Commission: _____

Order no..: _____

Made in Germany

Greenhouse „Livingten “ Type L5

Assembly Instruction

Montageanleitung

Status:2024/02

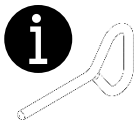
Subject to technical changes

Dear gardening friend,

Congratulations on your purchase of a quality product from ***HOKLARTHERM®.***

Assembly is relatively simple. First read the assembly instructions and follow them step by step! Before assembly, the completeness of the parts should be checked against the parts lists. The boxes containing the parts undergo a quality check to ensure that there are no missing parts. However, if a part is missing, our customer service will be happy to help you.

- The manufacturer is not liable for damage caused by improper installation.
- The greenhouse should be set up by at least three people!
- It`s recommended that the installation is carried out by trained specialists!
- Work only with safety shoes and safety clothing
- Work with safe tools that are appropriate for the job at hand. Ensure that the ladder is stable during assembly. (Risk of accident)!
- Except when inserting the screws and drilling, we recommend working with safety gloves. (Risk of injury, Risk of cutting yourself)!
- All drill holes are prepared in the factory.
- Only install in dry and windless weather.
- Keep children away from the construction site.



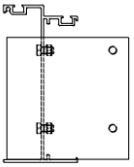
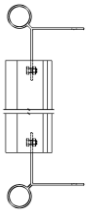
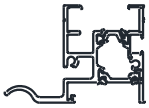
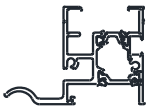
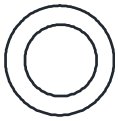
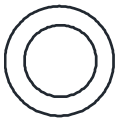
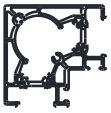
When the greenhouse is not in use, close the sliding windows and roof windows, please. Lock the sliding door. Secure it with the locking pin. (Preventive measures against external weather influences, such as storm damage and so on.)

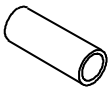
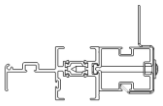
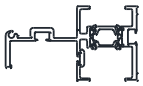
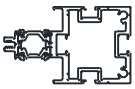
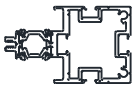
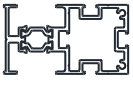
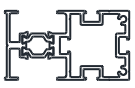
1x Set of Phillips screwdrivers
1x Set of Slotted screwdrivers
1x Set of open-end wrenches
1x Spirit level
1x Rubber mallet
1x Cartridge press
1x Set of screw clamps

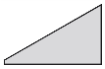
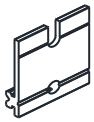
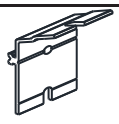
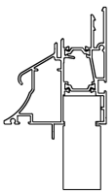
1x Steel tape measure 10m
1x Cordless drill
1x Hammer drill
1x Set of Bites/Screwdriving set
2x Stepladder
1x Silicone cartridge
1x 20mm Concrete drill(SDS)

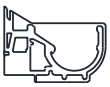
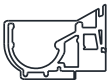
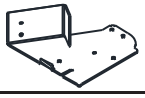
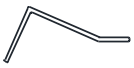
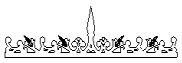
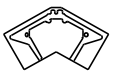
Optional

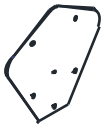
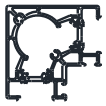
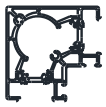
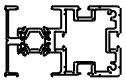
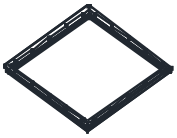
- 1x Stepladder
- 1x Scaffolding
- 20x Various leveling wedges
- 1x levelling Instruments
- Multi-purpose grease
- fine sandpaper (240)
- 1x Props for construction

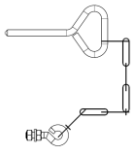
Parts list			
Position	Illustration	Designation	Quantity
1.4/2.1	 Top view (interrupted) 	AG* foundation frame gable roof Length 3439mm (from bore center pipe to bore center pipe) *AG: Assembly group	2
4.4		floor profile (front of/rear) (K10 glued-in glass modules) L.3354mm	2
1.15		foundation frame (side part) L. 4152mm	2
4.15		floor profile (side part) (K10 glued-in glass modules) L. 4200mm	2
K1		corner connector floor profile	4
K2		plastic pipe Ø30x5 L. 400mm	4
K2.1		plastic pipe Ø30x5 (as a drilling aid) L. 100mm	1
E1		stainless steel tube Ø20x2 L. 400mm	4
5.2		corner profile with hole for downpipe holder L. 2028mm	4
A14		downpipe Ø32 L. 1988mm	2

K6		spacer bushing Ø16 L. 40mm	2
K9		downpipe holder Ø32	2
K18		blanking plug Ø20	2
K19		blanking plug Ø5	2
8.4		sliding door track in the gable (front) (K10 glued-in glass modules) (with reinforcement profile and A13 screwed) L. 3400mm	1
8.41		sliding door track in the gable (rear) (K10 glued-in glass modules) L. 3400mm	1
12.1		gable glazing-bar left-hand (outside) L. 2626mm	2
12.2		gable glazing-bar right-hand (outside) L. 2626mm	2
13.1		cover strip for gable glazing-bar TH above the sliding door track on the left-hand side L. 520mm	2
13.2		cover strip for gable glazing-bar TH above the sliding door track on the right-hand side L. 520mm	2
13.5		cover strip for replacement glazing-bar (front gable) with oblong hole for the door lock L. 1976mm	2
14.1		gable glazing-bar centered in the front gable (above the sliding door track) L. 1009,1mm	1
14.2		gable glazing-bar centered in the rear gable L. 3088mm	1
E2		eaves corner connector inside (left-hand)	2

E3		eaves corner connector inside (right-hand)	2
G/S/D		roof, front, rear and side glazing 1997x829	24
DuF		roof glazing, short 1097x829	2
GoA2		gable glazing front and rear 1003x829	4
GoA1		gable glazing front and rear 1003x829	4
11.1		replacement glazing-bar TH as side glazing-bar Lg:1976mm	2
13.6		cover strip for replacement glazing-bar (rear wall + side wall) Lg:1976mm	4
A1		connector side glazing-bar to floor profile (M6x10 montiert)	8
A2		connector side glazing-bar to eaves profile (M6x10 mounted)	8
10.1		wall glazing-bar TH as side glazing-bar L:1976mm	6
6.5		eaves profile Type 5 (K11 plastic connection pipe fitted) L:4326mm	2

7.5		rain gutter profile Type 5 Lg:4326mm	2
K7		round downpipe socket Ø28 L:30mm	2
K3		plastic rain gutter end cap (left-hand)	2
K3.1		plastic rain gutter end cap (right-hand)	2
A4		gutter end plates (left-hand)	2
A5		gutter end plates (right-hand)	2
22.1		end stop bar(glass)for the eaves profile TH L:805mm	10
		silicone lip seal profile (white) L:805mm	10
9.5		roof ridge profile long part Type 5 (connector and plastic block mounted) L:4326mm	1
		decorative middle element L:855mm	
		decorative edge element Lg:855mm	2
K5		plastic roof ridge end cap	2

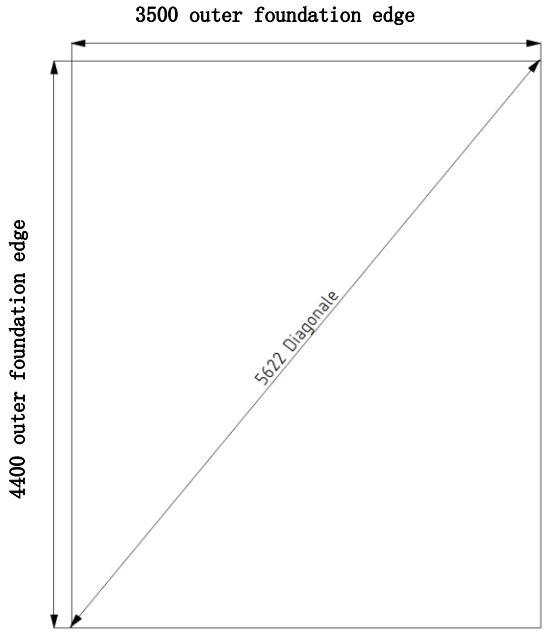
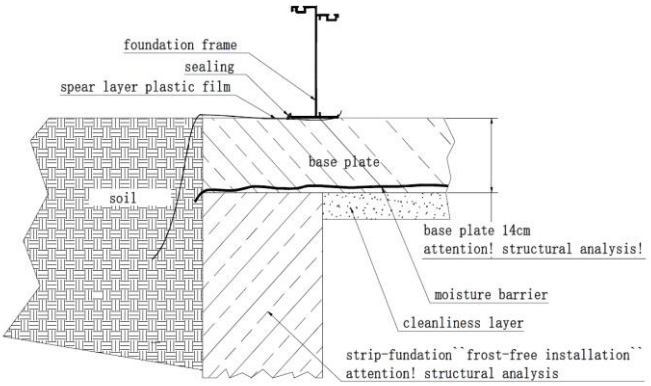
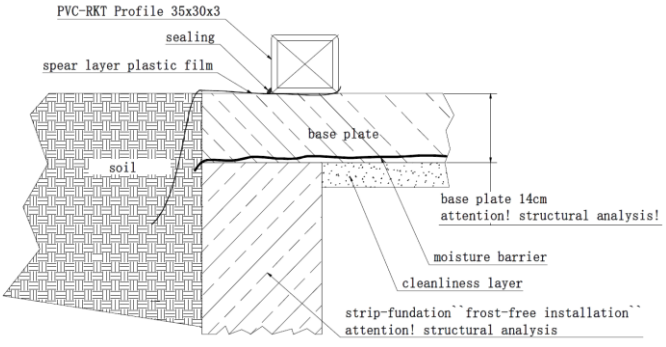
A6		alu-roof ridge end profile	2
5.4		verge profile right-hand (hexagon head screw M6x50 + Hexagon nut M6 + washer mounted) L:1983mm	2
5.5		verge profile left-hand (hexagon head screw M6x50 + Hexagon nut M6 + washer mounted) L:1983mm	2
14.5		roof glazing-bar TH Lg:1987mm	8
K18		end cap for roof glazing-bar TH	8
21.1		AG-drawstring 2x stiffening plate,1x distance tube and screw connection L:1995mm	1
DF		AG-roof window with glazing, gaskets and A14 connector (Megavent®) mounted 869x890	2
10.3		wall glazing-bar TH (cross bar) wedge seal and A14 connector (Megavent®) mounted L:1976mm	2
AFÖ		automatic openers Megavent®	2
18.5		plastic rectangular profile 25x15x1,5 roof profile L:862mm	4

18.6		plastic rectangular profile 25x15x1,5 Cross bar Lg:833mm	2
SHF		AG-sliding door (main door leaf) (SHF) with glazing, seals, door handles and push lock, track roller profile and door guide rail mounted 869x2035	1
SGF		AG-sliding door (opposite door leaf) (SGF) with glazing, seals, door handles and push lock, track roller profile and door guide rail mounted 869x2035	1
18.1		plastic rectangular profile 25x15x1,5 floor profil L:1682mm	1
18.1		plastic rectangular profile 25x15x1,5 replacement profile L:1972mm	2
20.1		plastic rectangular profile 25x25x1,5 sliding door track L:1682mm	1
E6		locking pin for double sliding door Chain and fastening material	1
Optional components			
3.4		PVC RKT 35x30x3,2 white (below the floor profile, gable) Lg:3304mm	2
3.5		PVC RKT 35x30x3,2 white (below the floor profile, side wall) Lg:4152mm	2

Accessories*			
Item	Designation	Contents	Quantity
B1	Bag 1 foundation frame	-S1 hexagon head screw M6x12 -S6 washer M6 -S4 hexagon nut M6	8 8 8
B3	Bag 3 foundation frame	-S1 hexagon head screw M6x12 -S6 washer M6 -S4 hexagon nut M6 -S2 hexagon head screw M6x50 -S5.1 drilling screw countersunk head 4,2x22 -S7 cap nut M6	24 30 34 10 32 8
B4.5	Bag 4.5 long part	-S10 pan head screw 4,2x16	28
B5.5	Bag 5.5 roof ridge	-S10 pan head screw 4,2x16	12
B6	Bag 6 corner profile	-S8 pan head screw 3,5x50	4
B8	Bag 8 verge profile	-S1 hexagon head screw M6x12 -S6 washer M6 -S4 hexagon nut M6	4 8 8
B10.6	Bag 10.6 wall profile	-S1 hexagon head screw M6x12 -S6 washer M6 -S4 hexagon nut M6	12 12 12
B11.2	Bag 11.2 replacement profile	-S1 hexagon head screw M6x12 -S6 washer M6 -S4 hexagon nut M6 -S5.1 drilling screw countersunk head 4,2x22	4 4 4 10
B12.4	Bag 12.6 roof profile	-S1 hexagon head screw M6x12 -S6 washer M6 -S4 hexagon nut M6	16 16 16
B13	Bag 13 steel tie rod	-S2 hexagon head screw M6x50 -S6 washer M6 -S4 hexagon nut M6	2 4 2
B30.1	Bag 30.1 roof profile	-S1 hexagon head screw M6x12	8

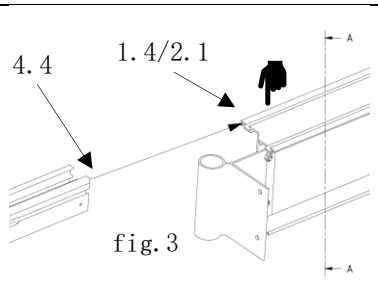
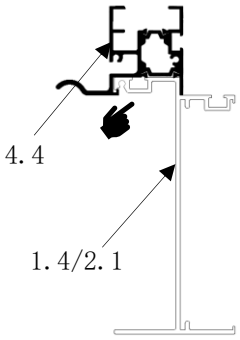
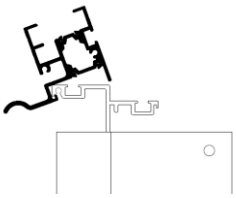
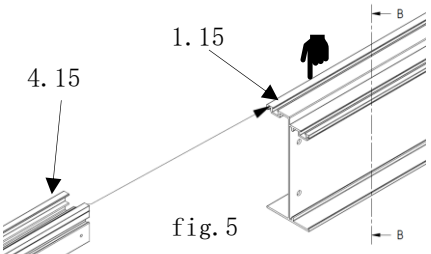
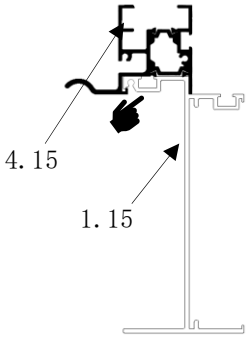
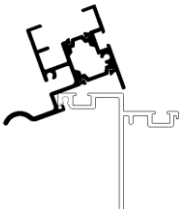
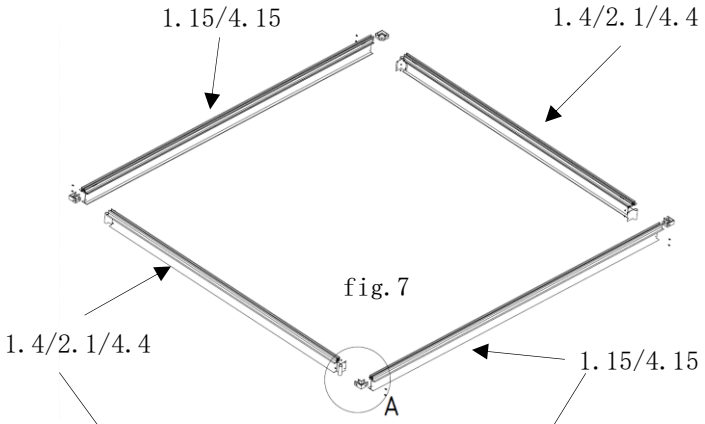
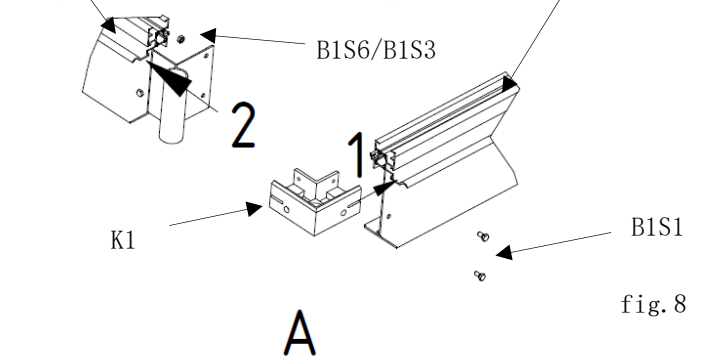
*The contents of the bag may vary depending on the model!

I. Building the foundation (optional)

Description	Illustration
I.I. Foundation Livingten TypL5	
Foundation data • only have the structural analysis of the foundation carried out by a specialist company! • always observe the locally applicable building regulations. • get detailed advice on the foundation from your professional. • execution by a concrete construction company *(fig. 1)*	 fig.1
1. Example: **Strip foundation - sectional view** • stud frame: **none** • only have the structural analysis of the foundation carried out by a specialist company! • always observe the locally applicable building regulations. • get detailed advice on the foundation from your professional. • execution by a concrete construction company *(fig. 2)*	 fig.2
2. Example: **Strip foundation - sectional view** • stud frame: **none** • only have the structural analysis of the foundation carried out by a specialist company! • always observe the locally applicable building regulations. • get detailed advice on the foundation from your professional. • execution by a concrete construction company *(fig. 2.1)*	 fig.2.1

II. Foundation frame

II.I. Assembly of the foundation frame

Description	Illustration
• slide the floor profile (item **4.4**) with the pre-assembled inner corner connectors **(item 1.4/2.1)** onto the outer raised groove of the gable-side AG foundation frame. • center the floor profile. • applies to front and rear gables. *(fig. 3/fig. 4)* • <u>Optional:</u> the floor profile **(item 4.4)** can also be installed tilted parallel to the AG foundation frame gable **(item 1.4/2.1)**! *(fig. 3.1)*	 fig. 3  fig. 4  fig. 3.1
• slide the floor profile **(item 4.15)** onto the outer raised groove of the AG foundation frame side part **(item 1.15)**. • center the floor profile. • applies to both side parts. *(fig. 5/fig. 6)* <u>Optional:</u> the floor profile **(item 4.15)** can also be installed tilted parallel to the both side parts. **(Item1.15)** *(fig. 5.1)*	 fig. 5  fig. 6  fig. 5.1
• **1.** The corner connector groove **(item K1)** is inserted into the floor profile **(item 4.15)**. This is repeated in the opposite AG side area. **(item 1.15/4.15)** *(fig. 8)* • **2.** The side parts assemblies **(item 1.15/4.15)** are connected to the gable assemblies **(item 1.1/4.1)**. *(fig. 7)* • **Detail A:** This means that the four inner corner connectors are each fitted with 2 hexagon bolts M6x12 **(item B1S1)** and 2 hexagon nuts M6 **(item B1S4)** with washers M6 **(item B1S6)**. *(fig. 8)*	 fig. 7  fig. 8 A

- align one of the AG side parts exactly with the edge of the concrete slab.
- **dimension X should be the same everywhere!**
  (fig. 9)

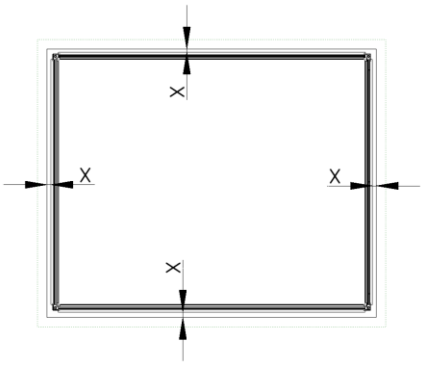


fig. 9

- a PVC pipe **(item K2)** is inserted into the pipe of the inner corner connector **(item 2.1)** as a drilling aid
  (fig. 10)
- this step is repeated later on the remaining three inner corner joints.

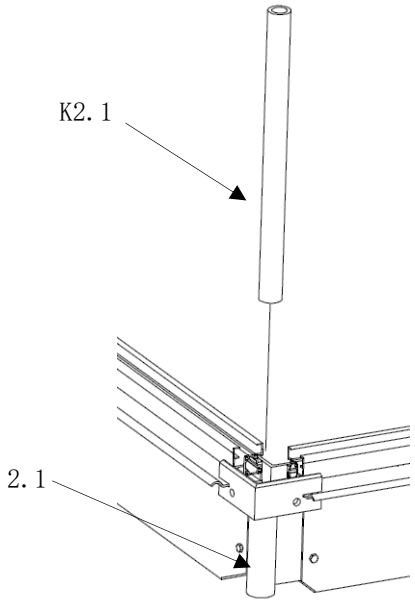


fig. 10

Caution! There is a risk of injury!

- **don't wear protective gloves when drilling!**
- **wear safety goggles when drilling!**
- **wear protective gloves when working with the hammer!**

- use a drilling aid (PVC pipe) to drill a hole at least 100 mm deep and Ø20 mm in the concrete **(itemK2.1)**. *(fig. 11)*
- remove drilling dust.
- for anchoring, a stainless-steel pipe (item**E1**) is positioned in the PVC pipe (drilling aid) **(itemK2.1)** and hammered into the hole. *(fig. 12)*
- remove the drilling aid **(itemK2.1)** and replace it with the long PVC pipe (item**K2**)! *(without fig.)*

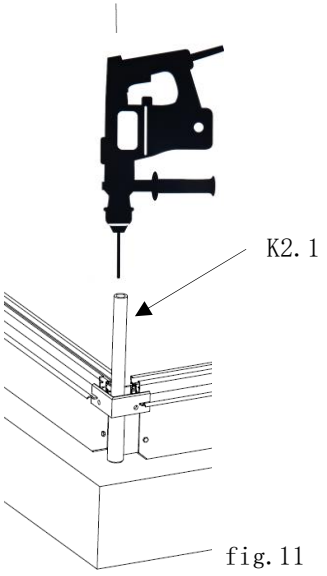


fig. 11

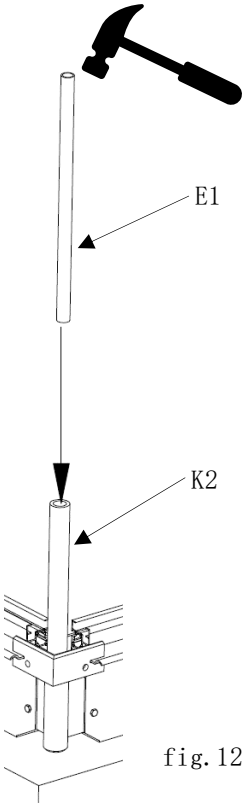


fig. 12

Optional: Mounting directly on the base plate

II.II. Installation without foundation frame

- slide the PVC RKT 35x30x3.2 (item 3.4) into the groove of the floor profile (item 4.4). **(fig.3a/fig.4a)**
- center the floor profile.
- applies to front and rear gables.

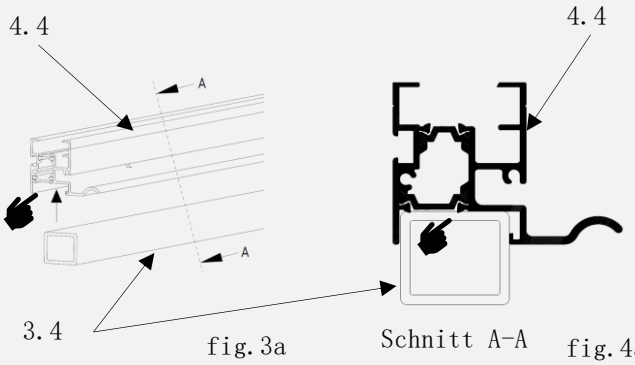


fig.3a Schnitt A-A fig.4a

- slide the PVC RKT 35x30x3.2 (item 3.5) into the groove of the floor profile (item 4.15). **(fig.5a/fig.6a)**
- center the floor profile.
- applies to both side parts.

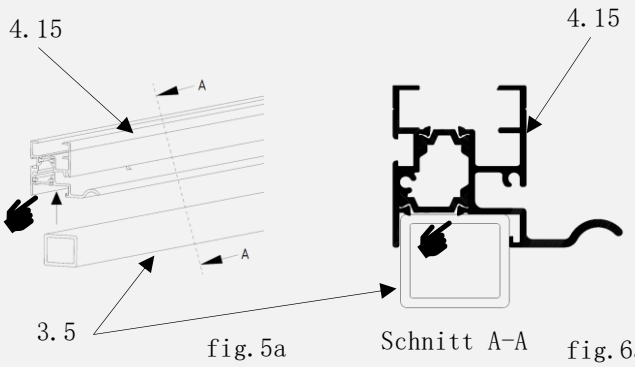


fig.5a Schnitt A-A fig.6a

- **1A.** The corner connection groove (item. K1a) is inserted into the floor profile (item 4.15). This step is repeated for the opposite BG side parts. **(item 3.5/4.15)** ***(fig.8a)***
- **2A.** The side parts (item 1.15/4.15) are connected to the gable parts (item 1.1/4.1). ***(fig.7a)***

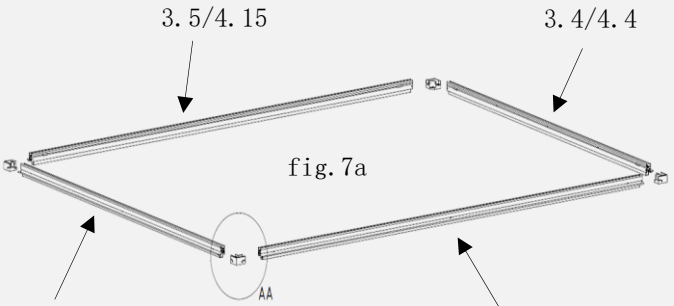


fig.7a

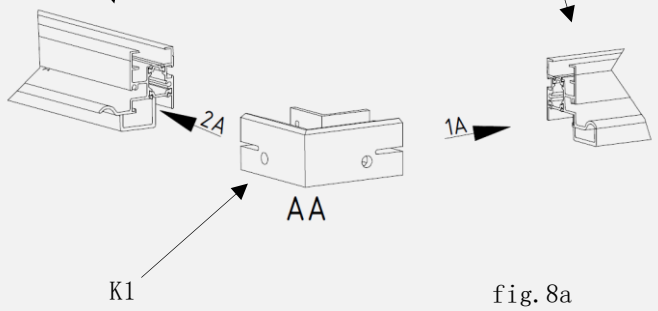


fig.8a

- align one of the BG side parts exactly with the edge of the concrete slab.
- **dimension X should be the same everywhere!**
  (fig. 9a)

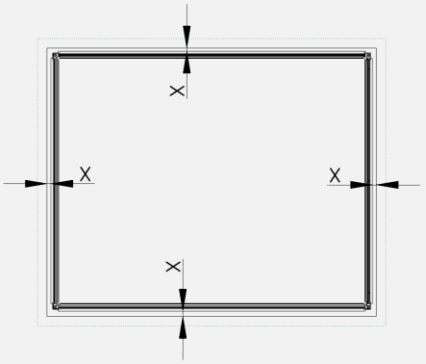


fig. 9a

- the drilling aid (PVC pipe) **(item K2.1)** is inserted into the hole in the corner connector **(item K1)**. ***(fig. 10a)***
- *Corner connector hole* **(item K1)** ***(fig. 10b)***
- this step is repeated on the remaining three inner corner joints.

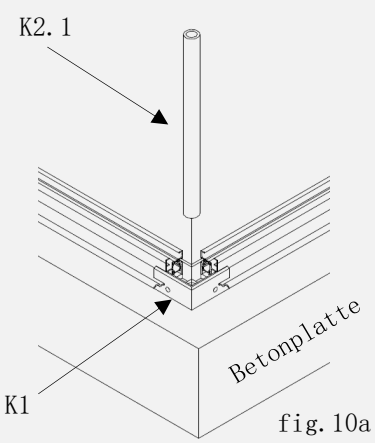


fig. 10a

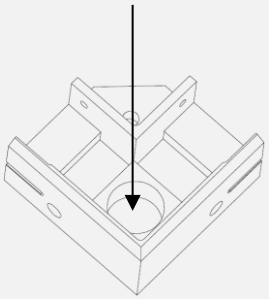


fig. 10b

Caution! There is a risk of injury!

- **don't wear protective gloves when drilling!**
- **wear safety goggles when drilling!**
- **wear protective gloves when working with the hammer!**

- drill a hole at least 100 mm deep and Ø20 mm into the concrete using a drilling aid (PVC pipe) **(item K2.1)**. ***(fig. 11a)***
- remove drilling dust.
- for anchoring, a stainless-steel pipe **(item E1)** is positioned in the PVC pipe (drilling aid) **(item K2.1)** and hammered into the hole. ***(fig. 12a)***
- remove the drilling aid **(item K2.1)** and replace it with the long PVC pipe **(item K2)**! ***(without fig.)***

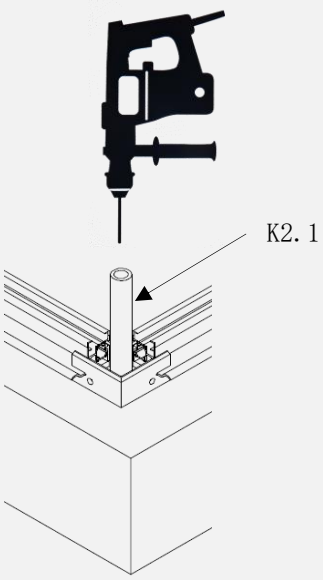


fig. 11a

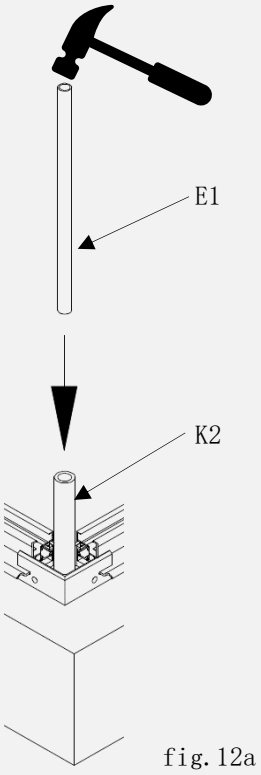


fig. 12a

Subsequent descriptions and illustrations are further described with ''foundation frame''!

- the perpendicularity of the foundation is achieved by measuring the diagonals. *(fig. 13)*
- measure from the fixed PVC pipe **(item K2)** diagonally to the opposite PVC pipe **(item K2)**, do the same with the other two PVC pipes**(item K2)**. *(fig. 13)*
- the aligned foundation is drilled diagonally from the fixed PVC pipe **(item K2)** to the opposite PVC pipe **(item K2)**. *(fig. 13)*
- The next steps are to be carried out as described in **fig. 10, 11 and 12.**
- the foundation must lie horizontally on the concrete, otherwise it must be leveled at several points under the foundation using plastic leveling wedges.

NOTE: ONLY a precisely aligned foundation guarantees the structured construction of the greenhouse.

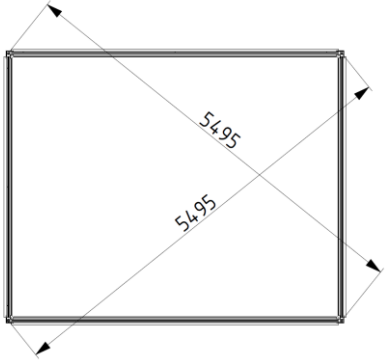


fig. 13

III. Mounting of the side and gable elements

III. I. Mounting the corner profiles

- the corner profiles (point 5.2) are pushed onto the four PVC pipes **(item K2)**. *(fig. 14)*

Note 1: the 5mm downpipe hole points to the side element (long side!

<u>Note 2:</u> the corner profiles (item 5.2) are pushed into the groove of the corner connector. (item K1)

<u>Note 3:</u> the corner profiles (item 5.2) must not stand on the edge of the corner connector!

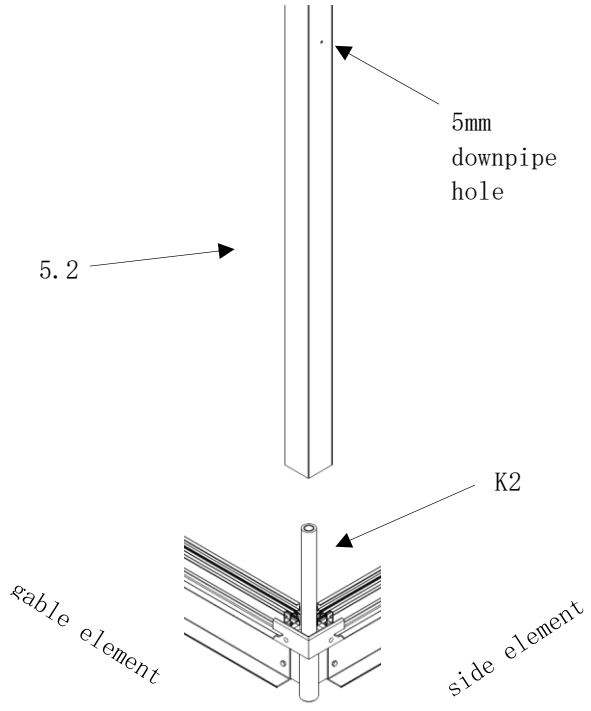


fig. 14

III.II. Mounting the AG-eaves-profiles

- the prefabricated AG-eaves-profiles **(item 6.5)** are inserted into the corner profiles **(item 5.2)**. ***(fig. 15)***
- ensure that the prefabricated BG eaves profiles **(item 6.5)** rest completely on the corner profiles **(item 5.2)**!

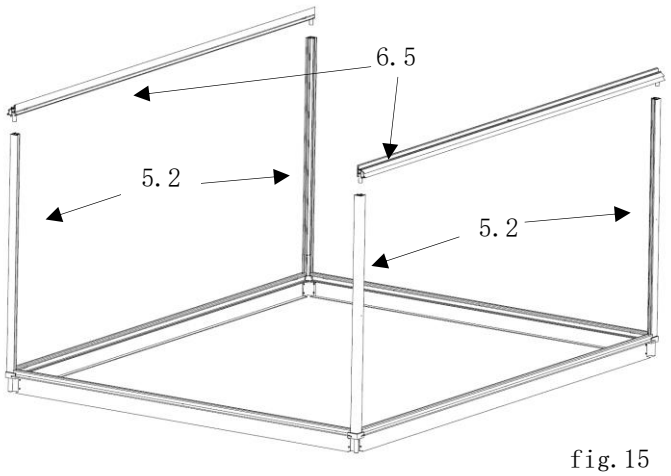


fig. 15

III.III. Mounting the gable reinforcement profile

☛ 1 insert hexagon bolt M6x12 **(item B3S1)** into the milled groove of the AG-eaves-profile and position with washer **(item B3S6)** and hexagon nut **(item B3S4)** not firmly with the eaves corner connector on the right **(item E3)**. ***(fig. 16)***

☛ 2 Note!

⚠ **don`t swap the positions of the eaves corner connectors on the left- (E2) and right-hand (E3)!**

☛ 3 insert an M6x12 hexagon bolt **(item B3S1)** into the hole on the underside of the corner profile, pull it upwards and position it with a washer **(item B3S6)** and a hexagon nut **(item B3S4)** with the right-hand eaves corner connector **(item E3)**. ***(fig. 16)***

- align the connections and screw them tight!
- the steps described above are repeated on the three remaining corners!

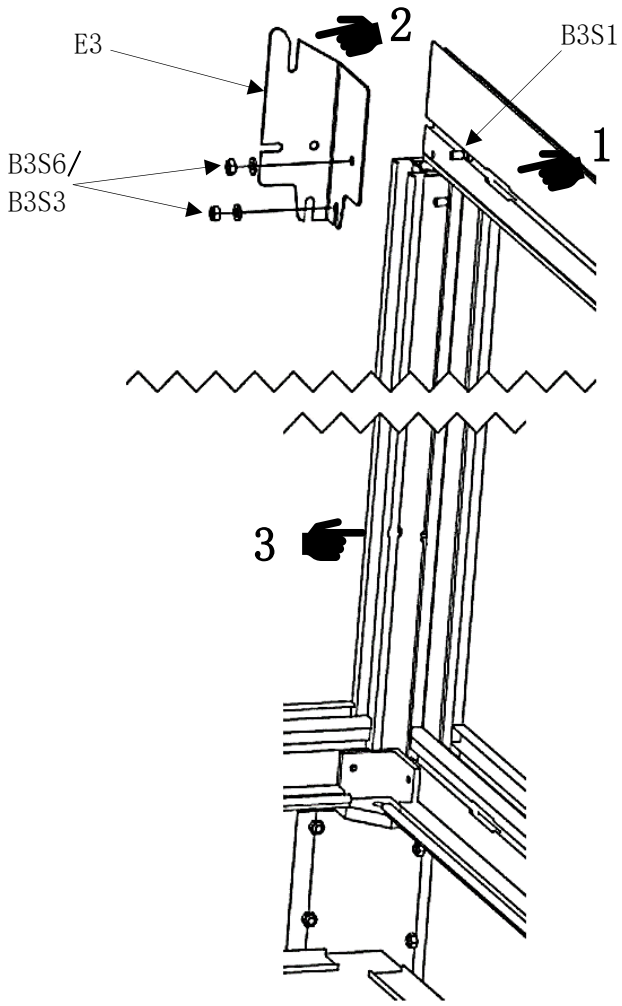


fig. 16

- the prefabricated AG-gable-door-track **(item 8.4)** is screwed to the eaves corner connectors **(item E2/E3)!**
- the gable door track **(item8.41)** is screwed to the eaves corner connectors **(item E2/E3)!** ***(fig.17)***
- **Detail B:**

  insert a hexagon head screw M6x12 **(item B3S1)** into the milled groove **4** of the prefabricated BG door rail gable **(item 8.4)** and fix it with the eaves corner connectors **(item E2/E3)** using a washer **(item B3S6)** and hexagon nut **(item B3S4).** ***(fig.18)***
- slide a hexagon bolt M6x12 **(item B3S1)** into the guide groove **5** of the corner profile at the top and screw it to the eaves angle connector **(item E2/E3)** using a washer **(item B3S6)** and a hexagon nut **(item B3S4). (fig.18)**
- the steps described above are repeated on the three remaining corners!

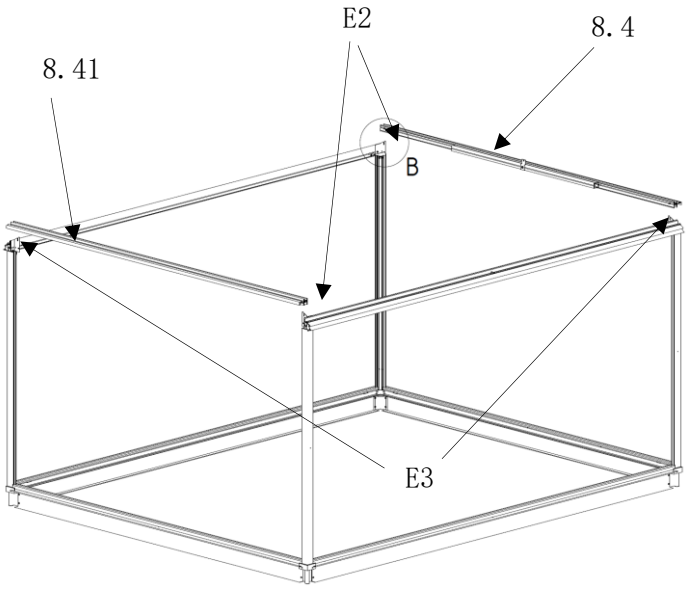


fig.17

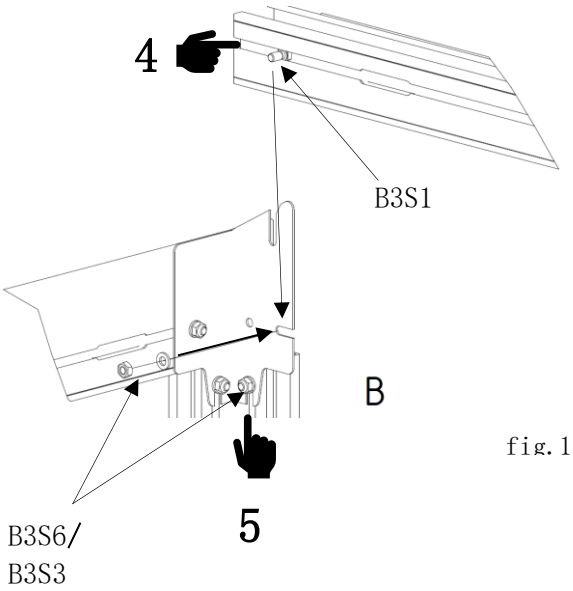


fig.18

- the side glazing-bar (eaves profile) connectors **(item A2)** are inserted into the milled groove of the prefabricated AG eaves profiles **(item 6.5)** and roughly positioned! ***(fig.19)***
- the side part connectors (floor profile) **(item A1)** are inserted into the milled groove of the AG-side-parts **(item 1.15/4.15)** and roughly positioned! ***(fig.20)***

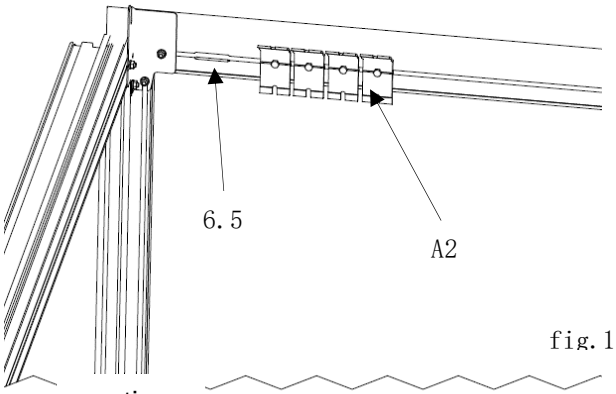


fig.19

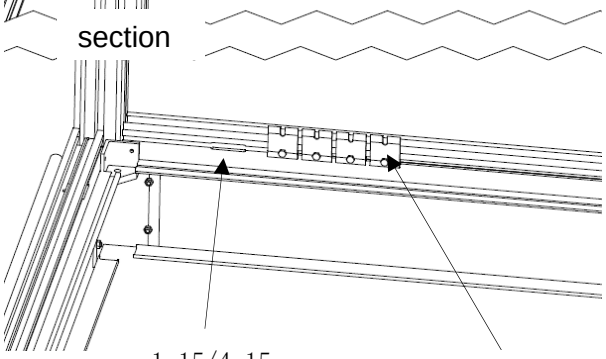


fig.20

IV. Mounting of side and rear glazing with side and gable glazing-bar

IV.I. Side glazing

- ☛ 6- Push the side glazing **(item G/S/D)** slightly tilted upwards into the AG eaves profile **(item 6.5)** until they can be adjusted over the edge of the bottom profile!
- slide two side glazing panes all the way to the corner profile. **(Item 5.2)**. see ***fig.21.***

⚠ <u>Note:</u> **To obtain the most accurate glazing dimensions possible, check whether any pane edge silicone is protruding before inserting the side glazing panes. These must then be removed if necessary!**

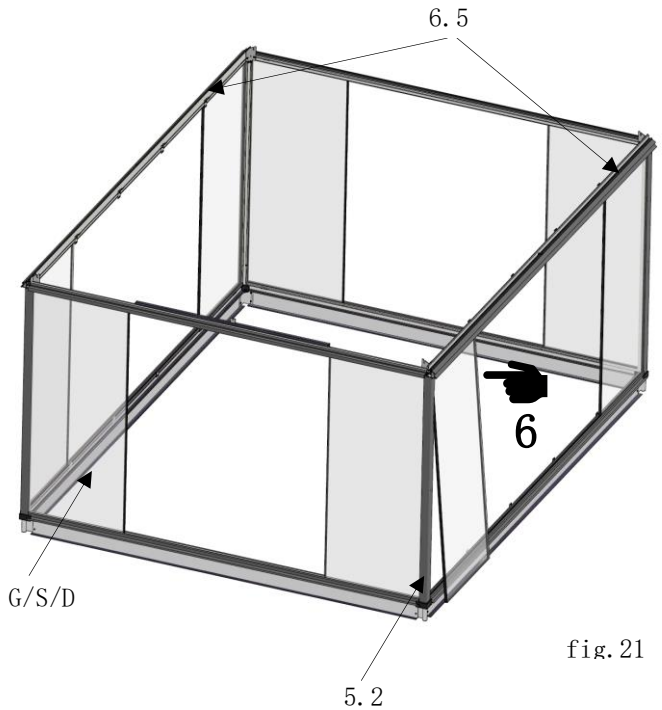


fig.21

*** Optional:**

Installation of a pop-up window or sliding doors in the side wall.

See appendix for description!

fig. 24a/fig. 24b

Installation of a ventilation panel in the side wall.

See appendix for description!

fig. 24c

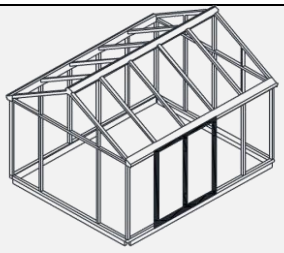


fig. 24a

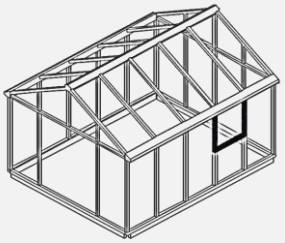


fig. 24b

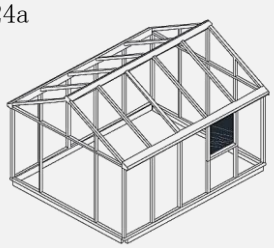


fig. 24c

- the remaining side glazing **(item G/S/D)** is inserted as described in the previous steps. ***(fig. 22)***

Note: the side glazing should be mounted on two glued-in glass blocks at the factory!

- **Detail C:** the side glazing **(item G/S/D)** is pushed glass to glass, with five panes two on the right and three on the left. The resulting gap width must now be checked.

Quanty of side windows	gap width X
5	62 - 65 mm
6	77 - 80 mm
7	92 - 95 mm

fig. 23

Note: the gap width must not be exceeded. If the tolerance value is exceeded, this must be compensated for with glass blocks! A glass block is glued into the top and bottom of the corner profile (item 5.2) with silicone.

(fig. 24)

fig. 22

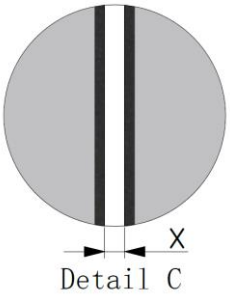


fig. 23

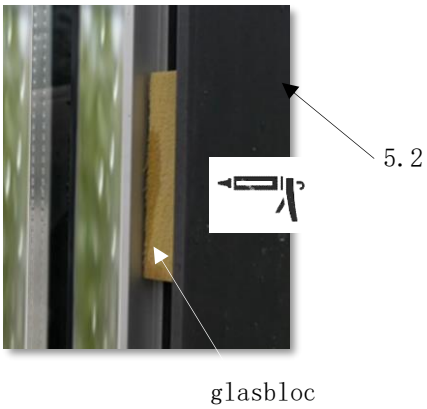


fig. 24

IV. II. Mounting of side-profiles

- the glazing panes are first moved in the direction of arrows **1.1, 2.1** and **3.1**. ***(fig. 25)***
- insert the hexagon head screws M6x12 **(itemB10.6/ S1)** at the bottom into the hole of the first side glazing-bar **(item 10.1)** and press one upwards and one downwards into the groove of the connector. ***(fig. 26)***
- the 1st side glazing-bar **(item 10.1)** is mounted to the connectors **(item 10.6/A1 and A2)** of the floor profile and the AG-eaves-profile using washers **(item 10.6 S6)** and hexagon nuts M6 **(item 10.6/S4)**. ***(fig. 26)***
- then the glazing 1.1 is pushed in the opposite direction up to the 1st side glazing-bar **(item 10.1)**. ***(fig. 25)***
- the previous steps are repeated with side glazing-bars **2** and **3**.
- the M6x10 hexagon head screws are now tightened on the connectors. ***(fig. 26)***
- all previous steps are carried out for the opposite side!

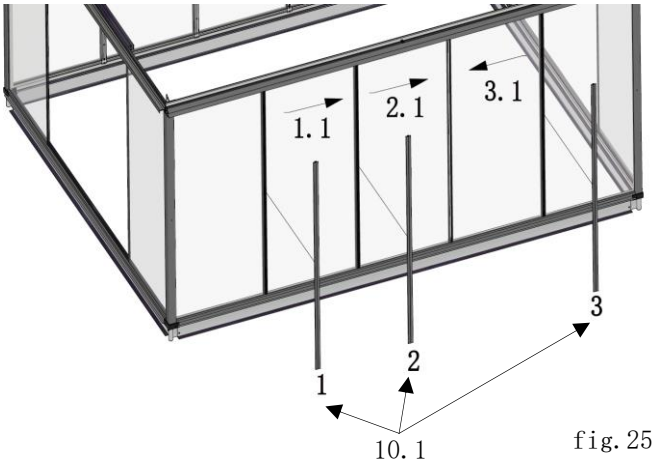


fig. 25

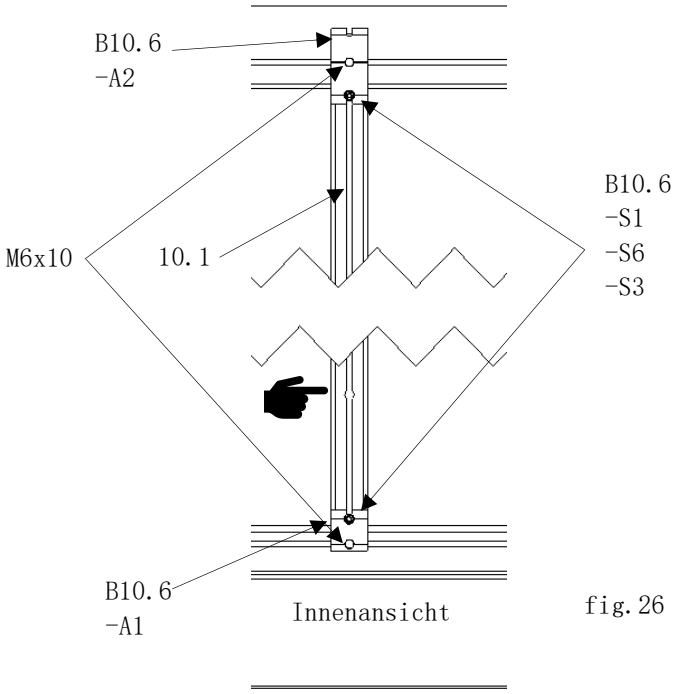


fig. 26

IV. III. Mounting of repair glazing-bars

- the repair glazing-bar **(item B11.2/10.1)** is fitted from the inside and screwed as shown in **fig. 26**! ***(fig. 27)***
- Attach the flashing **(item B11.2/13.6)** to the repair glazing-bar **(item B11.2/13.6)** from the outside and screw it with 5 x countersunk screws **4.2x22 (item B11.2/S5.1)**. ***(fig. 27)***
- all previous steps are carried out for the opposite side!

<u>Please note!</u> **If there is a gap between the glazing and the glazing-bar bar, this must be filled with a suitable glass block.**

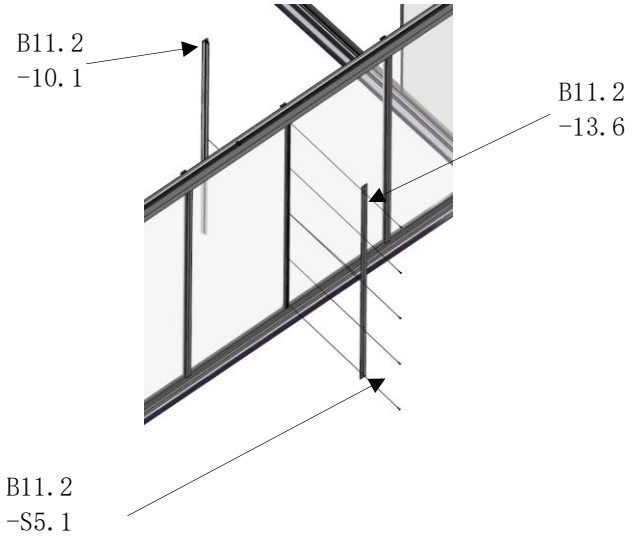


fig. 27

IV. IV. Mounting of the gable glazing-bars

- the six hexagon head screws M6x50 **(item B3.1/S2)** are inserted into the milled groove of the prefabricated AG-door-track **(item 8.41)** and the floor profile **(item 4.4)** and roughly positioned! ***(fig. 28)***

Sectional view

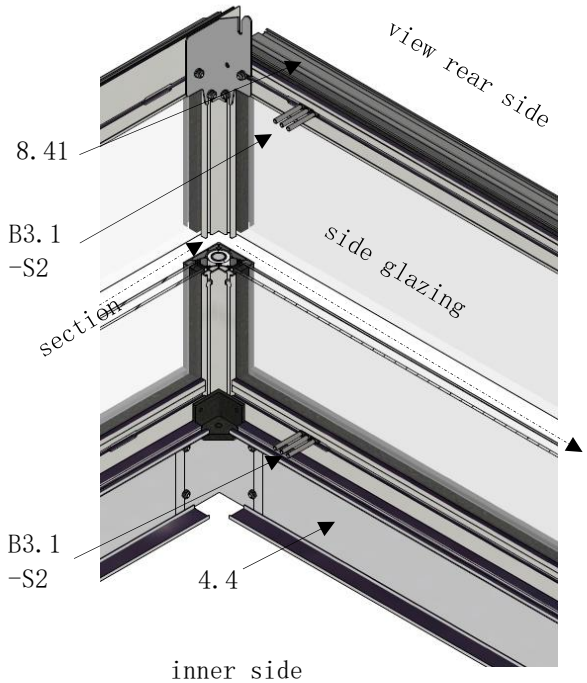


fig. 28

- slide the cut-out from the gable center glazing-bar **(item 14.2)** into the AG-door-track **(item B3.1/8.41)**. ***(fig. 29)***
- at the same time, insert the two hexagon head screws M6x50 **(item B3.1/S2)** into the hole in the gable center glazing-bar **(item 14.2)**. ***(fig. 29)***
- centering the middle gable glazing-bar (point 14.2). ***(fig. 29.1)***
- screw to the underside of the floor profile **(item 4.4)** using cap nut M6 **(item B3.1/S7)** and washer **(item B3.1/S6)**. ***(fig. 29)***
- check the verticality with a spirit level! ***(fig. 29)***
- now screw it to the top of the AG door track **(item B3.1/8.41)** with cap nut M6 **(item B3.1/S7)** and washer **(item B3.1/S6)**. ***(fig. 29)***

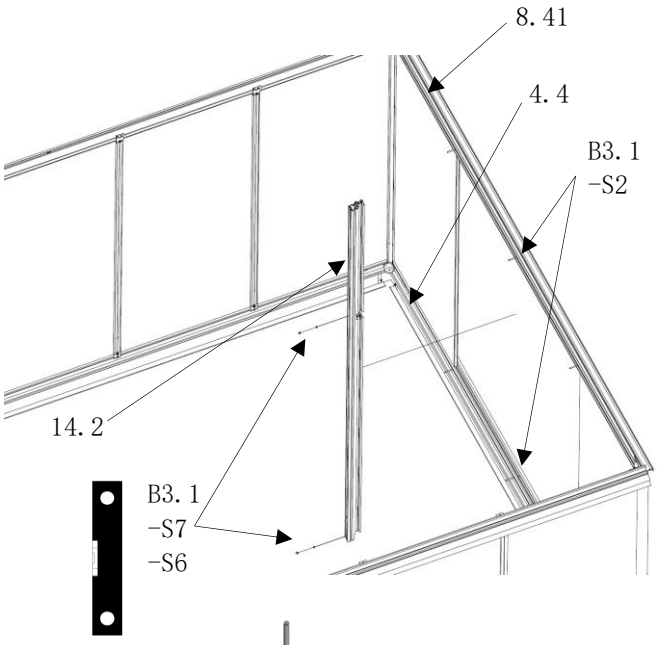


fig. 29

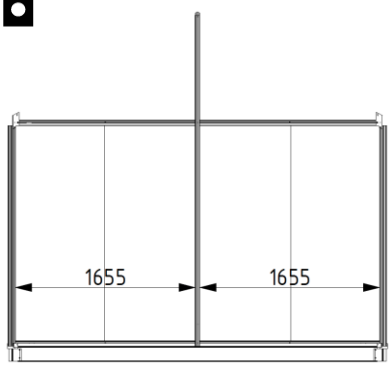


fig. 29.1

*** Optional:**

Installation of a pop-up window in the rear gable wall.

See description in the appendix! (fig.29a)

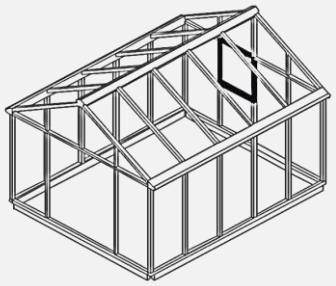


fig.29a

IV.V. rear side glazing

- ☛7- slide the two rear glazing panels slightly tilted upwards into the AG-door-track **(item 8.41)** until they can be adjusted over the edge of the floor profile **(item B3.1/4.4)** at the bottom! ***(fig.30)***

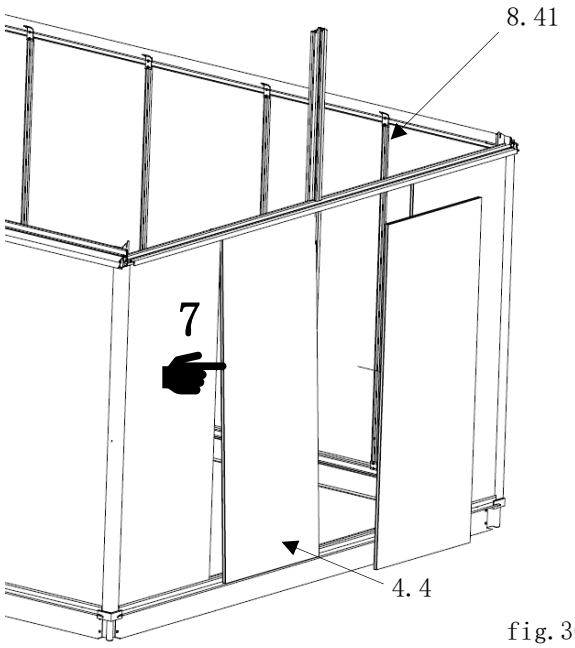


fig.30

- then the glazing is pushed in the direction of the gable center glazing-bar **(item 14.2).**
- the glazing lies completely against the profile. ***(fig.31)***

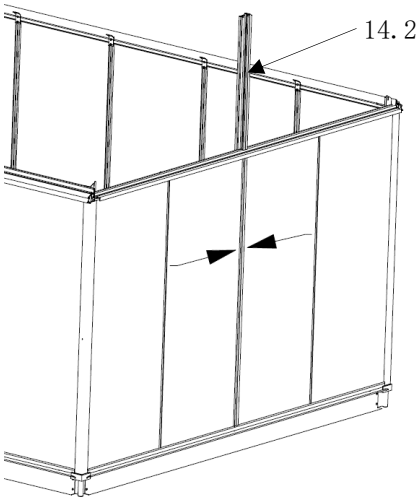


fig.31

IV.VI. Mounting of the gable glazing-bar (rear side)

- slide the cut-out of the gable glazing-bars **(item 12.1/12.2)** into the AG-door-rail **(item B3.1/8.41)**.
- at the same time, insert two hexagon head screws M6x50 **(item B3.1/S2)** into the holes of the gable glazing-bar **(item 12.1/12.2)**.
- the cap nuts M6 **(item B3.1/S7)** and washers **(item B3.1/S6)** are screwed on at the top and bottom. ***(fig.32)***

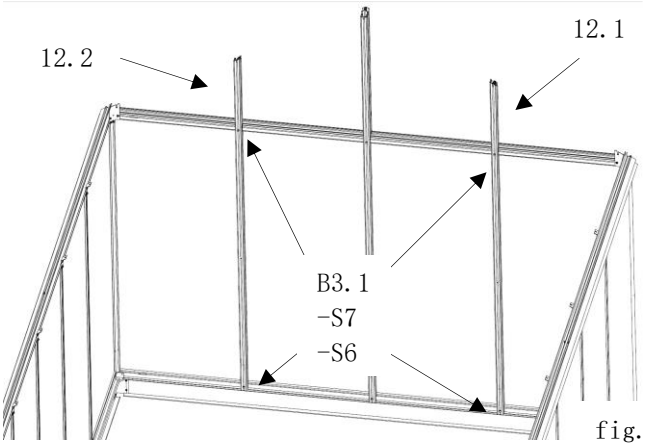


fig.32

- the cover strips **(item 13.6)** are placed on the gable glazing-bars **(item 12.1/12.2)** from the outside and screwed in place with 5x countersunk screws **4.2x22** (item B3.1/S5.1) ***(fig.33)***

Note: The cover strips (item 13.6) without slotted holes must be fitted on the rear side. ***(fig.33)***

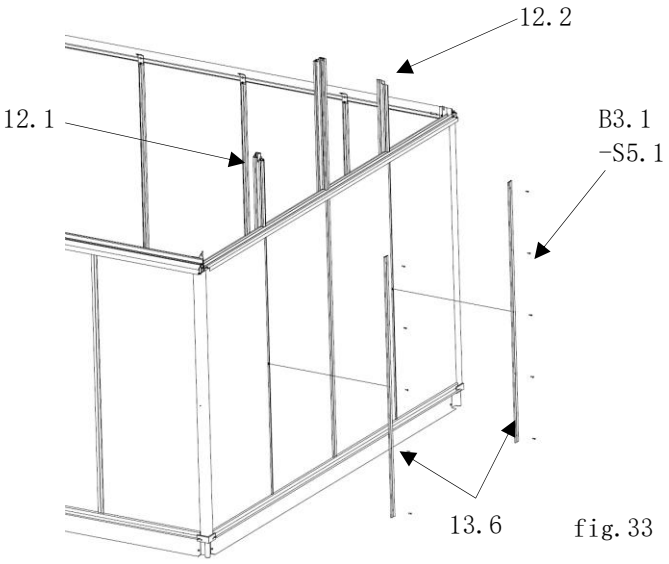


fig.33

IV.VII. Mounting of the gable glazing-bars (front)(fig.34)

- the four hexagon head screws M6x50 **(item B3.0/S2)** are inserted into the milled groove of the prefabricated BG door track **(item 8.4)** and the floor profile **(item 4.4)** and roughly positioned! ***(see page 17 fig.28)***
- slide the cut-out of the gable glazing-bars (repair glazing-bars) **(item 12.1/12.2)** into the AG-door-rail **(item 8.4)**.
- at the same time, insert two hexagon head screws M6x50 **(item B3.0/S2)** into the holes of the gable glazing-bars **(item 12.1/12.2)**.
- the cap nuts M6 **(item B3.1/S7)** and washers **(item B3.1/S6)** are screwed on at the top and bottom. ***(see page 21 fig.29)***

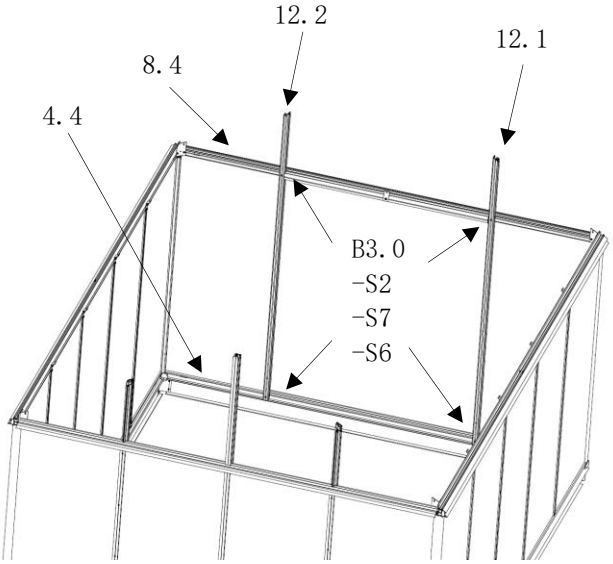


fig.34

the cover strips **(item 13.5)** are placed on the gable glazing-bars **(item 12.1/12.2)** from the outside and screwed in place with 5x countersunk screws **4.2x22** (item **B3.0/S5.1)** ***(fig. 35)***

Note: **The cover strips (item 13.5) with the slotted holes for the door locks must be installed in the front side.**

(fig. 35)

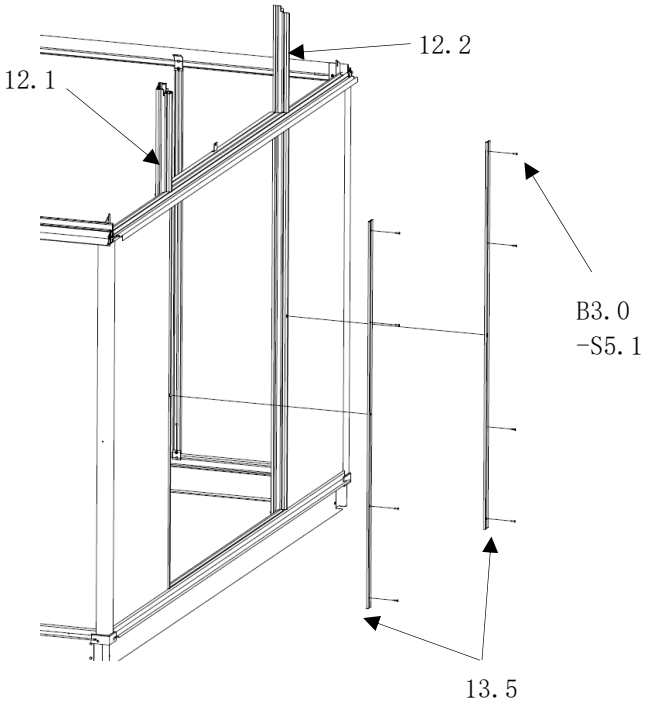


fig. 35

- insert a hexagon bolt M6x12 **(item B3.0/ S1)** into the groove of the middle gable glazing-bar **(item 14.1)** and mount with a washer M6 **(item B3.0/ S6)** and a hexagon nut M6 **(item B3.0/ S4)!**
- check the verticality with a spirit level!
- **detail D:** Tighten the screw connection.

(fig. 36/37)

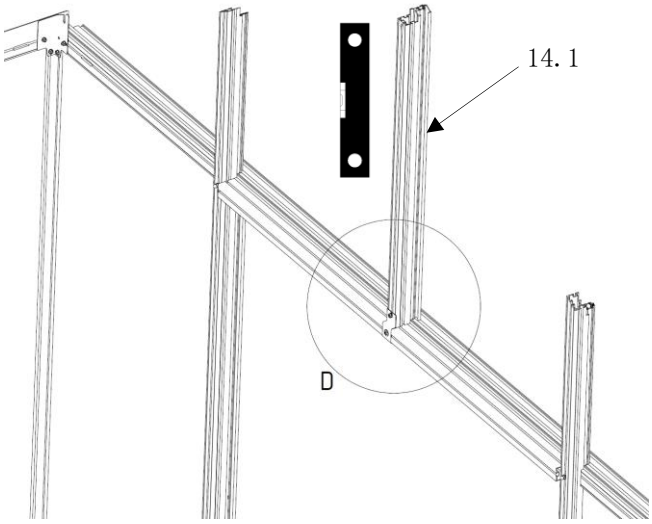
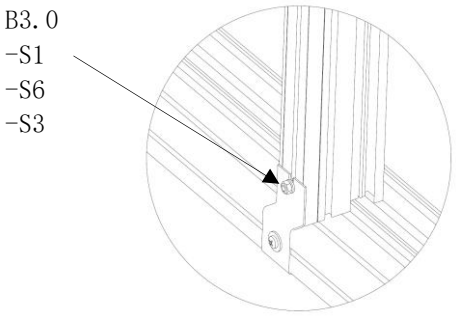


fig. 36



Detail D

fig. 37

IV.VIII. Mounting of the gable glazing

* the gable glazing should be installed with at least two people and two stepladders!
* reachable height 2300mm!
* please ensure that the stepladders stand securely during assembly (risk of accident)!

- insert the left-hand large gable glass pane **(item GoA2)** in the direction of the arrow.
- i.e. resting next to the gable center glazing-bar groove **(item 14.2)** and in the AG-door-track groove **(item 8.41)**.
- the cover strip **(item 13.1)** is placed on the gable glazing-bar **(item 12.1)** from the outside and with 3x countersunk head drilling screws 4.2x22 **(item B3.1/S5.1)** not yet screwed tight.

(fig.38)

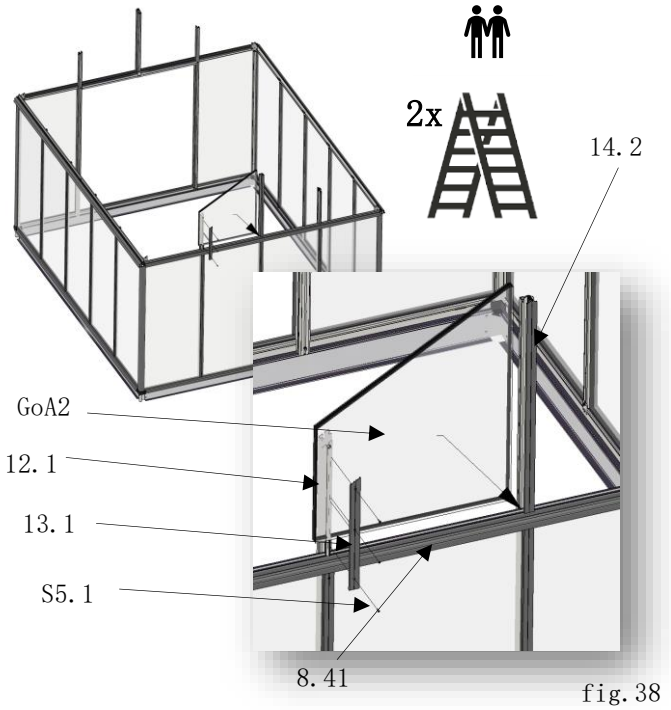


fig.38

- insert the small left-hand gable glazing **(Item GoA1)** in the direction of the arrow.
- i.e. resting next to the gable glazing-bar groove **(item12.1)** and in the AG-door-track groove **(item 8.41)**.
- now screw the cover strip **(item 13.1)** tight. *(fig.39)*

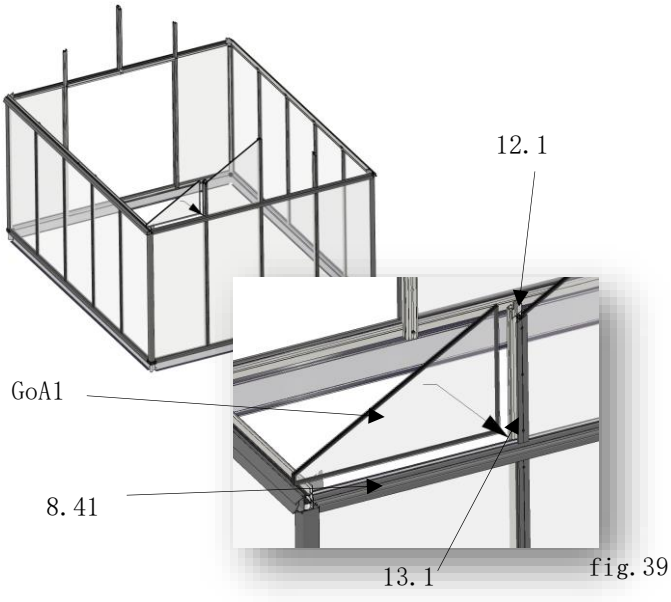


fig.39

*** Optional:**

Installation of a ventilation panel in the rear gable wall.

See appendix for description! **(fig.39a)**

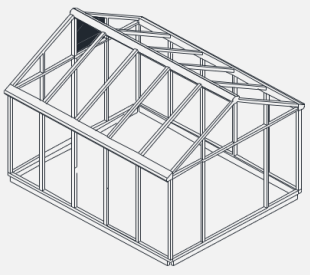


fig.39a

- the work steps described in fig. 38/39 are repeated for both the right rear side of the gable and for the opposite gable front. *(fig. 40)*

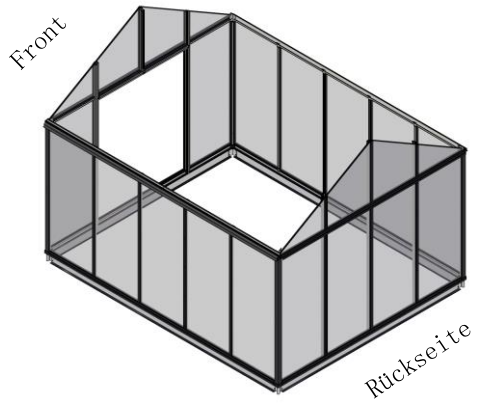


fig. 40

V. Mounting of the roof construction

V.I. Mounting the AG ridge profile type L5

* the AG-ridge-profile should be installed with at least two people and two stepladders!
* reachable height 2300mm!
* please ensure that the stepladders stand securely during assembly (risk of accident)!

- the plastic pins **(item K12)** of the BG ridge profile **(item 9.5)** are pushed into the gable center glazing-bar (rear) **(item 14.2)** and gable center glazing-bar (front) **(item 14.1)**.

  (fig. 41)
- see detail E *(fig. 42)*
- see detail F *(fig. 43)*

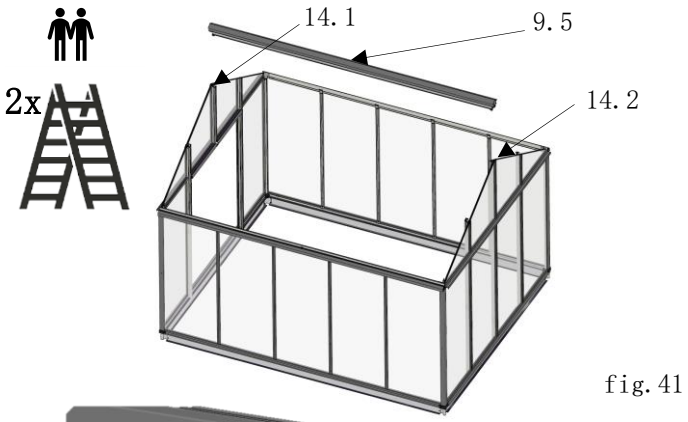


fig. 41

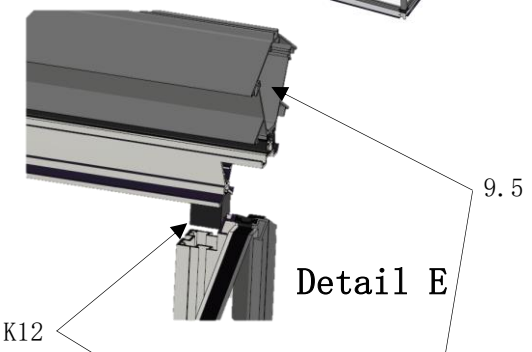


fig. 42

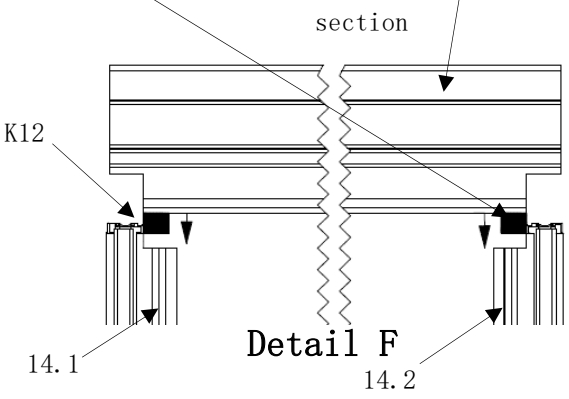


fig. 43

V. II. Mounting the roof profiles

- place the roof profile **(item 14.5)** on the ridge profile connector, slide it into the ridge seam **(item 9.5)** and place it on the eaves profile **(item 6.5)**. see details G and H. *(fig. 44/45)*

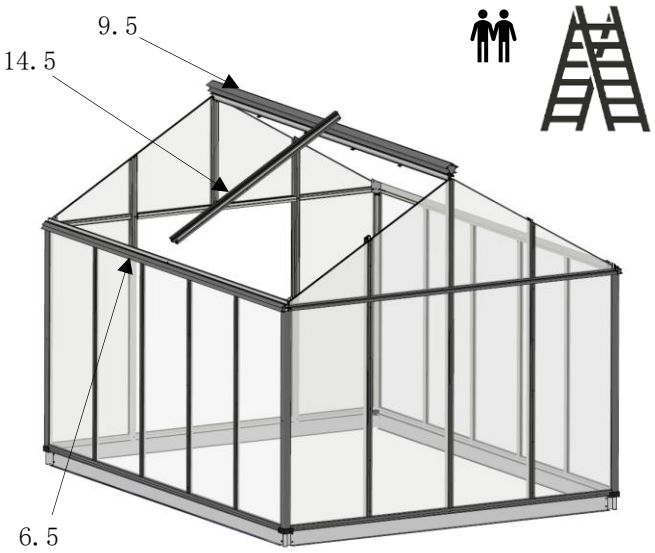


fig. 44

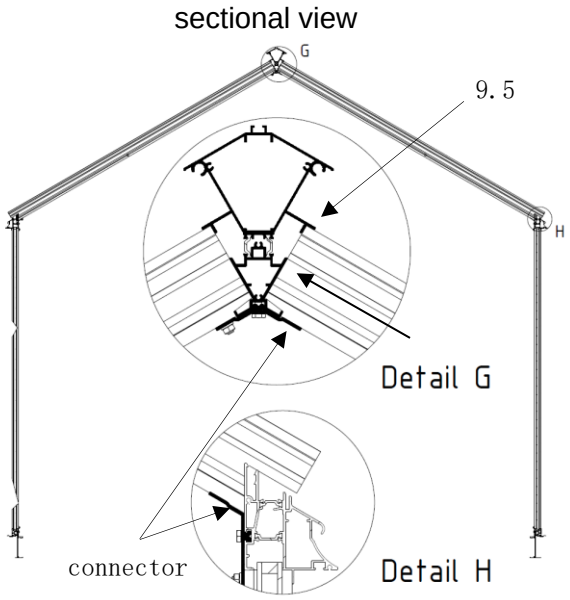


fig. 45

- insert the hexagon head screws M6x12 **(item B12.4/ S1)** into the hole in the roof profile **(item14.5)** and pull one upwards and one downwards into the groove of the connector. **(fig. 46)**
- then mounted with washers **(item 12.4/S6)** and hexagon nuts M6 **(item 12.4/S4)**. *(fig. 46)*

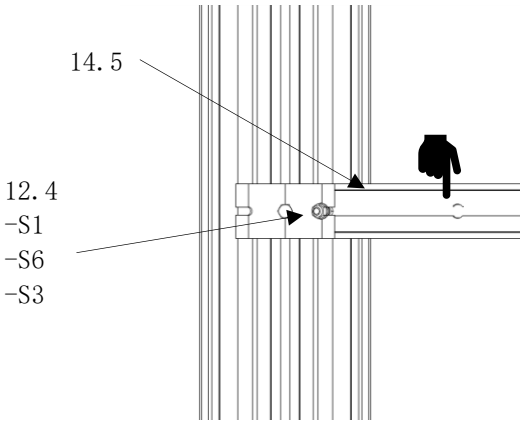


fig. 46

- as described in fig. 44 to 46, the work steps are repeated for the remaining roof profiles *(fig. 47)*

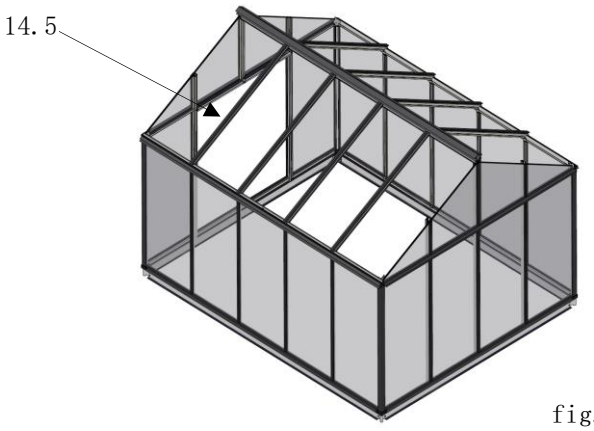


fig. 47

V.III. Mounting of the AG-drawstring

- the position of the AG drawstring **(item 21.1)** is mounted between the third and fourth field, as in **fig. 48.**
- both sides are fastened with a hexagon bolt M6 x 55 **(item B13.0/S1)**, two washers **(item B13.0/S6)** and a hexagon nut M6 **(item B13.0/S4)**.
- to attach the second screw connection, the ridge must be pushed slightly upwards!
- screw together **see detail I.** *(fig. 49)*

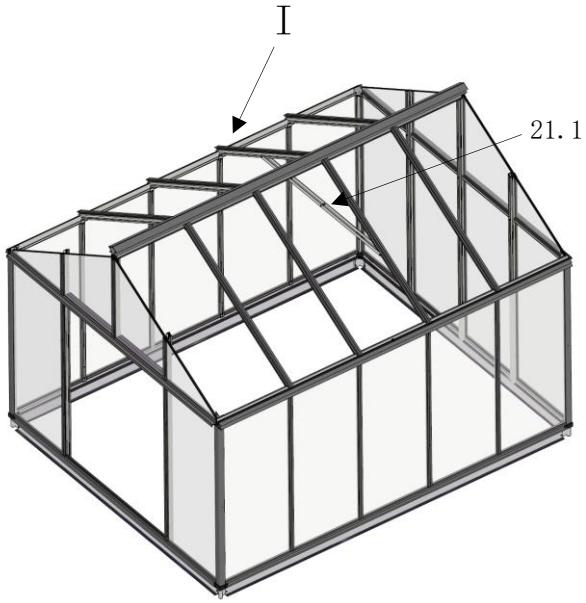


fig. 48

top view

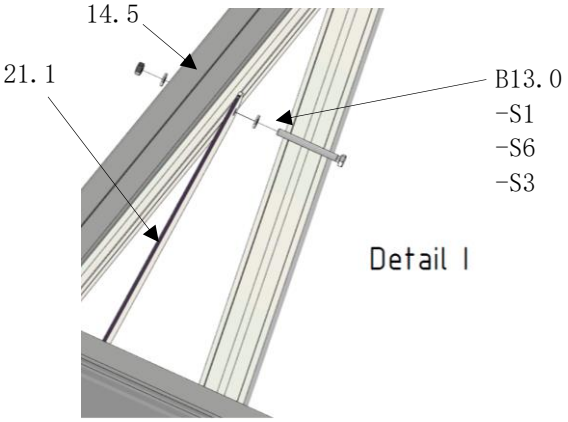


fig. 49

V.IV. Mounting of the verge profile

- place the verge profile **(item 5.4/5.5)** on the connector of the ridge profile and slide it over the edges of the window pane into the ridge rebate **(item 9.5)**. *(fig. 50)*
- see detail G. *(page 27 fig.45)*
- carefully push the verge profile **(item 5.4/5.5)** further down over the edges of the window pane and insert the M6x50 hexagon head screw of the verge **(item 5.4/5.5)** fixed in the middle into the groove of the gable glazing-bar (repair glazing-bar) **(item 12.1/12.2)**. Before the verge is attached to the eaves corner connector **(item 6.5)**, a hexagon head screw **(item B8.0/S1)** must be inserted into the groove of the verge. *(fig. 51)*
- insert the hexagon head screw **(item B8.0/S1)** with the verge profile into the groove of the corner connector.
- check the verticality in this area with a spirit level!
- fit two washers **(item B8.0/ S6)** on the hexagon bolts and tighten the two hexagon nuts **(item B8.0/ S4)**. *(fig. 52)*
- the work steps are repeated for the other verge profiles. *(fig. 50)*

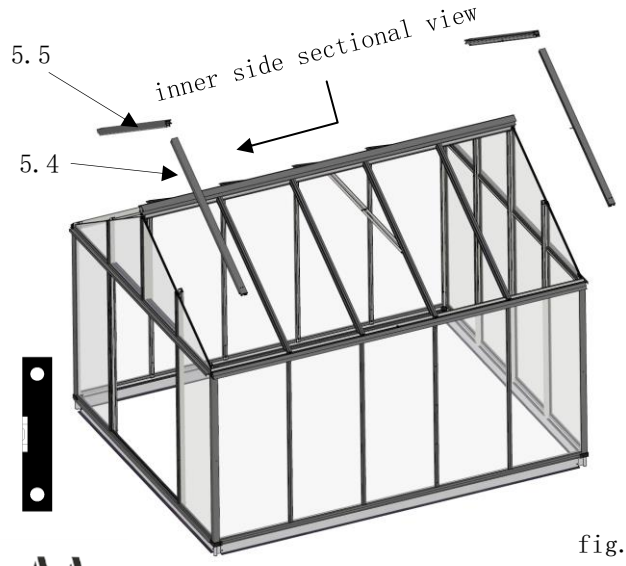


fig.50

inner side sectional view

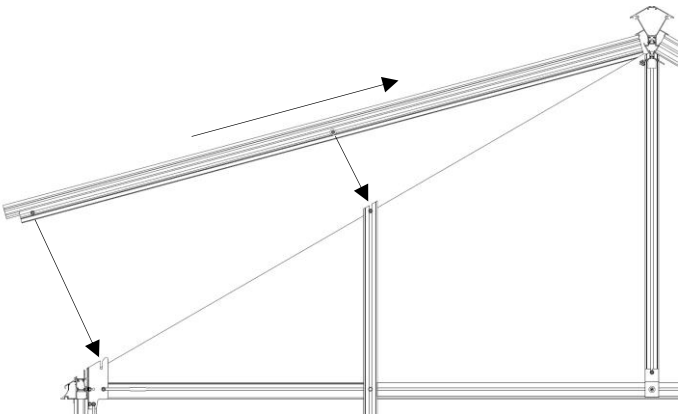


fig.51

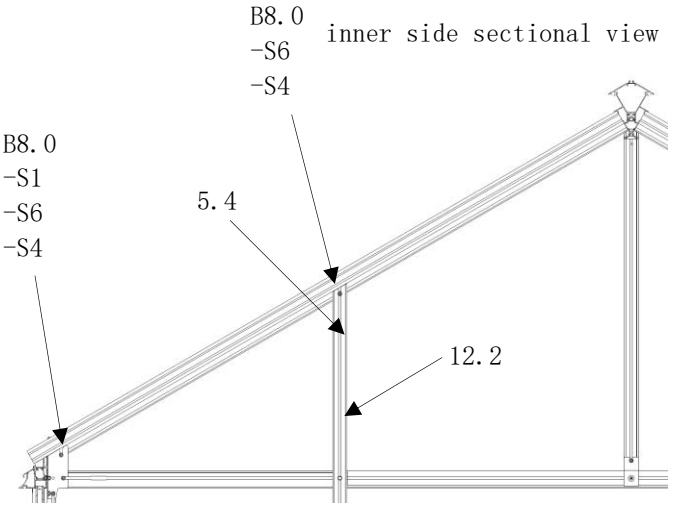


fig.52

VI. Mounting oft the roof glazing

VI.I. Mounting of the the lip seal

- for sealing, the eight prefabricated lip seals **(item Lpd)** (820 mm) are inserted between the roof profiles in the eaves profile condensation gutter. ***(fig. 53)***

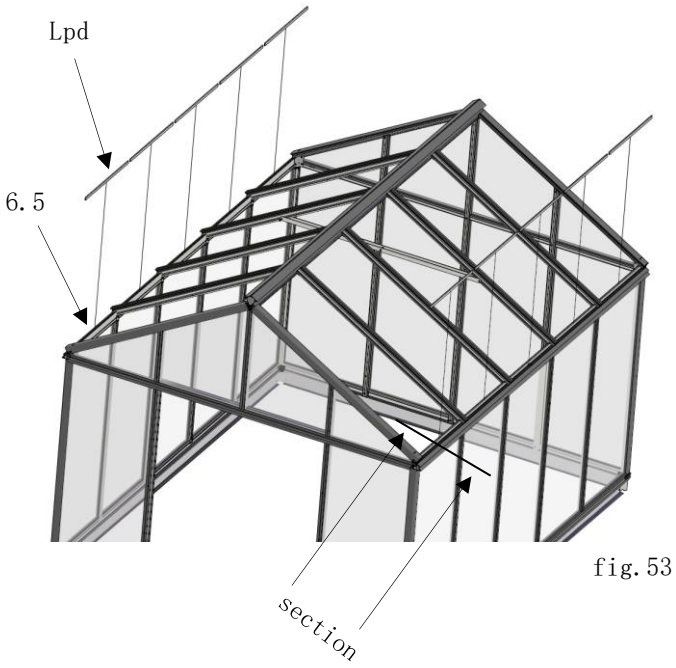


fig.53

Note:

- the lip seals are installed as shown in the sectional view (fig. 54)!
- the hook of the lip seal must engage in the nose of the condensation groove of the eaves profile!
- the lip seals must be fitted before the glazing is installed!
- SUBSEQUENT INSTALLATION OF THE LIP SEALS IS NO LONGER POSSIBLE WITHOUT REMOVING THE PANES!

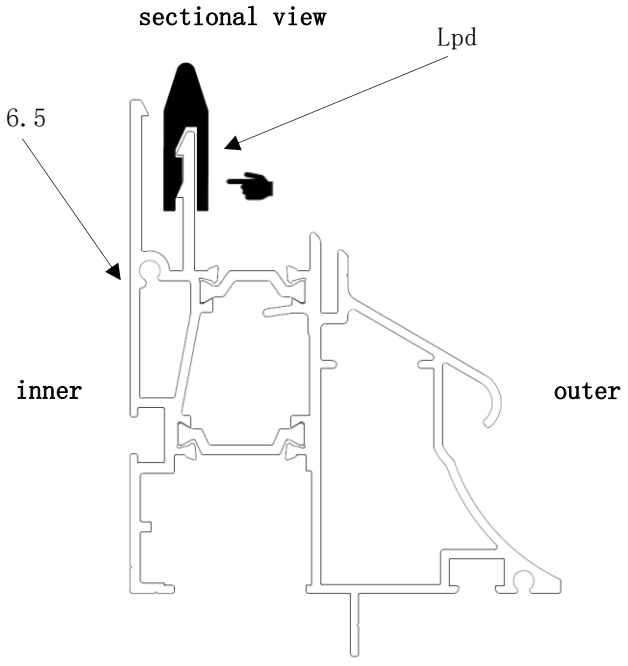


fig.54

VI.II. Mounting of the roof glazing

- the ISO roof glass panes **(item G/S/D)** are inserted one after the other into the groove of the roof glazing-bars. ***(fig. 55)***

  whereby the short ISO roof glazing **(item DuF)** is installed in the second position. ***(page 32 fig. 58)***
- at least two people should insert the roof glass from the outside and one person must insert the glass pane into the ridge profile from the inside!

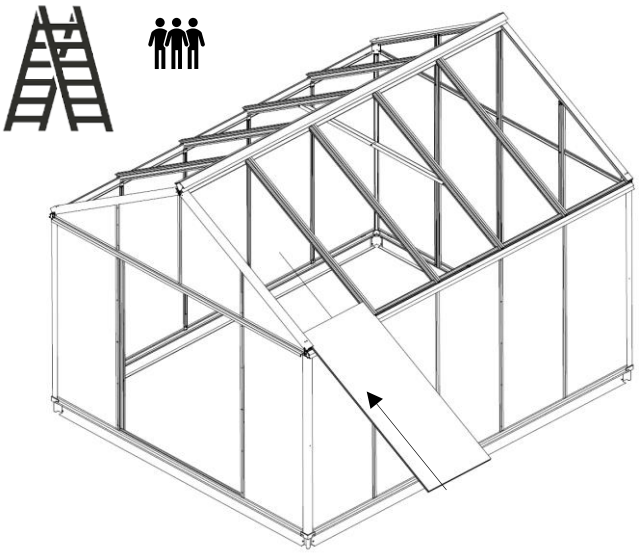


fig. 55

- the ISO roof glass pane **(item G/S/D)** must be pushed upwards into the ridge profile so far that the pane can be secured at the bottom in the eaves profile groove **(item 6.5)** with an end stop bar **(item 22.1)**! ***(fig. 56)***
- see sectional view

  (fig. 57)
- seal the end stop bar **(item 22.1)** along the top edge with silicone! ***(fig. 57)***

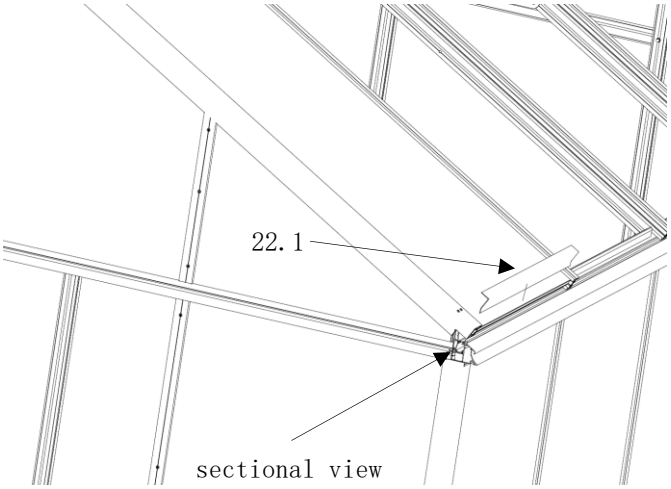


fig. 56

sectional view

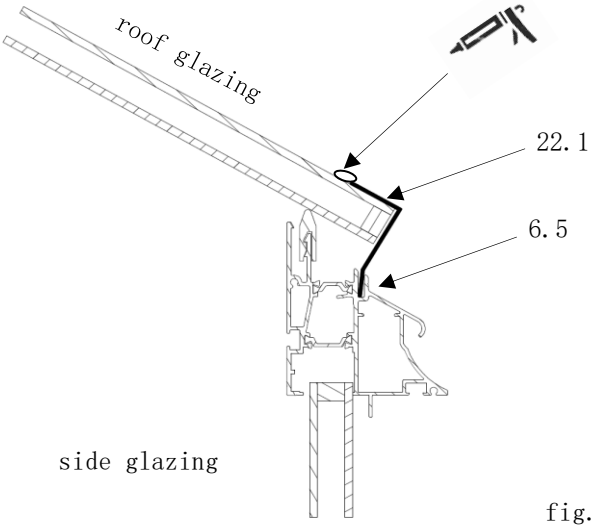


fig. 57

Note:

- **if the distance between the glazing-bars is too small, please loosen the M6x10 hexagon head screws on the connectors and set the desired dimension so that the washers can then be pushed between the glazing-bars without resistance!**

- the work steps from **fig. 55 to 57** are repeated for the remaining glass panes and end stop bars. ***(fig. 58)***

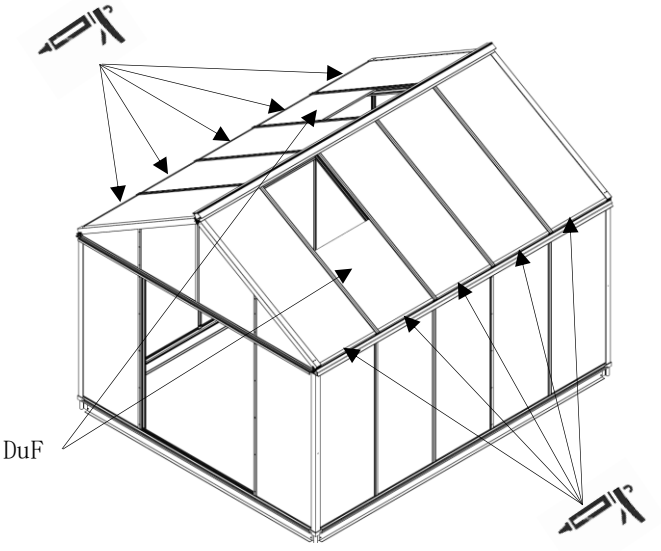


fig. 58

- install the two AG-crossbars (wall glazing-bars) **(item QR)** for the roof windows. ***(fig. 59)***

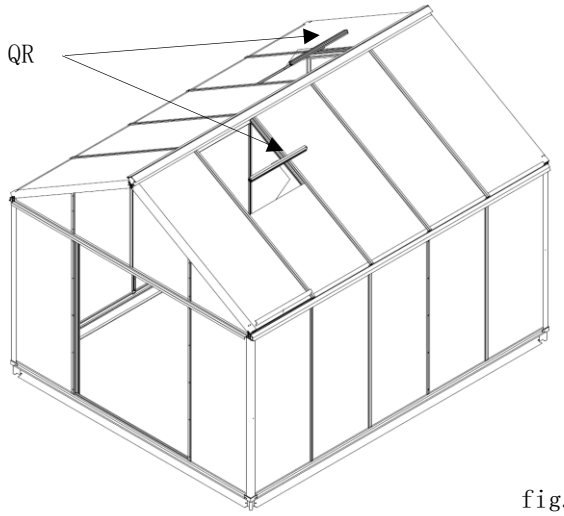


fig. 59

- Note the installation position!
- AG-crossbars (wall glazing-bars) **(item 10.1)**
  1. connector roof windows **(item A14)**
  2. wedge seal 3-5mm **(item KD3-5)**

see sectional view!
(fig. 60)

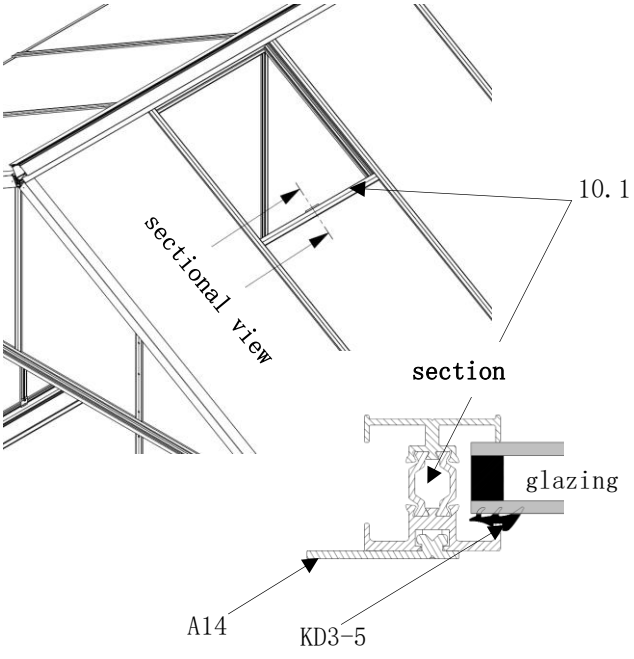


fig. 60

VI.III. Mounting oft the roof windows

- the two pre-assembled and glazed roof windows **(item DF)** are inserted into the profile holder provided at the end of the ridge profile up to the roof window opening.
  (fig. 61)
- see front view ***(fig. 62)***
- detail J ***(fig. 63)***

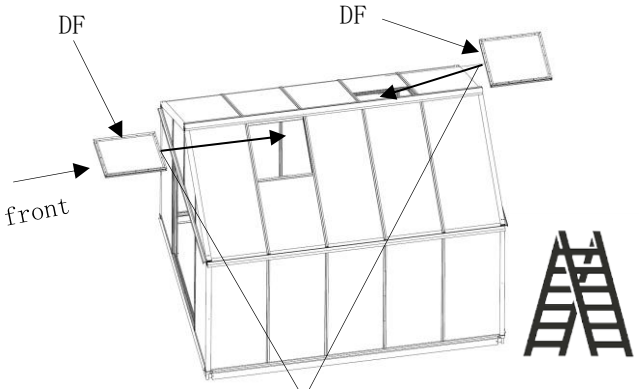


fig.61

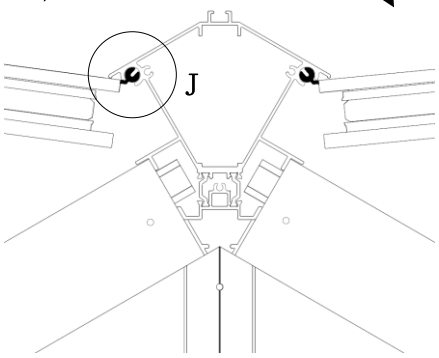


fig.62

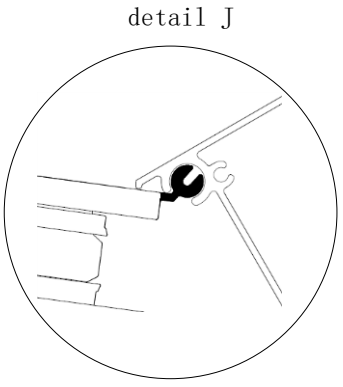


fig.63

VI. IV. Mounting the MegaVent® window opener

the room air climate is regulated automatically by the roof windows.

- the two automatic window openers **(item AFÖ)** are mounted to the connecting plate of the roof window **(item DF)** and the crossbar **(item 10.1)** with four hexagon head screws M6x12 **(item B30.1/ S1)** each. ***(fig. 64/65)***

front view (inside)

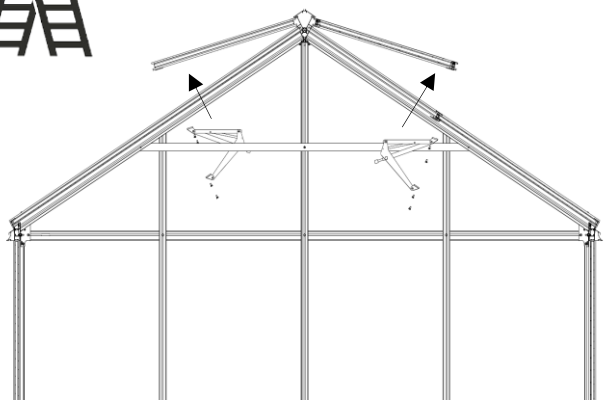


fig. 64

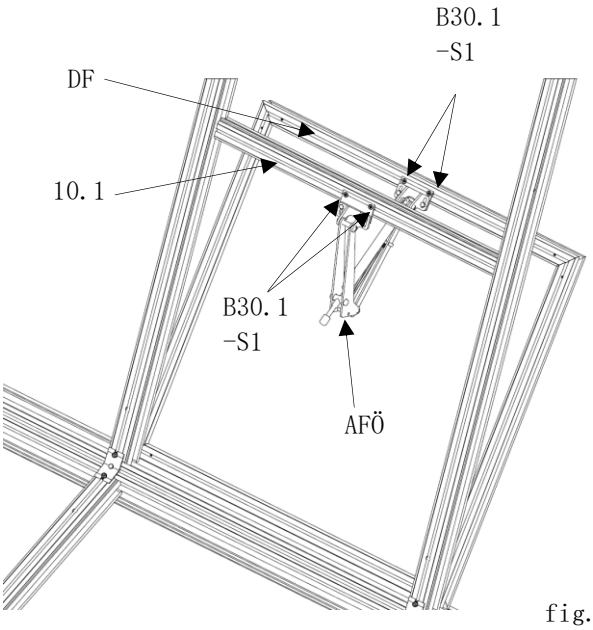


fig. 65

view from below

- note the installation position of the two automatic window openers!
- the dimension is 848mm from the angled ridge plate to the rear plate of the mounting bracket.
- turn the adjusting screw to set the parallelism of the window opener! *(fig. 66)*

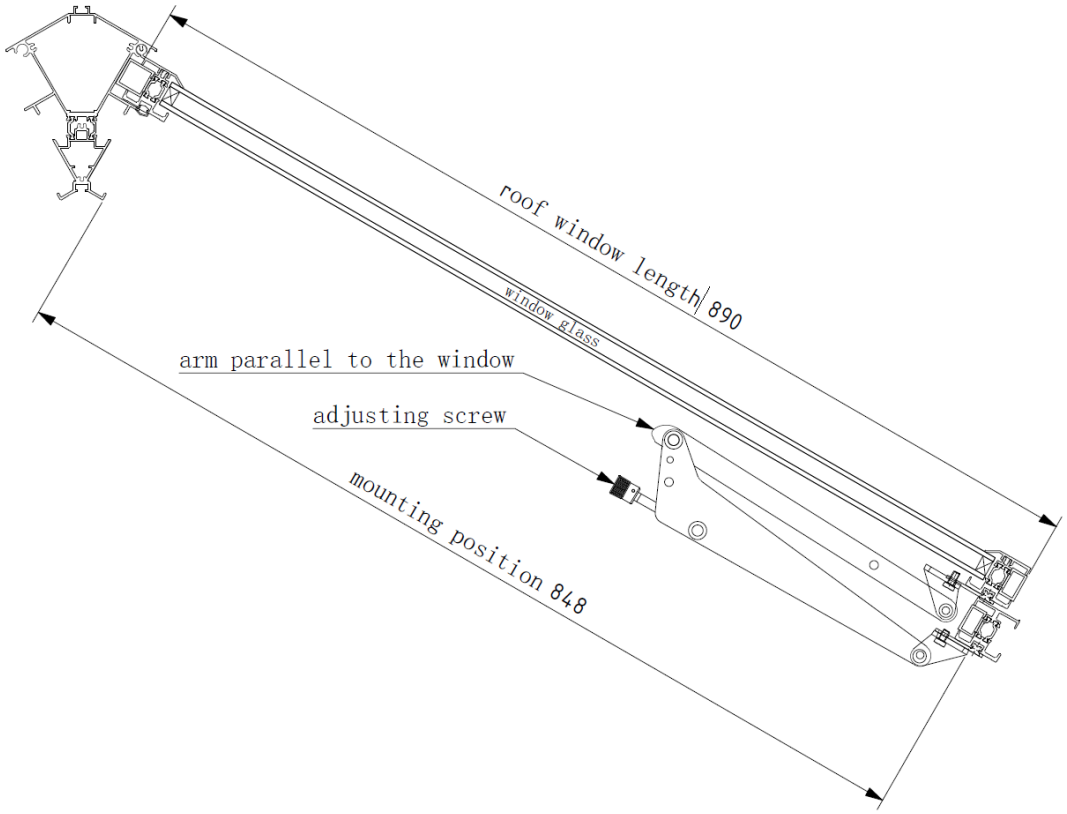


fig.66

VII. Mounting oft the sliding doors

VII.I. Preparation of the track

- to make it easier to insert the sliding doors, the track of the sliding doors must be sprayed with silicone spray. *(fig.67)*

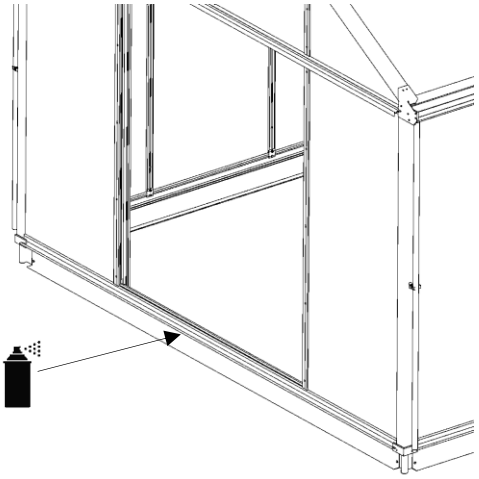


fig.67

VII.II. Mounting of the sliding doors

- the sliding doors **(item SHF/SGF)** are placed on the left and right sides of the guide rail of the floor profile **(item 4.4)** and pushed parallel into the guide groove of the door track **(item 8.4)**. *(fig. 68)*

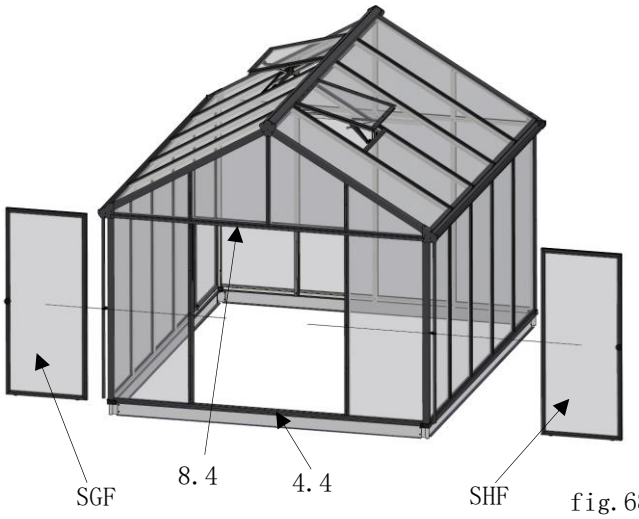


fig. 68

- section view sliding door *(fig. 69)*

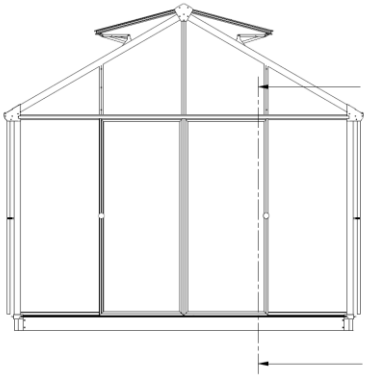


fig. 69

- section view sliding door *(fig. 70)*
- **detail K:** door track groove *(fig. 71)*
- **detail L:** guide rail floor profile *(fig. 72)*

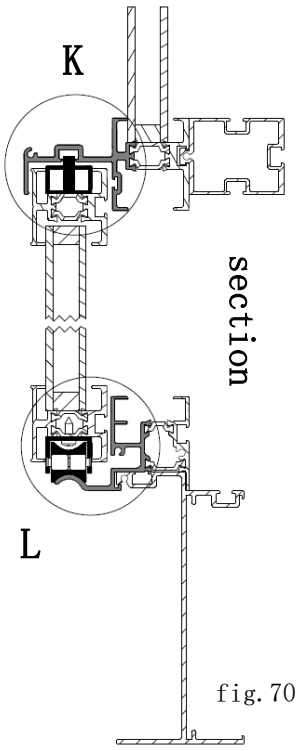


fig. 70

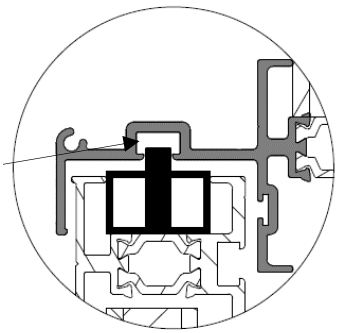
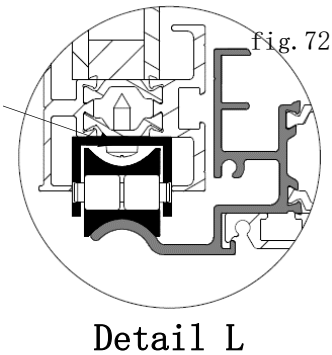


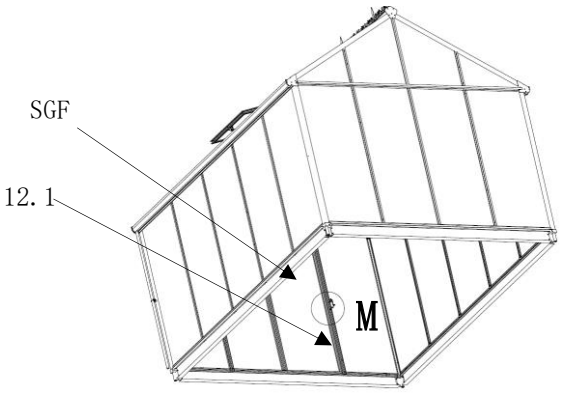
fig. 71

fig. 72



VII.III. Inserting the locking pin

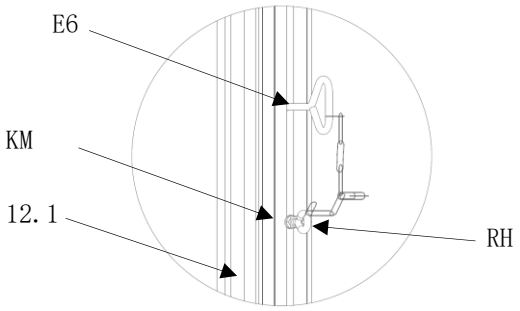
- slide the ring hook **(item RH)** with hexagon nut M6 and lock nut M6 **(item KM)** from the inside right upwards into the lower fastening hole of the repair glazing-bars **(item 12.1)** until you can insert the locking pin **(item E6)** into the hole of the repair glazing-bars **(item 12.1)**.
- **detail M:** secure the ring hook with the lock nut. ***(fig. 74)***
- lock the sliding door (counter sash) **(item SGF)** with the locking pin **(item E6)**. ***(fig. 73/74)***



inside view

View of the interior front

fig. 73



Detail M

fig. 74

VIII. Mounting of the rainwater gutter system

VIII.I. Mounting of the rain gutter

- position the two rain gutters **(item 7.5)**, paying attention to whether the round downpipe socket are to be installed at the front or rear! ***(fig. 75)***
- hang the rain gutters (item 7.5) at a slight angle in the groove of the eaves profile **(item 6.5)**. ***(fig. 76)***
- the ends of the rain gutters must be flush with the eaves profile.

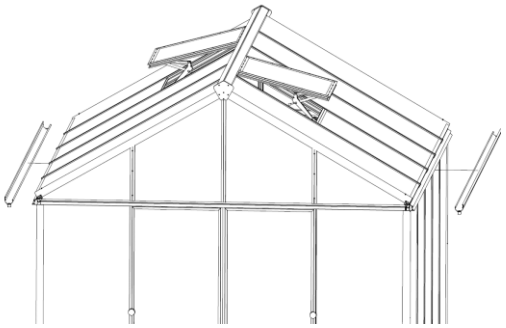


fig. 75

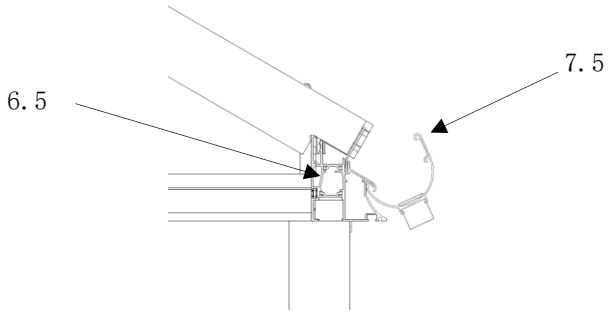


fig. 76

VIII.II. Mounting of the rainwater pipes

- screw the two downpipe holders **(item B6/ K9)** and spacer sleeves **(item B6/ K6)** to the corner profile **(item 1.17)** using one pan-head screw **(item B6/ S8)** 3.5x50 each. ***(fig. 77)***
- see **detail N.** ***(fig. 78)***

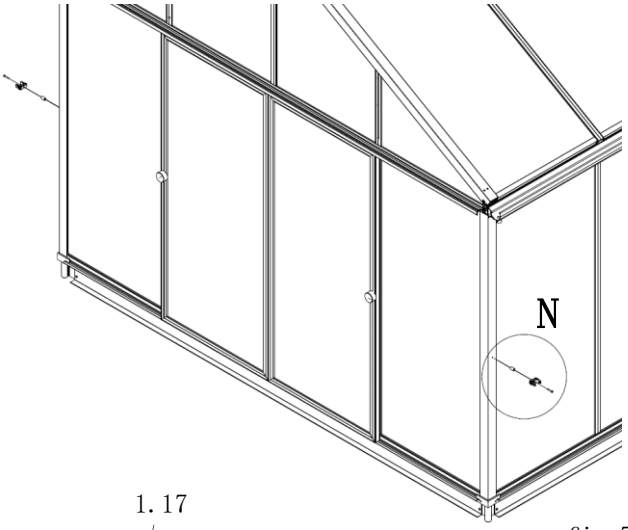


fig.77

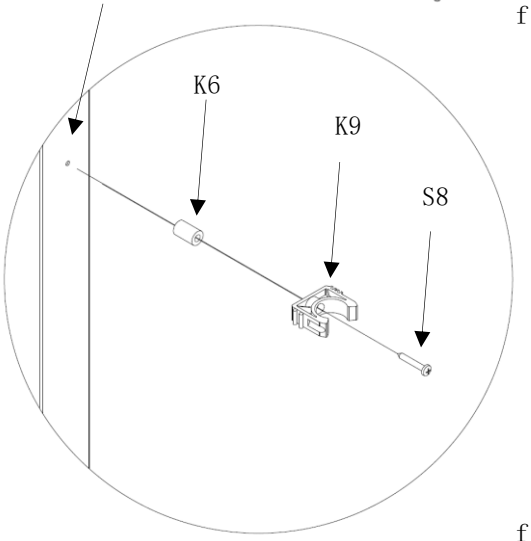


fig.78

Detail N

- the two downpipes **(item B6/ K14)** are clipped into the downpipe holders **(item B6/ K9)** and pushed upwards onto the round downpipe socket of the gutter **(item 7.5)**. ***(fig. 79/80)***

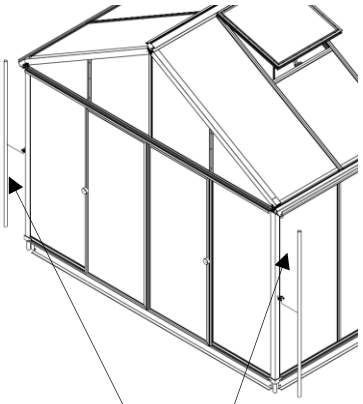


fig.79

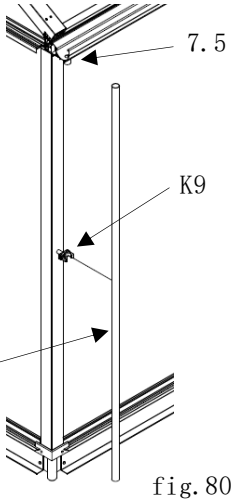


fig.80

VIII.III. Mounting of the blanking plugs

- fit a Ø20 blanking plug **(item K18)** in the holes for the rain gutter **(item 7.5)** on the left and right-hand side. ***(fig. 81)***
- Seal both blanking plugs **(item K18)** from above in the rain gutters with silicone! ***(fig. 81)***

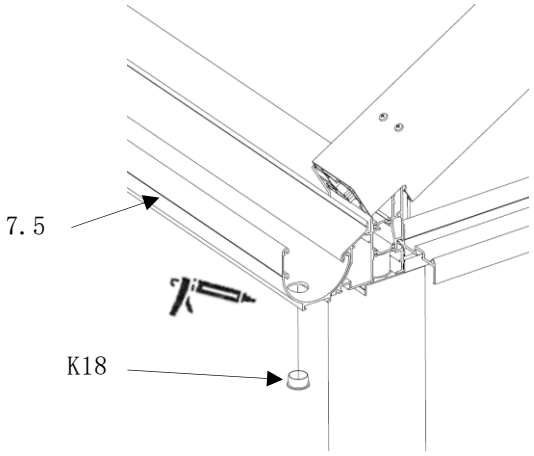


fig.81

- fit a Ø5 blanking plug **(item K19)** in the holes of the corner profile **(item 1.17)** on the left and right-hand side. ***(fig. 82)***

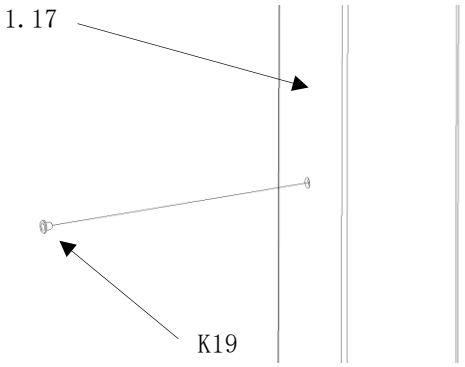


fig.82

VIII.IV. Mouting of the of plastic gutter end caps

- fill the cut-out of the two left and two right plastic gutter end caps **(itemB4.5/ K3/K3.1)** with silicone. ***(fig. 83)***
- press all four plastic gutter end caps **(item B4.5/ item K3/K3.1)** onto the gutter profiles. ***(fig. 84)***
- **<u>Tip:</u> press the swollen silicone lightly onto the components with your finger and cleaning agent and spread it by pulling.**
- remove excess silicone.

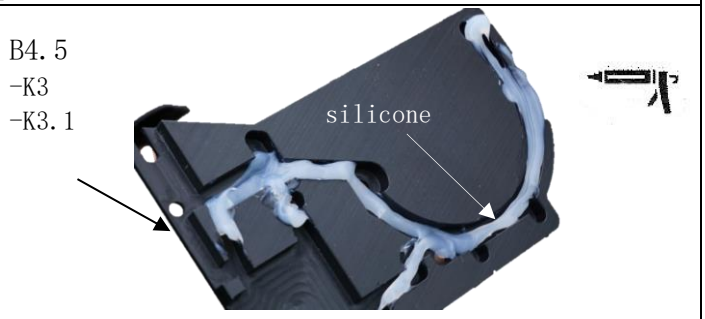


fig.83

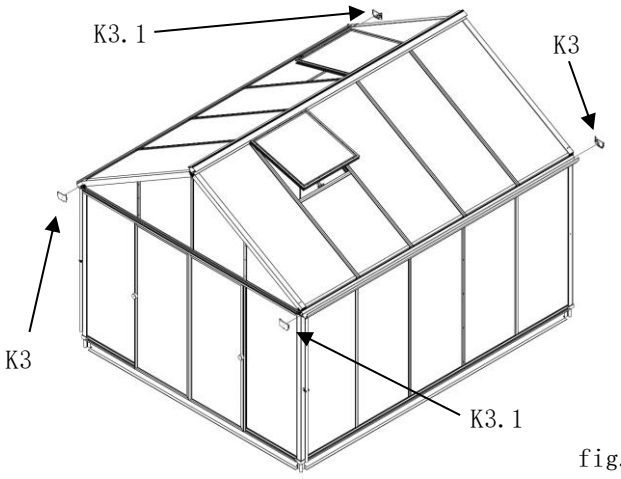


fig.84

VIII.V. Mounting of the the gutter end plates

- attach the four left and right gutter end plates **(item B4.5/ A4/A5)** to the verge profiles **(item 5.4/5.5)** and screw them to the front and rear with five pan-head screws Ø4.2x16 each **(item B4.5 S4)** with the fitted plastic gutter end caps **(item B4.5/ K3/K3.1)**. ***(fig. 85)***
- screw the four left and right gutter end plates **(item B4.5/ A4/A5)** onto the Ortgan profiles **(item 5.4/5.5)** using two pan-head screws Ø4.2x16 **(item B4.5 S4)** each. ***(fig. 85)***
- screwed view. ***(fig. 86)***

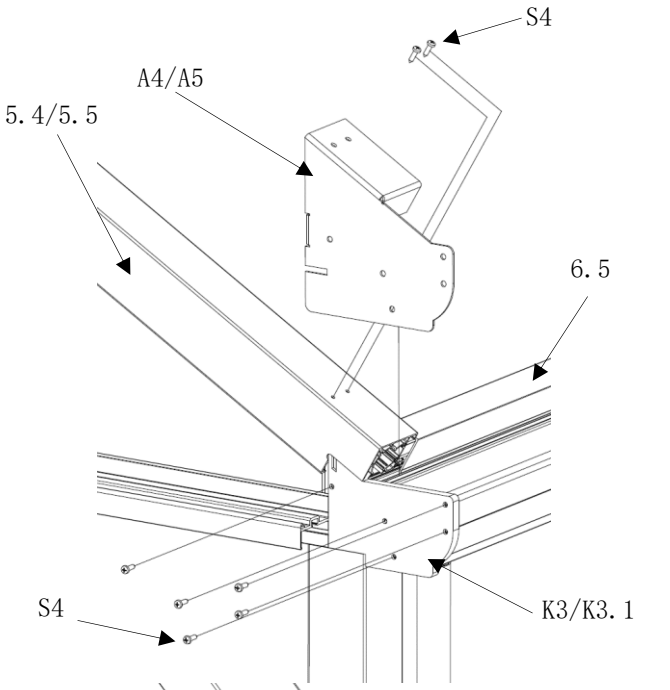


fig.85

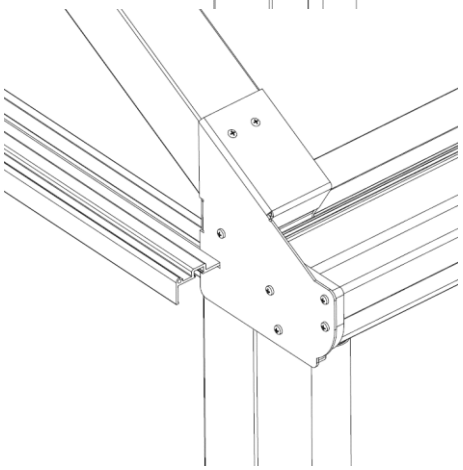


fig.86

IX. Mounting oft the end cap

IX.I. Mounting oft the end cap (roof glazing-bars)

- the four end caps **(item B12.4/ K18)** are mounted on the left and right eaves side of the respective roof rung **(item 14.5)**. ***(fig. 87)***
- mounted view: **Detail O** ***(fig.88)***

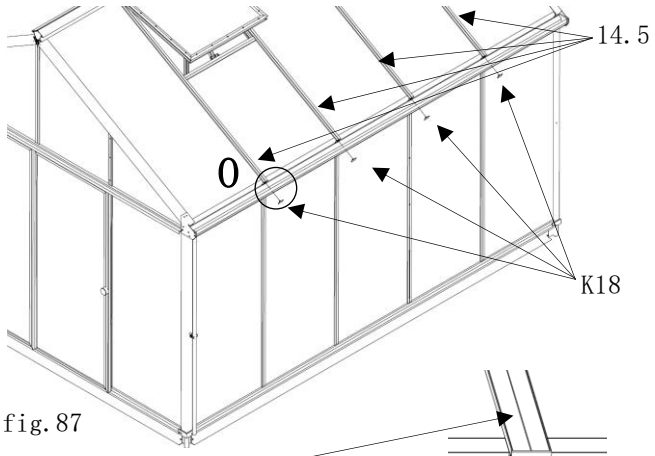


fig.87

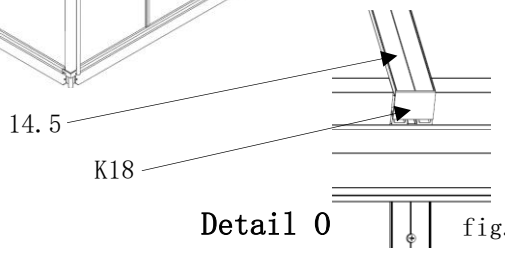


fig.88

IX. II. Mounting of the decorativ sheet metal elements

- first insert an decorative edge element **(item RZ)** into the groove of the ridge profile.
- insert three decorative middle elements **(item MZ)**.
- finally, insert a decorative edge element **(item RZ)**. ***(fig. 89)***

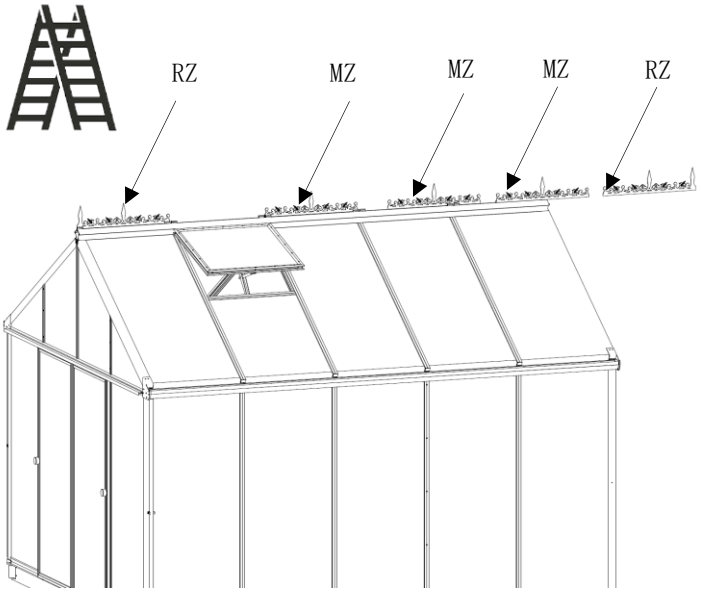


fig. 89

- end position of the decorative elements. ***(fig. 90)***

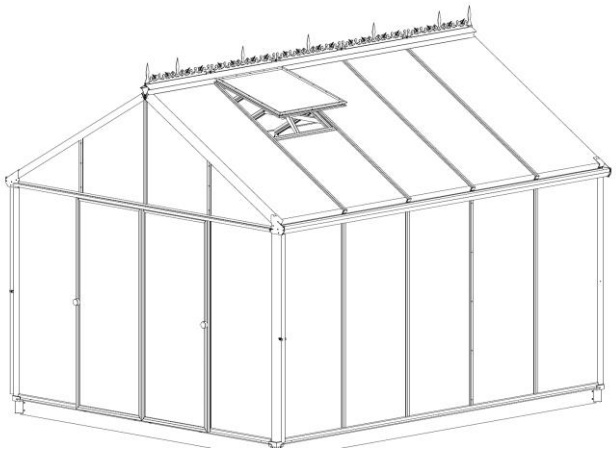


fig. 90

IX.III. Mounting of the plastic roof end ridge cap

- fill the cut-out in the two plastic ridge end caps **(item B5.5/ K5)** with silicone. ***(fig. 91/92)***

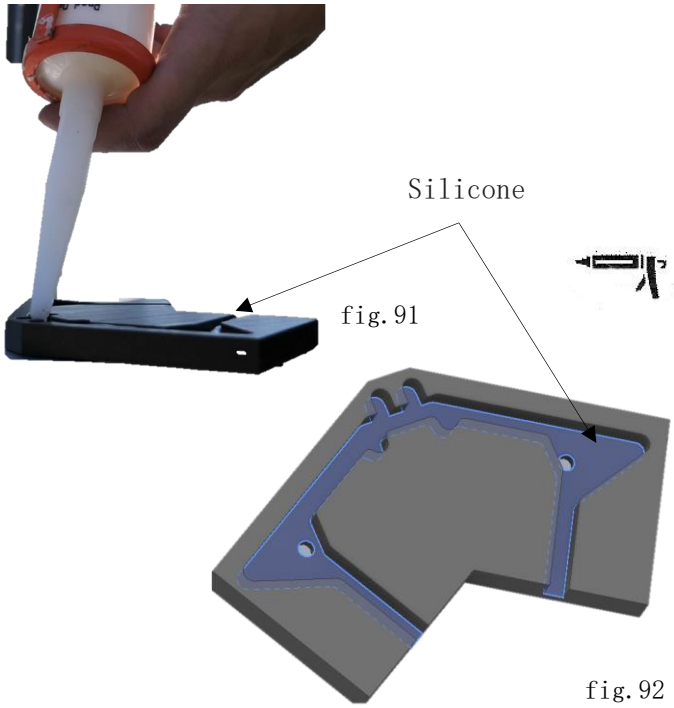


fig.91

fig.92

- press the two plastic ridge end caps **(item B5.5/item K5)** onto the front and rear of the ridge profile **(item 9.5)**. ***(fig. 93/94)***

- **<u>Tip:</u> press the swollen silicone lightly onto the components with your finger and cleaning agent and spread it by pulling.**

- remove excess silicone.

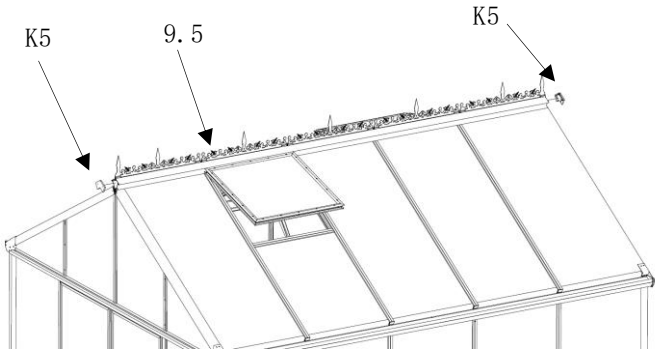


fig.93

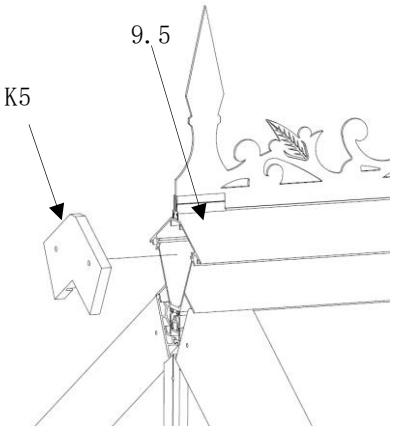


fig.94

IX. IV. Mounting of the Alu-roof ridge end caps

- screw the two alu-roof ridge end caps **(item B5.5/ item A6)** with the mounted plastic roof ridge end caps **(item B5.5/ item K5)** to the ridge profile **(item 9.5)** at the front and rear using six pan-head screws Ø4.2x16 **(item B4.5 S4)** each.
  (fig. 95/96)

- mounted view.
  (fig. 97)

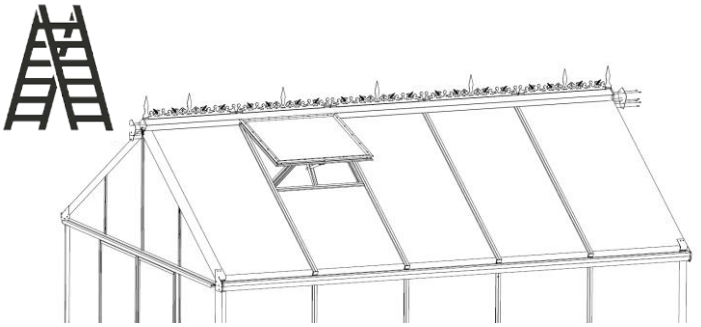


fig. 95

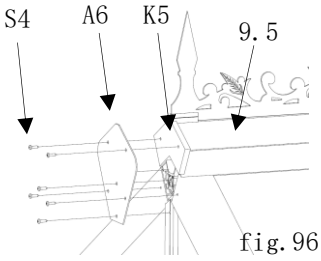


fig. 96

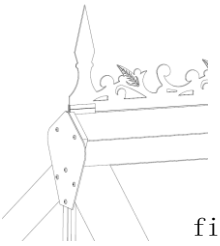


fig. 97

X. Mounting of seals and rectangular plastic pipes

X. I. Installation of seals in the front/rear and side parts

Positions of the individual seals *(fig. 98)*

- the seals are only fitted inside the greenhouse!
- observe the seal table!
  fig. 99)
- the opposite side is fitted with seals in the same way.
- the sliding door area has no seals.

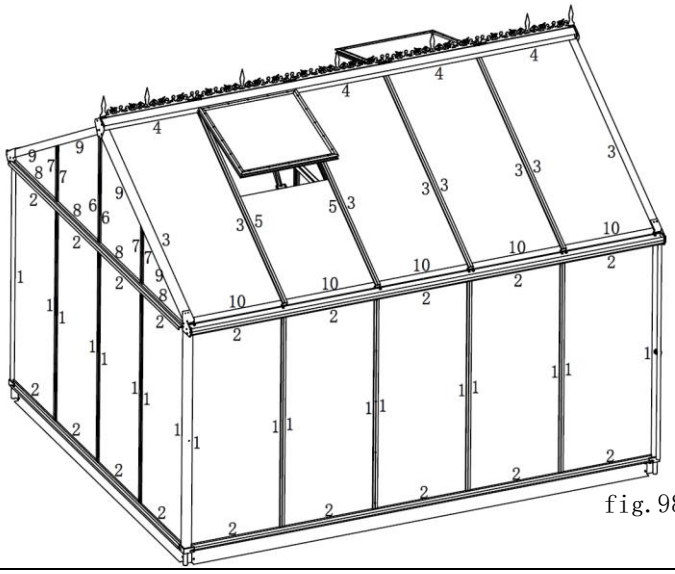


fig. 98

X. II. List of seals

Item	Quanty	Discription(mm)	Designation	fig. Cross section	Lenght(mm)	
1	32	wedge seal 2-4	side glazing vertical inside			2020
2	32	black	side glazing horizontal inside			830
3	16	wedge seal 2-4	roof glazing vertical inside			2020
4	8	black	roof glazing horizontal inside			830
5	4		roof glazing vertical inside		adapt,cut	2020
6	4	wedge seal 2-4	gable glazing vertical inside		adapt,cut	2020
7	8	black	gable glazing vertical inside		adapt,cut	830
8	8		gable glazing horizontal inside			830
9	8		gable glazing diagonal inside		adapt,cut	2020
10	10	lip seal white	roof glazing eaves profile inside		installed,see fig.54 page 28	830

fig. 99

X.III. Sectional views of seals

- section view roof ridge profile.
  (fig. 100)
- section view side glazing (horizontal)
  (fig. 101)
- section view roof glazing (vertical)
  (fig. 102)
- section view top side glazing (vertical)
  (fig. 103)
- section view Bottom side glazing (vertical)
  (fig. 104)
- the installation of the remaining gaskets **(item 5-7 and 9-10)** does not differ significantly from **fig. 100 to 104.**

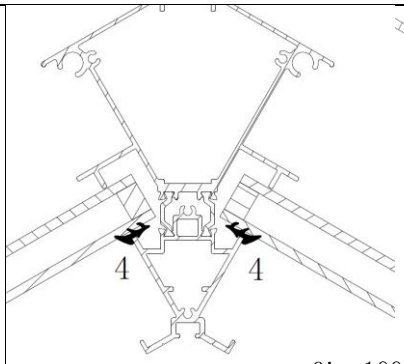


fig. 100

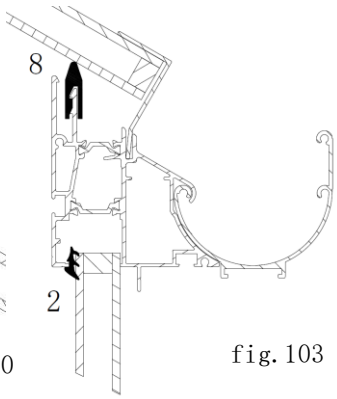


fig. 103

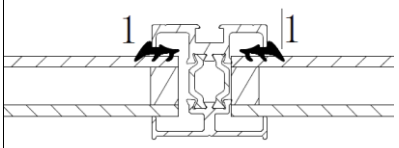


fig. 101

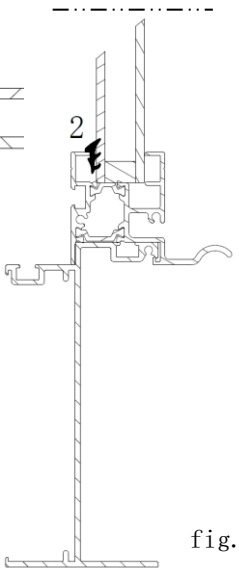


fig. 104

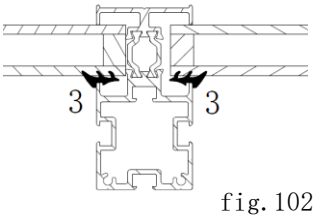


fig. 102

X.IV. Installation illustrations for all seals

all seals are pressed in "compressed"!
Installation examples
(fig. 105/106)

fig. 105

fig. 106

X.V. Installation of the plastic rectangular tubes in the area of the double sliding door

- insert the PVC-RKT 25x15x1.5x1682 **(item 18.1)** with silicone into the glass groove of the floor profile **(item 4.4)**. ***(fig. 107)***
- see sectional view for installation position. ***fig. 108***

the individual PVC RKTs should be glued to the respective profiles in several places with silicone!

Section through the front interior

sectional view

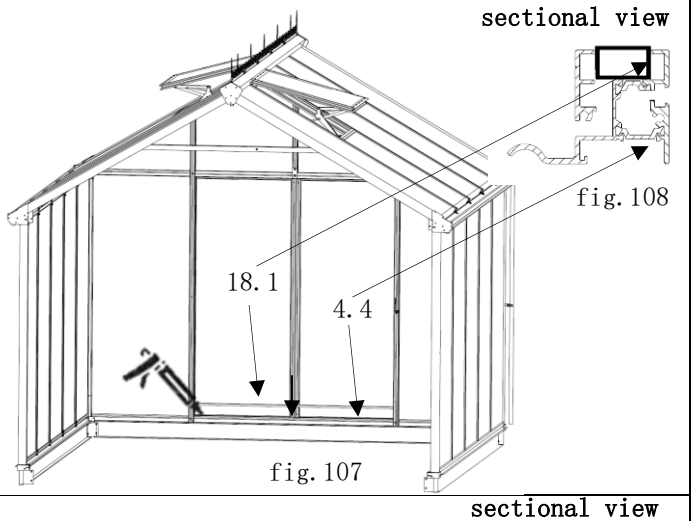


fig. 108

fig. 107

- insert PVC-RKT 25x25x1.5x1682 **(item 20.1)** with silicone into the glass groove of the AG door track **(item 8.4)**. ***(fig. 109)***
- see sectional view for installation position. (***fig. 110***)

sectional view

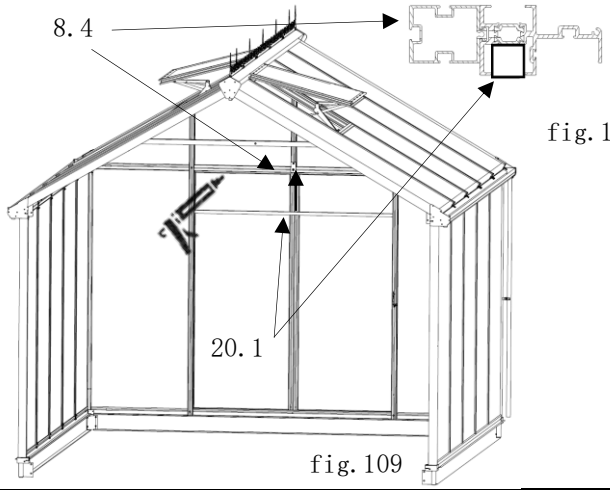


fig. 110

fig. 109

- Insert the two PVC RKTs 25x15x1.5x1972 **(item 18.2)** with silicone into the glass groove of the repair glazing-bars (gable glazing-bars) **(item 12.1/12.2)**. ***(fig. 111)***
- see sectional view for installation position ***(fig. 112)***

sectional view

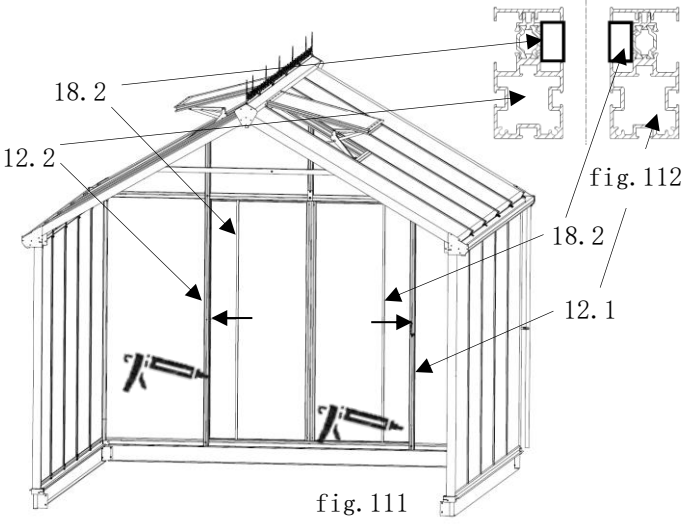


fig. 112

fig. 111

X.VI. Installation of the plastic rectangular pipes in the roof window area

- insert the two PVC RKTs 25x15x1.5x833 **(item 18.6)** with silicone into the glass groove of the crossbars **(item 10.1)**. ***(fig. 113/115)***
- for installation position, see section- (fig. 114) and detailed view (fig. 115)

view from below

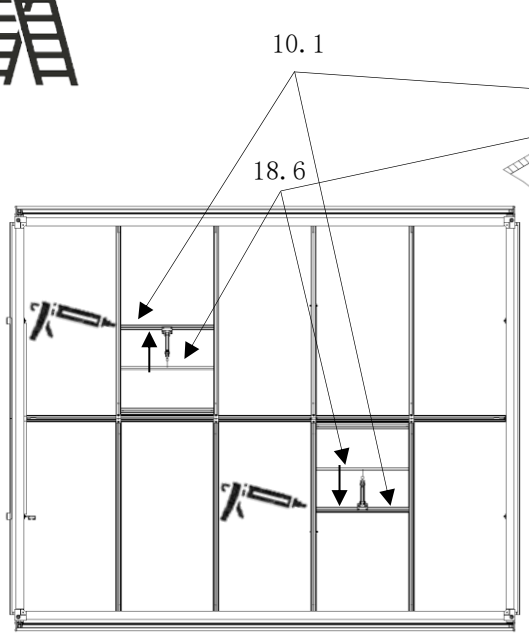


fig. 113

sectional view

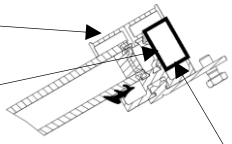


fig. 114

detailed view

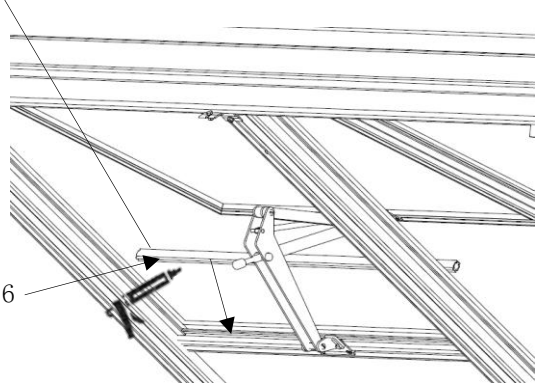


fig. 115

- die vier PVC-RKTs 25x15x1,5x862 **(item 18.5)** mit Silikon in die Glasnut der Dachsprosse **(item 14.5)** einsetzen. ***(fig. 116/118)***
- see sectional view for installation- ***(fig. 117)*** and detail postion ***(fig. 118)***

view from below

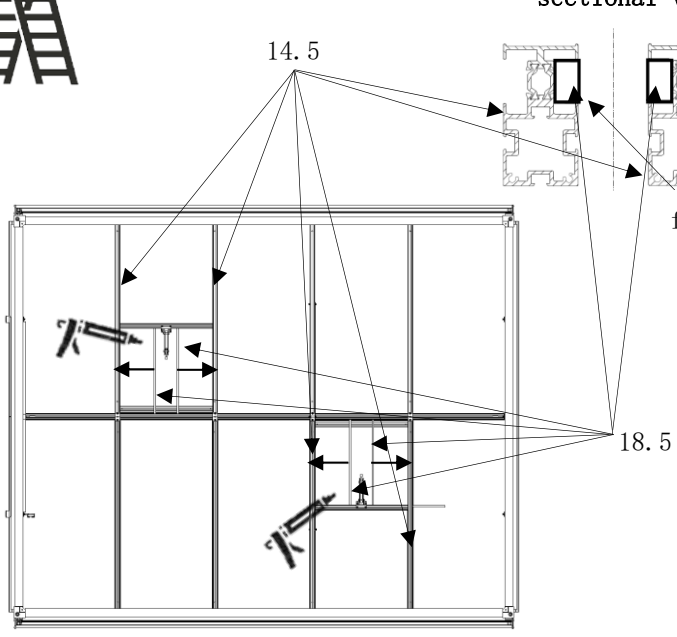


fig. 116

sectional view

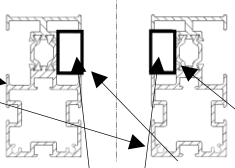


fig. 117

detailed view

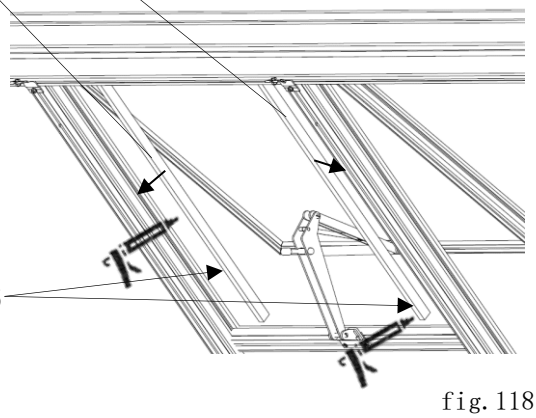
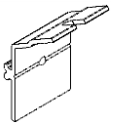
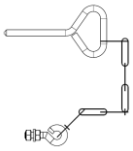
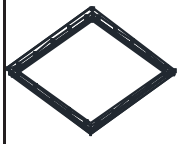
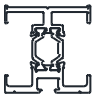
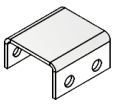


fig. 118

Appendix for optional built-in parts

Parts list

Item	Illustration	Designation	Quantity
SsHF		AG sliding door side main leaf (SsHF) with glazing, seals, door handles and push lock, track roller profile and door guide rail mounted 869x2005	1
SsGF		AG sliding door side opposite leaf (SsGF) with glazing, seals, door handles and push lock, track roller profile and door guide rail mounted 869x2005	1
A2		connector side glazing-bar to eaves profile (shortened) (M6x10 mounted)	1
10.1		wall glazing-bar TH as side glazing-bar (incl. hole for locking the sliding door) Lg:1976mm	6
18.1		plastic rectangular profile 25x15x1,5 floor profil L:1682mm	1
18.1		plastic rectangular profile 25x15x1,5 replacement profile L:1972mm	2
20.1		plastic rectangular profile 25x25x1,5 sliding door track L:1682mm	1
E6		locking pin for double sliding door with chain and fastening material	1
DF		AG side window Mounted with glazing and gaskets 869x890	2
10.3		wall glazing-bar TH (cross bar) wedge seal and A14 connector (Megavent®) mounted L:1976mm	2

SuF		side glazing, short 1084x829	2
HAS		hand opener	2
18.5		PVC RKT 25x15x1,5 Roof glazing-bars Lg:862mm	4
18.6		PVC RKT 25x15x1,5 crossbar Lg:833mm	2
KuSt		sliding block 40x12x4	2
AFP		profile of the side window LG:890mm	2
ASH		PE-spacer LG:890mm	1
ABB		connecting plate	2
AVPG		gable aluminum composite panel 1003x534x829x21	1
AVGS		side wall aluminum composite panel 900x829x21	1

Mounting accessories*

Item	Designation	Contents	Quantity
BX	Bag X Side window	- S20 countersunk screws M5x12 - S21 hexagon head screw M6x6 - S22 M5 hexagon nut - S23 washer A 4.3 - S24 pan-head tapping screw, self-tapping Ø4.2 x 9.5 - S25 pan-head drilling screw 4.2 x 19 - S3 hexagon nut M6 - S26 hexagon head screw M6x25	8 4 4 4 4 2 6 6

XI. Mounting of the side sliding doors

XI.I. Installing the wall glazing-bars in the side part (from page 19)

- the glazing is inserted as described in the previous steps on **pages 18/19 (fig. 21/22).** The positions for the sliding doors remain free.
- the side glazing **(fig. G/S/D)** is moved to the left here so that a wall glazing-bars **(item 10.1)** can be fitted. **(fig.119)**

⚠ Note: the side glazing should each stand on two glued-in glass blocks at the factory!

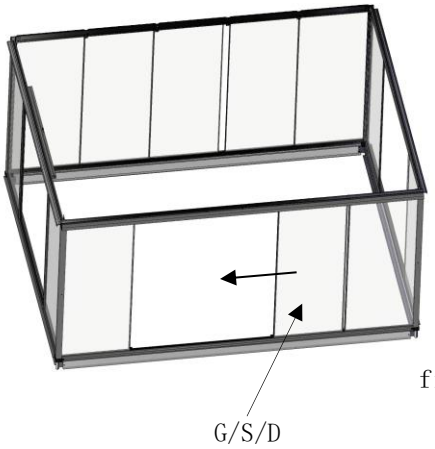


fig.119

- insert wall glazing-bars **(item 10.1)**!

  (fig.120)
- if necessary, glue the glass blocks into the wall bars with silicone beforehand so that a dimension of approx. 1718 mm is created between the side glazing. **(fig.121/122)**
- Slide the side glazing to the wall-glazing-bars **(fig.121)**

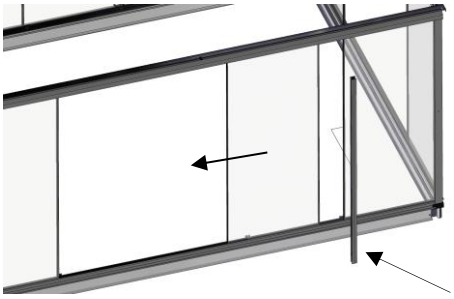


fig.120

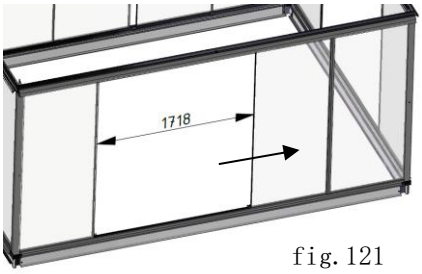
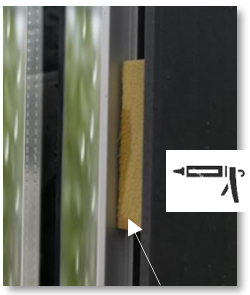


fig.121



glass block

fig.122

- insert the wall-glazing-bars **(item 10.1)**! **(fig.123)**

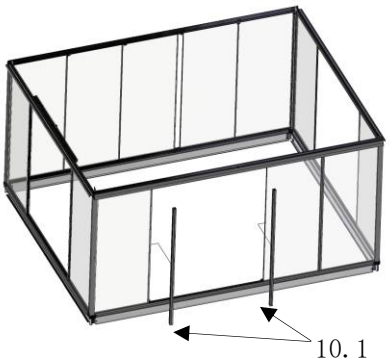


fig.123

- insert the hexagon head screws M6x12 (**item B10.6/ S1**) at the bottom into the hole of the 1st side glazing-bar (**item 10.1**) and pull one upwards and one downwards into the groove of the connector. *(fig. 124)*
- the 1st side-glazing-bars (**item 10.1**) is attached to the connectors (**item 10.6/A1 and A2**) of the floor profile and the BG eaves profile using washers (**item 10.6 S6**) and hexagon nuts M6 (**item 10.6/S4**). *(fig. 124)*
- the previous steps are repeated with the side-glazing-bars
- the hexagon bolts M6x10 are now tightened on the connectors. *(fig. 124)*

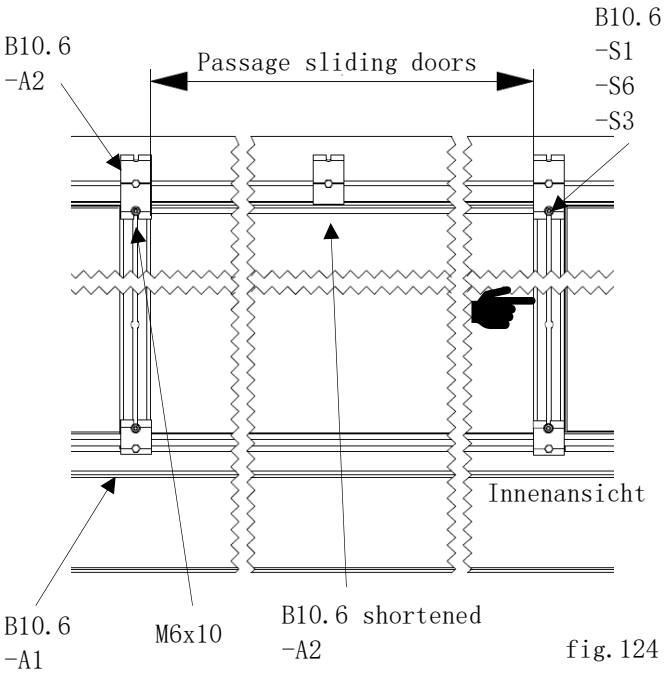


fig. 124

XI.II. Preparation of the track in the side part

- to make it easier to insert the sliding doors, the track of the sliding doors must be sprayed with silicone spray. *(fig. 125)*

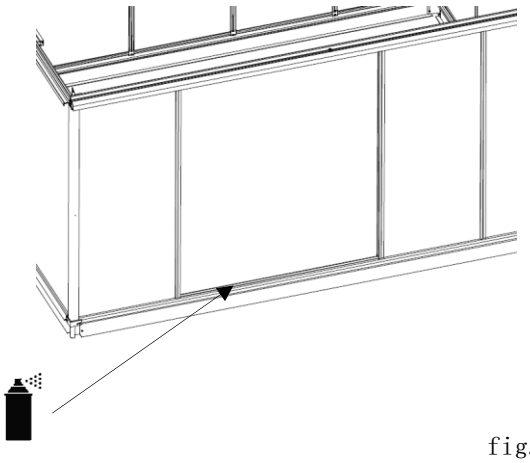


fig. 125

XI.III. Installing the sliding doors in the side part (from page 37)

- the sliding doors (**item SsHF/SsGF**) are placed laterally on the guide rail of the floor profile (**item 4.15**) and pushed parallel at the top into the guide groove of the eaves profile type 5 (**item 6.5**). *(fig. 126)*

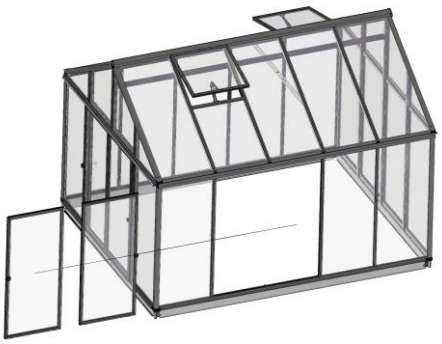


fig. 126

- sectional view of the sliding door *(fig. 127)*

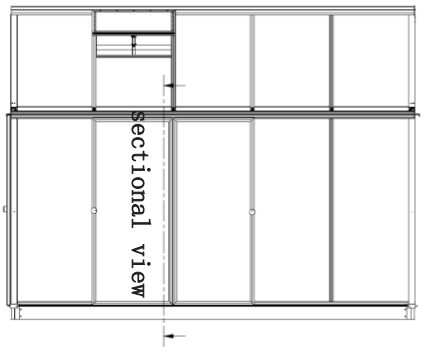


fig. 127

- sectional view of sliding door *(fig. 128)*
- **detail P:** eaves profile groove *(fig. 129)*
- **detail Q:** floor profile guide rail *(fig. 130)*

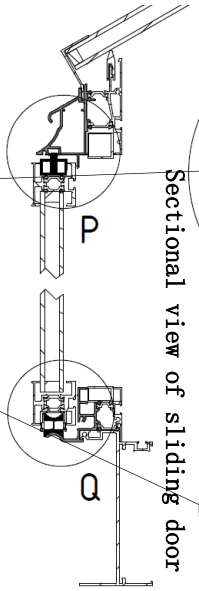


fig. 128

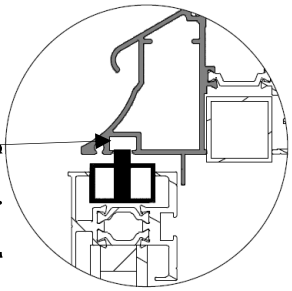


fig. 129

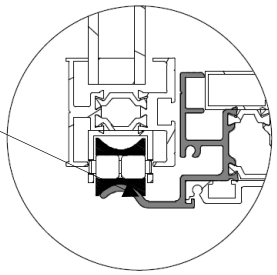


fig. 130

XI. IV. Mounting of the the locking pin

- description as on page 37
  detail M

XI. V. Installation of the plastic rectangular tubes around the area of the double sliding door

- description as on page 45

XII. Mounting of the side-window in the side wall

XII.I. Glazing installation (from page 19)

- the glazing is inserted as described in the previous steps on **pages 18/19 (fig. 21/22).**
- side glazing **(item SuF)** should be secured with an aid to prevent it from tipping over or held by a second person! ***fig. 131***

Note: The side glazing should each stand on two glued-in glass blocks at the factory!

- **detail R:** the side-glazing **(item G/S/D and SuF)** are pushed glass to glass, with five panes two on the right and three on the left. The resulting gap width must now be checked.

Quantity of side windows	Gap width X
5	62 - 65 mm
6	77 - 80 mm
7	92 - 95 mm

fig. 132

Note: the gap width must not be exceeded. If the tolerance value is exceeded, this must be compensated for with glass blocks! A glass block is glued into the top and bottom of the corner profile (item. 5.2) with silicone.

(fig. 133)

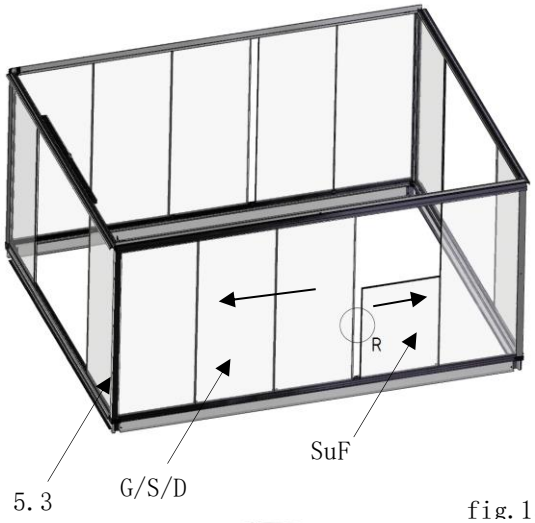


fig. 131

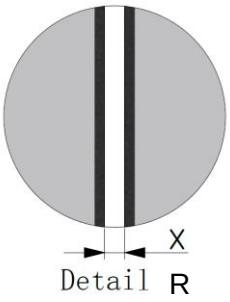


fig. 132

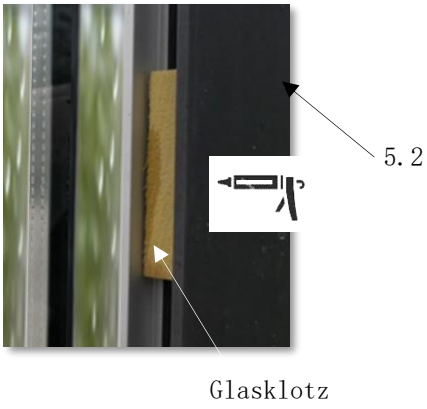


fig. 133

XII. II. Installation of the side-glazing-bars and cross struts

- the small glazing pane **(item SuF)** is first moved in the direction of arrow 1. ***(fig. 134)***
- the crossbar **(item 10.3)** is placed on the small glazing pane **(item SuF)**. ***(fig. 134)***
- then the small glazing pane **(item SuF)** is pushed with the crossbar **(item 10.3)** in the opposite direction 2 all the way to the 1st side-glazing-bars **(item 10.1)**. ***(fig. 134)***
- the next steps are described on **page 20 fig. 25/26**

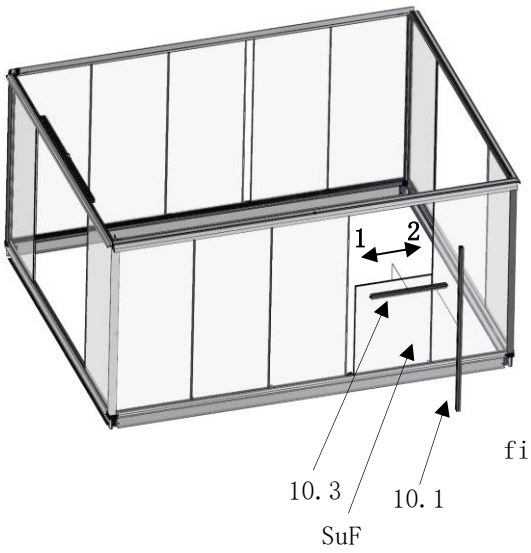


fig. 134

- slide the profile of the side window **(AFP)** into the eaves profile groove **(item 6.5)**. **(fig. 135)**
- the profile of the side window **(AFP)** must be flush with the outer edge of the side-glazing-bars and screwed in place with a pan-head screw **(item BX S25)**. **(fig. 136)**

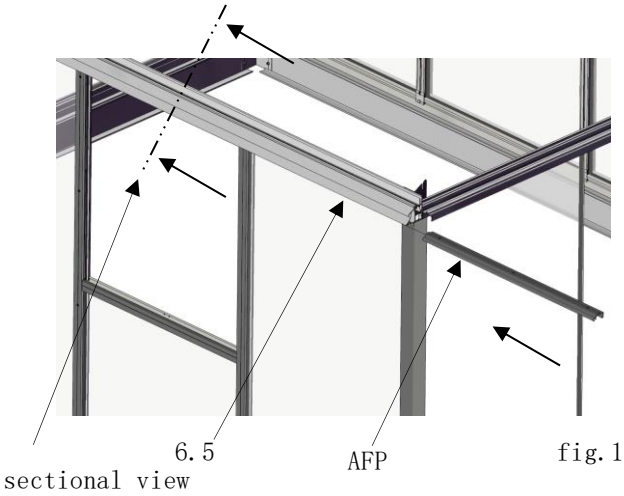


fig. 135

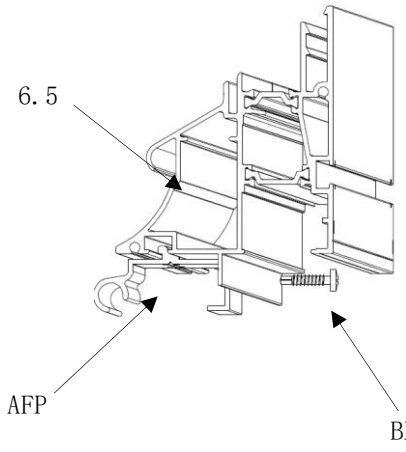


fig. 136

- slide the side window **(item DF)** into the profile of the side window **(AFP)** until the end position is reached. **(fig.137)**
- **see detail S (fig.138)**

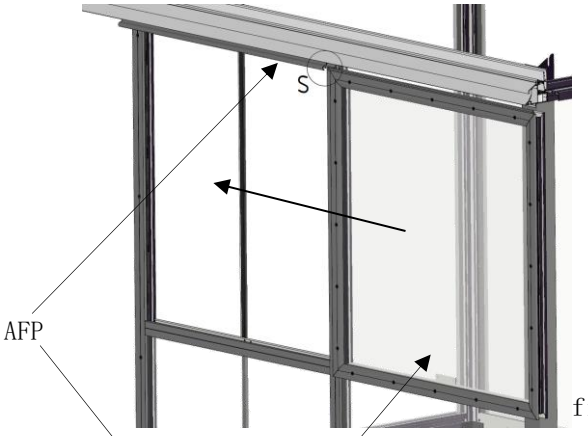


fig.137

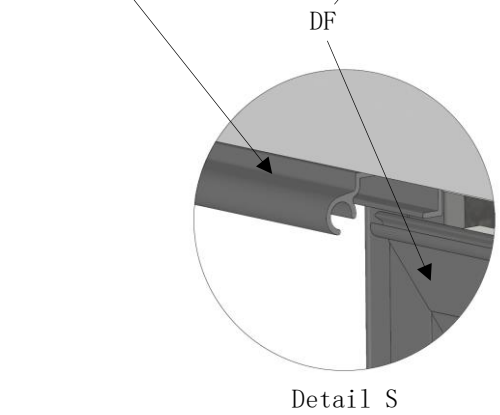


fig.138

- mount the side window **(itemDF)** on both sides in the groove of the profile of the side window **(AFP)**using 2x washers **(item S23)** and 2x pan-head screws **(item S24). (fig.139)**

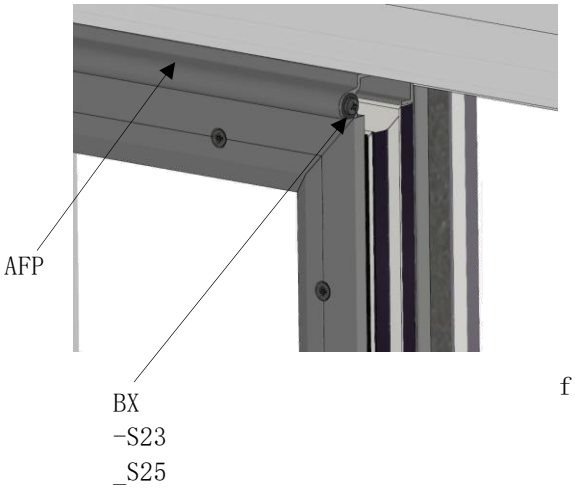


fig.139

- screw the connection plate **(item ABB)** to the connection of the side window (inside) **(item DF)** using 2x hexagon head screws **(itme BX S21). (fig.140)**

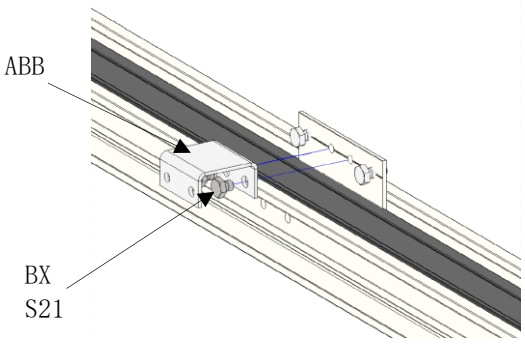


fig.140

- attach the hand-opener **(item HAS)** to the crossbar **(item 10.3)** using a sliding block **(item KuSt)** and 2x countersunk screws **(item S20)**. **(fig. 141)**
- Mount the hand opener **(item HAS)** with 2x countersunk screws **(item S20)** and 2x hexagon nuts **(item S22)** on the connecting plate **(item ABB)**. **(fig. 141)**
- installation of the plastic rectangular pipes around the area of the side window (**see page 46 X. VI. Installation of the plastic rectangular pipes in the roof window area**)

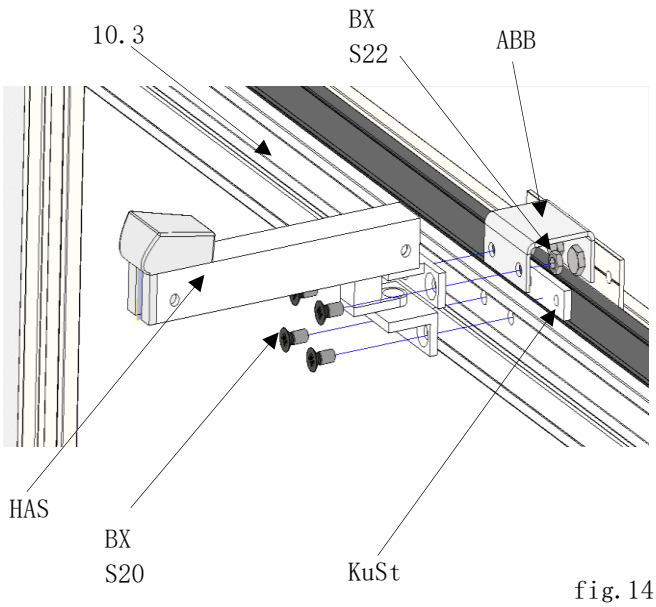


fig. 141

XIII. Mounting of the gable windows in the gable wall (from page 22)

- then the glazing is pushed in the direction of the central-gable-glazing-bars **(item 14.2)**.
- the glazing lies completely against the profile.
- the crossbar **(item 10.3)** is placed on the small glazing pane **(item SuF)** and also pushed in the direction of the central-gable-glazing-bar **(item 14.2)**. ***(fig. 142)***
- the next steps are described on **page 23 fig. 32/33.**

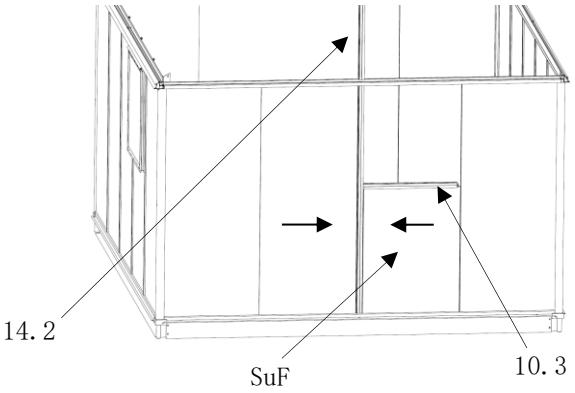


fig. 142

- the PE spacer **(item ASH)** and the profile of the side window **(item AFP)** are loosely screwed together with 3x hexagon screws **(item S26)** and 3x hexagon nuts **(item S3)** so that the hexagon screw heads can later be pushed into the door track groove.

(fig. 143)

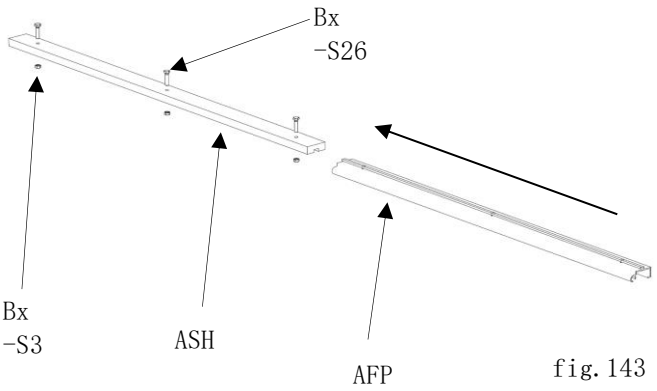


fig. 143

- insert PE spacer **(item ASH)** with profile of the side window **(item AFP)** into the door track groove **(item 8.41)**. *(fig. 144)*
- see detail T *(fig. 145)*

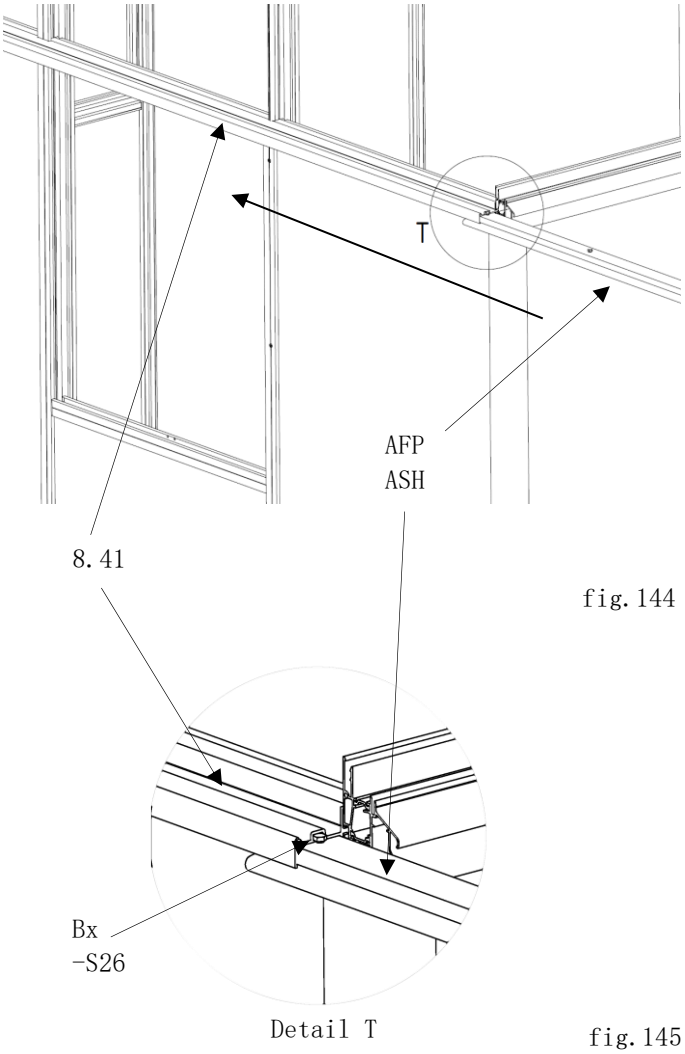


fig. 144

fig. 145

- the PE spacer **(item ASH)** with the profile of the side-window **(item AFP)** must be flush with the outer edge of the side-glazing-bar and must now be screwed tight with the hexagon head screws **(item BX S26)** and hexagon nuts M6 **(item BX S3)**.
- *(fig. 146)*

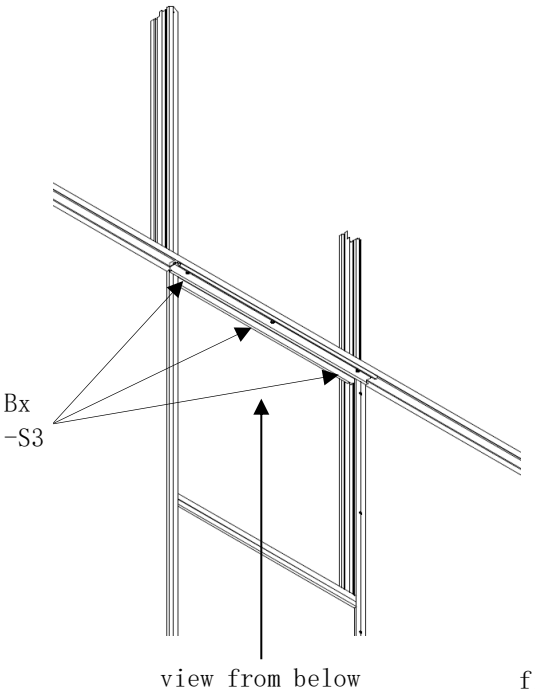


fig. 146

- slide the side window **(item DF)** into the profile of the side window **(AFP)** until the end position is reached. **(fig. 147)**
- **see detail U (fig. 148)**

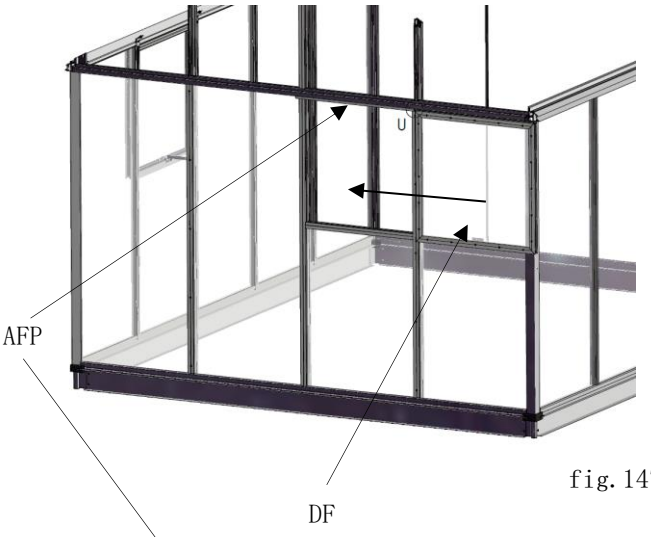


fig. 147

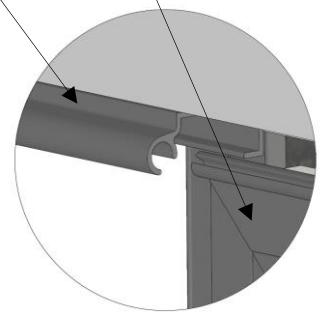


fig. 148

- mount the side window **(item DF)** on both sides in the groove of the profile of the side window **(AFP)** using 2x washers **(item S23)** and 2x pan-head screws **(item S24). (fig. 149)**

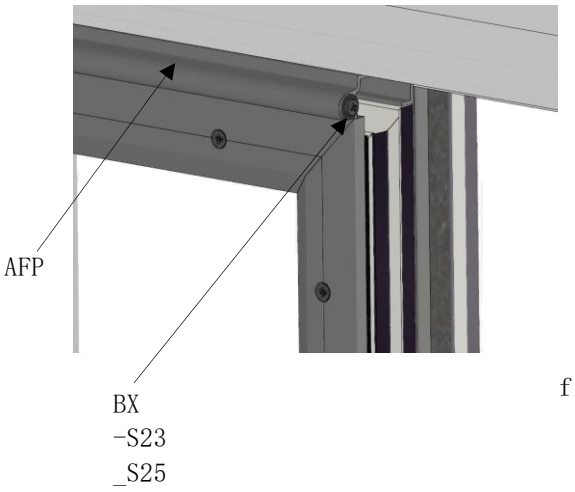


fig. 149

- screw the connection plate **(item ABB)** to the connection of the side window (inside) **(item DF)** using 2x hexagon head screws **(item BX S21). (fig. 150)**

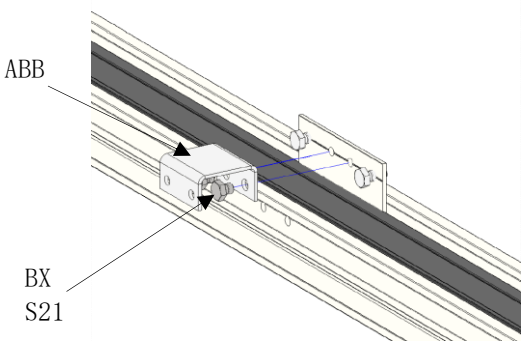


fig. 150

- attach the hand-opener **(item HAS)** to the crossbar **(item 10.3)** using a sliding block **(item KuSt)** and 2x countersunk screws **(item S20)**. **(fig. 151)**
- mount the hand opener **(item HAS)** with 2x countersunk screws **(item S20)** and 2x hexagon nuts **(item S22)** on the connecting plate **(item ABB)**. **(fig. 151)**
- installation of the plastic rectangular pipes around the area of the side window (**see page 46 X. VI. Installation of the plastic rectangular pipes in the roof window area**)

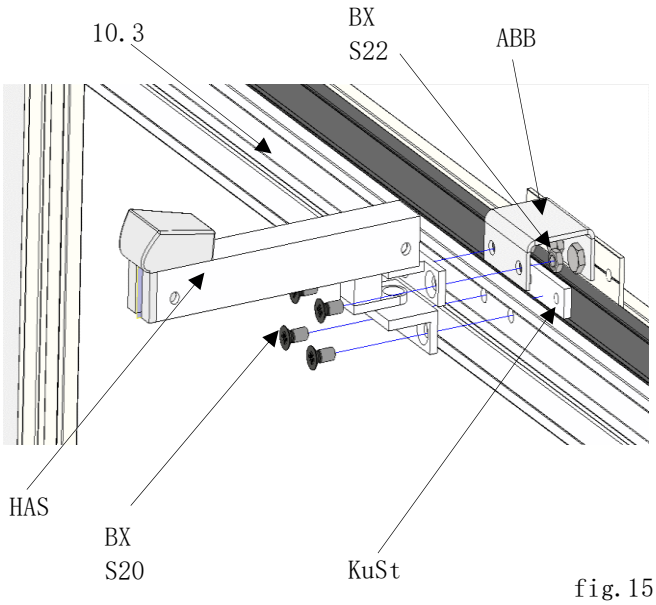


fig. 151

XIV. Mounting of the aluminum composite panel in the gable wall (from page 25).

XIV. I. Cutting a circle into the aluminum composite panel

Caution! There is a risk of injury!

- **don't wear protective gloves when drilling!**
- **wear safety goggles when drilling!**

- determine the position of the circle on the aluminum composite panel.
- draw the circle on the aluminum composite panel. Determine the circle according to the component diameter. **(fig. 152)**
- drill a hole (choose a metal drill bit that is 5 mm larger than the jigsaw blade) at the marked circle. **(fig. 153)**
- insert the jigsaw blade into the hole and saw along the marked circle. **(fig. 154/155)**

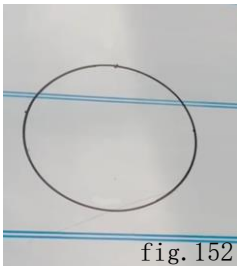


fig. 152

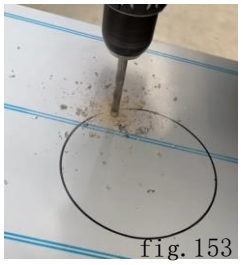


fig. 153

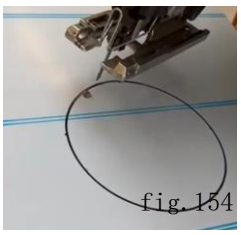


fig. 154


fig. 155

XIV. II. Mounting of the gable aluminum composite panel

- Insert the gable aluminum composite panel **(item AVPG).**
- i.e. adjacent in the gable center glazing-bar groove **(item 14.2)** and resting in the BG door track groove **(item 8.41).**
- the cover strip for gable glazing-bar **(item 13.1)** is placed on the gable glazing-bar **(item 12.1)** from the outside and loosely screwed on with 3x S5.1 drilling screw countersunk head 4,2x22 **(item BX S5.1).**
- Fit the seals as described on **page 43** ***(fig. 156)***

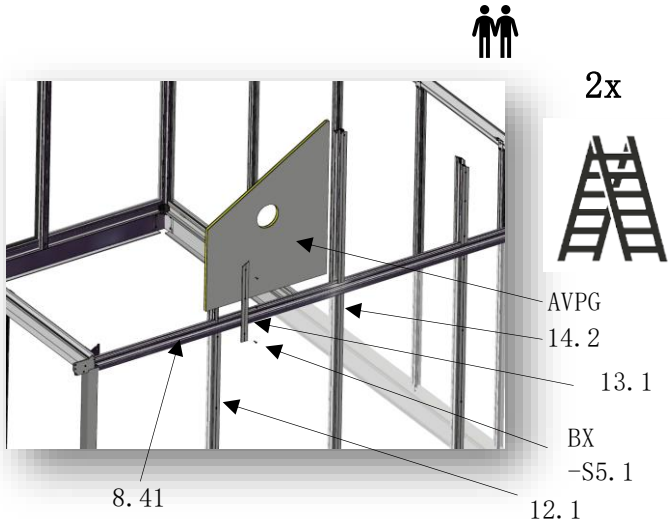


fig. 156

XIV. II. Mounting of the aluminum composite panel in the side-wall (from page 19)

- create the circle as described under **XIV. I.**

- the small glazing pane **(item SuF)** is first moved in the direction of arrow 1. **(fig. 134)**
- the crossbar **(item 10.3)** is placed on the small glazing pane **(item SuF). (fig. 134)**
- then the small glazing pane **(item SuF)** is pushed with the crossbar **(item 10.3)** in the opposite direction 2 all the way to the 1st side-glazing-bars ***(fig. 157)***

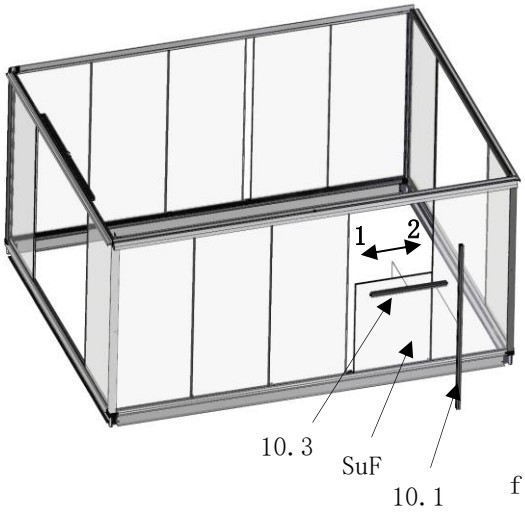


fig. 157

- slide the aluminum composite panel **(item AVPS)** slightly tilted upwards into the AG eaves profile **(item 6.5)** until it can be adjusted at the bottom over the edge of the crossbar **(item 10.3)!** ***(fig. 158)***
- the next steps are described on **page 20, fig. 25/26.**
- Fit the seals as described on **page 43**

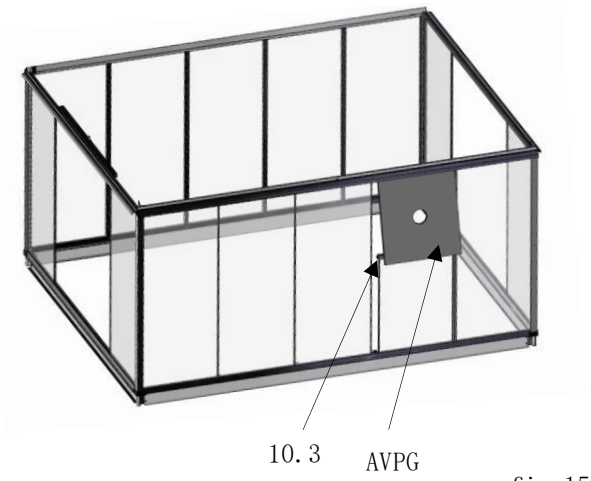


fig. 158

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