



Manual
for
Greenhouse TITAN Arch 280



Dear customers!

If you decide to purchase a greenhouse, you will receive a product, produced with the greatest possible care, which carcass is made of special galvanized metal profiles of 1 mm thickness and is very sturdy.

Due to simple structure, a greenhouse is easily collected. The range of various accessories will provide you with freedom to implement your ideas.

We wish you a lot of joy and success purchasing our produced greenhouse.

Attention!

When assembling the carcass of a greenhouse and working with canal polycarbonate covering, please always wear protective gloves.

For the assembly of a greenhouse you will need the following tools:

- Hexagonal wrench of 8 mm diameter or an open-end wrench.
- Screwdriver with four-way ferrule or cordless screwdriver.
- Shovel for excavation of pits.
- Level – to measure the evenness.
- Rope - to measure the diagonal.
- Blade – to cut polycarbonate sheets.

If necessary, follow instructions of local construction. In the event of high winds or storm, please close windows or doors.

Before assembling a greenhouse, you should read the entire instruction at least one time and to get acquainted with separate sections and profiles. This is an important additional tool for you.

Check the delivery content according to the detalization of parts. Then sort out the profiles and store them separately.

During the assembly of a greenhouse, we recommend at first to tighten screws by hand – not tightly enough, in order to move profiles freely if necessary. Collected carcass of a greenhouse align with level and then tighten screws securely.

List of parts

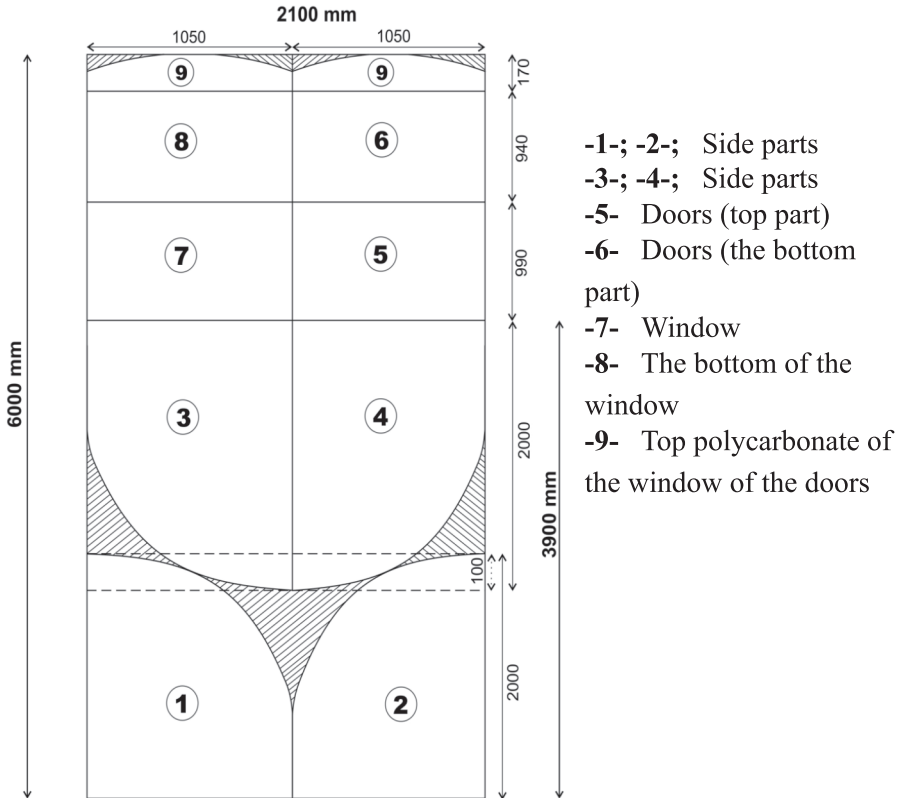
No.	Name	Lenght, mm	TITAN Arch 280		
			6m ²	12m ²	2m extension
NR. 1	Short arch (top)	1820 mm	3	5	2
NR. 2	Side arch (left, right on top)	1200 mm	6	10	4
NR. 3	Side lower arch stand (left, right)	1235 mm	6	10	4
NR. 4	Fixture to the ground	200 mm	10	14	4
NR. 5	Reinforcement in the front and at the end at the bottom of sides	925 mm	4	4	
NR. 6	Reinforcement of arches - crossbars	2030 mm	5	10	5
NR. 7	Reinforcement profile	1469 mm	2	6	4
NR. 8	Doors-windows stand	2270 mm	4	4	
NR. 9	Side reinforcements of the front-rear part	900 mm	4	4	
NR. 10	Transverse stand of doors-windows	985 mm	5	5	
11	Reinforcement between side arches at the bottom	945 mm	4	8	4
12	Screws M5-12 with inlet capping	I-12mm	294	354	62
13	Screws M5-40	I-40 mm	112	140	26
14	Screws M5-20 for polycarbonate fixation to plates and angles	I-20 mm	10	10	
15	Screws M5		416	504	88
16	Interim transparent		120	144	24
17	Handle		3	3	
18	Fixation angles of polycarbonate and stands		22	22	
19	Protective sealing tape of plates for doors and ends	m	16	16	
DOOR - WINDOW					
DOOR NR.1	Part of the door with loop	930 mm	3	3	
DOOR NR.2	Part of the door with handle	930 mm	3	3	
DOOR NR.3	Bottom/top part of the door (horizontal part)	885 mm	9	9	

Dimensions of polycarbonate

	Width x Height	6m ²	12m ²	2m extension	Notes
1; 2; 3; 4 Side parts	1050x2000	4	4		CUTTING OF SHEETS DEPENDS ON THE PACKAGING!!! If you have received only large 2,10x6,00 m sheets (6 m ² – 2 units; 12 m ² – 3 units and etc-), all these details are cut out of 2,10x6,00 m 1 sheet in accordance with the scheme.
5 Top part of the doors	1050x990	1	1		
6 The bottom part of the doors	1050x940	1	1		
7 Window	1050x990	1	1		
8 The bottom of the window	1050x940	1	1		
9 Top polycarbonate of the window of the doors	1050x170	2	2		
10 Top part	2100x6000	1	2	1	

Polycarbonate cutting

Do not mix polycarbonate sides! Fix the set side on the outside, which has a protective layer against UV rays. The protective layer against UV rays is coated with a tape with notes or other specified information, the other side (covered on the inside) is covered by protective transportation film. If necessary, it is recommended to cut sheets with electric circular saw, hand saw with fine teeth or sharp knife. Prior to installation, be sure to remove all tapes! WHEN CUTTING BE SURE TO WEAR GLOVES!



If you have received large sheets 2,10x6,00 m and additionally 1,05x2,00 m, in such case there is no need to cut large sheets according the provided scheme. Large sheets of 2,10x6,00 m are used for roof and small sheets of 1,05x2,00 m are used for ends, doors and windows. Follow the dimensions provided in the table of polycarbonate dimensions.

Installation procedure:

1. Assembly of front and rear parts of a greenhouse. Assembly of arches. The most convenient way to assemble front and rear arch by laying them on the ground. Attach fixtures to the ground (NR.4) to the lower parts of side lower arch stands (NR. 3), and to the top parts – side arches (NR. 2) from both sides, and on the top in the middle section to side arches – short top arch (NR. 1) with screws M5-12 (12) and screws (15). **VIEW FIGURE 1**

2. With screws M5-12 (12) and screws (15) attach fixation angles of stands (18) to the assembled arches. **VIEW FIGURE 2**

3. To the overhead fixation angles of stands (18) screw on doors-windows stand (NR. 8) with screws M5-12 (12) and screws (15). To the lower parts of windows stands of the bottom door (NR. 8) screw on fixtures to the ground (NR.4) with screws M5-12 (12) and screws (15). **VIEW FIGURE 3**

4. Assembly of the front part of a greenhouse. Screw on doors-windows transverse stands (NR. 8) with screws M5-12 (12) and screws (15) between doors-windows stand (NR. 8). At the sides of doors-windows stand (NR. 8) screw on side reinforcements of the front-rear part (NR. 9) and reinforcements at the bottom of sides (NR. 5) with screws M5-12 (12) and screws (15).

NOTE. The lower doors-windows transverse stand (NR. 8) is fixed one hole below than fixtures at the bottom of sides and holds only one screw M5-12 and screw (15). **VIEW FIGURE 4**

To the arch according to the provided drawing (5) fix reinforcement of arches – stands (NR.6) and reinforcement between side arches at the bottom (NR. 11) with screws M5-12 (12) and screws (15). **VIEW FIGURE 5**

Starting from the bottom, fix the second arch to reinforcement of side arches (NR. 11) and reinforcement of arches – crossbars (NR. 6) with screws M5-12 (12) and screws (15), which can be assembled by parts, screwing to the current frame, or by screwing in advance assembled arch (sequence in paragraph Nr. 1). The assembled fragment from two arches with fixtures raise from the ground and put up vertically. **VIEW FIGURE 6**

5. Assembly of the rear part of a greenhouse. Screw on transverse stand of doors-windows (NR. 10) with screws M5-12 (12) and screws (15) between doors-windows stand (NR. 8). At the sides of doors-windows stands (NR. 8) screw on with screws M5-12 (12) and screws (15) side reinforcements of the front-rear part (NR. 9) and reinforcements at the bottom of sides (NR. 5). **VIEW FIGURE 7.**

To the arch according to the presented drawing (5) screw on with screws M5-12 (12) and screws (15) reinforcements of arches – crossbars (NR. 6) and reinforcements between side arches at the bottom (NR. 11). **VIEW FIGURE 8.**

Starting from the bottom, fix the second arch to reinforcement of side arches (NR. 11) and reinforcement of arches – crossbars (NR. 6) with screws M5-12 (12) and screws (15),

which can be assembled by parts, screwing to the current frame, or by screwing in advance assembled arch (sequence in paragraph Nr. 1). The assembled fragment from two arches with fixtures raise from the ground and put up vertically. **VIEW FIGURE 9.**

6. The assembled front and rear parts connect together uniting one with another through reinforcement of arches – crossbars (NR. 6). Insert the last fifth arch, which can be assembled in parts, tightening to the existing carcass, or by screwing in advance assembled arch (sequence in paragraph Nr. 1). The arch and fixtures are collated and fixed with screws M5-12 (12) and screws (15) through all three parts. **VIEW FIGURE 10.**

For greater than 12m² (4 meters) greenhouse BALTIC LT greenhouse extension kits are used, each of which is equal to 2 meters.

If the length of a greenhouse is 6 meters – than a greenhouse is connected as follows: 4m + 2m extension.

If the length of a greenhouse is 8 meters – than a greenhouse is connected as follows: 4m + 2m extension + 2m extension.

If the length of a greenhouse is 10 meters – than a greenhouse is connected as follows: 4m + 2m extension + 2m extension + 2m extension. And etc. **VIEW extension drawing (p.43).**

7. Installation of greenhouse fixtures. Reinforcement profiles (NR. 7) are inserted in each inner arch on the left and right sides. They are fixed at the bottom with screws M5-12 (12) and screws (15) through all three parts, and at the top with M5-12 (12) and screws (15). **VIEW FIGURE 11.**

8. Fixation angles of polycarbonate (18) are screwed on to rear parts of reinforcement of arches – crossbars (NR. 6) at the front and end. **VIEW FIGURE 12.**

9. Excavate pits (25 cm in diameter, 40 cm of deepness) for embedding of side lower arch stands (NR. 3) over the entire ground perimeter. Place the collected greenhouse carcass into the excavated pits, measure the diagonal with a rope (diagonals should be equal), check the camber of side arches (they have to be vertical) and tighten the carcass of a greenhouse.

10. After assembling the carcass part of a greenhouse, cut the polycarbonate according to the provided dimensions and attach it to the carcass. Fix cut polycarbonate sheets (polycarbonate cutting scheme -1-, -2-, -3-, -4-, -8-, -9-) at designated areas to corners of polycarbonate and stand reinforcement with screws M5-20 (14), screws M5 (15) and interims (16). To doors-windows stand and crossbar (NR. 8, NR.10) as well as to side reinforcements of the front-rear part (NR. 9 and NR. 5) with screws M5-40 (13), screws M5 (15) and interims (16). **NOTE: if side parts of the polycarbonate protrude above the carcass part of arches, align them by cutting equally.**

NOTE: POLYCARBONATE SHEETS ARE LAID WITH UV PROCESSED SIDE TO THE SUN (THE PROTECTIVE TAPE WITH AN INSCRIPTION OUTSIDE). IT IS IMPORTANT TO REMOVE POLYCARBONATE PROTECTIVE TAPES FROM BOTH SIDES PRIOR TO INSTALLATION ON THE CARCASS. IT IS IMPORTANT NOT TO MIX WHICH SIDE IS PROCESSED WITH UV PROTECTIVE LAYER. VIEW FIGURE 13-14.

11. Put on an aluminum foil (19) on the open ends of the channel-polycarbonate on the top of side sheet of polycarbonate and only after it put on the top polycarbonate part (10 – 2100x6000 mm). **VIEW FIGURE 15.**

12. Upper-solid polycarbonate sheets -10- place from a bottom to the top, starting from one side. The polycarbonate is fixed with screws M5-40 (13), screws (15) and interims (16). One arch band has 4 (four) marked fixation points. Please fix EXACTLY only at designated fixation points. The other side has to be fixed from the top to bottom at designated and marked 4 (four) fixation points. If the solid sheet of the polycarbonate is too long, cut it so it would equally touch the bottom of reinforcement between the side arches (NR. 11). The next top-solid -10- polycarbonate sheet change on already attached sheet and tighten in the same principle ONLY at designated areas. At the front and at the end polycarbonate sheets has to protrude for 5-7 cm. **VIEW FIGURE 16.**

13. Assembly of doors-windows. All the parts presented in set of doors part connect into a square (DOORS NR. 1, DOORS NR. 2, DOORS NR. 3) by screws M5-12 (12) and screws M5 (15). **VIEW FIGURE 17.**

14. Part of the doors with loops (DOORS NR. 2) screw on to doors-windows stand (NR. 8) with screws M5-12 (12) and screws M5 (15) (Fig. 23).

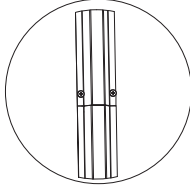
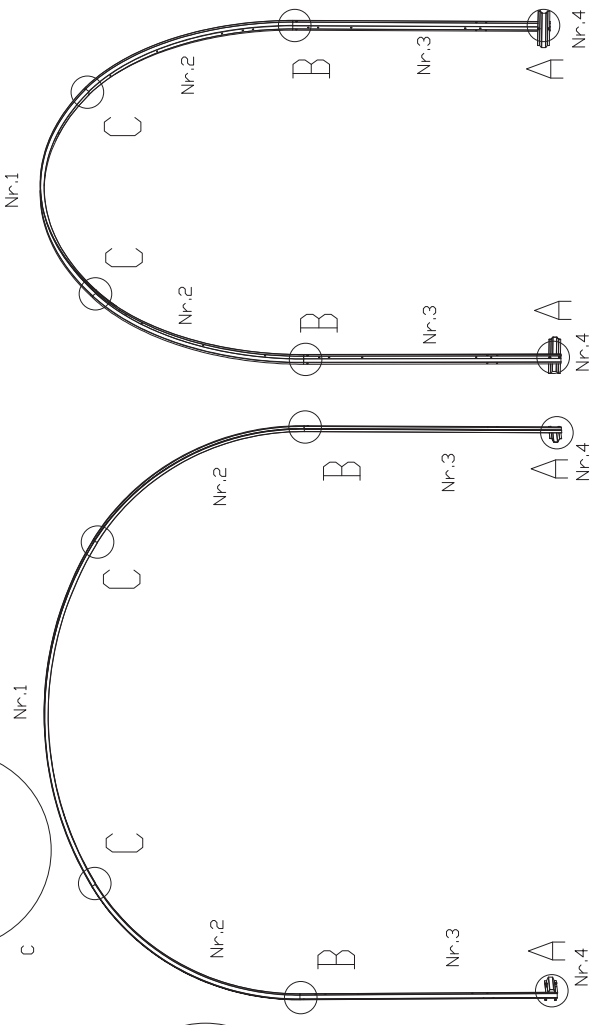
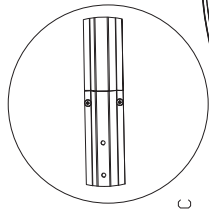
NOTE: Doors are attached to doors stands when doors are fully opened and loop stretched out into the outside of a hole, through the canal polycarbonate. VIEW FIGURE 18.

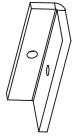
15. According to the polycarbonate cutting scheme cut the polycarbonate (-5-; -6-; -7-). Cut polycarbonate parts of the window of doors put on ONLY when loops of doors are fixed to the carcass. Polycarbonate sheets of doors-window are fixed to the frame of doors-window with screws M5-40 (13) and screws M5 (15) and interims (16). The upper ends of the polycarbonate of doors-window seal with a protective sheet tape (19). Connect handles (17) already at the prepared doors-window areas. **VIEW FIGURE 19.**

Nr.1	Nr.2	Nr.3	Nr.12	Nr.15	Nr.12						
					12x						
1x	2x	2x	<table><tr><td colspan="3">Nr.4</td></tr><tr><td></td><td>2x</td><td></td></tr></table>			Nr.4				2x	
Nr.4											
	2x										

Rear and front 2X

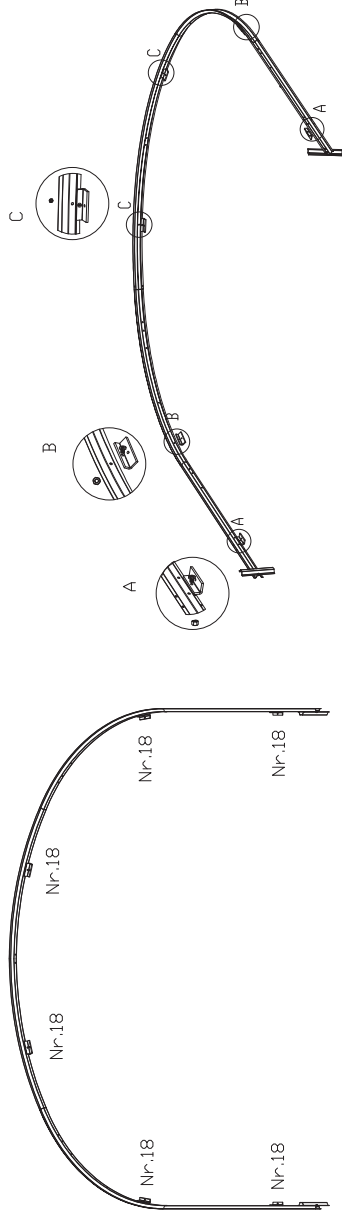
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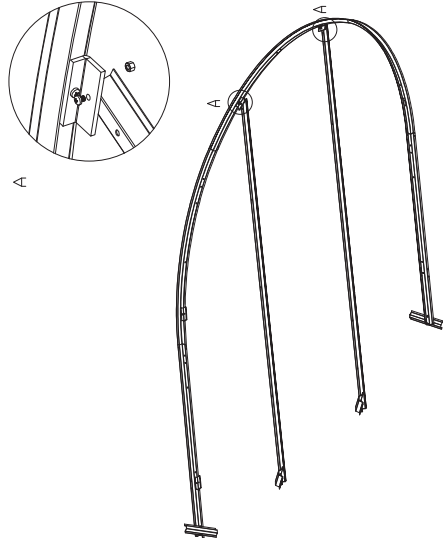
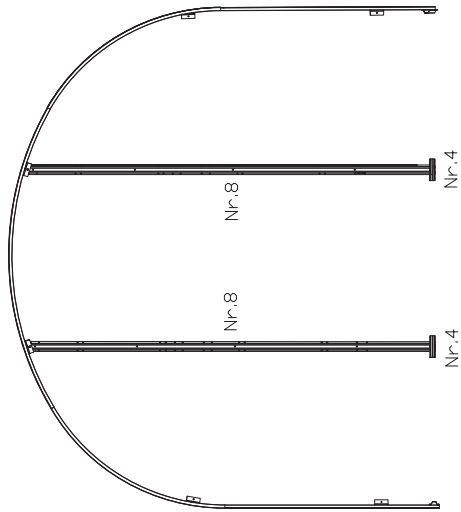
Nr.18  6x	Nr.15  6x	Nr.12  6x
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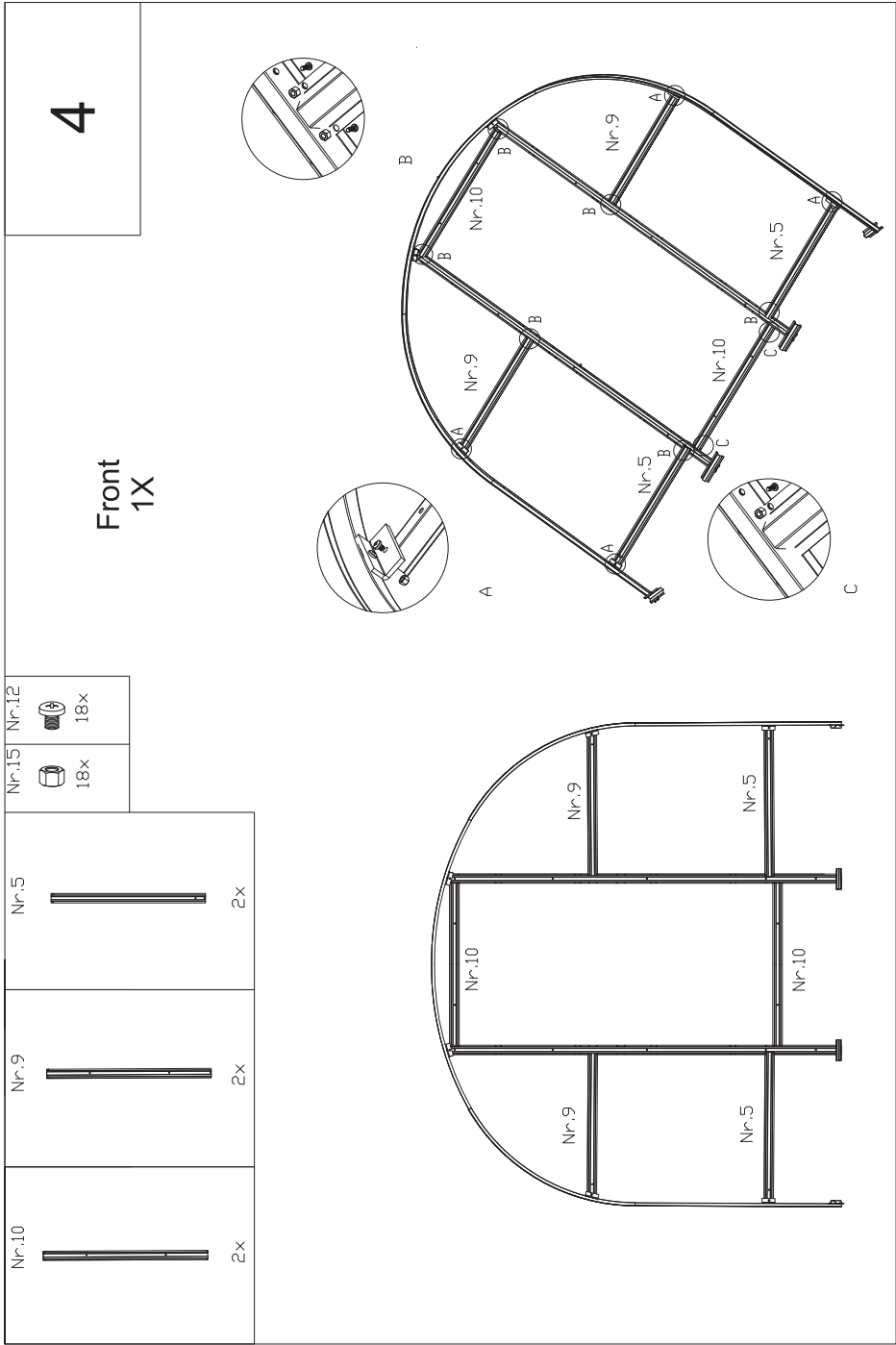
Rear and front
2X

2



Nr.8	Nr.15	Nr.12	Nr.4	Rear and front 2x	3
	 6 x	 6 x	 2 x		



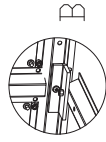
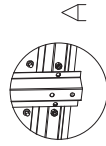
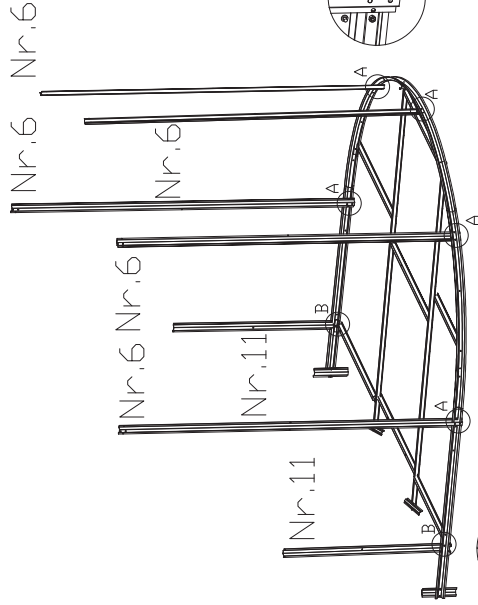
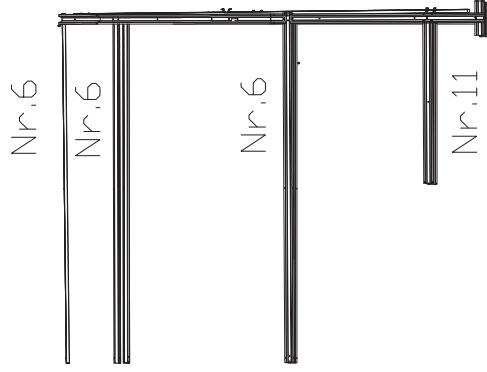


Nr.6	Nr.11	Nr.15	Nr.12
5x	2x	14x	14x



Front
1X

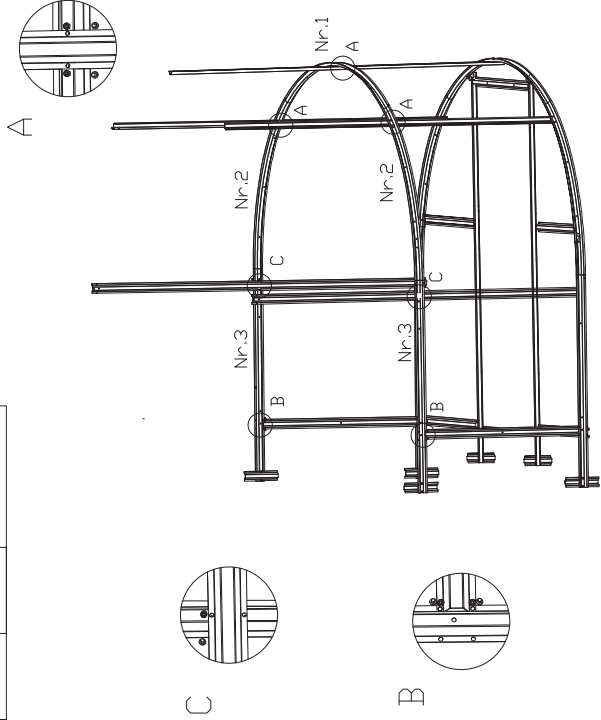
5



Nr.1		1x
Nr.2		2x
Nr.3		2x
Nr.15	 16x	Nr.4  2x
Nr.12	 16x	

Front
1X

6



Nr.10



3x

Nr.9



2x

Nr.5



2x

Nr.15



24x

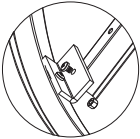
Nr.12

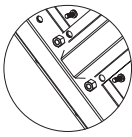


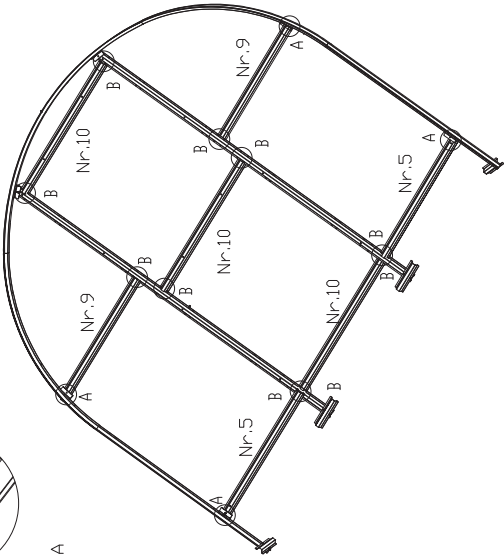
24x

Rear
1X

7



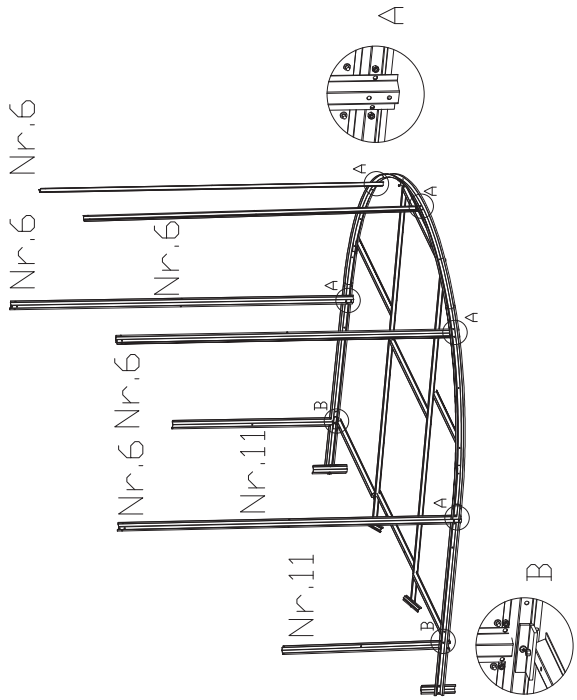
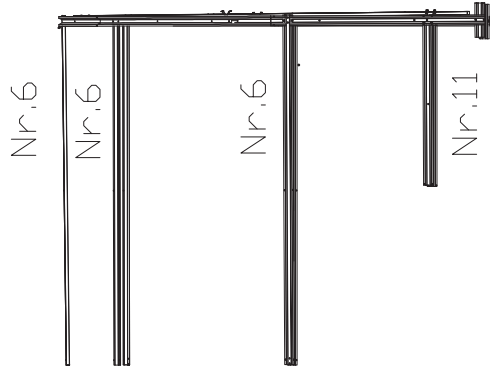




Nr.6	Nr.11	Nr.15	Nr.12
5x	2x	14x	14x
			

Rear
1X

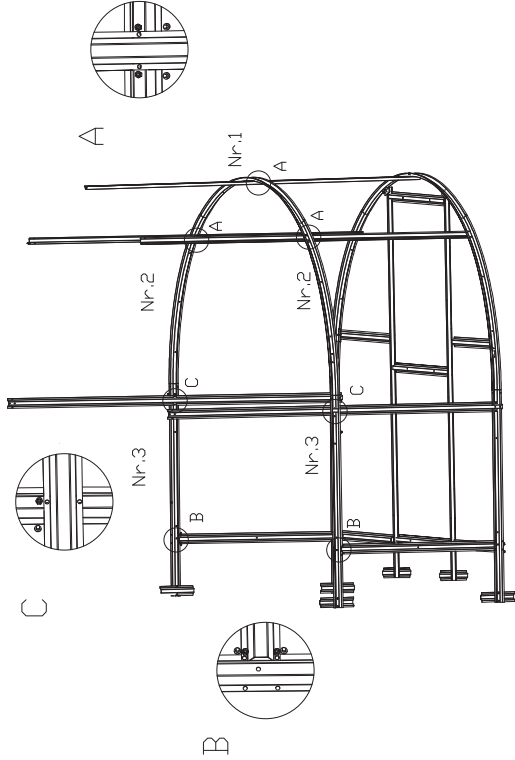
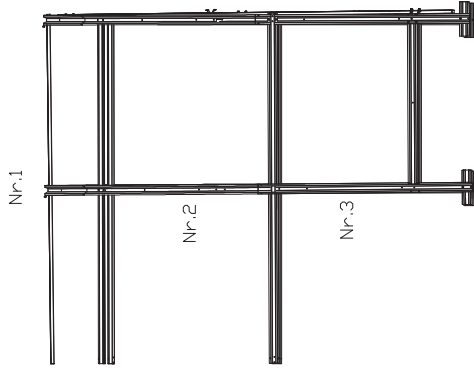
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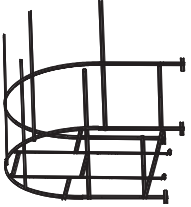
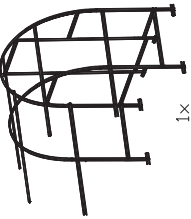
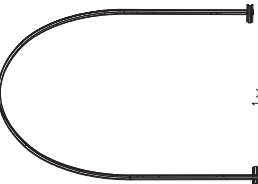
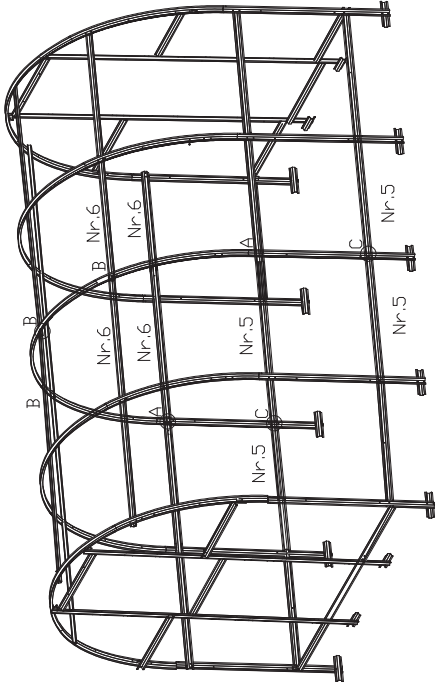


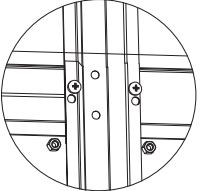
Nr.1		1x
Nr.2		2x
Nr.3		2x
Nr.15	 16x	Nr.4  2x
Nr.12	 16x	

Rear
1X

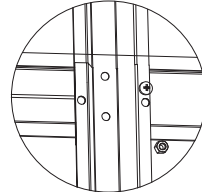
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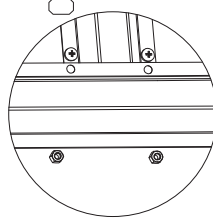
Nr.5  4x	Rear  1x	10
Front  1x	Nr.15 12x  Nr.12 12x 	
Arch  1x	Diagram showing the assembly of the arch structure with labels A, B, C, and parts Nr.5, Nr.6. 	



B



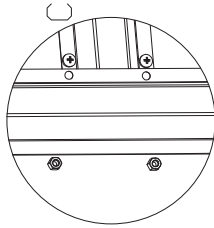
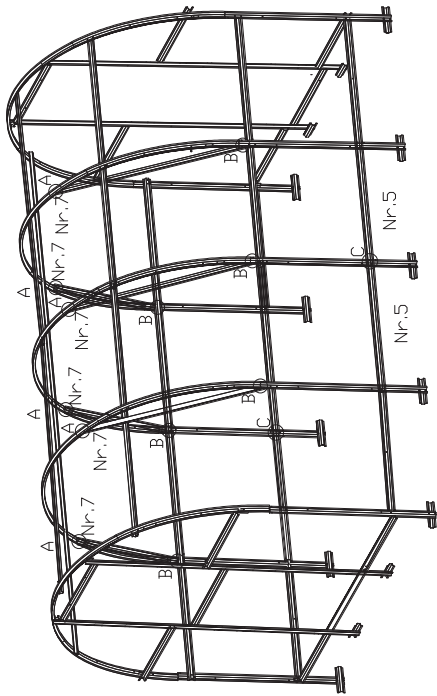
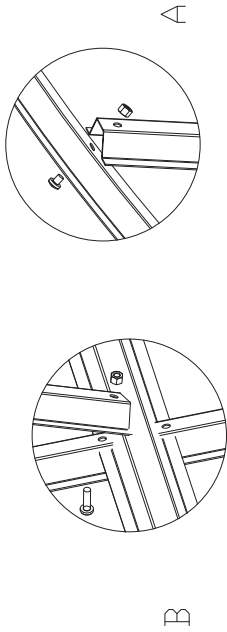
A



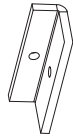
C

Nr.15	Nr.12	Nr.13
		
34x	28x	6x

Nr.7		6
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Nr.18



10x

Nr.15



10x

Nr.12

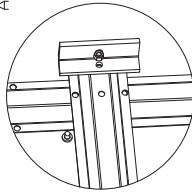


10x

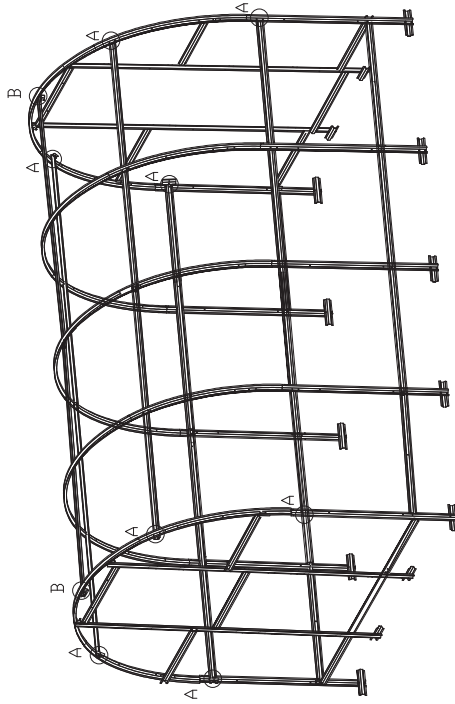
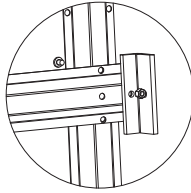
Angles fixation in front and rear

12

A



B



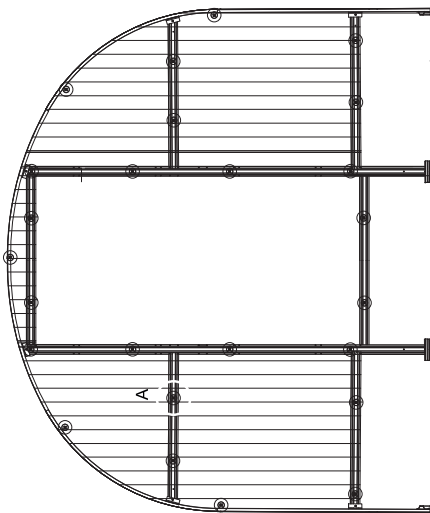
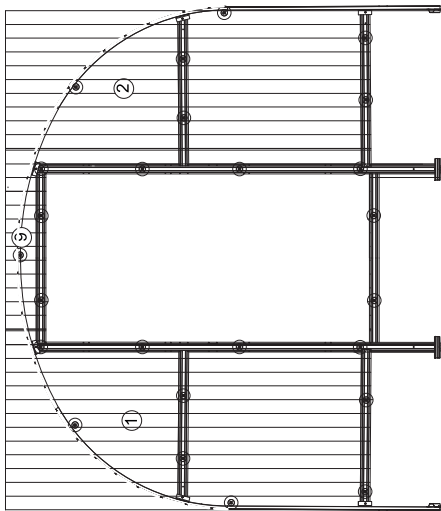
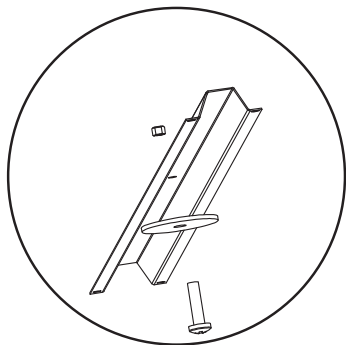
Nr.15	Nr.13	Nr.16	Nr.14
			
23x	18x	23x	5x



① ②



⑨



Polycarbonate fixation in rear

Nr.15	Nr.14	Nr.16	Nr.13
			
27x	5x	27x	22x

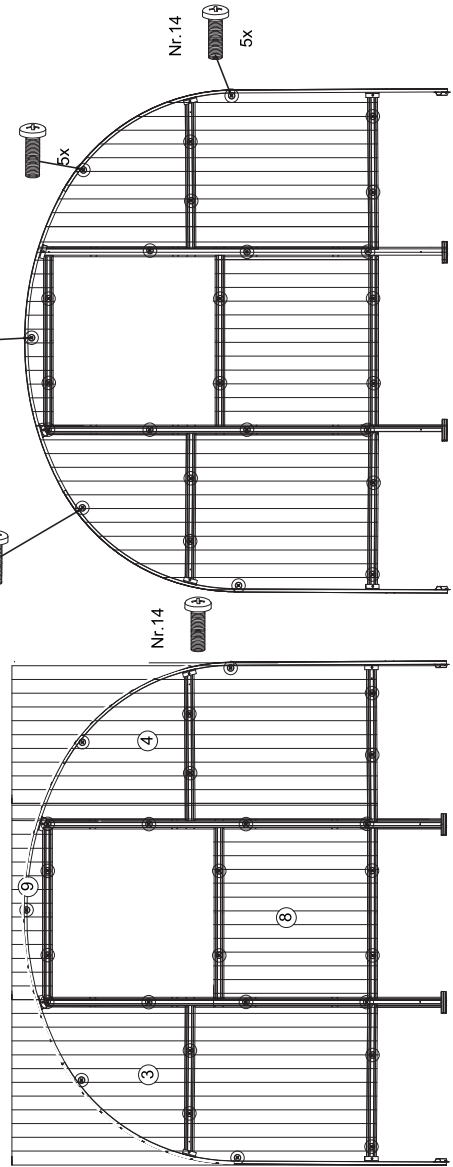


③

④



⑧

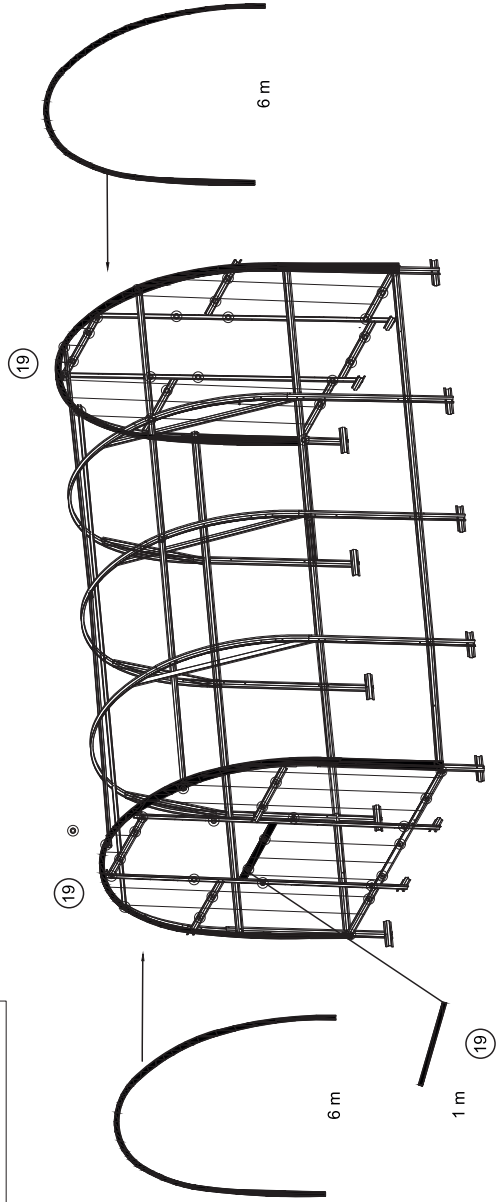


Protective sealing tape in front and rear

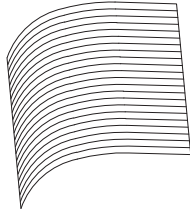
(19)



13 m



2100x6000 mm



2 x

Nr.15



48x

Nr.13



48x

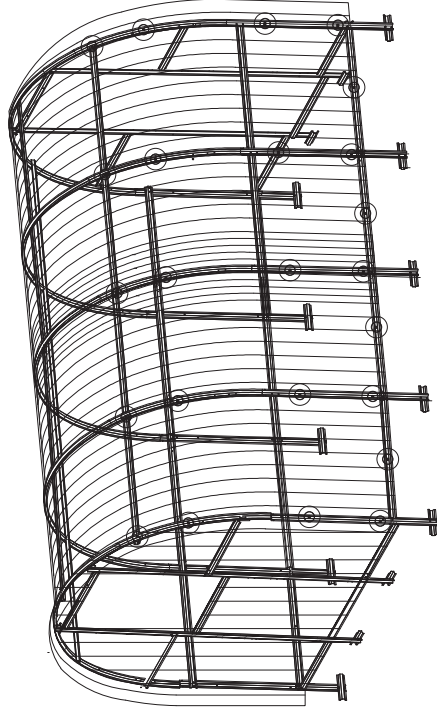
Nr.16



48x

Polycarbonate fixation on the top

16

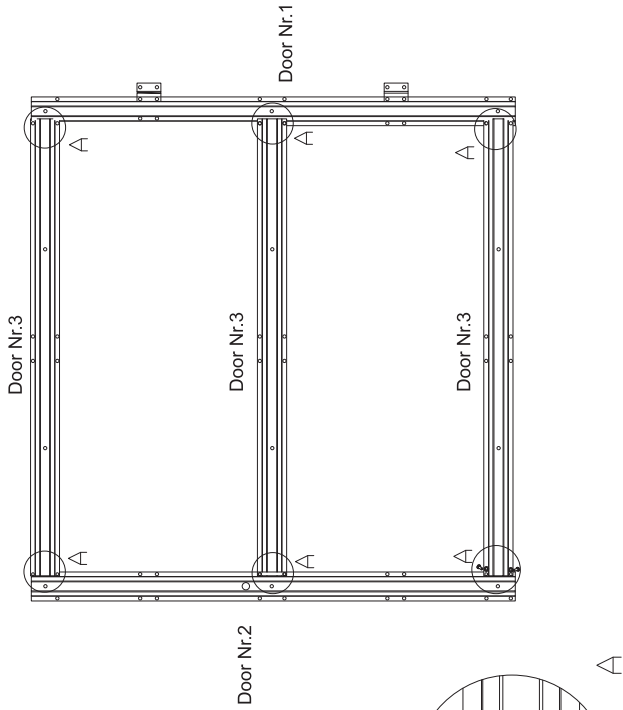


Door Nr.1 930 mm 	1x
Door Nr.2 930 mm 	1x
Door Nr.3 885 mm 	3x

Nr.15 	12x
Nr.12 	12x

Doors assembly 3X

17



Doors



3 x

Nr.15



12x

Nr.12

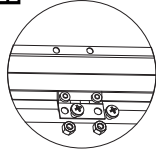


12x

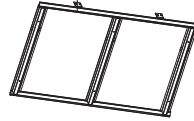
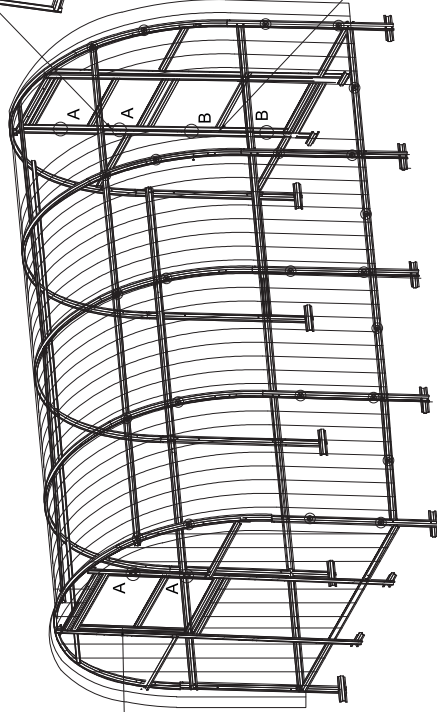
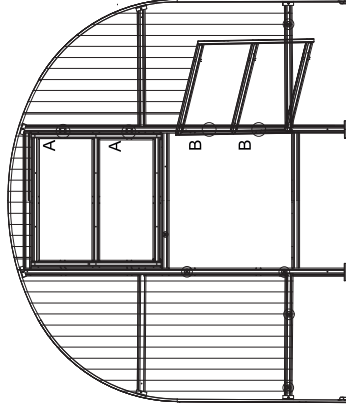
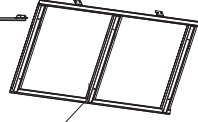
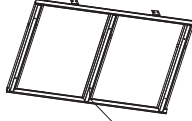
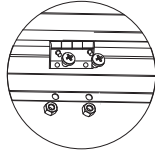
Doors assembly
3X

18

B

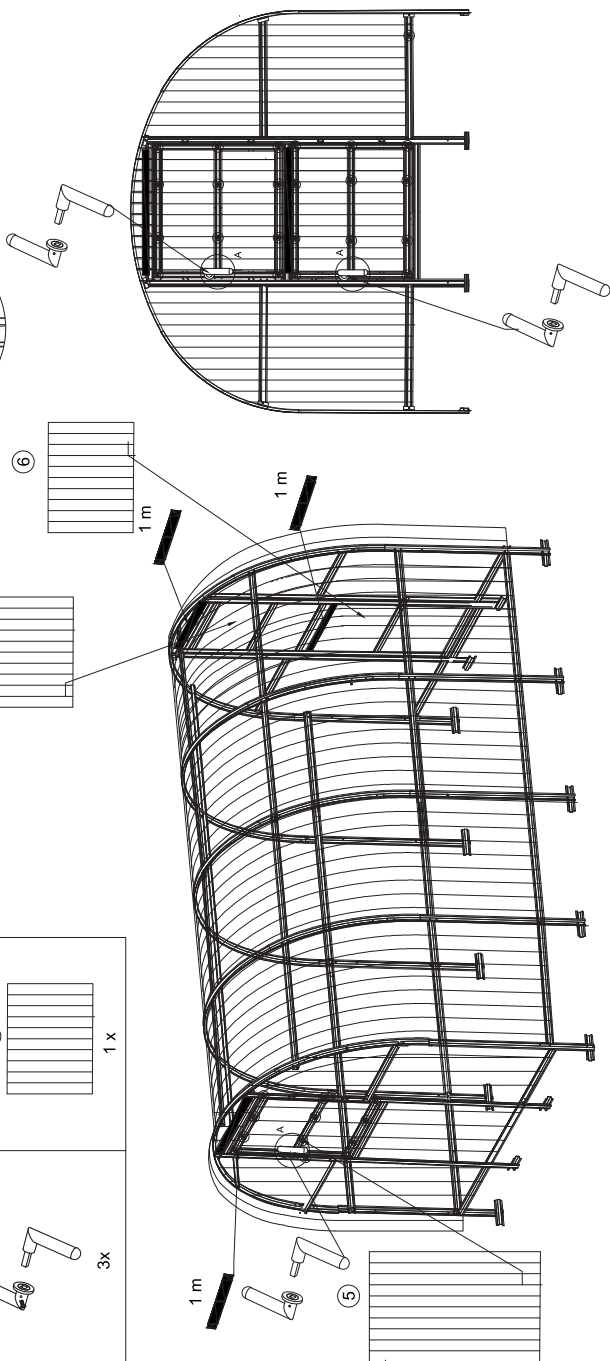
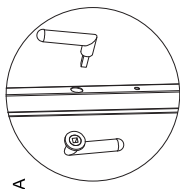


A



Nr.14		36x
Nr.16		36x
Nr.15		36x

Protective sealing tape 3 x 1m	Handle 3x	⑤ ⑦ 2 x	⑥ 1 x
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Nr.6

5x

Rear

1x

Nr.5

8x

Front

1x

Nr.15

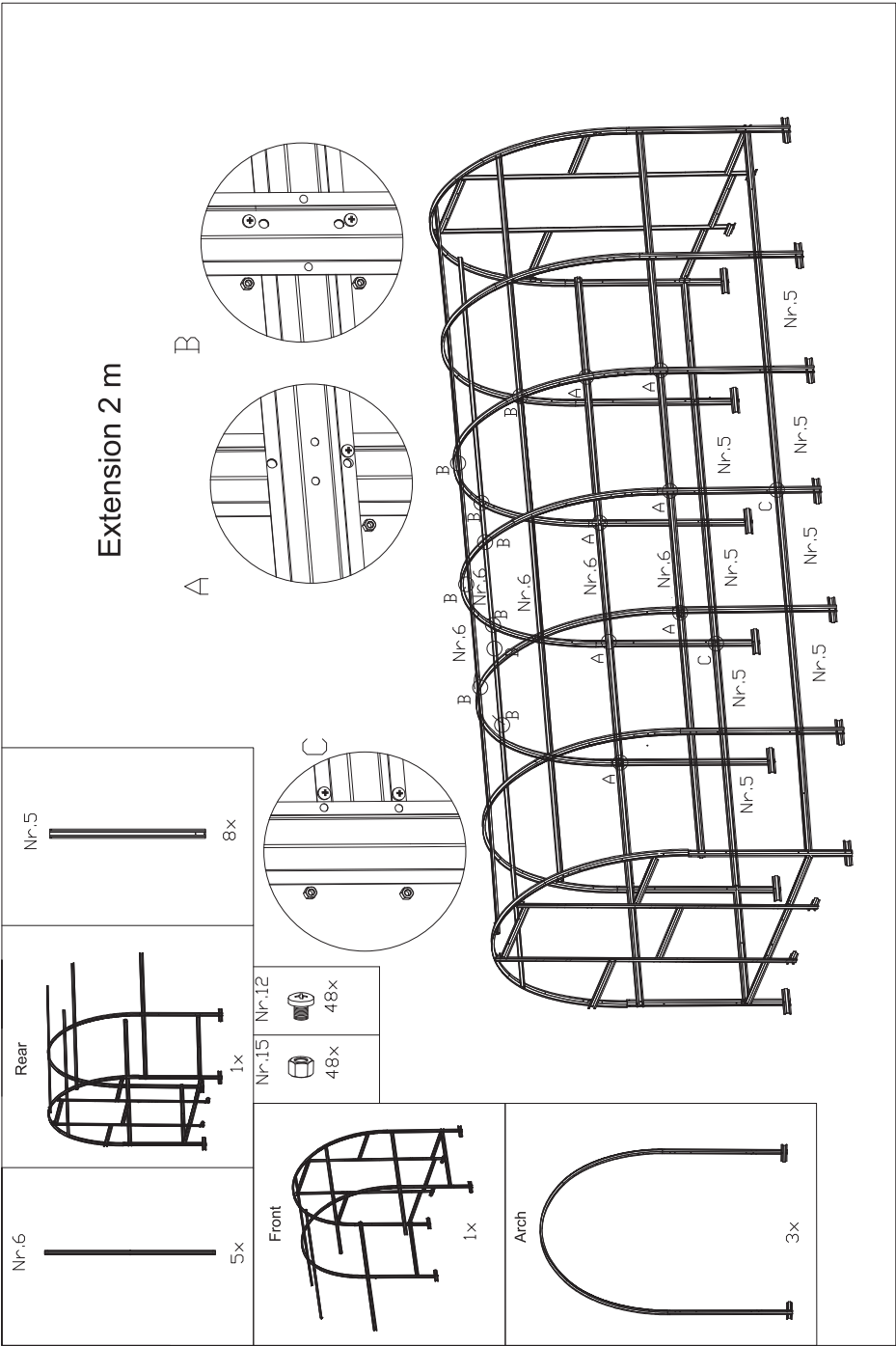
48x

Nr.12

48x

Arch

3x



Contact information

Head office:

Dancover A/S
Lyngelvej 16A, Nørre Herlev
3400 Hillerød
Denmark

For more information
please visit:

www.dancovershop.com

National contact

Denmark:

denmark@dancover.com

UK:

uk@dancover.com

Germany:

germany@dancover.com

France:

france@dancover.com

Sweden:

sverige@dancover.com

Finland:

suomi@dancover.com

Poland:

polska@dancover.com

Luxembourg:

luxembourg@dancover.com

Portugal:

portugal@dancover.com

Spain:

espana@dancover.com

Italy:

italia@dancover.com

Switzerland:

schweiz@dancover.com

Austria:

austria@dancover.com

Norway:

norge@dancover.com

Nederland:

nederland@dancover.com

Ireland:

ireland@dancover.com

Belgium:

belgique@dancover.com