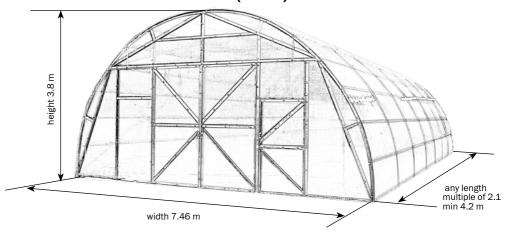


## honeycomb polycarbonate greenhouse (EURO)



**Technical certificate** 

p. 2-7

**Assembly manual** 

p. 8-36

Technical certificate

Technical certificate

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 "FERMER 7.5" greenhouse is designed and manufactured in accordance with SNiP 2.10.04-85 and generally intended for industrial cultivation of crops at farms and peasant holdings.

Width of the greenhouse is 7.46 m. Area of covered ground depends on the length of the greenhouse and for minimal length of 4.2 m is 31.5 m2. Height of the installed frame is 3.8 m. Required length of the greenhouse is provided by purchasing of extra packages «Insert» and adds 2.1 m to the base length (table 1). The frame of the greenhouse is made of galvanized iron 1 mm thick and is to be assembled with screws, nuts and washers.

The greenhouse is fixed on the ground without foundation by digging special frame endings or on a fundament using cleater angles. The type of fixing is determined by a buyer. The kit includes everything you need to mount the covering. The greenhouse may be completed with covering on buyer's request. Number of gates, doors, small windows is conformed to a buyer and the complete set of an anteroom is conformed to a buyer.

Table 1 COMPLETION WITH PACKAGES, PCS																																									
	FRAME (basic length 4,2 m)							(fr	INSERT (frame extension for 2,1 m)																																
L greenhouse length, m	N - number of greenhouse sections, excluding	1 FARMER PACKAGE	2 FARMER PACKAGE	3 FARMER PACKAGE	4 FARMER PACKAGE	5 FARMER PACKAGE	6 FARMER PACKAGE	7 FARMER PACKAGE	8 FARMER PACKAGE	9 FARMER PACKAGE	10 FARMER PACKAGE	EXTRA PACKAGE	1 INSER! PACKAGE	2 INSERT PACKAGE	3 INSERT PACKAGE	4 INSERT PACKAGE	EXTRA PACKAGE																								
4,2	0												0	0	0	0	0																								
6,3	1															1	1	1	1	1																					
8,5	2						.																														2	2	2	2	2
10,6	3															3	3	3	3	3																					
12,7	4												4	4	4	4	4																								
14,9	5	1	1	2	2	2	2	2	2	2	1	1	5	5	5	5	5																								
17,0	6												6	6	6	6	6																								
19,1	7												7	7	7	7	7																								
21,2	8													8	8	8	8	8																							
23,4	9												9	9	9	9	9																								
2,1(N+2)													N	N	N	N	N																								

Table 2 <b>COMPLET</b>	ION WITH TAM	BOUR PACKAGES	*, PCS
Package name	quantity	dimensions (mm)	max. allowable
Tambour	1	2700x100x100	31
Door	1	1900x100x50	14,2
Tambour packaging	1	200x100x50	1,3
Door sealing	1	500x300x50	1,2
Side wall sealing	1	500x300x50	3,1

<sup>\*</sup>Completing with one anteroom or more is made at the request of the buyer (purchased separately).

Table 3 PARAMETERS OF PACKAGE	ES	
content	dimensions,mm	weight,no More,kg
FRAME (BASE LENGTH	4.2 M)	
1 PACKAGE FERMER (arc elements)	3100x200x100	15,0
2 PACKAGE FERMER (power arc straight elements)	2800x100x90	28,0
3 PACKAGE FERMER (end runners elements)	2000x90x100	41,0
4 PACKAGE FERMER (end side brace elements)	2400x90x100	23,0
5 PACKAGE FERMER (arc elements)	3100x200x100	15,0
6 PACKAGE FERMER (end straight elements and strips)	2800x200x100	41,0
7 PACKAGE FERMER (end straight elements)	2800x200x100	34,0
8 PACKAGE FERMER (elements and strips for doors)	500x300x100	14,0
9 PACKAGE FERMER (elements and strips for gates)	2700x100x90	37,0
10 PACKAGE FERMER (fixtures, component parts and seal)	500x300x100	19,5
EXTRA PACKAGE		
INSERT (2.1 M FRAME ELO	NGATION)	
1 PACKAGE INSERT (arc elements)	3100x200x100	15,0
2 PACKAGE INSERT (power arc straight elements)	2800x100x90	32,0
3 PACKAGE INSERT (runners elements)	2100x110x90	43,0
4 PACKAGE INSERT (fixtures and component parts for Insert)	200x100x50	2,0
EXTRA PACKAGE		

Technical certificate Technical certificate

	DETAILED PARTS LIST "FRAN	/IL (T.Z III)	
marking	name	quantity(pcs)	length (m))
	1 PACKAGE FERMER		
4	Arc	4	3,08
	2 PACKAGE FERMER		
5н	Bottom arc strainer	2	2,73
5	Top arc strainer	2	2,73
6	Segment strainer	3	2,58
7м	Radial strainer 1	4	0,3
76	Radial strainer 2	3	0,54
3	Support	2	0,29
1	Foundation stay brace	2	0,84
	3 PACKAGE FERMER		
2к	End runner	13	1,99
2кн	Bottom end runner	4	1,99
	4 PACKAGE FERMER		
Укос	Longitudinal stiffness side brace	8	2,36
	5 PACKAGE FERMER		
4	Ark	4	3,08
	6 PACKAGE FERMER		
11	Top girder	2	2,7
15ц	Central vertical member	1	0,6
15	Side vertical member	2	0,55
9	Stay brace	4	2,7
10	Cross bar	5	1,07
8	Side brace	2	1,31
10ц	Central strainer	1	2,72
Π-11	Strip of a top girder	1	2,67
П-9	Strip of a gate opening stay brace	2	2,62
П-10	Strip of a cross bar	1	1,01
П-12-д	Strip of a door opening stay brace	1	1,9
	7 PACKAGE FERMER		
5н	Bottom arc strainer	2	2,73
5	Arc strainer	2	2,73
6	Segment strainer	1	2,58
7м	Radial strainer 1	4	0,3
7б	Radial strainer 2	1	0,54
1	Foundation stay brace	6	0,84
3	Support	6	0.29
П-5н	Strip of a bottom arc strainer	6	1,24
	Ridge side brace	1	2,23
	Strip of a ridge side brace	2	0,03
	8 PACKAGE FERMER		-,,,,,
13-д	Door cleat	2	0,95
13-д-н	Door bottom cleat	1	0,95
12-д-л	Door left stay brace	1	1,88
12-д-п	Door right stay brace	1	1,88
14-д	Door diagonal	2	1,23
П-12-д-п	Strip of a door right stay brace	1	1,88
П-12-д-н	Strip of a door hight stay brace Strip of a door bottom cleat	1	0,95
16к	Guiding bracket	4	0,08
TON	Hasp	2	0,65

Table 4	DETAILED PARTS LIST "FRAME" (4.2 m)				
marking	name	quantity(pcs)	length (m)		
	9 PACKAGE FERMER				
13-в	Gates cleat	4	1,28		
13-в-н	Gates bottom cleat	2	1,28		
12-в-п	Gates right stay brace	2	2,61		
12-в-л	Gates left stay brace	2	2,60		
16-к	Guiding bracket	8	0,08		
14-в	Hinged gate diagonal	4	1,73		
П-12-в-п	Strip of a right stay brace	2	2,61		
П-13-в-н	Strip of a bottom cleat	2	1,28		
	Hasp	4	0,91		
	10 PACKAGE FERMER				
	Screw M6x10 DIN 965	460			
	Bolt M6x14 DIN 933	1192			
	Bolt M6x20DIN 933	120			
	Nut M6 DIN 934	1772			
	Bracket 26x17x16 (angle)	352			
	Hanger	18			
	Hinge ΠΗ 1-130 left	4			
	Hinge ΠΗ 1-130 right	8			
	Straight lug 40x90	8			
	Pull PC-80-2	6			
	Self-driving screw M5x20	352			
	Washer 6	1344			
	Washer 32x6	450			
	Penofol	1	21,4		
	Door seal	1	35,6		
	End seal	1	24 м		
	EXTRA PACKAGE (BASE)				
	Ridge	2	2,10		
	Top draw band	3	10,91		
	Bottom draw band	6	0,60		
	Arc base sheet	4	2,91		
	Outermost base sheet for a runner	4	1,95		
	Tingle	24	0,09		
	Outermost shape	4	2,10		
	Washer 32x6	24			
	Bolt M6x14	56			
	Bolt M6x20	24			
	Bolt M6x60	6			
	Nut M6	86			
	Washer 6	88			
	Double-size scotch tape	2	5 м		

Technical certificate Technical certificate

Table 5 DETAILED PARTS LIST "INSERT"					
marking	name	quantity(pcs)	length (m)		
	1 PACKAGE INSERT				
4	Arc	4	3,08		
	2 PACKAGE INSERT				
5н	Bottom arc strainer	2	2,73		
5	Arc strainer	2	2,73		
6	Segment strainer	3	2,58		
7м	Radial strainer 1	4	0,3		
76	Radial strainer 2	3	0,54		
П-5н	Strip of a bottom arc strainer	4	1,24		
3	Support	2	0,29		
1	Foundation stay brace	2	0,84		
	3 PACKAGE INSERT				
2	Main runner	13	2,08		
2н	Main runner	4	2,08		
	4 PACKAGE INSERT				
	Screw M6x10 DIN 965	52			
	Bolt M6x14 DIN 933	164			
	Bolt M6x20DIN 933	40			
	Nut M6 DIN 934	256			
	Washer 6	304			
	EXTRA PACKAGE INSERT	1			
	Ridge	1	2,10		
	Top draw band	1	10,91		
	Bottom draw band	2	0,60		
	Arc base sheet	4	2,91		
	Outermost base sheet for a runner	2	2,04		
	Tingle	24	0,09		
	Main shape	2	2,10		
	Washer 32x6,3	12			
	Bolt M6x14	38			
	Bolt M6x20	12			
	Bolt M6x60	2			
	Nut M6	52			
	Washer 6	54			
	Double-size scotch tape	1	5 м		

marking	name	quantity(pcs)	lengtl
	1 PACKAGE ANTEROOM		
15	Side vertical member	1	0,5
9	Stay brace	2	2,7
10	Cross bar	2	1,0
8	Side brace	1	1,3
1	Foundation stay brace	2	0,8
3	Support	2	0,2
2кн	Bottom end runner	5	1,9
10ц-т	Central strainer	1	1,2
П-9	Strip of a gate opening stay brace	1	1,9
П-10	Strip of a cross bar	1	1,0
	2 PACKAGE ANTEROOM		
13-д	Door cleat	2	0,9
13-д-н	Strip of a door bottom cleat	1	0,9
12-д-л	Door left stay brace	1	1,8
12-д-п	Door right stay brace	1	1,8
14-д	Door diagonal	2	1,2
П-12-д-п	Strip of a door right stay brace	1	1,8
П-13-д-п	Strip of a door bottom cleat	1	0,9
	Bracket	4	0,8
	Hasp	2	0,6
	Anteroom seal		
	Door seal	1	6 N
	End seal	1	8 N
	Anteroom prepacking		
	Screw M6x10	78	
	Bolt M6x14	123	
	Bolt M6x20	50	
	Nut M6	251	$\bot$
	Bracket 26x17x16	97	
	Hanger	3	
	Hinge ΠΗ 1-130 left	2	
	Straight lug 40x90	2	$\bot$
	Pull PC-80-2	2	
	Self-driving screw	97	
	Washer 6	91	1

#### **WARRANTY LIABILITIES**

- 1. The manufacturer bears responsibility for the greenhouse frame complete setup.
- 2. The manufacturer bears responsibility for the greenhouse assemblability in accordance with the manual.
- 3. The manufacturer bears responsibility for the greenhouse durability under specified magnitude of atmospheric actions.
- 4. Claim presentation period is 12 months from the date of purchase.

#### WARRANTY CONDITIONS

Warranty liabilities do not apply to cases of:

Date of manufacture

- 1. Greenhouse installation with violation of requirements of the manual.
- 2. Violation of the rules of operation.
- 3. Inappropriate use of the greenhouse.
- 4. Floods, hurricanes and other natural disasters.

Manufacturer: VOLYA LLC per. Severny, 8, Dubna, Moscow region, 141983, Russia. The manufacturer bears responsibility for quality of products in accordance with RF CC.

The manufacturer reserves the right for greenhouse engineering design changes.

#### **RULES OF OPERATION**



It is not allowed to install the greenhouse without fastening on the ground because of the large sail area of the greenhouse and the possibility of floating away the unfastened greenhouse.

The greenhouse should be serviced in the winter period. The greenhouse has durability under the action of snow loads way more than is required for greenhouses, but less for some snow areas in comparison with the general construction standards. According to SNiP 2.10.04-85 «Greenhouses and seedbeds» «weight of snow blanket on 1 m2 of horizontal surface of the ground in design of static greenhouses...» should be taken from 10 to 40 kg/m2 depending on a snow region. This is much less than the general construction standards for snow load, because it is assumed that on the current greenhouses a snowcap is not preserved until the next snowfall. According to the results of strength tests the limits of durability of the greenhouse frame are revealed: destroying snow load is  $196 \, \text{kg/m2}$ , permissible load (with safety coefficient 1.4) –  $140 \, \text{kg/m2}$ .

The permissible load approximately corresponds to the thickness of fresh snow 0.9 m and settled snow 0.45 m. Thus, in operation it is necessary to prevent accumulation of snowcaps above specified limits.

If the greenhouse is not heated in winter, or it is supposed to use the greenhouse as an unheated housing, awning, warehouse, etc., it is necessary to control the snowcap (to shift the snow down with a wooden or plastic scraper, installed on a pole). For these variants of operation it is possible to supply reinforced frames with a reduced interval between the power arcs under the snow load specified by the customer.

Do not allow damage to the frame, and if it happened, then hold timely repairs

#### **OPERATION RULES**

#### CLEANING AND WASHING OF THE POLYCARBONATE SHEETS.

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



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).

#### INSTALLATION INSTRUCTIONS FOR THE «FARMER» GREENHOUSE



Be careful during the assembly! Parts have sharp corners. Beware of cuts! The works shall be carried out in gloves.

#### INTRODUCTION

- General view of the frame is shown in Fig.1, with tambour Fig.1a (tambour is to be purchased separately at the customer's request). The frame is assembled from the shaped numbered parts. Middle flanges of the frame are facing the cladding. Indices:
  - м small;
- . **M** Silia
  - **6** big;
  - κ end (of the greenhouse length);
  - H lower;
  - ц center;
  - **д** door;
  - B gates;
  - **π** right;
  - Λ left;
  - **Π** band;
  - → the arrow indicates the direction of the installation according to the diagrams in the instructions.



Some parts have remaining free holes which is the result of the parts uniformity.



Do not violate instructions! Do not install the bolts and nuts without washers - this may reduce the strength of the frame!

#### FERMER" GREENHOUSE INSTALLATION MANUAL

#### 3. Vocabulary:

**Left side** - on the left, from the position outside the greenhouse, before the gates. **Right side** - on the right, from the position outside the greenhouse, before the gates.

- 4. Assembling nodes are marked with letters and shown in figures. The greenhouse assembly is carried out using M6 bolts, nuts, washers, self tappers etc. The joints are performed by the part overlay and with fastening on holes. Bolts, nuts and washers shall be put in all the points specified in the instruction.
- Assembling the greenhouse is presented in stages, at each stage assembling nodes are shown as "before" and "after." There are no nuts and washers installed from the inner side of the section shown in node figures.
- During assembly, be careful not to damage the parts, because until they assembled fully, they do not have sufficient rigidity.

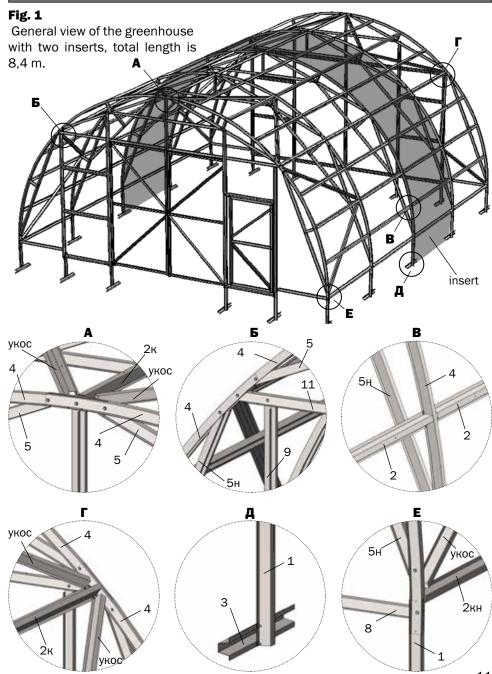
Use additional tools for assembly:

- -wrench 10;
- -screwdriver:
- -drill with a  $\bigcirc$ 6,5 bit;
- -stepladder height of 3m;
- -power jigsaw;
- -knife.

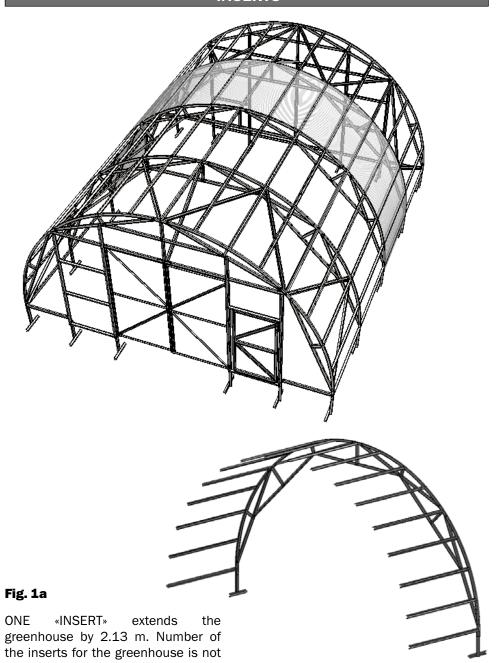
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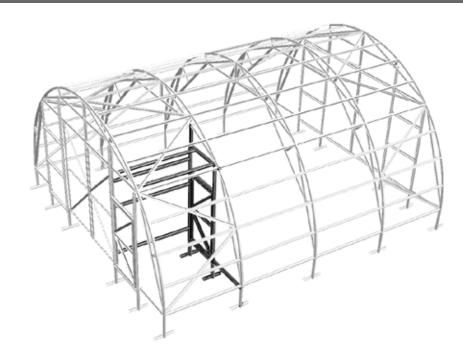
Stage	Name	page.
1	End wall assembly	13-17
2	Installation of runners on the end wall	17
3	Power arc assembly	18-20
4	End section assembly: end section without the anteroom assembly; end section with the anteroom assembly; installation of longitudinal stiffness side braces on the end section.	21
5	End section installation	22
6	Extension of the frame length by the insert	23
7	Second side wall section assembly	23
8	Attaching the second end section to the frame	23
9	Doors and gates assembly	24-26
10	Installation of the cladding and sealing	27-35

### GENERAL VIEW OF THE GREENHOUSE FRAME WITH EXTENDING INSERTS

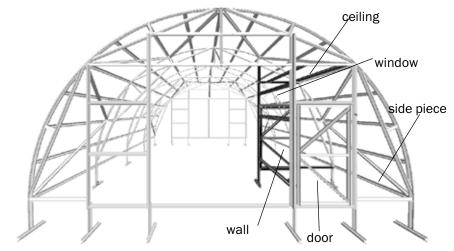


# GENERAL VIEW OF THE GREENHOUSE FRAME WITH EXTENDING INSERTS





**Fig. 16**General view with the anteroom.



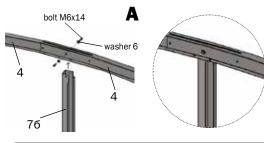
limited. 12

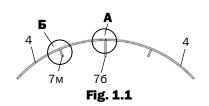
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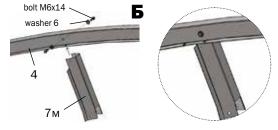
#### STAGE 1

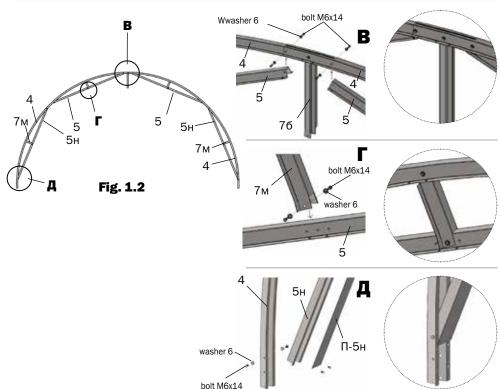
Assembly of the end wall.

Assembly is carried out according to the figure.1.1-1.8. Assembly of parts is carried out in a horizontal plane by connection on side walls of a shape. Arcs are connected to each other by nesting at length of the cut with alignment of holes (view A).

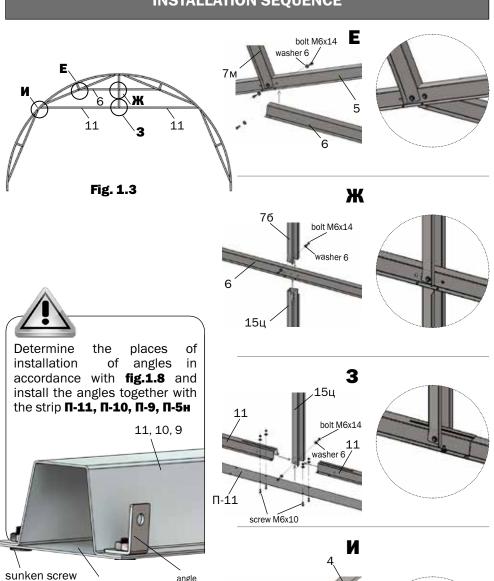








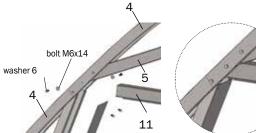
#### **INSTALLATION SEQUENCE**



П-11, П-10,

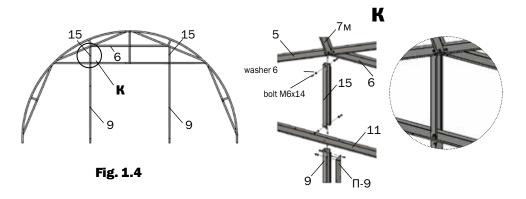
П-9, П-5н

M6x10



Manual

#### **INSTALLATION SEQUENCE**



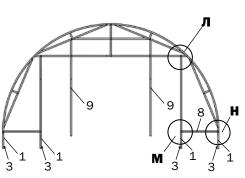
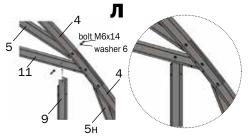
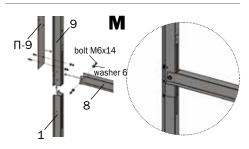
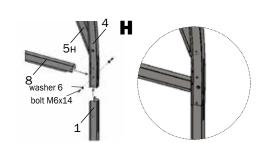


Fig. 1.5

Foundation stay braces **1** µ supports **3** are connected **1** align the side flanges of shapes **(fig.1.7 view C).** 







#### **INSTALLATION SEQUENCE**

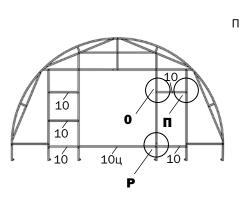
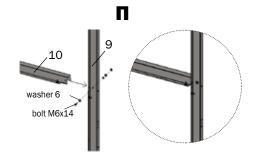


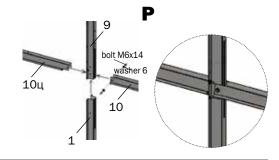
Fig. 1.6

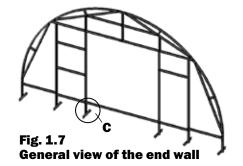
9 bolt M6x14
10

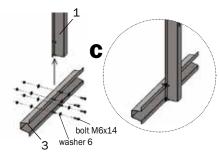
Π-10

Manual



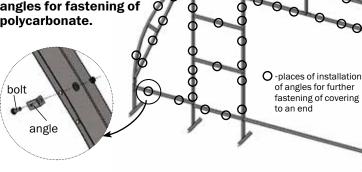






#### **INSTALLATION SEQUENCE**

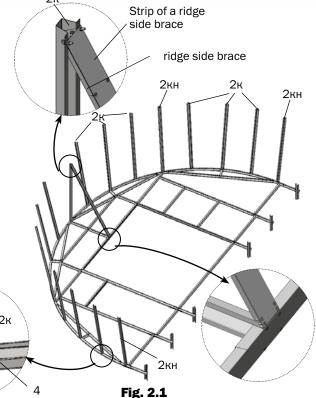
# Fig. 1.8 General view of the end wall and location of the angles for fastening of polycarbonate.



**STAGE 2** 

Installation of runners on the end wall.

Assembly is carried out according to the **fig. 2.1.** The assembled end wall is installed in the horizontal To arcs **4** of the end wall **2K** are alternatively joined end runners **2K 2KH** align the side flanges of shapes. Runners deviate from the vertical under their own weight and abut against side walls of shapes of arcs **4** (until the next operation).



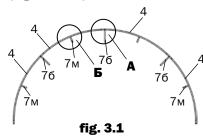
#### **INSTALLATION SEQUENCE**

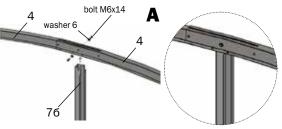
#### STAGE 3

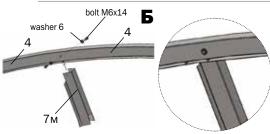
#### **Assembly of the power arc**

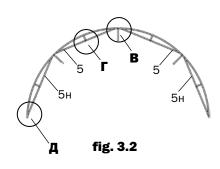
Assembly of the power arc is carried out in a horizontal plane similar to the assembly of the end wall

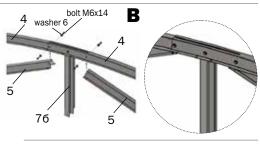
(fig. 3.1-3.5).

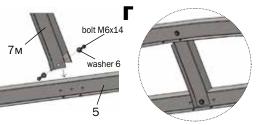


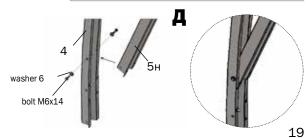




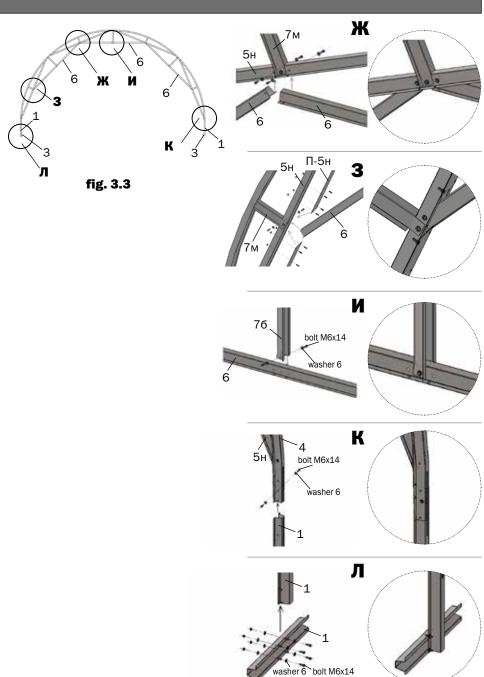




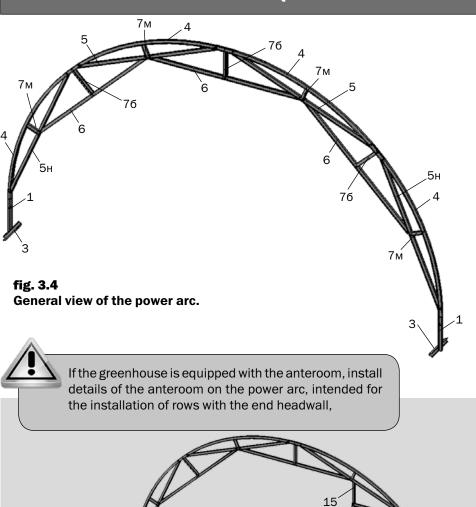




#### **INSTALLATION SEQUENCE**



#### **INSTALLATION SEQUENCE**



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fig. 3.5

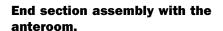
General view of the power arc with the anteroom.

#### **INSTALLATION SEQUENCE**

#### **STAGE 4**

End section assembly without the anteroom.

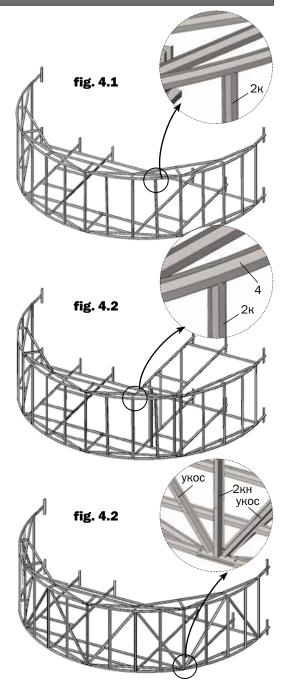
Assembly is carried out according to the **fig.4.1**. The assembled power arc (60kg) is brought to the end wall with the installed runners, is raised to the height of the end runners and joined with their upper ends. It is recommended to connect the outermost and middle runners first.



Connection the power arc with the anteroom to the end runners  $2\kappa$  and  $2\kappa\mu$  (fig.4.2.)

Installation of longitudinal stiffness side braces.

Installation is carried out in the same way for variants with or without the anteroom.



#### **INSTALLATION SEQUENCE**

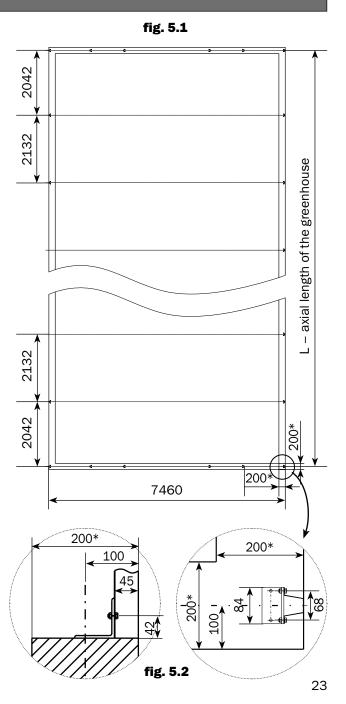
#### **STAGE 5**

End section installation

In the variant of installation of the greenhouse without a foundation, marking of axes is made on the ground in accordance with **fig. 5.1** and holes 70 cm deep are dug for foundation stay braces with supports.

In the variant of installation of the greenhouse on a foundation in accordance with fig. 5.1, cleater angles are mounted to the foundation for the subsequent fastening on them bottom ends of arcs in accordance with fig. 5.2 without foundation stay braces.

The end section (weight is about 200 kg) is lifted and placed in a vertical position on a prepared place.



#### **INSTALLATION SEQUENCE**

#### **STAGE 6**

### Extension of the frame length.

Assembled power arc is brought to the assembled end section at the distance of the main runner and joined to it with the use of main runners 2 and 2H align the side flanges of shapes (fig. 6).

connect the outermost and middle runners first, using a stepladder.
Next power arc is joined to the power arc that has already been connected, and so on all the arcs are alternatively joined

It is recommended to

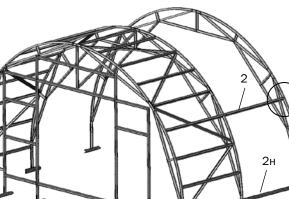


fig. 6.1

#### STAGE 7

The second end section assembly.

Assembly of the second end section is carried out similar to the assembly of the first end section. If the greenhouse is assembled without inserts (**L-4,2m**), runners and longitudinal stiffness side braces are

installed when the end wall is in vertical position similar to **Fig.6.1** 

#### **STAGE 8**

#### Connecting of the second end section to the frame.

Assembled second end section is brought to the frame at the distance of the main runners and is connected to the frame with the help of them.

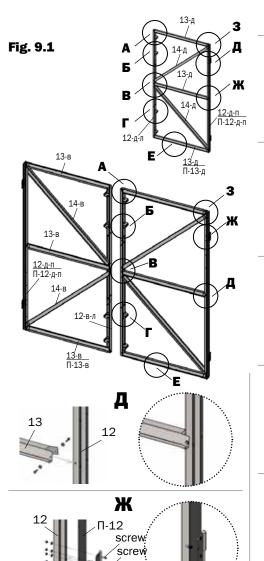
It is recommended to connect the outermost and middle runners first, using a stepladder. Lines of runners are leveled and foundation stay braces are covered 24 with earth. The earth is compacted. If it is necessary, aligning is repeated.

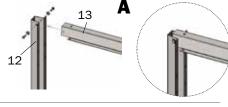
#### **DOORS AND GATES ASSEMBLY**

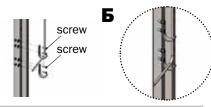
#### **STAGE 9**

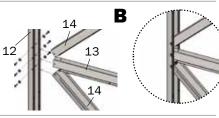
Doors and gates assembly.

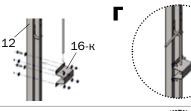
Doors and gates assembly is carried out in the same way. Units are shown in figures.

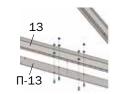




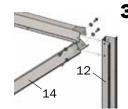














#### **DOORS AND GATES ASSEMBLY**

# Fig. 9.2 Arrangement of angles for fastening of polycarbonate on the doors.

#### STAGE 10

Installation of covering



Install covering after fixing the frame on the ground. It is better to cut the sheets using a fret saw or a fine-pitch arm saw.

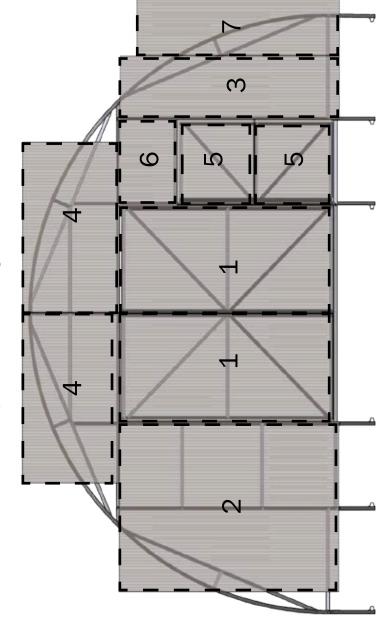


Install honeycomb polycarbonate with a specified side facing outwards (sunward); this side has a covering layer (make sure to clarify it on buying or prior to installation). Covering layer is usually placed on the side with notations on the shipping film. The film is transparent on the opposite side of a sheet. After marking the sheet but prior to cutting it, mark the side with the covering layer on each piece of the sheet: when the shipping film is removed sheet sides look the same. Shipping film shall be removed from the both sides immediately before fastening covering on the frame.

#### **CUTTING LIST OF COVERING OF AN END**

**KEEPING VERTICAL DIRECTION OF HONEYCOMBS.** OF COVERING ON THE END PLACE PIECES





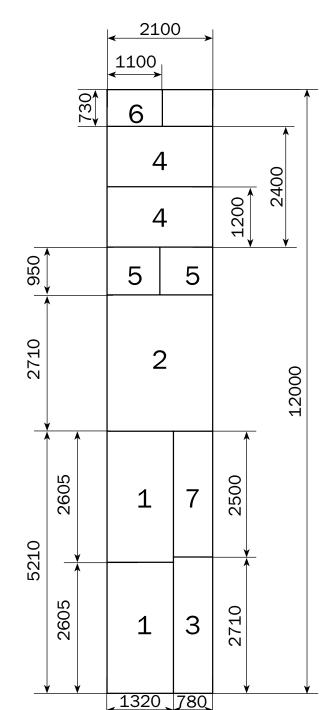


#### **CUTTING LIST FOR THE ANTEROOM**

# **CUT POLYCARBONATE SHEET IN STRICT ADHERENCE TO FIG. 10.2** Honeycomb polycarbonate sheet size 2100 x 12000 mm

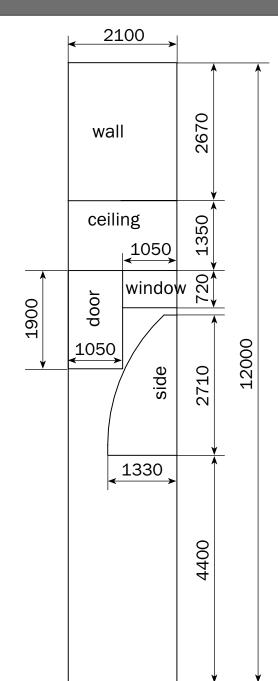
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**Fig. 10.2**Cutting list of covering for an end.



Honeycomb polycarbonate sheet size 2100 x 12000 mm **CUT POLYCARBONATE SHEET IN STRICT ADHERENCE** TO FIG. 10.3

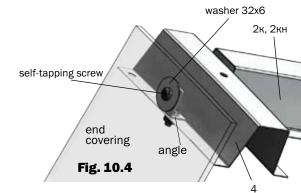
**Fig. 10.3** Cutting list of covering for the anteroom. (ref. fig. 16)

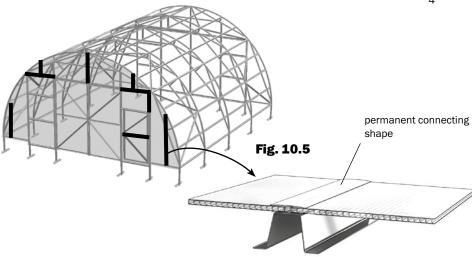


#### **FASTENING OF COVERING**

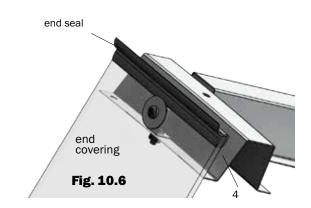
Fasten the pieces of covering on the end to the angles with the use of washers and self-tapping screws (fig.10.4).

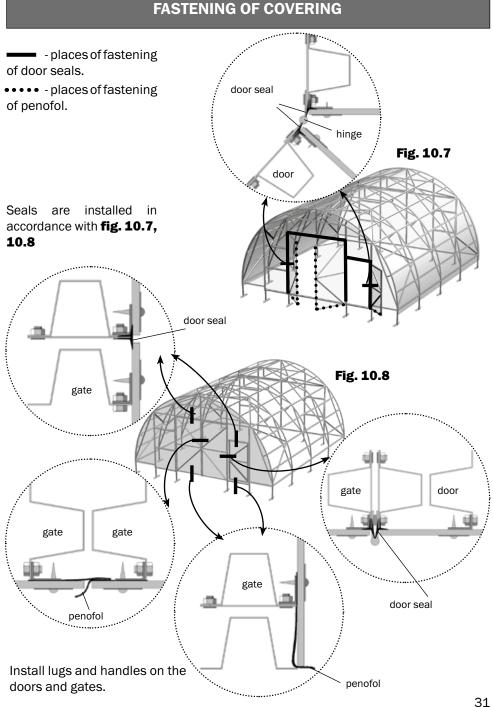
Places of fastening of pieces of covering to each other with the use of a permanent polycarbonate connecting shape are shown in fig.10.5.





Using a knife, adjust covering pieces to arcs 4 and girder 20, and then install sealing profile in accordance with fig.10.6

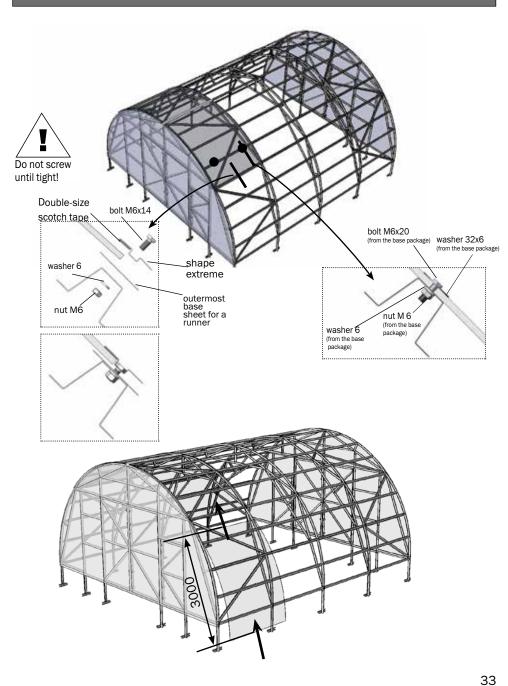




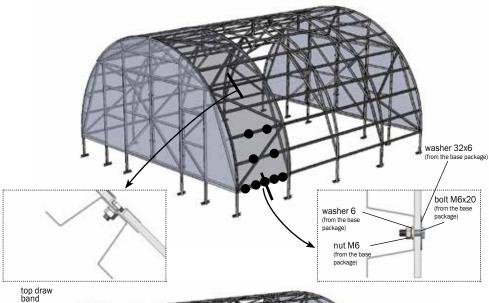
#### **FASTENING OF COVERING**

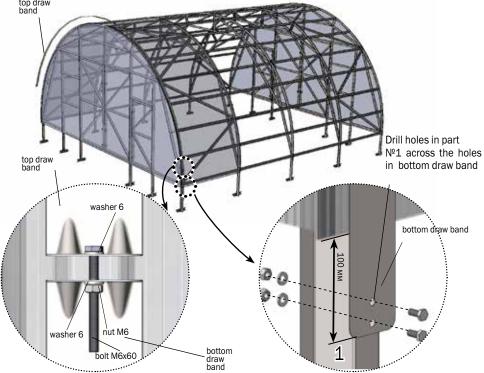
# At first install all joint plates and tingles arc base bolt M6x14 sheet tingle -washer 6 nut M6 2940 2940 bolt M6x20 ridge shape washer 32x6 nut M6

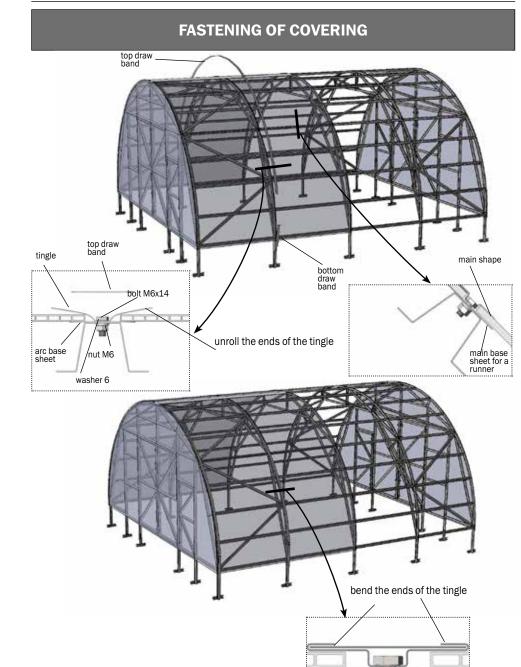
#### **FASTENING OF COVERING**



#### **FASTENING OF COVERING**







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