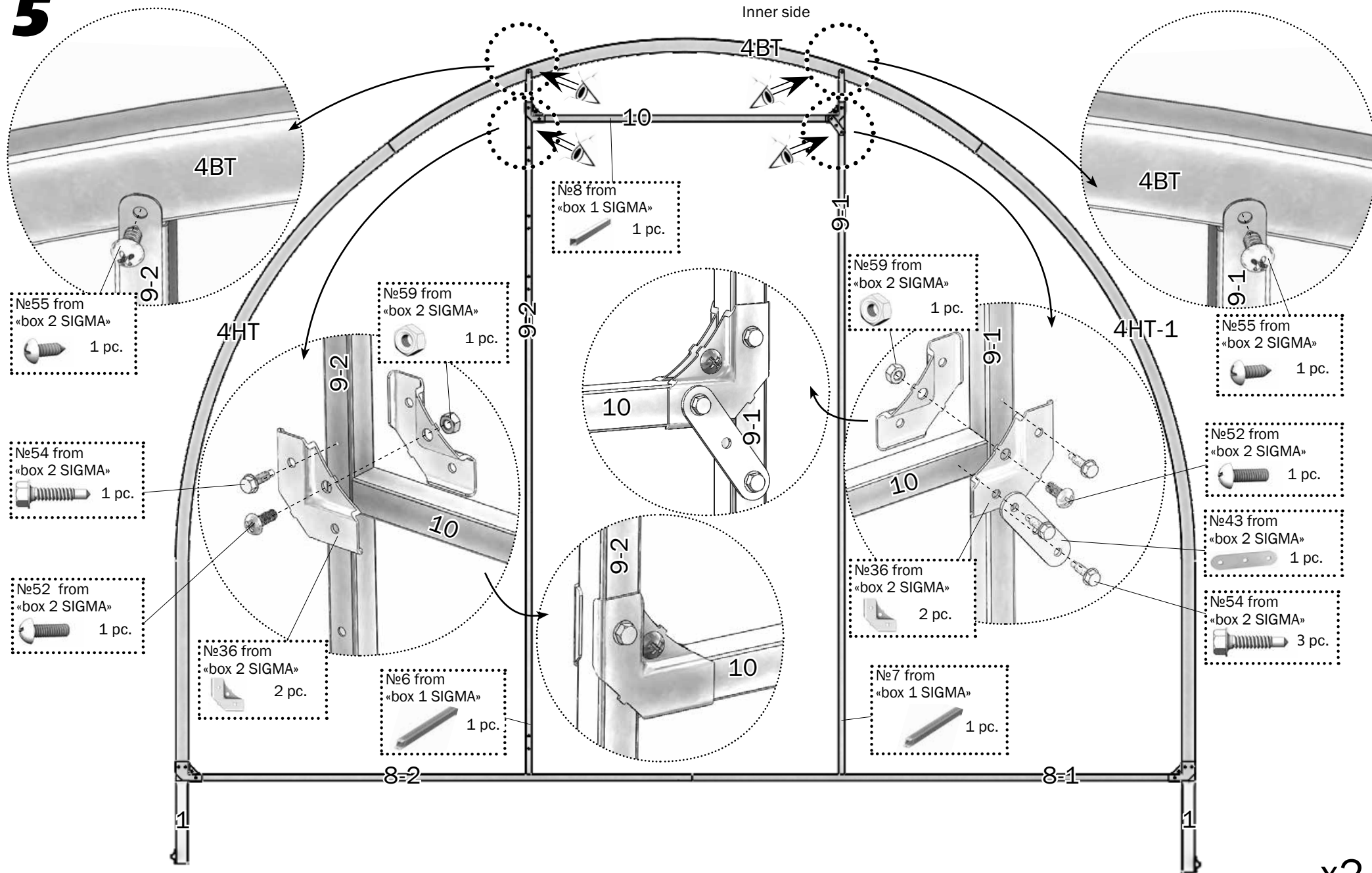
# 4

№26 from «box 2 SIGMA»  
1 pc.

Inner side of the end wall.  
Perforation on the elements from the backside:

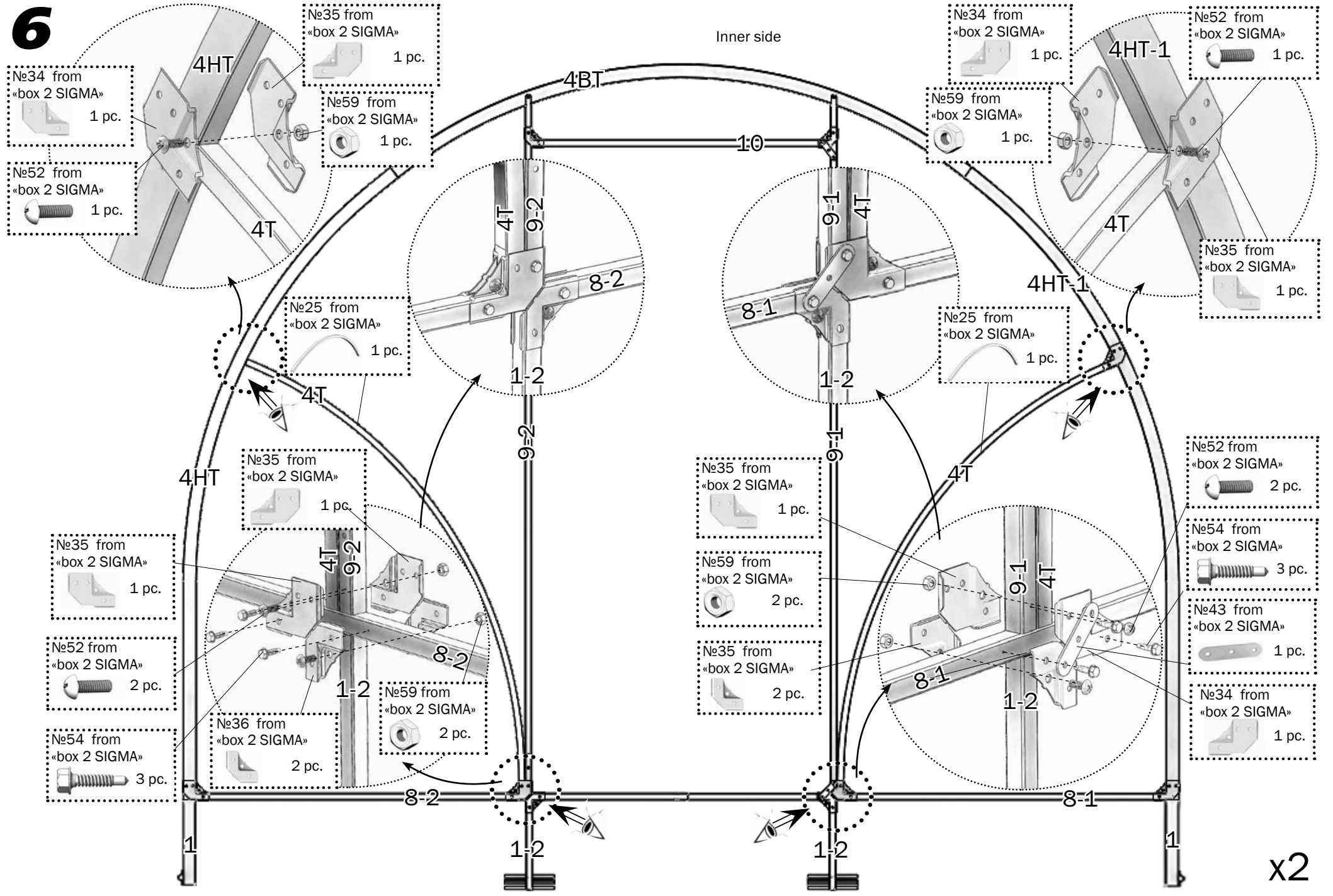


5



x2

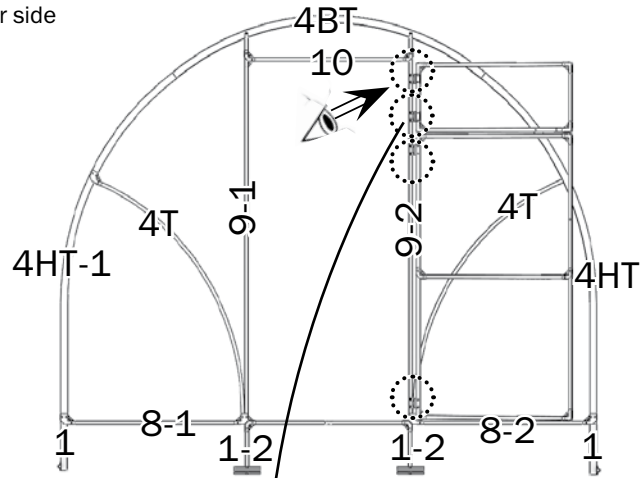
6



x2

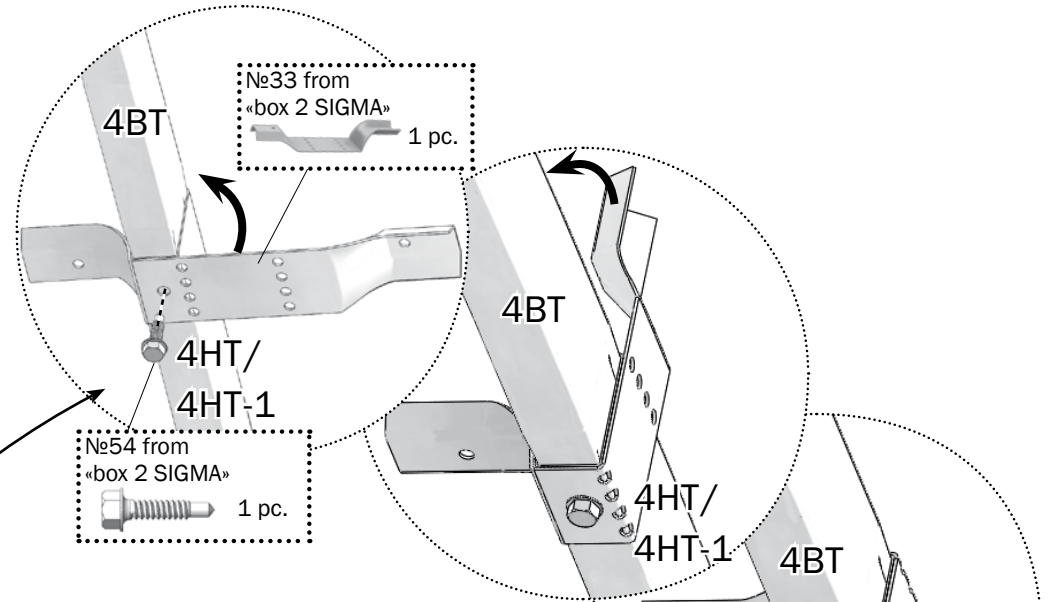
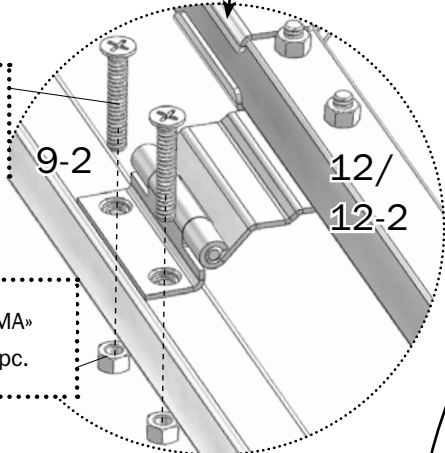
# 7

Outer side



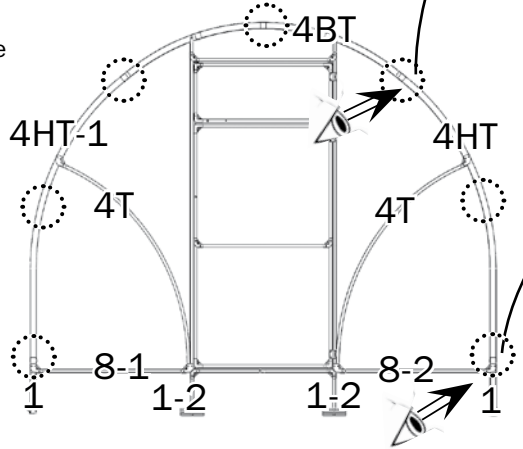
x2

№51 from  
«box 2 SIGMA»  
2 pc.



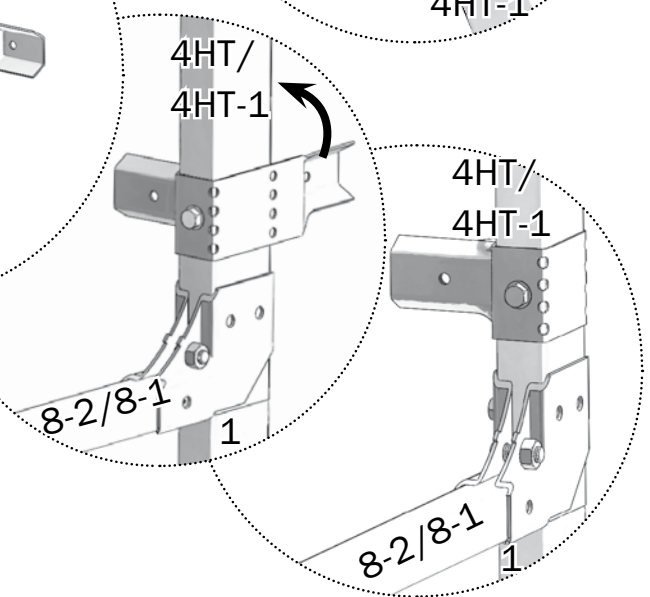
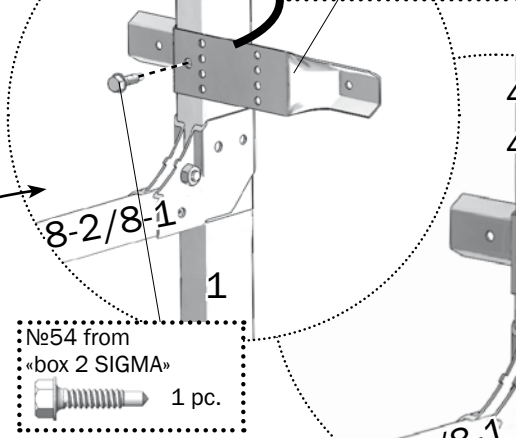
# 8

Outer side

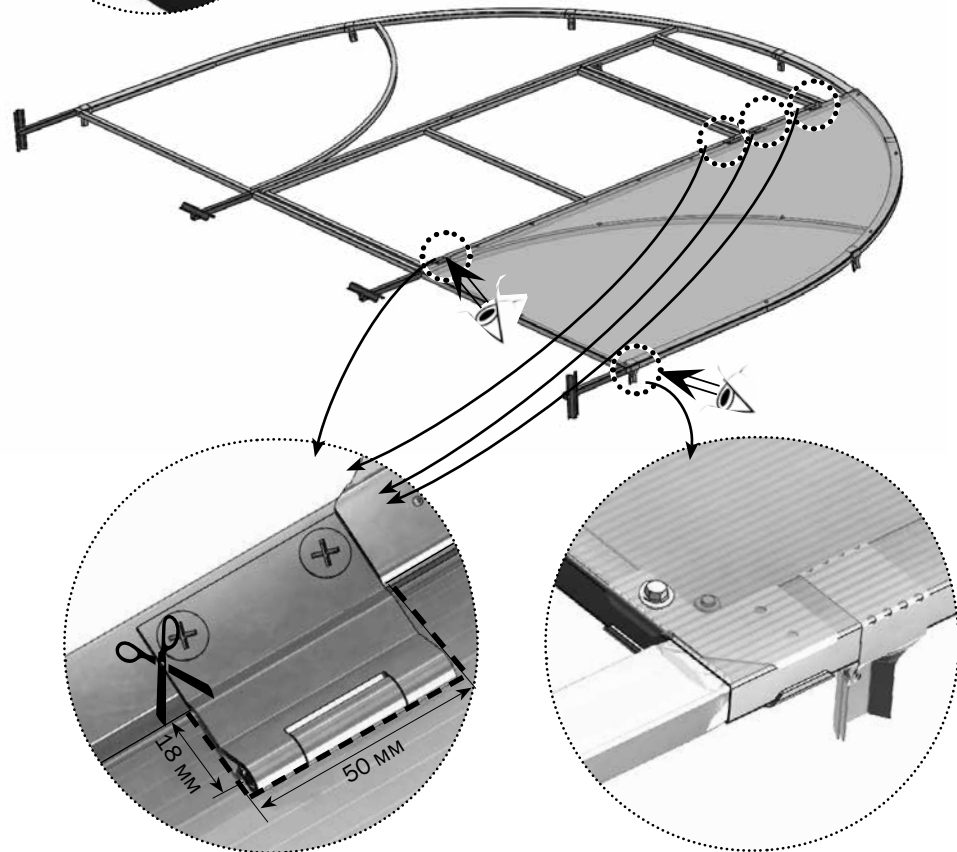
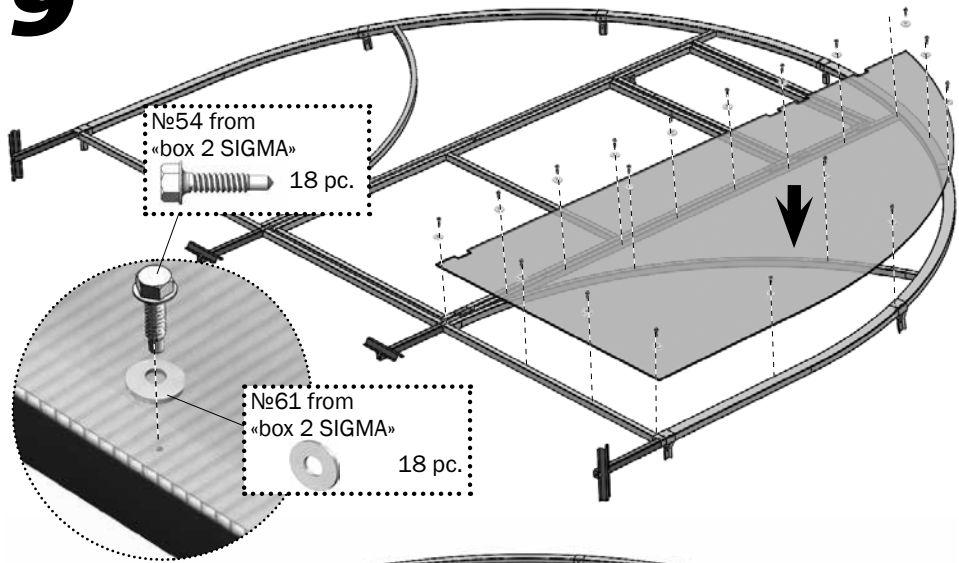


x2

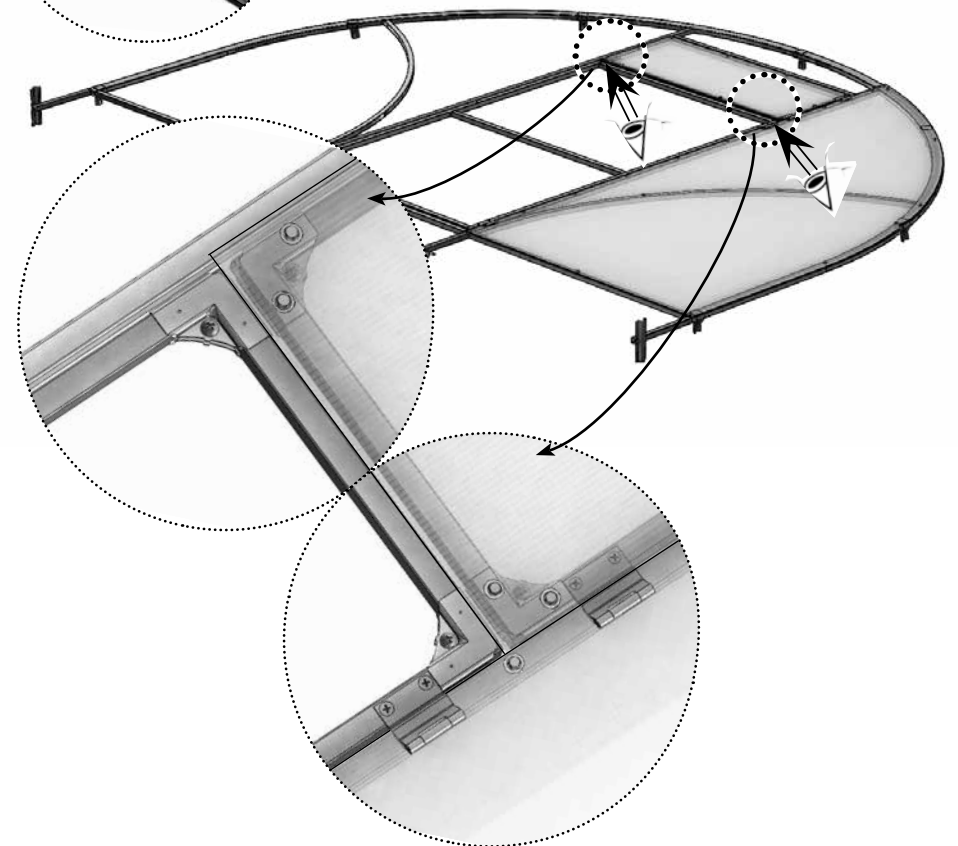
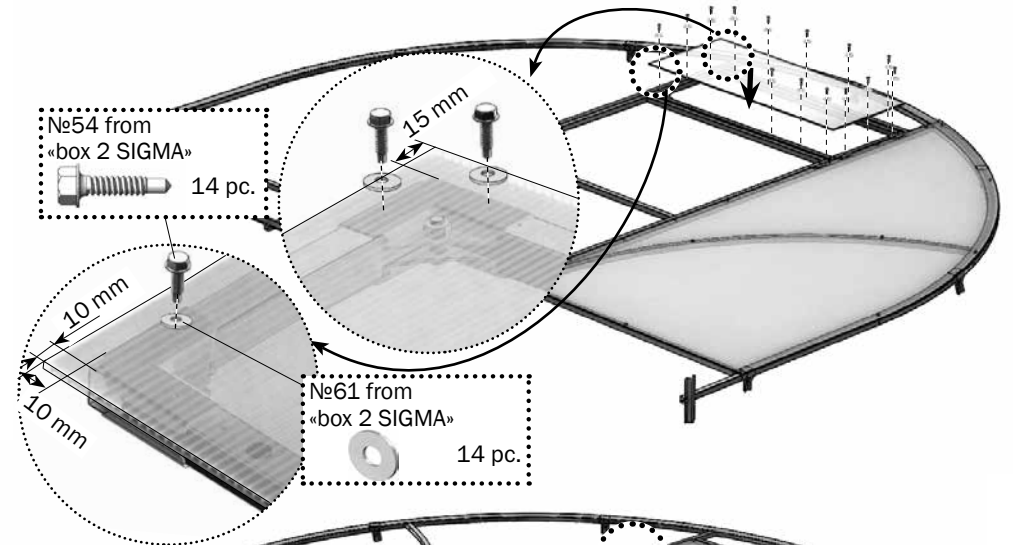
№33 from  
«box 2 SIGMA»  
1 pc.



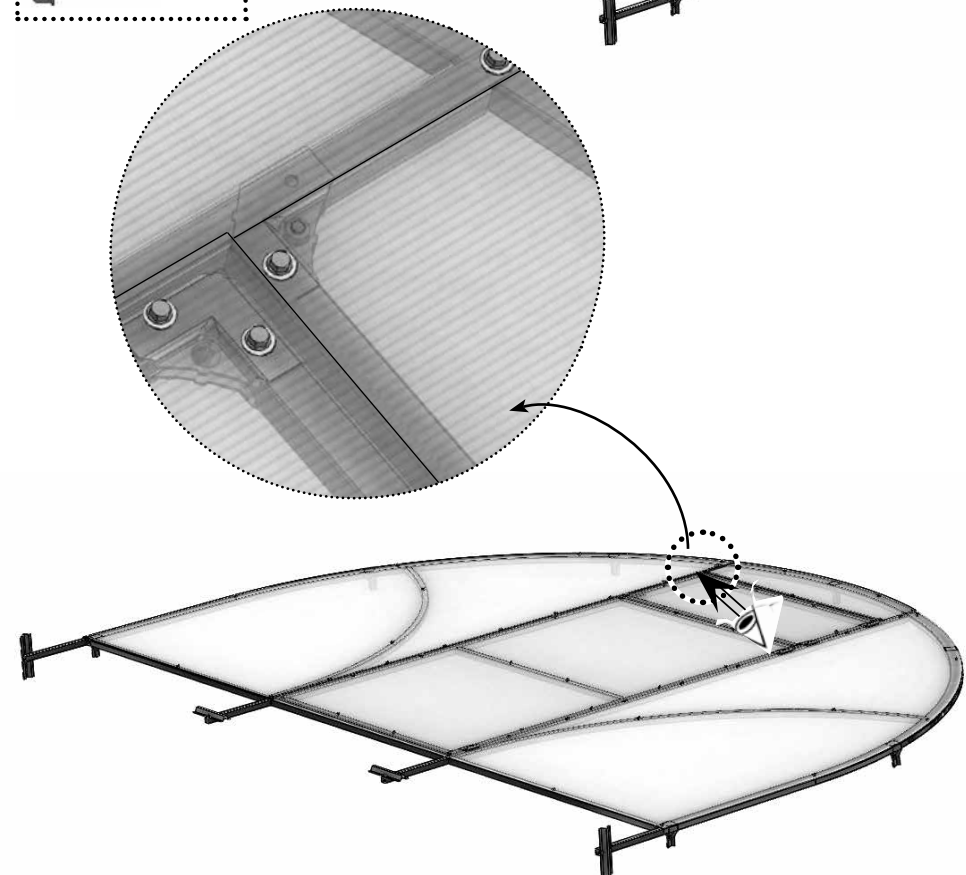
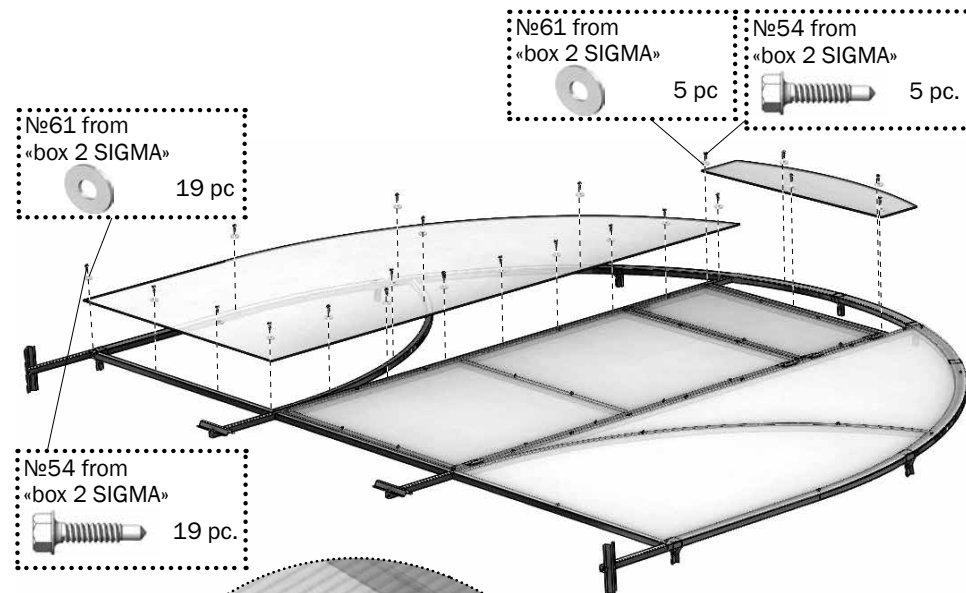
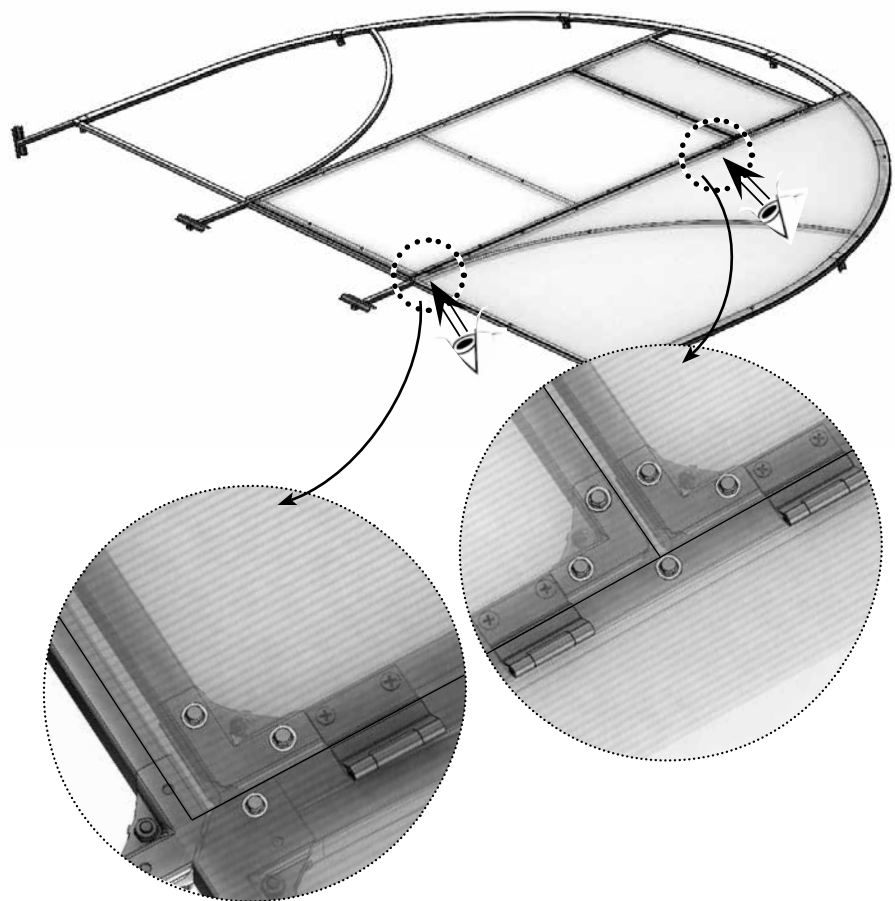
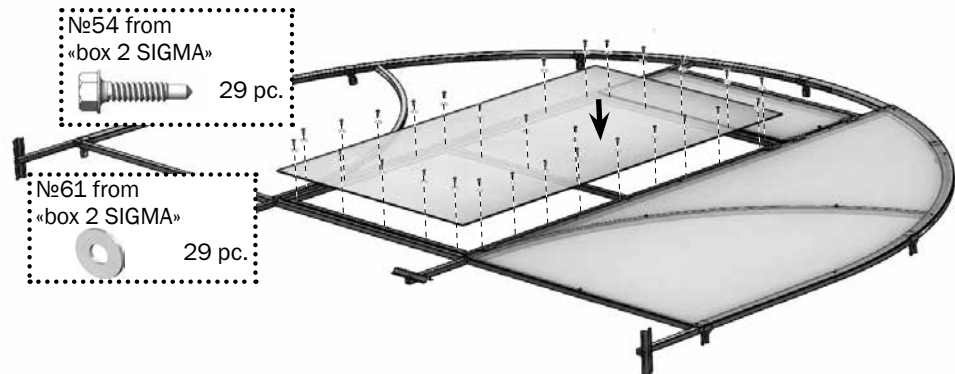
# 9



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

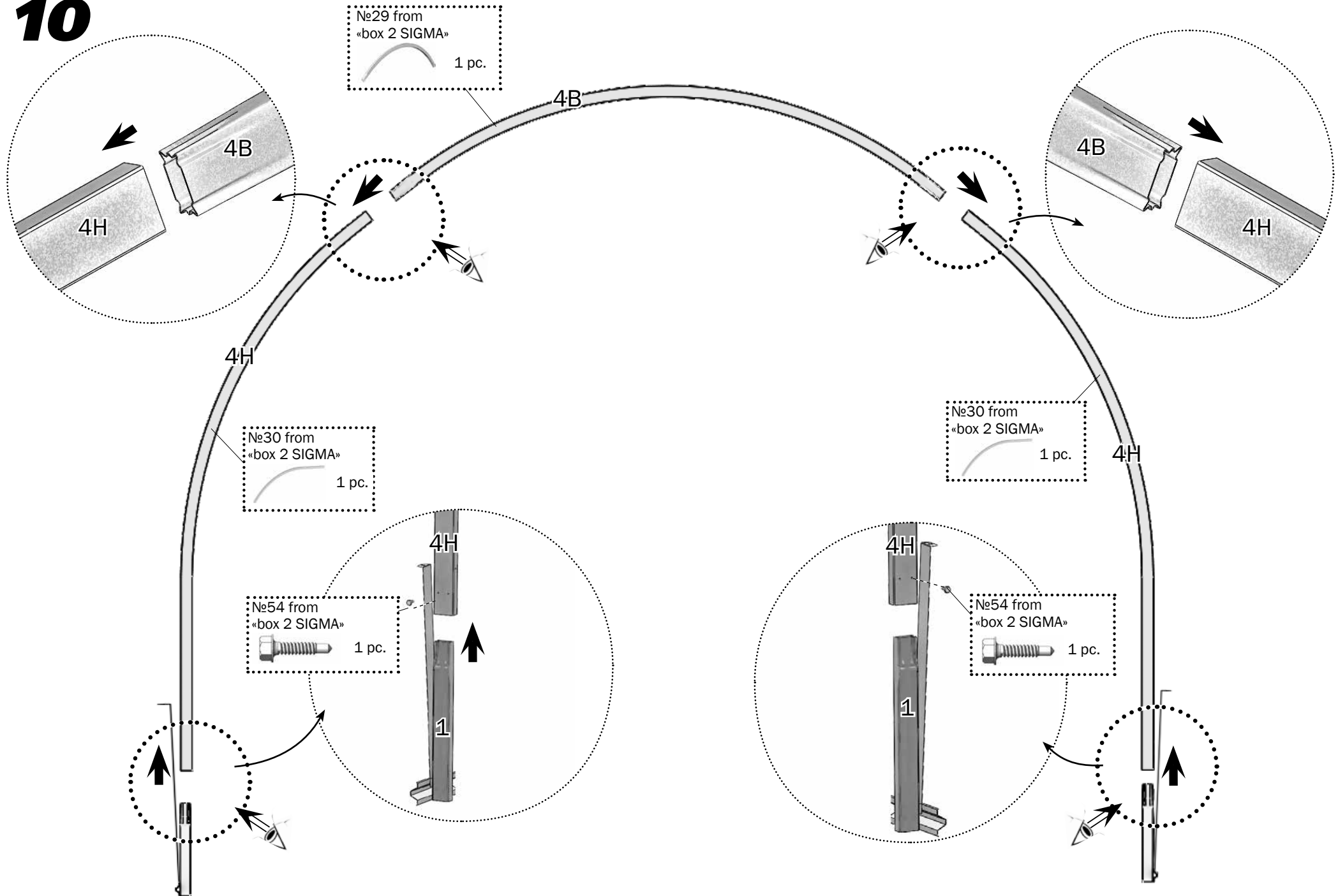


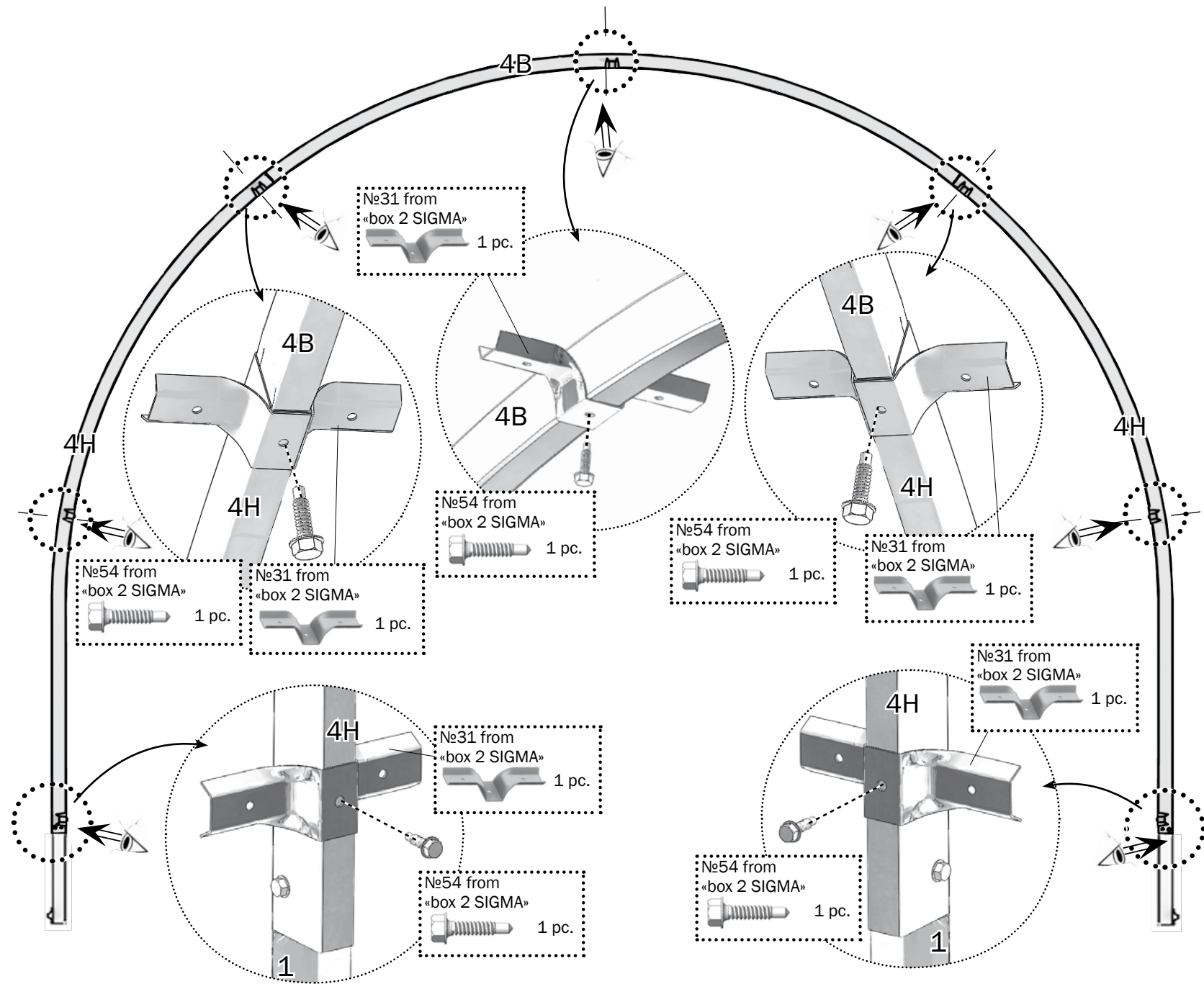
In case the decorative steel lining (seal) from the additional kit is installed on the doors and windows see para.23





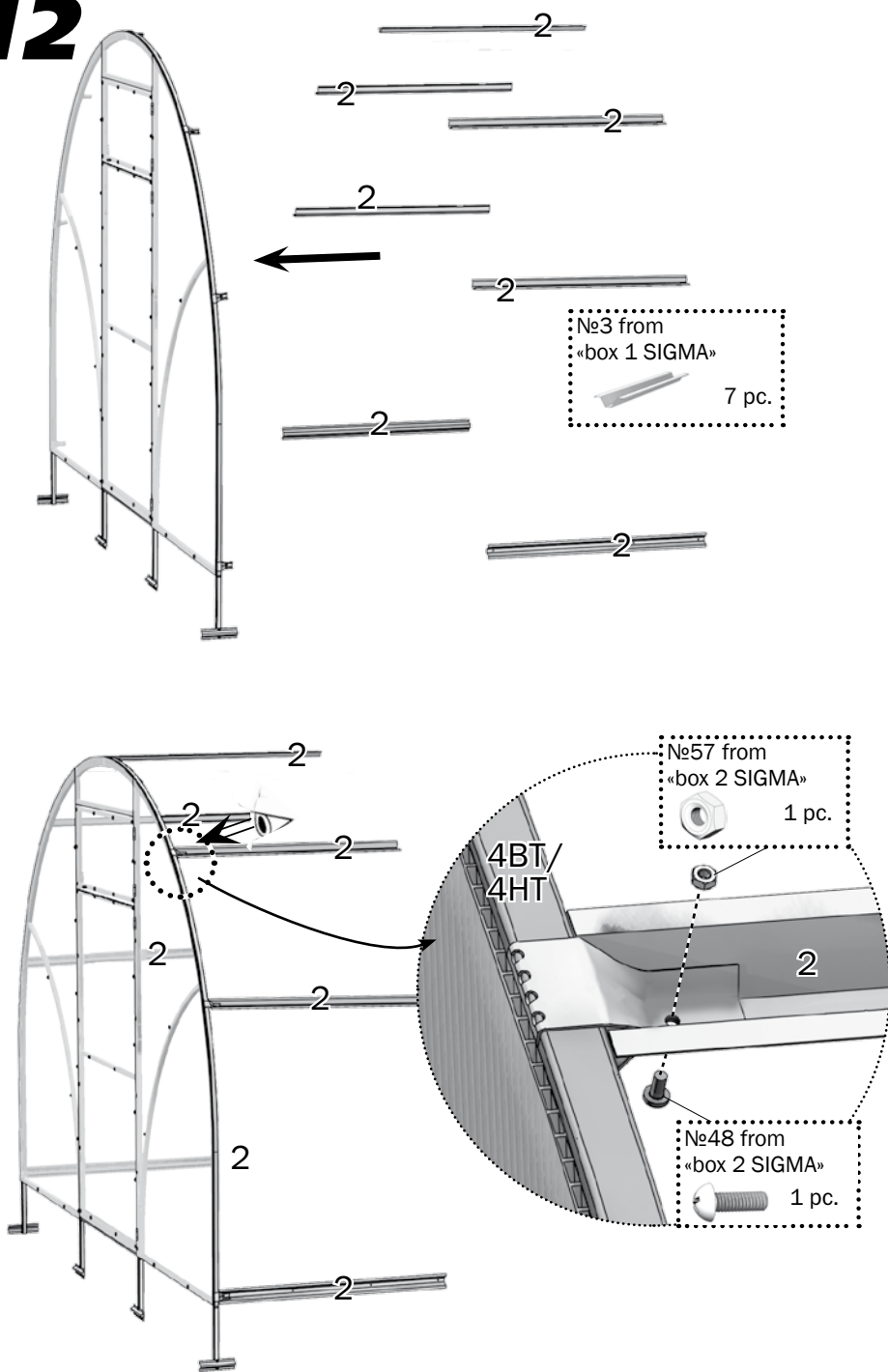
# 10



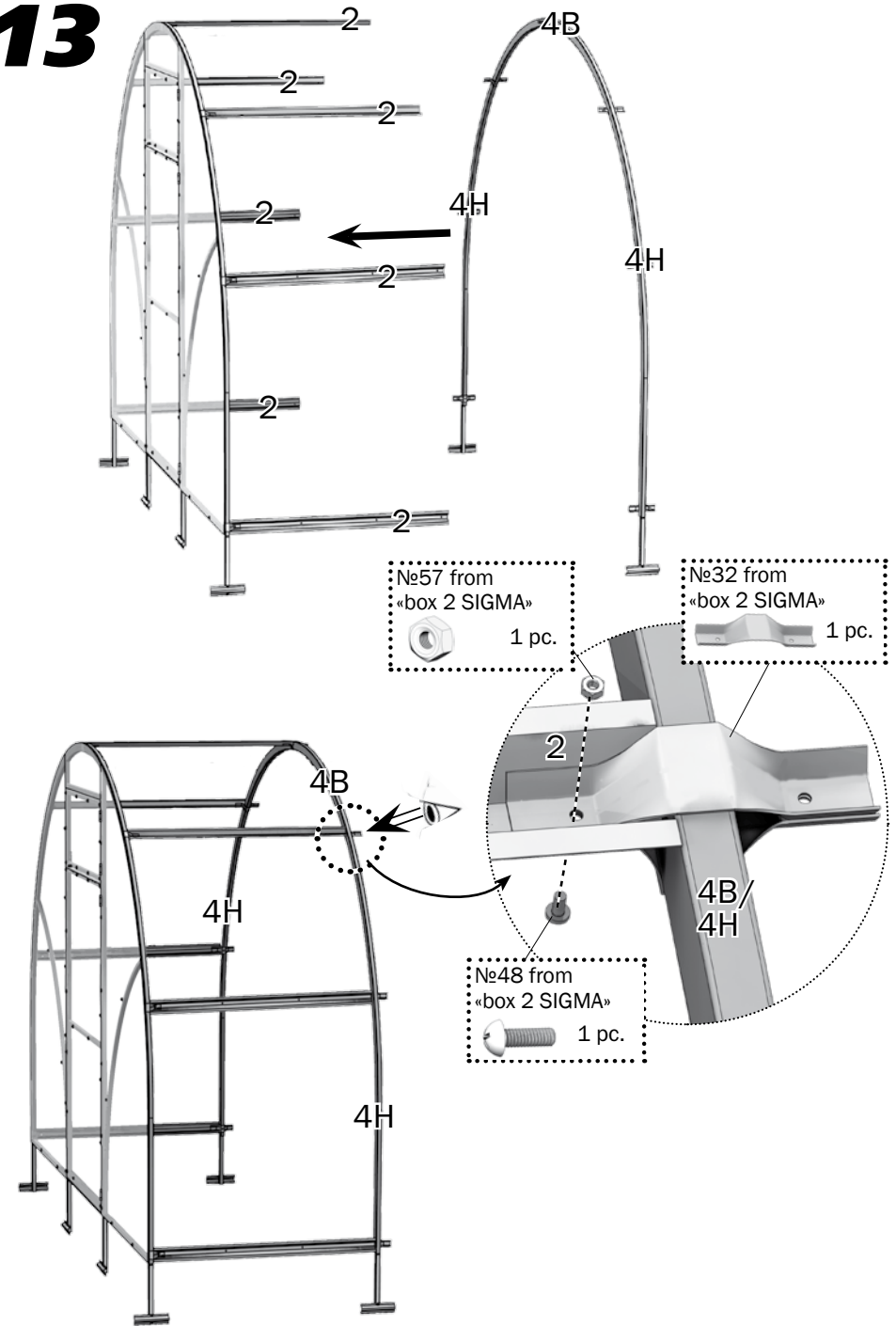




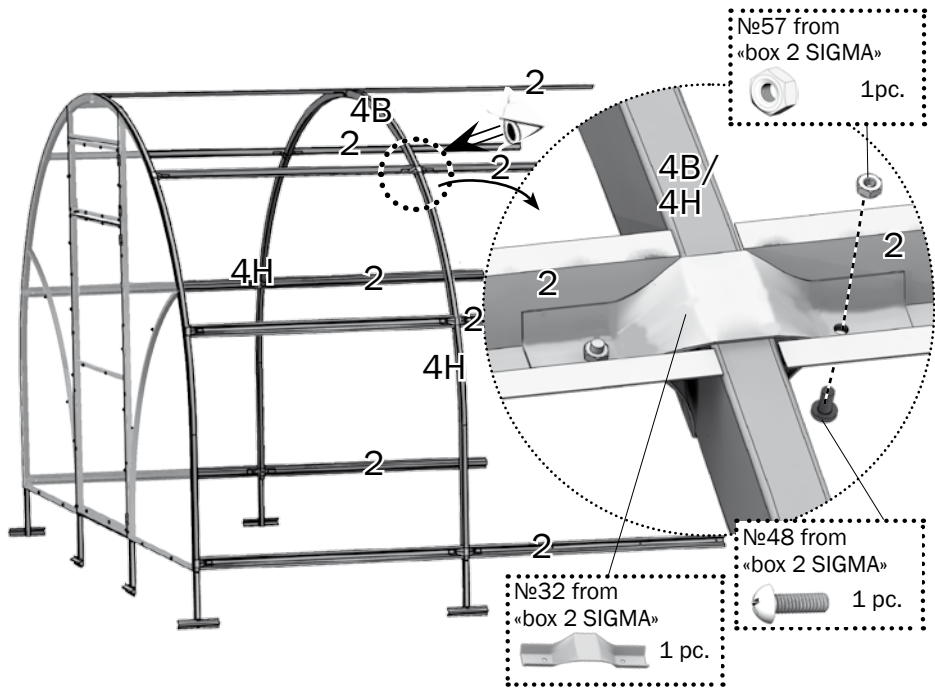
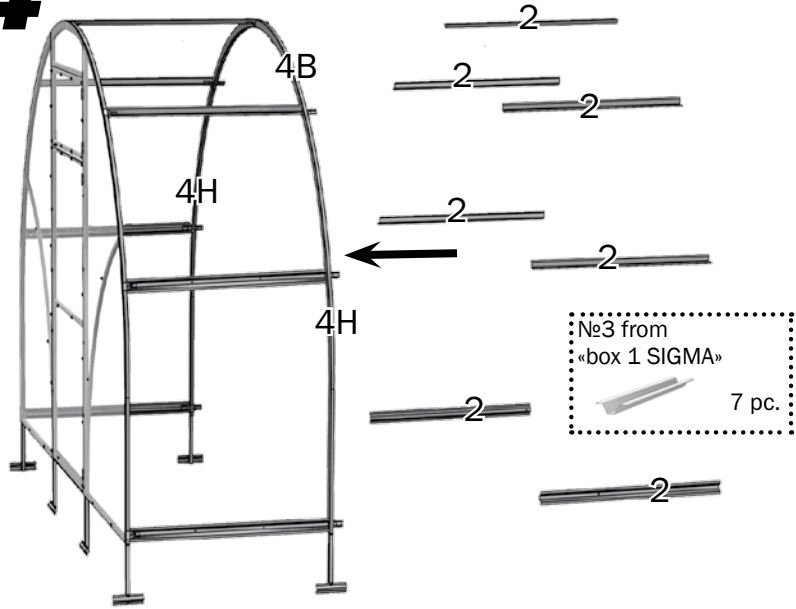
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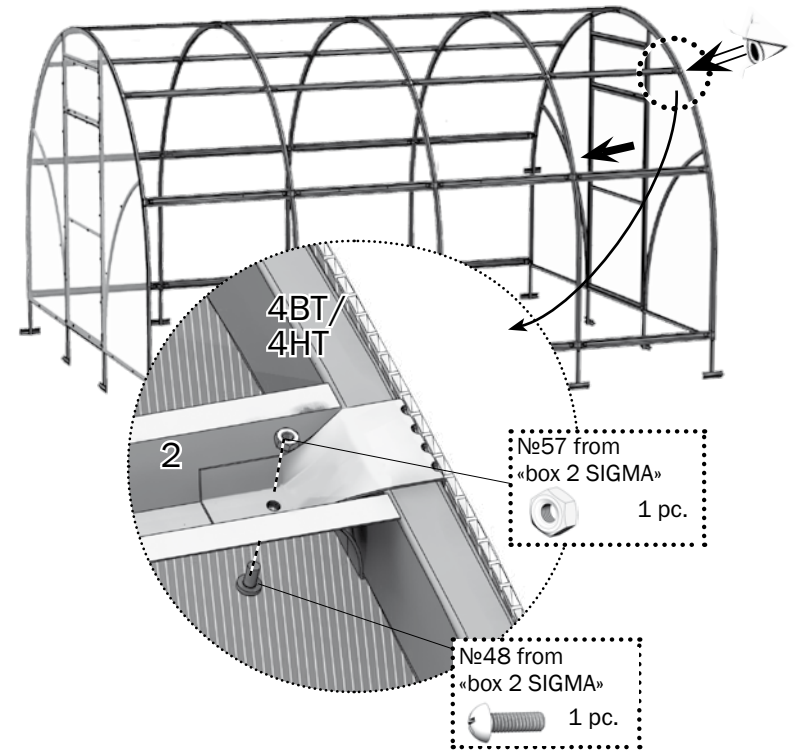
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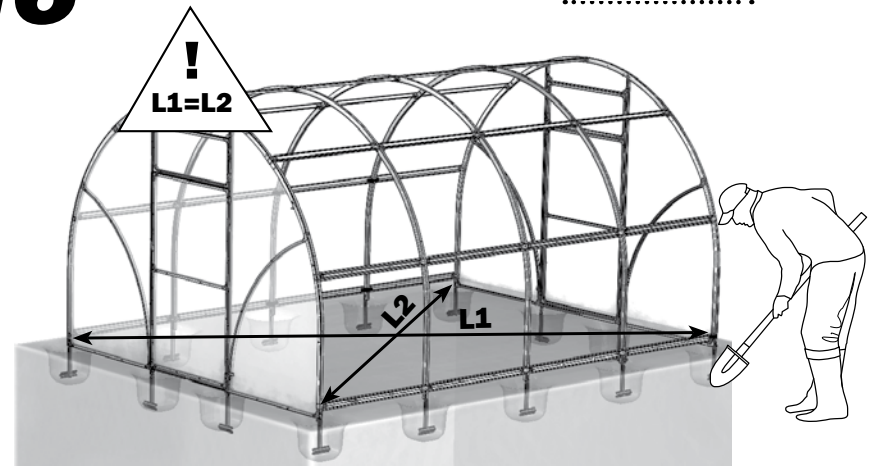
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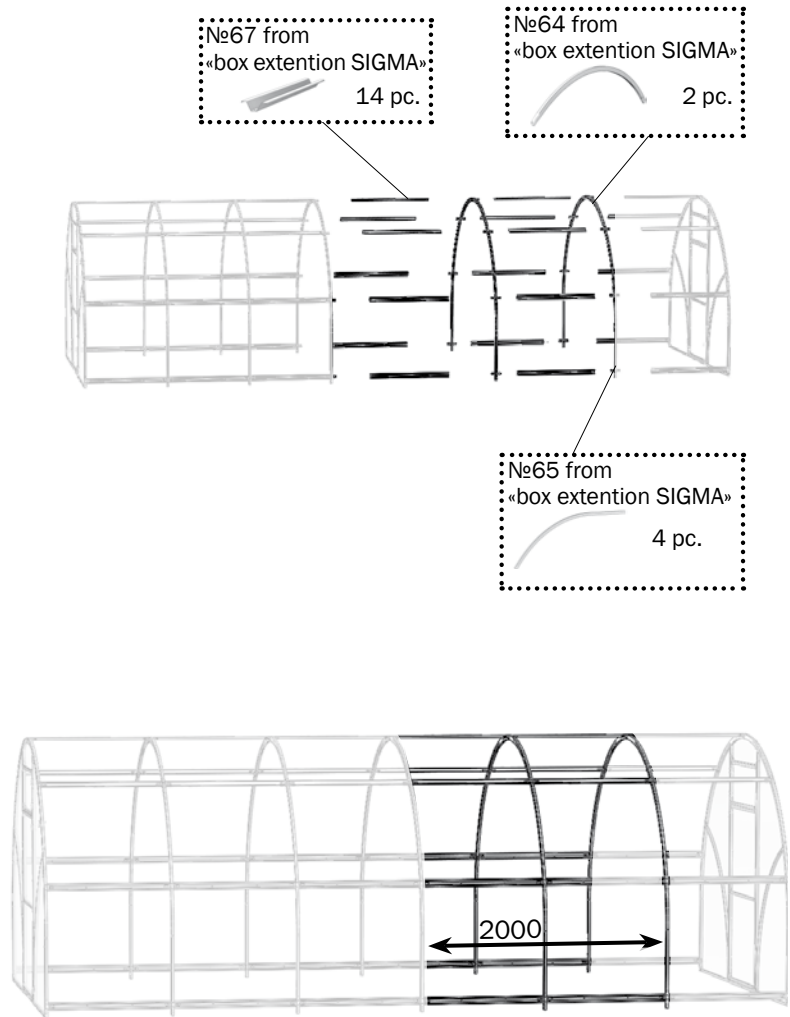
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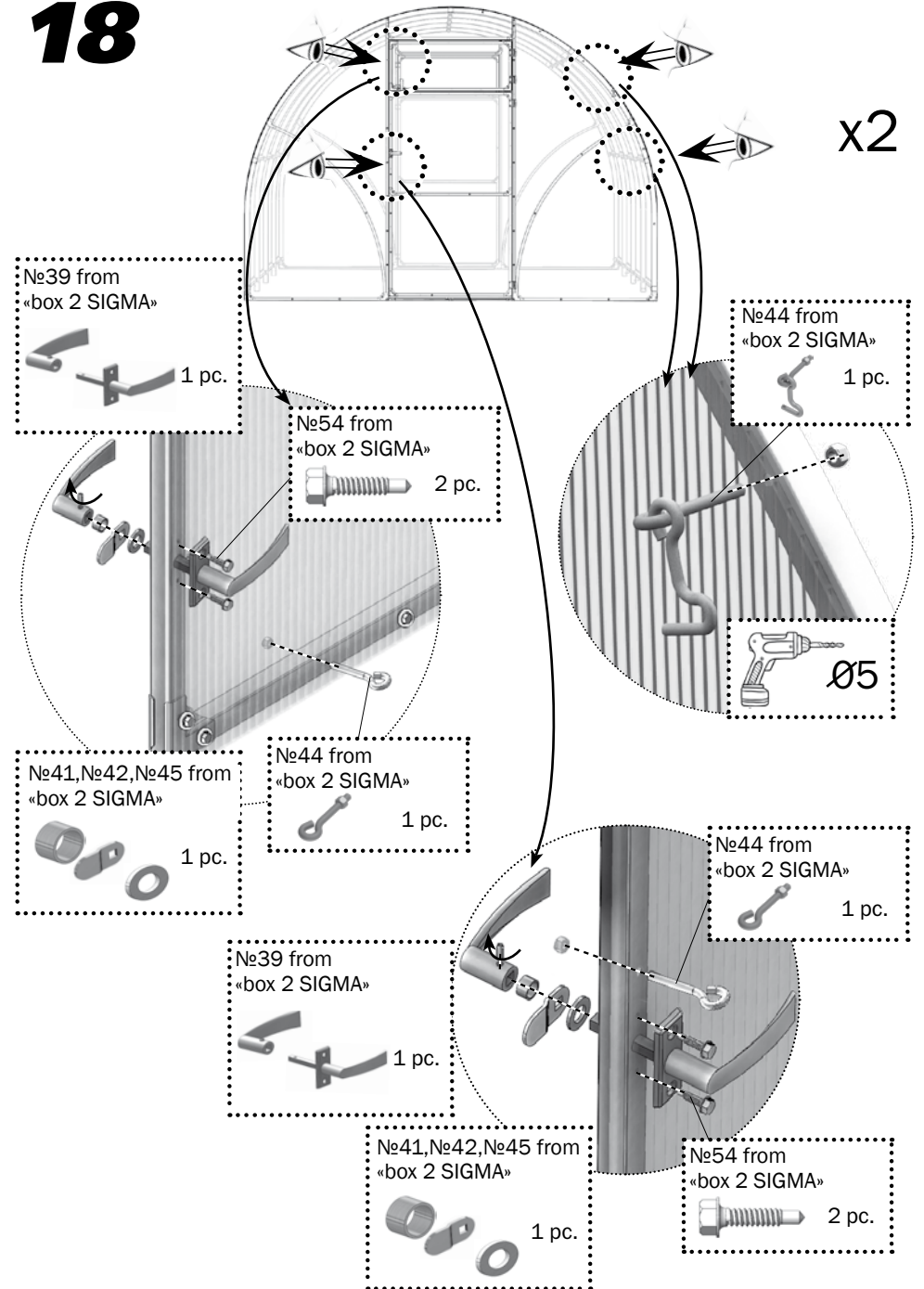
# 16



# 17 LENGTHENING OF THE BASE WITH THE INSERT

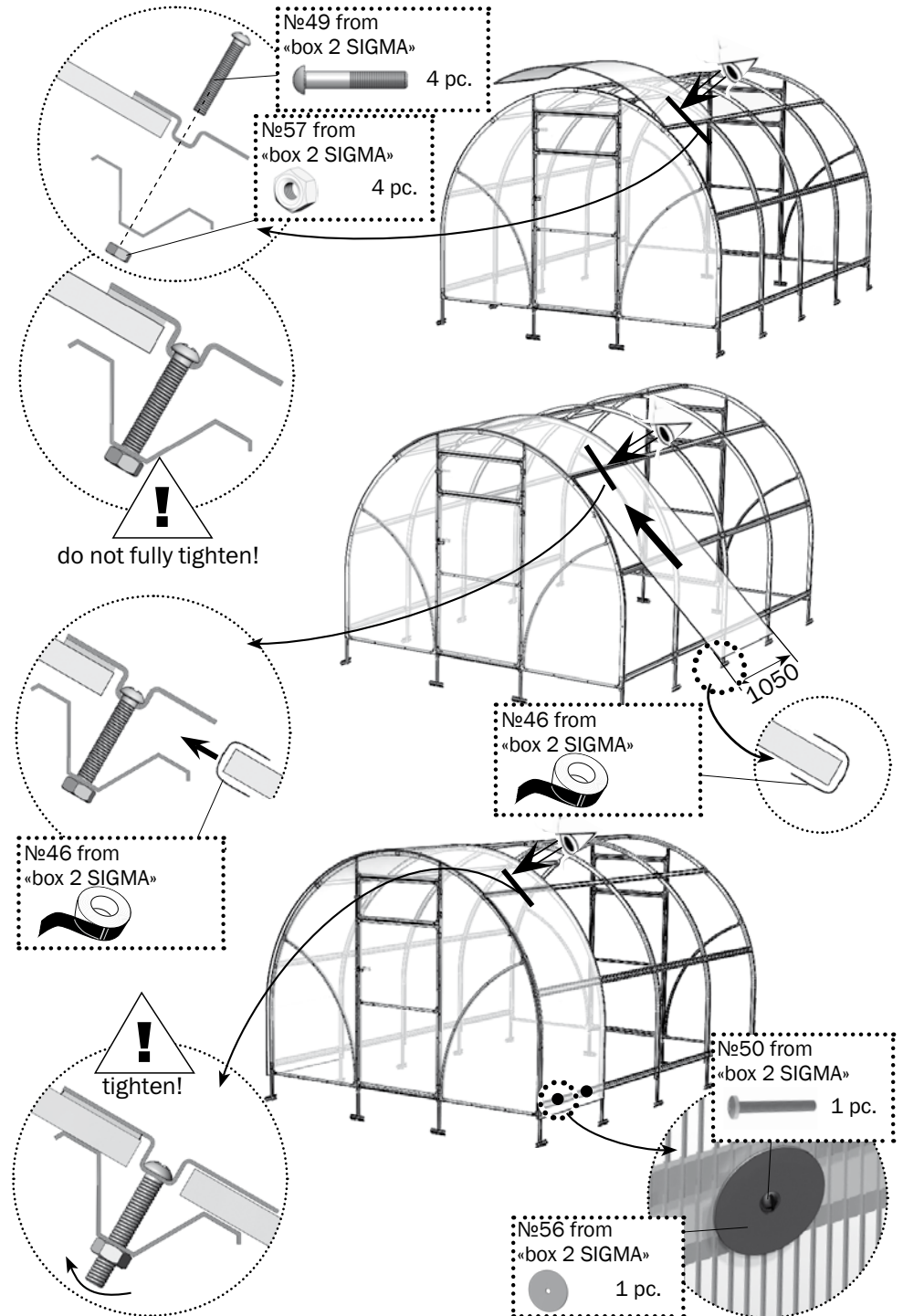
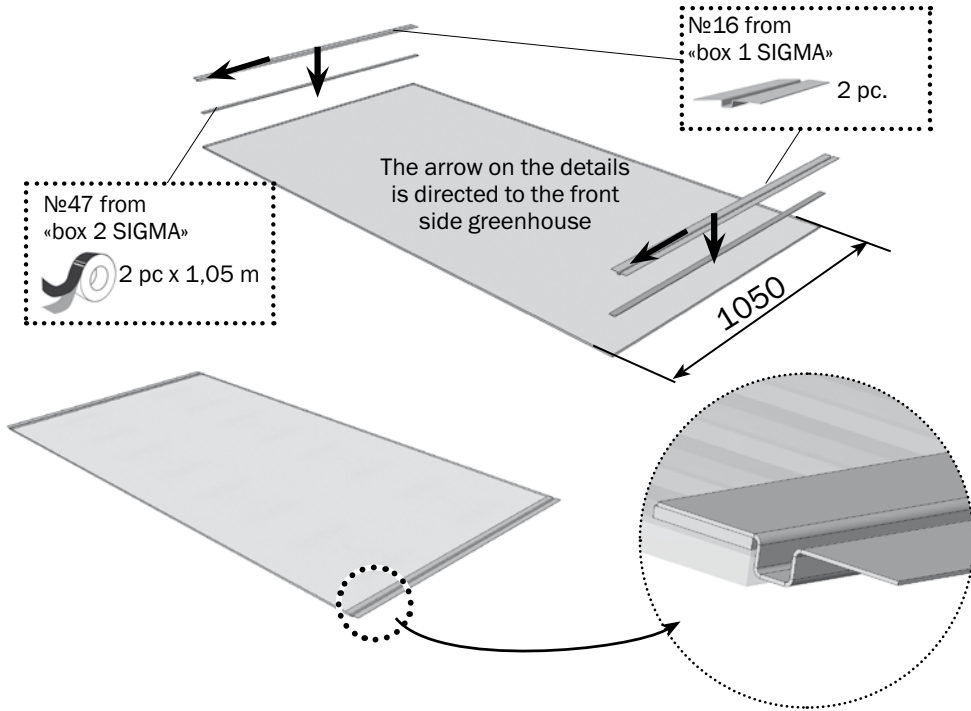
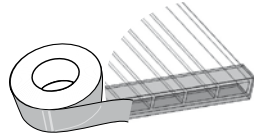


# 18



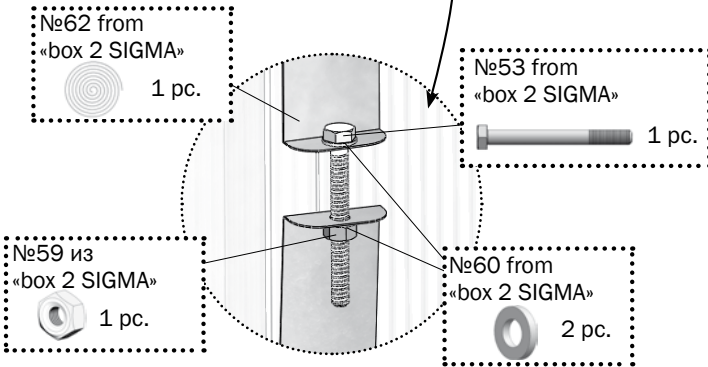
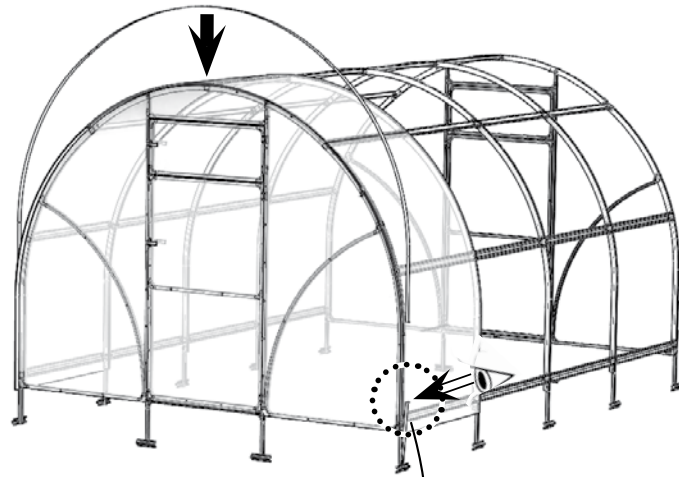
**19** Cellular polycarbonate panels are installed with a certain surface, which has a protective layer, outside (towards the sun). The protective layer usually has a side with the inscriptions on the transportation film. The other side of the film is transparent. Mark the protective side of the sheet 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

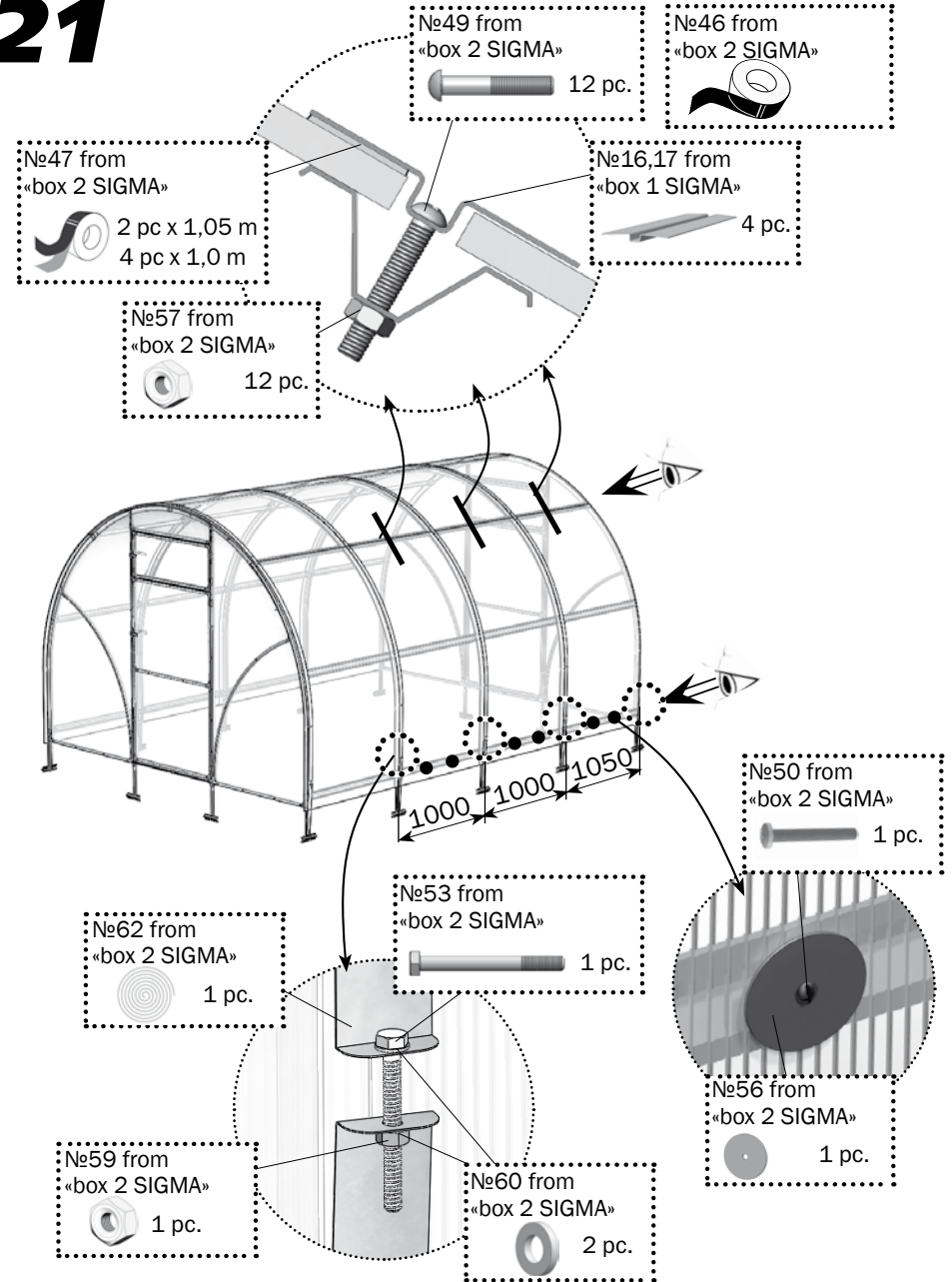




# 20

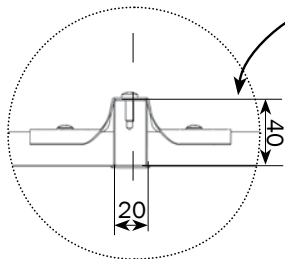
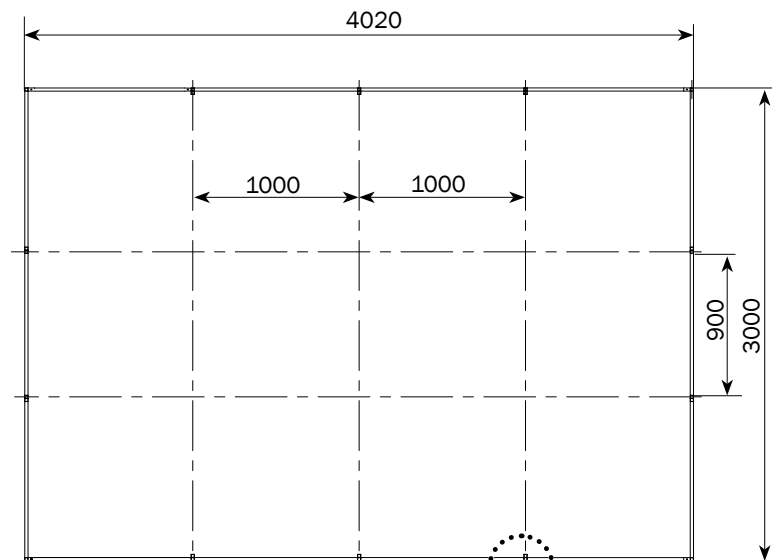
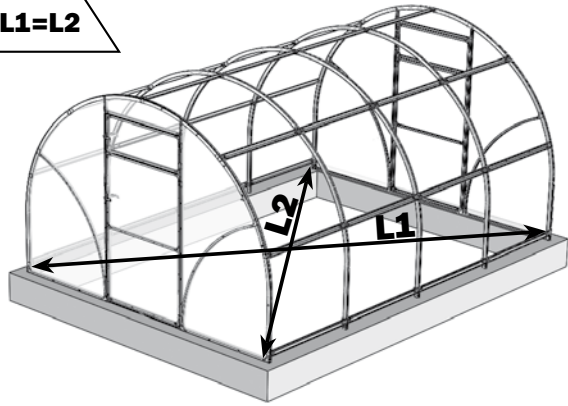


# 21



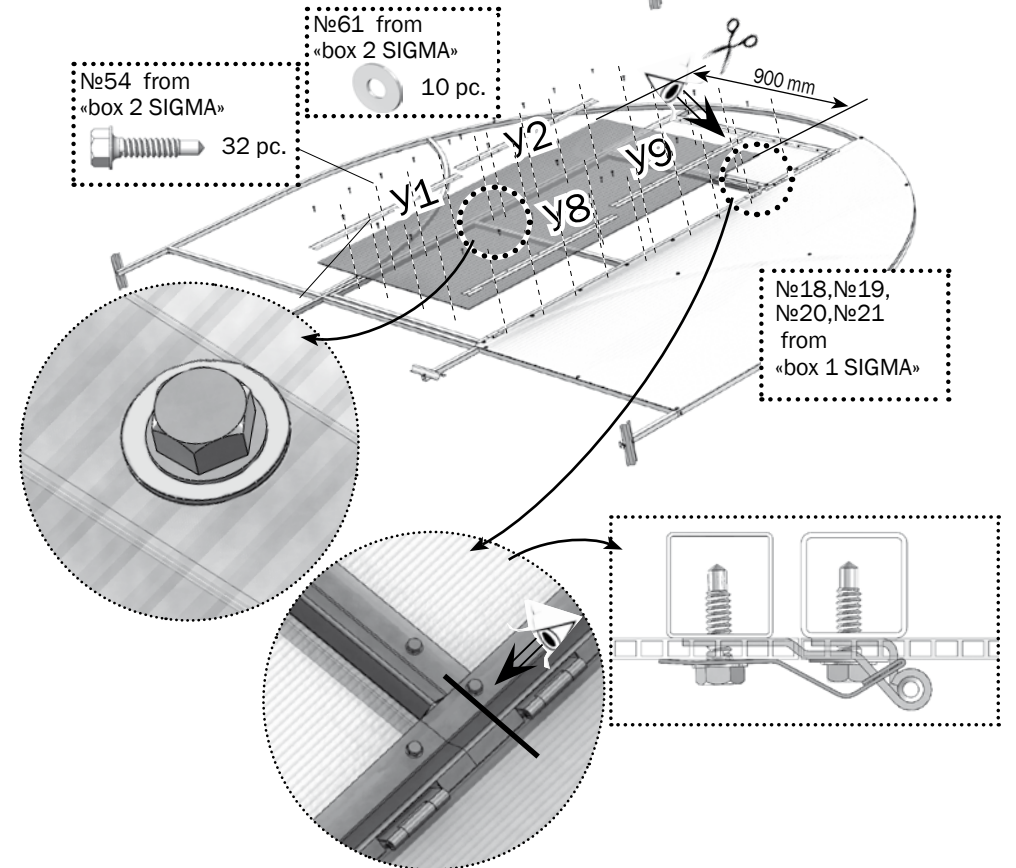
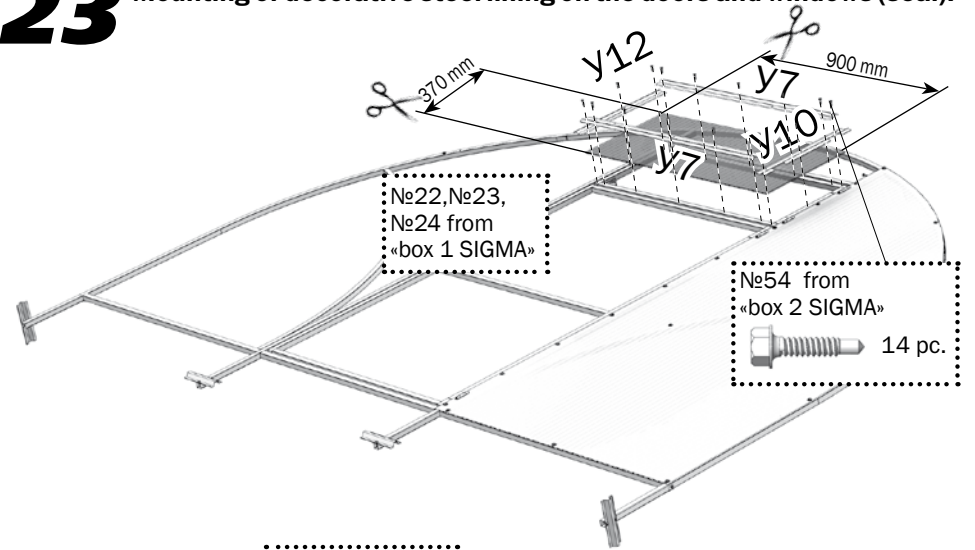
# 22

## MOUNTING ON THE FOUNDATION



# 23

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





Manufacturer:  
Volya LLC, Dubna, Moscow Oblast  
Phone/fax: 8 (495) 598-5-999  
[www.perchina.ru](http://www.perchina.ru)  
e-mail: [info@perchina.ru](mailto:info@perchina.ru)

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