



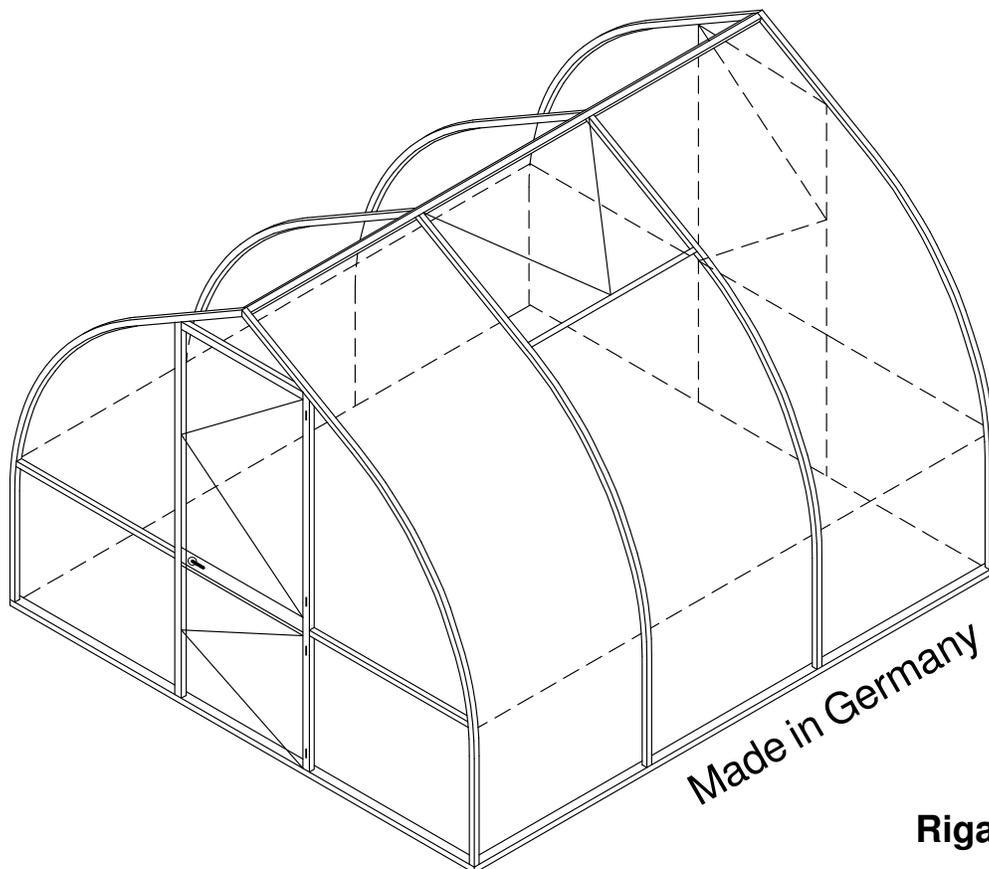
ALUMINUM Onion shaped greenhouse

- Riga -

Technical Information Subject to Change

Assembly Instructions *RIGA Series II, III, IV*

November 2004



Riga Type 3

Dear garden friend,

Congratulations on the purchase of a RIGA greenhouse from **Hoklartherm**, Germany.

You will find the assembly of the RIGA greenhouse to be quick and easy if you carefully follow these Assembly Instructions.

The assembly requires only two people, but it will go quicker if you have access to a 3rd person who can help from time to time - this person does not need to be especially strong or handy.

Contents:

Hoklartherm inspectors have carefully checked the contents of each package. Nonetheless, we ask you to do the same: Check the contents of each package against the table of contents in this Manual. Call us toll-free if believe you are missing any parts: 1-877-760-8500.

Note: Before you call us, make sure you have received all the packages. Check the Freight Bill provided by the delivery company's driver and/or the Packing Slip attached to the outside of one of your packages.

Choose the best location:

Please choose, if possible, a sunny and protected location for your greenhouse. Avoid a heavily shaded near buildings and/or trees. However, also be careful to avoid bright, direct sunlight (especially in the Southwestern part of the United States). High-intensity sunshine is not good for more than a few hours a day. In such areas some protection from trees and/or buildings is recommended. Shade cloth might also be needed (ask your supplier for details). For greenhouses intended for growing vegetables such as tomatoes, cucumbers and melons we recommend the greenhouse be located in a north-south direction, and for those to be used for flowers and pot plants orient it in an east-west direction.

CAUTION:

Do not attempt to assemble the RIGA greenhouse while a wind is blowing - your Glazing Panels might blow away.

Do not expose the Glazing Panels, with their special protective film, to bright sunlight or the film will become permanently glued to the Panels before the film is removed during installation.

Manufacturer's Limit to the RIGA warranty - Glazing: 10 years. Frame: 15 years.

The RIGA has been specially designed to withstand heavy winds, snowstorms and other bad weather, however proper assembly is essential. Make sure you assemble the RIGA greenhouse exactly according to this manual. In case of any difficulties please call us: 1-877-760-8500. Hoklartherm will not warrant this greenhouse if it is not properly assembled, neither is the company responsible for damage done by very severe weather, such as tornados, hurricanes, lightning, and/or 'force majeure' (other acts of God).

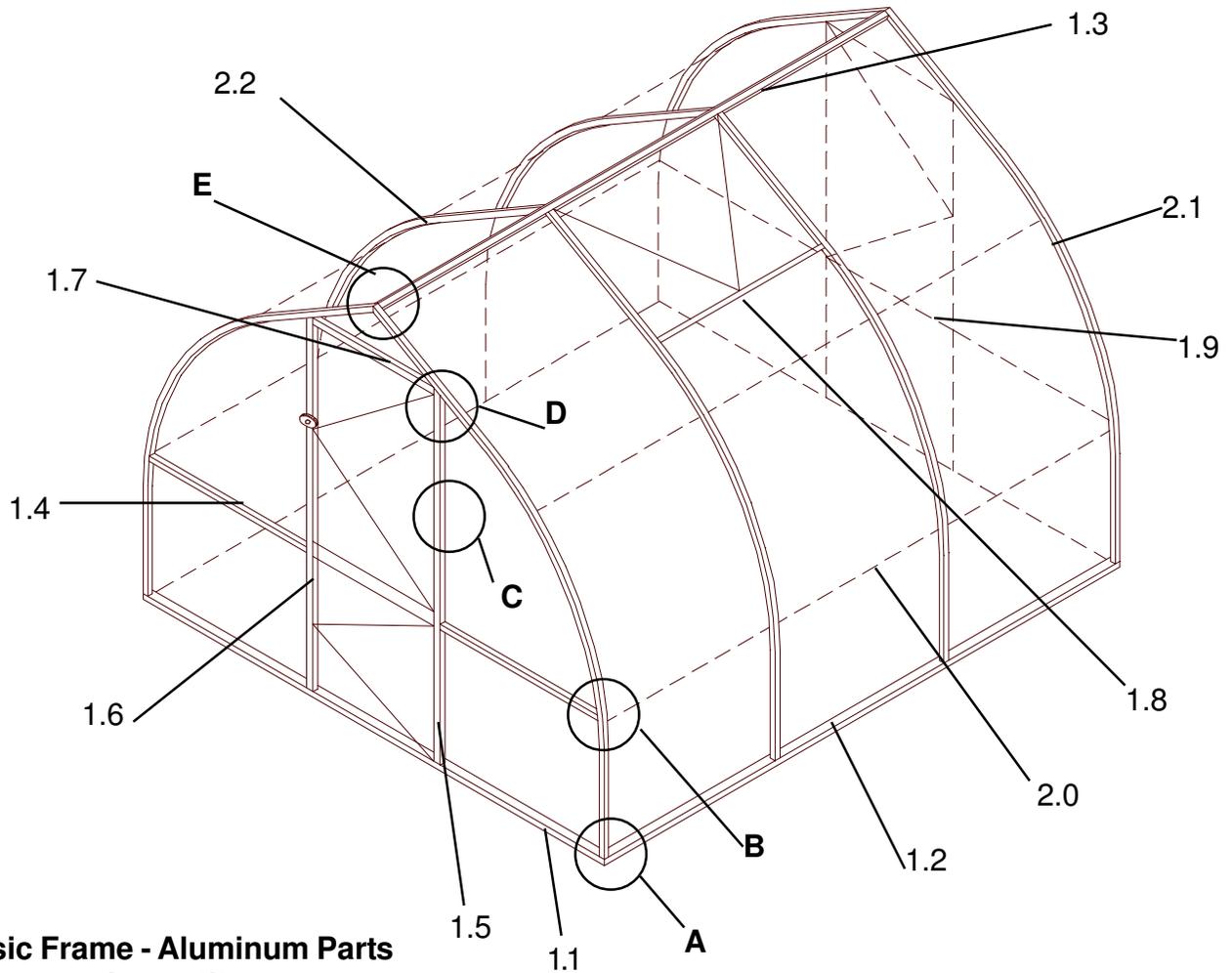
Getting Started:

- 1) The assembly has to be executed by at least two people - a 3rd person to help out from time-to-time is recommended!
- 2) Work cautiously, with the proper tools. Make sure that the stepladder's footing is secure!
- 3) We recommend that you work with gloves (although all of the edges have been filed, it is always possible for you to be cut when handling either the aluminum or polycarbonate parts).
- 4) You need the following tools for the assembly:

- 1 pc Phillips-head Screwdriver for recessed-head screws, size #2
- 1 pc Open-jaw wrench, 10 mm (0.4")
- 1 pc Screwdriver for slotted screws
- 1 pc Water level
- 1 pc Step Ladder, approx. 6-feet high
- 1 pc File to remove possible sharp edges
- 1 pc Rubber Mallet
- 1 pc Measuring Tape
- 1 pc Electric or Cordless Drill
- 1 pc Bungee Cord
- 1 pc Caulking Gun

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Basic Frame - Aluminum Parts and quantity:

1.1	Front & Back Floor Profile	2x	Note: Windows and Door frame parts are taped together into their own individual bundles.
1.2	Side-Floor Profile	2x	
1.3	Roof Beam Profile	1x	
1.4	Front & Back Crossbars	4x	
1.5	Door Support - right side with 8 holes	2x	Detail A = Floor Profile (page 7)
1.6	Door Support - left side no holes	2x	Detail B = Front Crossbar Connection (page 8)
1.7	Door Frame: Top Crossbar	2x	Detail C = Window/Door Hinge (page 16)
1.8	Roof Window - Crossbar (RIGA IV & IVs: 2x)	1x	Detail D = Window/Door Frame connection (page6)
1.9	Rear Wall Middle Crossbar	1x	Detail E = Roof Beam Connection (page 7)
2.0	Lateral Supports	4x	
2.1	Curved Corner Profiles with 1 channel	4x	
2.2	Curved Center Profiles with 2 channels II 2x ; III 4x ; IV 6x	<<<	

Bag(s) with Accessories for Riga 2S/2, 3S/3 and Riga 4S/4
Please check - according to table - if complete.

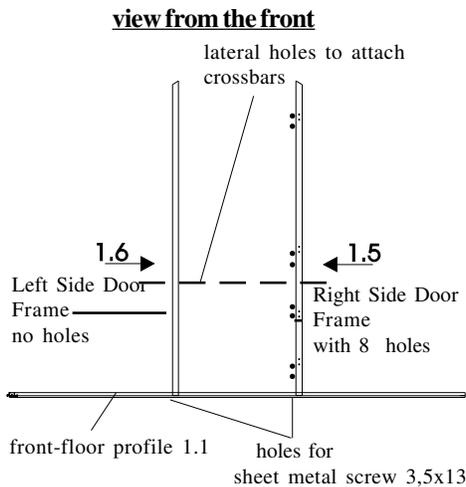
designation	size	no. of pieces Riga 2S/2	no. of pieces Riga 3S/3	no. of pieces Riga 4S/4
clamping plate		8	8	10
hexagon bolt	M6 x 16	50	60	60
nut	M6	50	60	60
hexagon bolt	M6 x 30	1	1	1
angle bracket	30 x 10 x 4	8	8	12
L-connection	60 x 27,2 x 7,4	8	8	12
connecting angle	40 x 40 x 4	4	4	4
angle	50 x 50 x 5,95	6	6	6
automatic window opener*		1	1	2
manuel window opener*		1	1	1
knurled nut	Ø35 x M6	1	1	1
angle	40 x 30 x 30	1	1	1
covering plate for roof beam		2	2	2
pan-head tapping screw	4,2 x 13	4	4	4
pan-head tapping screw	4,8 x 45	12	12	12
blind plug	Ø10	8	8	8
door „open“ holder		1	1	1
pan-head tapping screw	3,5 x 16	16	16	16
hinges*		6	6	6
Silicon		1	1	1
flat-head screw	4,8 x 25	24	24	24
flat-head screw	4,8 x 50	4	4	4
t-seal		21 feet	21 feet	27 feet
PVC-adapter		1	1	1
flat-head screw	M6 x 20	1	1	1
self-locking nut	M6	1	1	1
flat-head screw	3,5 x 38	6	6	6
sash lock, small		3	3	3
seal - frame of door*	2mm	24 feet	24 feet	24 feet
GHD-seal 1*		24 feet	24 feet	24 feet
wedge seal*	3-5 mm	15 feet	15 feet	15 feet
wedge seal*	6-8 mm	29 feet	36 feet	45 feet
fittings of the door handle*		1	1	1

* parts in separate bags!

Suggestion

Before you begin - read all these instructions to become familiar with each step of the assembly process. You might decide that you find it easier to complete the assembly process in a different sequence. Several sequences are possible. For example, some people may prefer to build all of the greenhouse frame first and then insert the Glazing Panels, while others may prefer to interchange these steps. Some may prefer to add the Optional Foundation/Base Frame at the very beginning (special L-brackets have been provided for you if you wish to do so) - see page 8 for Foundation Frame installation options. We recommend the following Assembly Steps:

III.1:

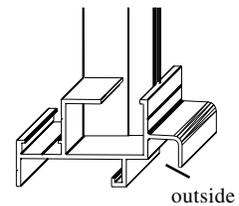


Step 1: Door Frame Assembly

Connect the Front-Floor Profile with the Upright Profiles of the door frame.

Carefully slide/push the door profiles # 1.5 and #1.6 along the channel in the front-floor profile (See picture on the right).

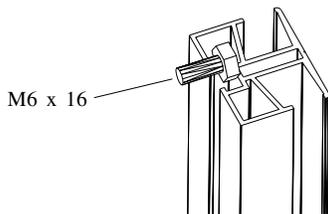
Put the profile with 8 holes (which will be used for the hinges) on the right side. You can use the rubber mallet to tap the Upright Profiles in order to slide them along. Distance between both upright profiles should be about 29.5 inches.



The upright door profiles will be attached to the Front Floor Profile (through their holes) using sheet metal screws 3.5 x 13, once the front glazing panels have been installed.

Important: Slide 1 hexagon bolt (M6 x 16) down each door profile channel (See Illustration #2 on left). These are for the assembly of the Door Frame Cross bars (at the top).

III.2:



Step 2: Rear Window Frame Assembly:

Repeat everything in Step 1: However this time slide 2 hexagon bolts (M6 x 16) down the channel of each Door Profile.

These will be used later to attach the Top Crossbar as well as the Middle Crossbar (which will be under the window).

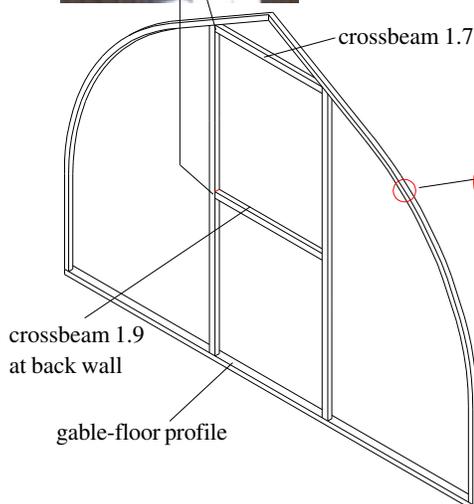


Detail D

III.3+III.4:

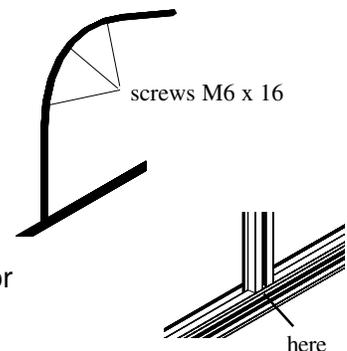
Step 3: Attach Front Curved Corner Profiles:

Slide both Corner Curved Profiles (#2.1 - with one channel each) onto the corners of the Front Floor Profile (#1.1) The ends of each Curved Corner Profile are slightly different on the top from the bottom. (See small circular picture on left). Note: Be sure to check that each bottom end is marked with an X.



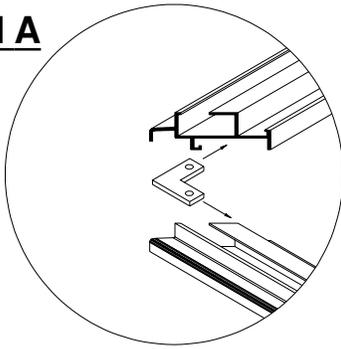
Step 4: Mounting of the Cross Bars in the Door Frames:

Push 2 hexagon bolts (M 6x16) into each crossbar #1.7 and #1.9 as shown in Illustration 2 and connect these to the hexagon bolts in the upright door profiles with round mounting plates (with 4 holes)



*too many screws M6x16 are possibly screwed in, it doesn't matter, they can be used elsewhere!

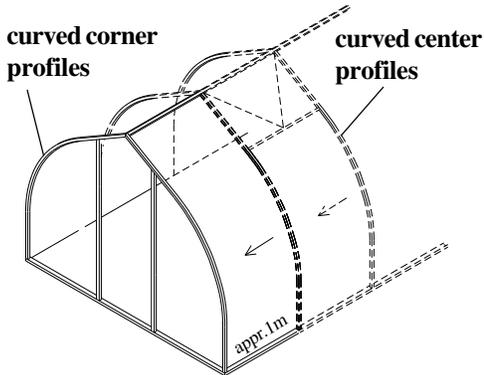
Detail A



Step 6: Connection of the front section to the Side Floor Profiles:

Now attach both Side-Floor Profiles (#1.2) to the front section by inserting the aluminum-corner connectors with recessed screws while at the same time sliding the Curved Corner Profiles (#2.1) into the Side-Floor Profiles. Tighten the recessed screws. (See picture on left).

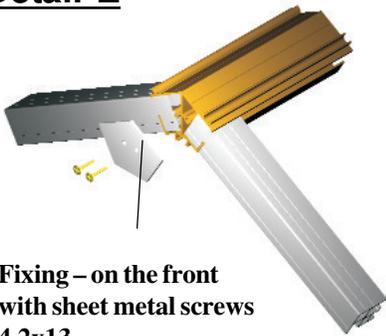
Now you will need a third person or devices that can help you hold the profiles in the air.



Step 7: Mounting of Curved Center Profiles with 2 Channels:

Now slide a Curved Center Profile with 2 Channels (#2.2) from the rear to the front into Side-Floor Profiles (#1.2). Be sure the end marked with the X is on the bottom. Slide to about 45" from the front Corner Profiles.

Detail E



Fixing – on the front
with sheet metal screws
4,2x13

Step 8: Mounting of the Roof Beam Profile #1.3:

Lift the Roof Beam Profile (#1.3) and, coming from the back, thread the 2 Curved Center Profiles into the channel of the Roof Beam.

Continue moving the roof beam forward until reaching the front Curved Corner Profiles and thread them onto the end of the Roof Beam. Cover the end using the Roof Beam Cover plate and fasten with sheet metal screws 4,2x13. (See picture on left). Note: Use 3 people for this step: Two to hold up the Curved Profiles and one to slide the roof beam while standing on a stepladder.

Step 9: Adding additional Curved Center Profiles #2.2:

Now add more Curved Center Profiles as necessary (Series II uses only 1 on each side; III uses 2 on each side and IV uses 3 on each side). Slide each along the Side-Floor Profile as well as the Roof Beam at the same time. Be careful to move the profile only inches at a time on each end. Preferably one person pushes at the bottom while the other pushes at the top. Use Rubber Mallet! Distance between each set is about 45".

Important information regarding the Mounting of Polycarbonate Glazing Panels:

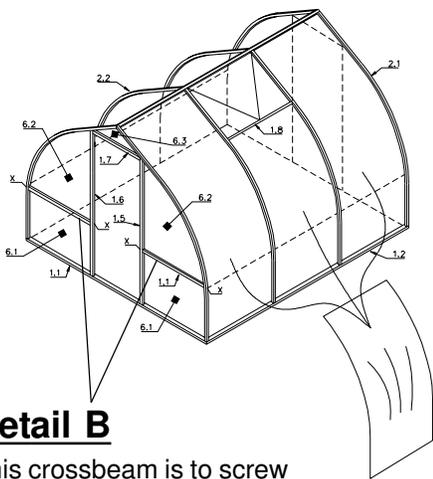
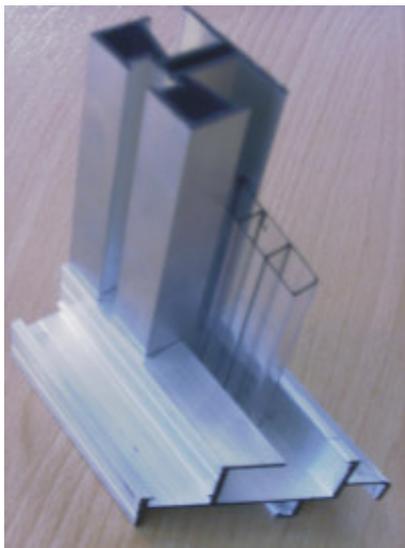
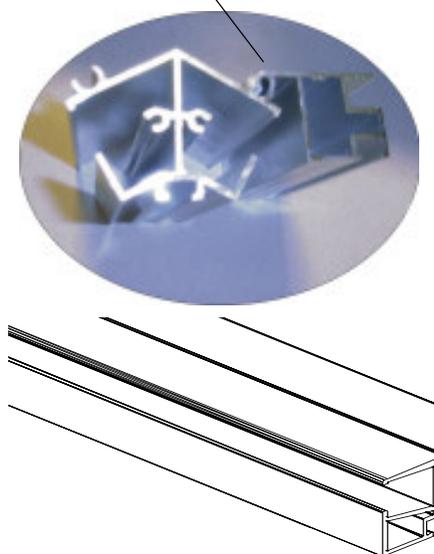
Warning: Always put the side with the blue protective film towards the outside.

All glazing panels come coated with a special layer of high quality UV inhibiting film, however this treatment is only applied on one side. In order to identify the UV-coated side a removable layer of blue protective film has been applied. This film must be removed before placing the Glazing Panels into any of the channels of the aluminum profiles. Remove protective film from both sides only one panel at a time as you install each panel.

Suggestion: Mark either the inside or the outside of each panel with a dot from a permanent marker. That way if you later move the greenhouse you will always know which side of the panels is coated. The Glazing Panels are not marked. Choose the right one like solving a puzzle! Have a little fun.

Warning: Do not leave Glazing Panels with the protective film in bright sunlight as the film will be permanently glued to the Panels.

Guiding groove of the window



Detail B

This crossbeam is to screw together with screws 4,8x45 laterally through the frame of doors or gable edge profile respectively. After the glazing.

Step 10: Mounting of Roof Glazing Panels:

At this time select one of the largest sheets of the Glazing Panels and remove the protective film, and insert it into the channel of a Curved Corner Profile (start either on the right or left side of the greenhouse). The first time this is quite tricky - you have to learn how to bend the big sheet correctly. Using 3 people is highly recommended. Use one person standing on the outside, and one person at the top end (on a stepladder), and a third in the middle on the inside. Start at the bottom by inserting the Glazing Panel into the groove/channel in the Curved Corner Profile, the person standing on the outside then puts his/her shoe against the other side of the Glazing Panel to push and hold the glazing in to the groove. Next, using one hand they guide the rest of the Panel into the groove, while using their other hand to pull/push the other side of the Glazing Panel in to the groove, at the same time the person on the inside provides counter pressure. The person near the top helps to insert the top half of the Panel. Once completed, one person holds the Panel in place while the other two slide the next Curved Center Profile on to the other side of the Glazing Panel. You can hold this Curved Profile temporarily in place with a bungee-cord.

Now do the same thing on the other side of the greenhouse. Once completed you have installed one section of Glazing Panel on each side

Step 11: Placing the Roof Window(s):

(In order to continue, placing the Roof Glazing Panels, you must decide on which side you want your Roof Window(s). This might depend on the prevailing wind. It is best not to put Roof Windows facing a prevailing wind, but put them on the other side of the greenhouse. However, without a prevailing heavy wind from one direction put 1 Roof Window on each side, in different sections, if installing more than 1 Window (i.e. RIGA IV).)

Next: place the shorter roof Glazing Panel, in the second section (from the front), of your RIGA greenhouse, either on the left or right and side. Slide the next Curved Center Profile on to the other side of the panel and: (go to step 12).

Step 12: Placing Roof Window Crossbar:

Once you have placed a shorter roof Glazing Panel, add the Roof Window Crossbar #1.8, on top of the Panel. But, first you must slide 4 Hexagon Bolts (M6 x16) in to the center channel of the crossbar. (two of the bolt will be used to attach the Automatic Window Opener). Bring from the bottom of the two Curved Center Profiles one of the 3 Hexagon Bolts you placed in the channel earlier and using a Mounting Plate (round disk with 4 holes) attach the Crossbar on each side to the Curved Center Profiles. Making sure the Crossbar is fully pushed down over the Glazing Panel.

Step 13: Place rest of Roof Glazing Panels:

Now place the rest of the large Glazing Panels (remember that if you are installing a second Roof Window) you must place this in one of the other sections as you prefer). When you have completed the last section attach the back wall.

Step 14: Connection of the Back section to the Side Floor Profiles & to the Roof Beam:

(also refer to step 5)

Now attach both Side Floor Profiles (#1.2) to the back section by means of inserting the aluminum-corner connectors with recessed screws while at the same time sliding the Curved Corner Profiles (#2.1) in to the Side-Floor Profiles, tighten the recessed screws. (see picture on previous page). Next tread the top ends of each of the Curved Corner Profiles onto the Roof Beam and attach the Roof Beam Cover Plate with screws (4.2 x 13mm).

Step 15: Glazing of Front Wall:

First insert the bottom two Glazing Panels (all most square), one on either side of the door frame (suggestion: remove the top Crossbar of the Door Frame - to allow you more manouvering space - you can slide the Door Frame Uprights towards the center). If you have bought the RIGA shelving, you must slide one M6 x 16 Hexagon Bolt in to each of the Front Crossbars. Than set the Front Crossbars (#1.4) on top of the bottom Glazing Panels. Then place on top of each Crossbar a Glazing Panel with the curved edges, making sure the side with the UV-filter in facing outwards (as always). Now permanently attach the Crossbars to the outersupports (Curved Corner Profiles and Door Frame), using screws: 4.8 x 45mm (0.2" x 1.75"). See picture on the left.

Next, insert the small triangular Glazing Panel above the Door Frame (you will have to remove the Top Crossbar - if you haven't already done so). Before, you put the top crossbar back and bolt it in place, make sure the triangular Panel is inserted such that the bottom edge is perfectly horizontal (if you like, use a level) and that the top corners at each of the ends of the Crossbar touch the Curved Corner Profiles.

Step 16: Glazing of the Back Walls:

Follow step 15 to insert the Glazing Panels on each side of the vertical uprights. Than place the center Galzing Panel in the bottom of the „door“ opening and cap with the Back Wall Crossbar (#1.9). Make sure you insert 3 Hexagon Bolt (M6 x 16mm) in the channel of the Crossbar. Using the Round Mounting Plates with 4 holes attach each side of the Crossbar to the „door“ frame - using the bottom Hexagon Bolts in the door frame. The 3rd Hexagon Bolt in the Crossbar will be used to attach the Rear Window Opener to.

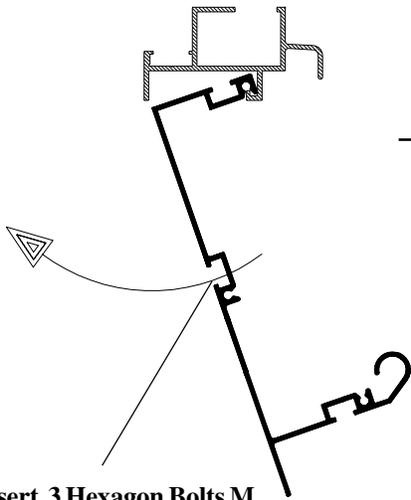
Next, insert the triangular Panel above the „door“ frame. Same process as in Step 15.

Step 17: Assembly of Lateral Supports #2.0:

If you bought the optional shelving (shelving without legs - specially designed for the RIGA greenhouses) - refer to page 13 for further instructions.

If not: Lay 2 of the Lateral Supports (#2.0) on top of the Front and Back Crossbars one on each side against the Curved Profiles, attach to the Curved Profiles using the lowest Hexagon Bolts you put in the Curved Profile channels, tighten with nuts. Attach in such a manner that the L-shape goes upwards.

If you were to install their shelving later the shelf trays will lie inside the L. Install the second set of Lateral Supports (#2.0) about halfway between the bottom Lateral Supports and the Roof Beam - stay underneath the Roof Window as shown in the drawing on page 3.



Insert 3 Hexagon Bolts M 6x16

Roof Window Assembly: see Page 12

Rear Window Assembly: see Page 13

Front Door Assembly: see page 14



Angle Brackets on the Foundation Frame

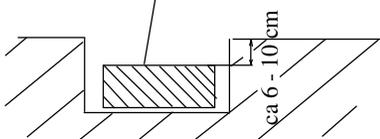
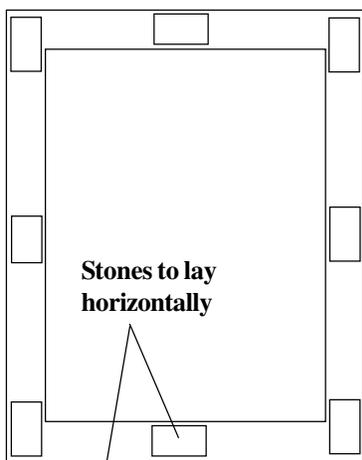
Mounting of a Foundation Frame:

If you have purchased the RIGA Foundation Frame (extra high 6"), you have 2 choices about when to attach it:

(But in either case you must slide 3 Hexagon Bolts (M 6X16) into the central channel of each Foundation Frame piece: Place one bolt near the center and one at each end.)

Choice #1: At the beginning: Mount the Foundation Frame by hooking it into the floor profiles #1.1 and #1.2 before you start to assemble the RIGA greenhouse. (Many prefer this method). Special L-brackets have been provided for you to do it this way. You slide a Hexagon Bolt into the center channel, towards the middle of each of the 4 Foundation Frame sections and use a L-Bracket to hook over the Floor Profile and then over the bolts in the Foundation Frame - hold in place with a nut. You can remove these brackets if you wish when you have fully assembled the greenhouse.

Choice #2. When the greenhouse frame has been completed: You attach/hook the Foundation Frame (see picture on the left) in single parts to the 4 Floor Profiles (remember to add 3 Hexagon Bolts to each piece first). You will have to lift each side of the greenhouse approx. 10-12" above the ground. Suggestion: Place some blocks underneath the frame to hold it up or you can lay it on its side (yes, if you have properly assembled your greenhouse you can lay it on its side - and this is a good test to find out!) Either method, once the 4 Foundation Frame pieces have been put into place you attach the 4 Corner Brackets (see picture on the left).



Helpful Hint: Depending on where you might have laid down the Floor Profiles you might find that dirt/sand has already entered the little channel on the bottom side of the Floor Profiles into which the Foundation Frame pieces are to be hooked. Two solutions: Either use a brush with very fine bristles and try to wipe out the dirt, and/or carefully slide the Foundation Frame, starting from one end all the way down the channel of the Floor Profiles, to push the dirt out. Use a Rubber Mallet - carefully - to do this.

Another suggestion: Assemble the greenhouse on a hard surface, like a driveway, and carry the greenhouse to its final location once it is fully assembled. That way you avoid dirt entering any of the profiles.

Step 18: Placing the Greenhouse in its permanent location:

There are 2 basic options:

1. In the ground:

Dig a trench approx. 6-10" deep, and depending on the slope in your garden and how much you care that your greenhouse appear horizontal, place in each of the four corners and half way down the length, somekind of a brick (or something similar) as a support (see picture on left). You will want to fill the trench, up to the top of your bricks, with some kind of small riverbed stones (peddle stones) to provide a solid and even footing all the way round. If you have not yet attached the Foundation Frame to the greenhouse you can use the frame pieces to make sure that all four sides of the trench are level. Once the trench is level start the assembly of the greenhouse or if you have already assembled your greenhouse you will need 4 people to set it in the trench.

Once in place - fill the Foundation Frame with the excavated materials and thus the greenhouse is protected from it flying away in strong winds.

2. On a hard surface:

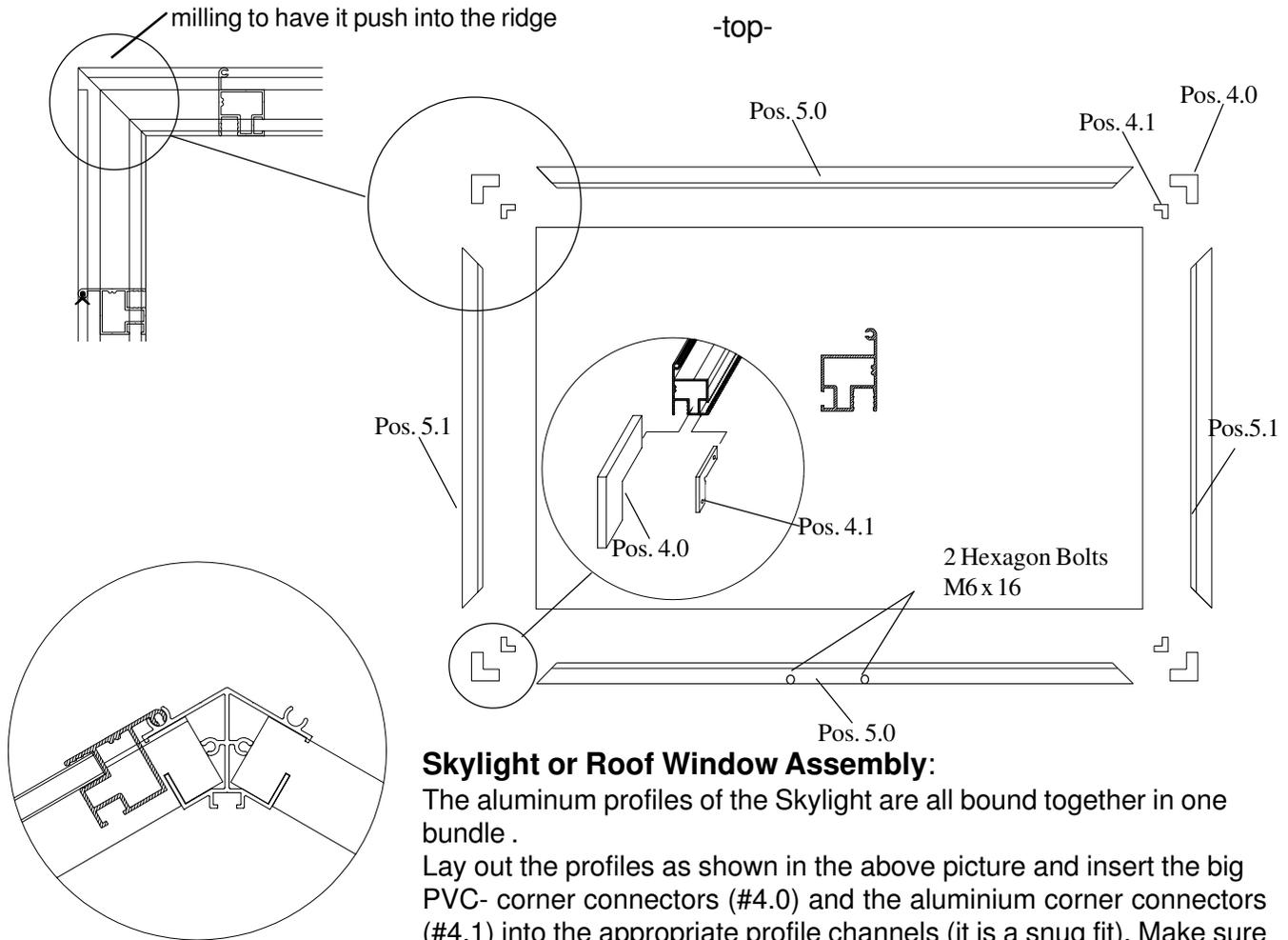
The RIGA can be placed with or without the Optional Foundation Frame. In Europe it is common for people to buy the Foundation Frame - even though they are mounting the greenhouse on top of a deck, concrete slab, or a specially build low wall - just to add 6" more of head room.

Attach either the Foundation Frame or Floor Profiles to your foundation using appropriate screws or bolts. Recommendation: Place at least 1 screw/bolt every 3 feet; diameter: 0.3"-0.4".

Notice: There are no pre-drilled holes in either the Floor Profiles or the Foundation Frame for mounting to a hard surface because depending on what type of hard surface you want to mount the RIGA to, the required distances of such holes might be different. Although the Aluminum parts are extremely strong their material is soft enough for you to drill holes wherever you require them.

Parts list for skylight

Pos.	designation	length	number
4.0	PVC-angle bracket	2.7" x 1.1" x 0.4"	4
4.1	Alu-angle connection with recessed screw	1.2" x 1.2" x 0.4"	4
5.0	Skylight (roof window) cross-rail	41"	2
5.1	Skylight Side Bar Y-seal	24.8" 11.5 ft.	2



Skylight or Roof Window Assembly:

The aluminum profiles of the Skylight are all bound together in one bundle .

Lay out the profiles as shown in the above picture and insert the big PVC- corner connectors (#4.0) and the aluminium corner connectors (#4.1) into the appropriate profile channels (it is a snug fit). Make sure to insert 2 Hexagon Bolts (M 6x16) into one of the Skylight profiles (#5.0) (This one will become the bottom of the window) as these will be later used to attach the Automatic Window Opener.

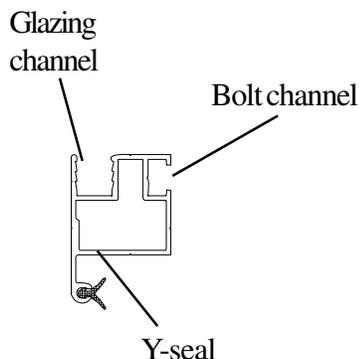
Attention! In order for the window to be able to close correctly you must make sure that the 2 ends with a slight cut-out of each of the vertical/side profiles are facing to the top. (Look carefully at each end and put the ends with the shorter round channels on the top). See picture on top left.

Attention! The appropriate size Glazing Panel has to be inserted into the profiles while assembling the frame. Use the Allen key to tighten all the aluminum corner connectors.

Next insert (or pull-in) the rubber Y-seal into the narrow circular channel located on the outer edge of the two side profiles and the bottom profile. See picture on left bottom.

Then if you wish (optional, but recommended) seal the outside of the Skylight with silicon (use enclosed tube).

III. 3:



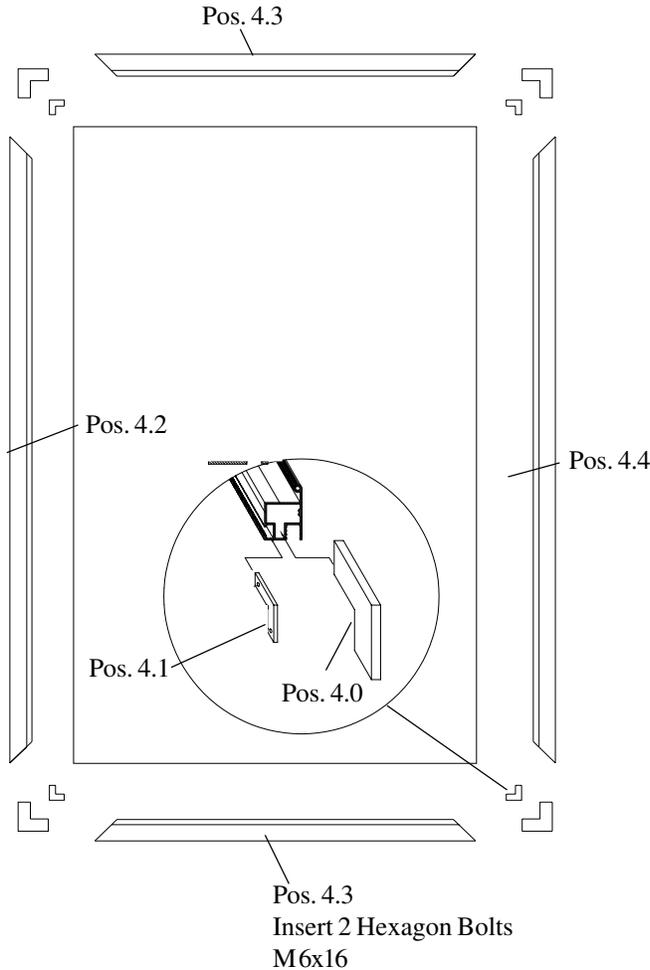
Mounting of the skylight (roof window):

Slide the narrow circular channel sticking out of the top Skylight Profile (#5.0) of the fully assembled roof window (see Ill. 3, page 8) into the wider circular channel on top of the Roof Beam. With the rubber mallet move the window in position so that when it closes it fits between two Curved Center Profiles (#2.2).

Parts list for Rear Wall Window

Pos.	designation	length	number
4.0	PVC-corner connector	2.4" x 2.4" x 1.1"	4
4.1	Aluminum-corner connector	1.2" x 1.2" x 0.4"	4
4.2	Vertical Window Support (without holes)	50.7"	
4.3	Horizontal Window Frame Supports	30.1"	2
4.4	Vertical Window Support with holes (for hinges)	50.7"	1
	Y-seal	15 feet	

Part of the Total Parts List



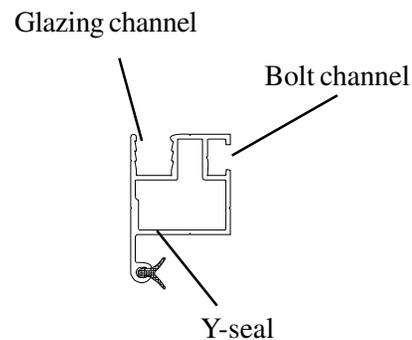
Rear Wall Window Assembly:

The Rear Wall Window is assembled the same way as the Roof Window or Skylight. See Previous page and drawings on this page.

One exception: the Y-seal goes into all 4 profiles.

Attention!

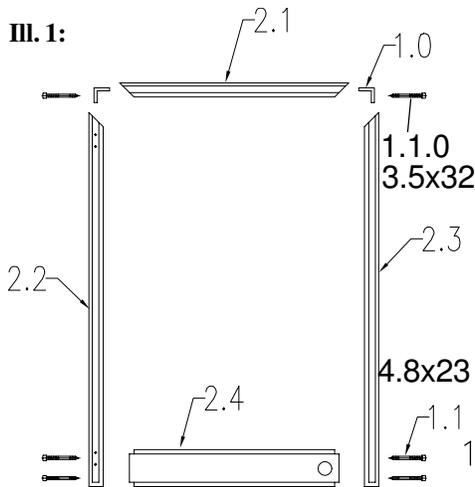
Insert 2 Hexagon Bolts (M 6 x16) into the bottom profile of the Rear Wall Window - in order to be able to attach the Rear Wall Window Opener (adjustable arm) later.



Parts list for divided revolving door

Pos.	profile	designation	length	number
1.0		Aluminum Corner Connectors with a hole on side	2" x 2" x 0.4"	6
1.1.0		Connecting screw	3,5 x 32 (0.1" x 1.3")	6
1.1.1		Connecting screw	4,8 x 50 (0.2" x 2.0")	4
2.1	Upper Section	Upper door cross-rail	30.5"	1
2.2		Right Vertical Door Support with holes for hinges	46.3"	1
2.3		Left Vertical Door Support with 2 holes at bottom	46.3"	1
2.4		Door Crossbeam with large hole for door handle	28"	1
3.1	Lower Section	Vertical Support with sash lock holes	29"	1
3.2		Top Crossbar with VKT-holes	30.6"	1
3.2.1		Rectangular tube VKT 30/30 as door stop	28"	1
3.2.2		Seal 2mm	23 feet	1
3.2.3		Distance blocks 4 mm (yellow)	3"	2
3.2.4		Connecting screw for top part of lower door	3,5 x 32 (0.1" x 1.25")	2
3.3		Right Vertical Support with hinge holes	29"	1
3.4		Bottom Crossbar	30.6"	1

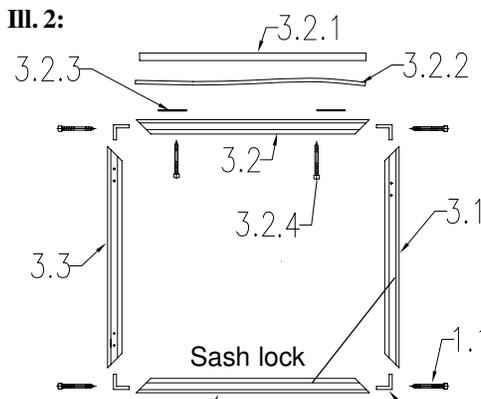
Part of the total parts list



Upper Door Section: See III. #1

Lay out the profiles according to the drawing on the left. Insert the Aluminum Connectors (#1.0) into the Vertical Supports (#2.2 and 2.3) so that the holes in the Connectors line up with the holes in the Vertical Supports. After they are lined up the profiles are screwed together with the screws going through the screw channels in the Top Crossbar (#2.1). Use the sheet metal screw 3.5 x 32 (0.15" x 1.25"). See Picture.

Next, place the large Lower Crossbeam (~4" wide) with doorhandle hole (#2.4) and screw it together with the sheet metal screws 4.8 x 50 (0.2" x 2"). Two screws each go on both sides - as shown.

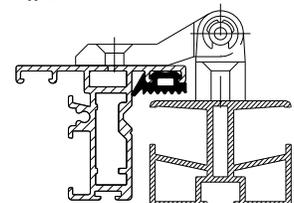
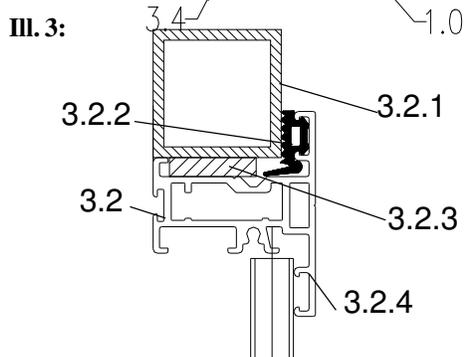


Lower Door Section: See III. #2 & #3

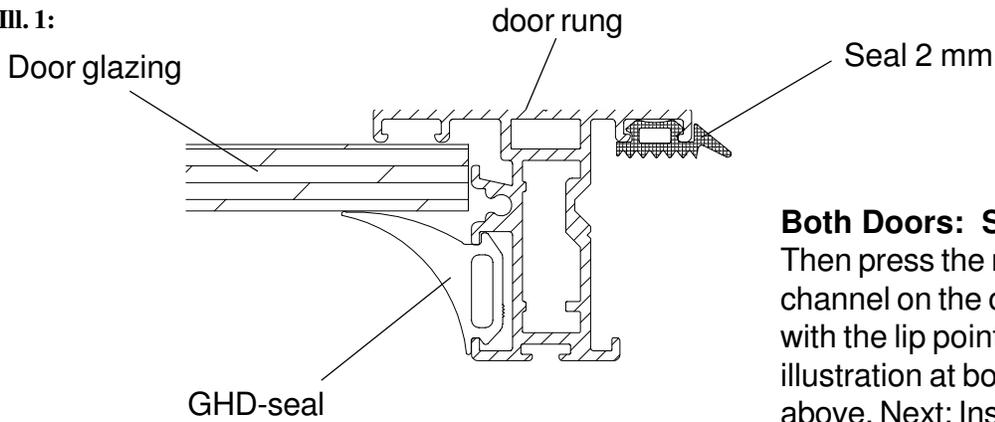
Assemble the bottom half of the door the same way as the top half. Then press the strip of sealer material into the intended sealing grooves. Always cut the seals a bit longer and then press them so there is slightly too much rubber seal on each end. Over time temperature fluctuations will slowly shorten this excess rubber seal. See III. #3

Lie the rectangular tube 1.25" x 1.25" x 28" on top of the Top Crossbar and insert the yellow spacers (#3.2.3) between the Top Crossbar and the Rectangular Tube (#3.2.1) (See III. 3). Next, attach the Rectangular Tube to the Top Crossbar using the long screws (3.5x38), screwing them upwards through the Top Crossbar (#3.2), as shown in III. #2.

Next, place the two black caps (1.25" x 1.25") on each end of the Rectangular Tube.



III. 1:



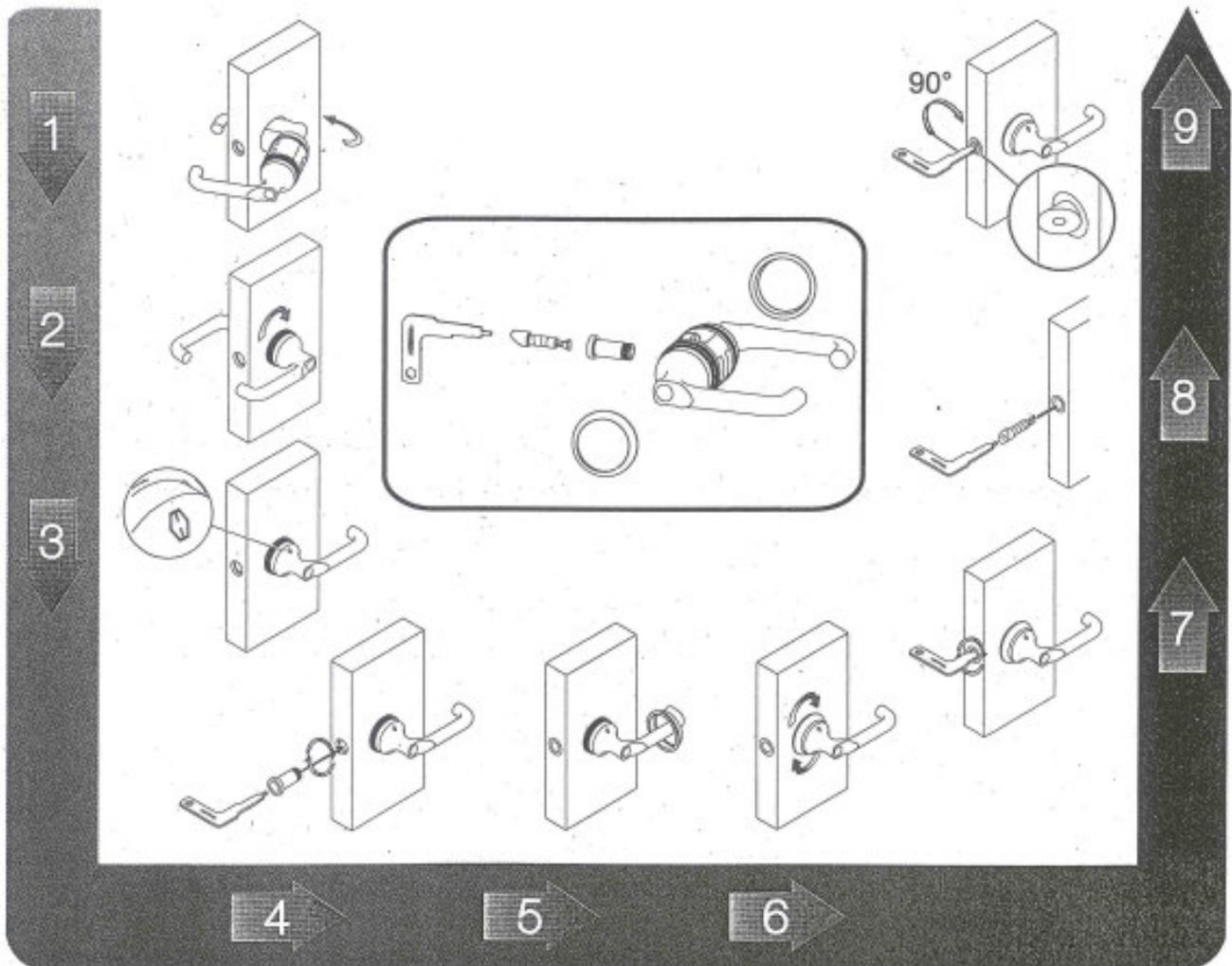
Both Doors: Sealer & Glazing:

Then press the narrow seal into the channel on the outside of the profiles with the lip pointing to the inside. See illustration at bottom of last page and above. Next: Insert the Glazing Panels into both door sections on the inside and push in place the GHD-seal as shown on the left (III. 1 on this page).

III. 2:

Door Handle Assembly Instructions

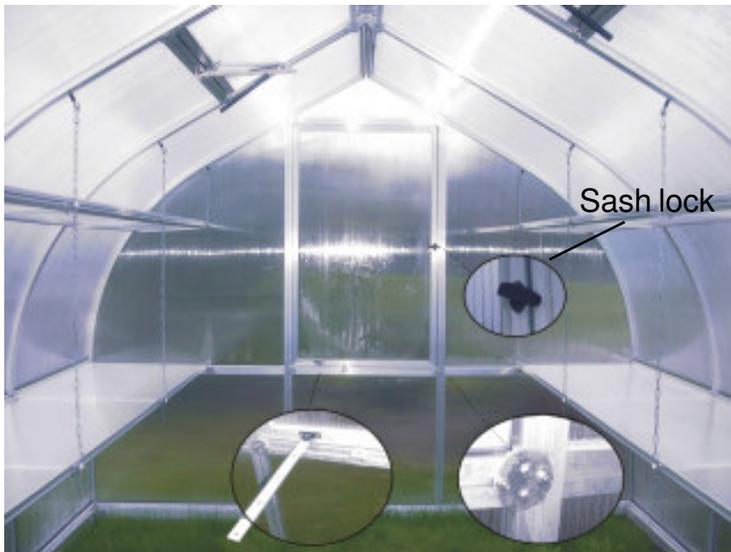
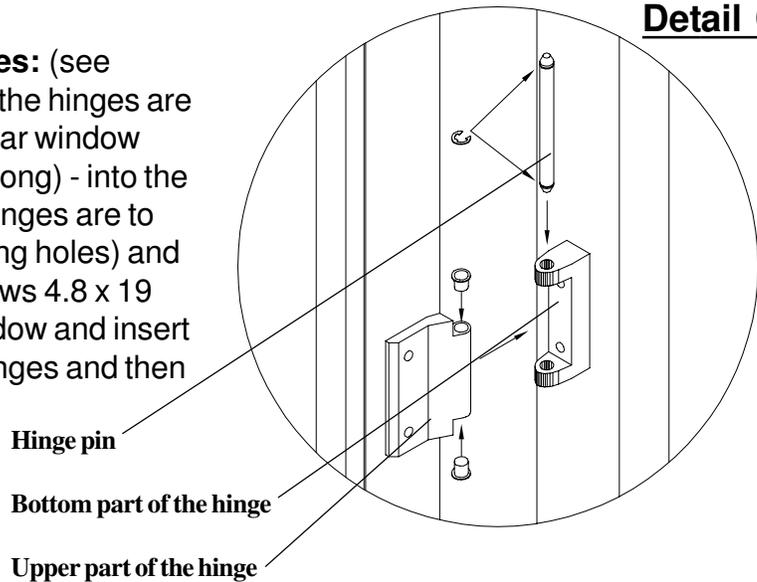
Montageanleitung für abschließbaren Drücker



Mounting of the Accessories

Mounting of the door and window hinges: (see illustration on the right). The bottom parts of the hinges are to be attached to the right outer door and rear window frames using the screws 4.8 x 25 (0.2" x 1" long) - into the appropriate holes. The upper parts of the hinges are to be attached to the inner door frames (existing holes) and the frame of the back wall window with screws 4.8 x 19 (0.2" x 0.75" long). Hang the doors and window and insert the spacers between the two parts of the hinges and then insert the Hinge Pin from the top and secure with Snap-Rings at the bottom. If necessary, loosen and adjust the hinges to get the right fit.

Detail C



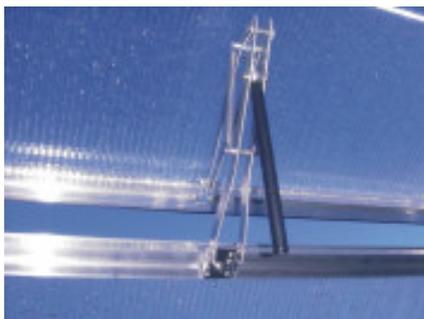
Mounting of the manual window opener

Attach the PVC-adapter – with the thick eye on the bottom – to the Hexagon Bolts (M 6x20) already placed in the bottom profile of the Rear Wall Window. Then attach Manual Window Handle (about 12" long) to the adapter (if it did not already come assembled). Attach the metal bracket with the threaded pin sticking up to the Rear Wall Crossbar (under the window) to the Hexagon Bolt placed there earlier. By trial and error determine the optimal position you desire for both ends of the Manual Window Opener. Hold the window in a

fixed open position by placing any eye in the handle bar over the pin sticking up from the Crossbar below the window, and holding it in place with the large White Knob.

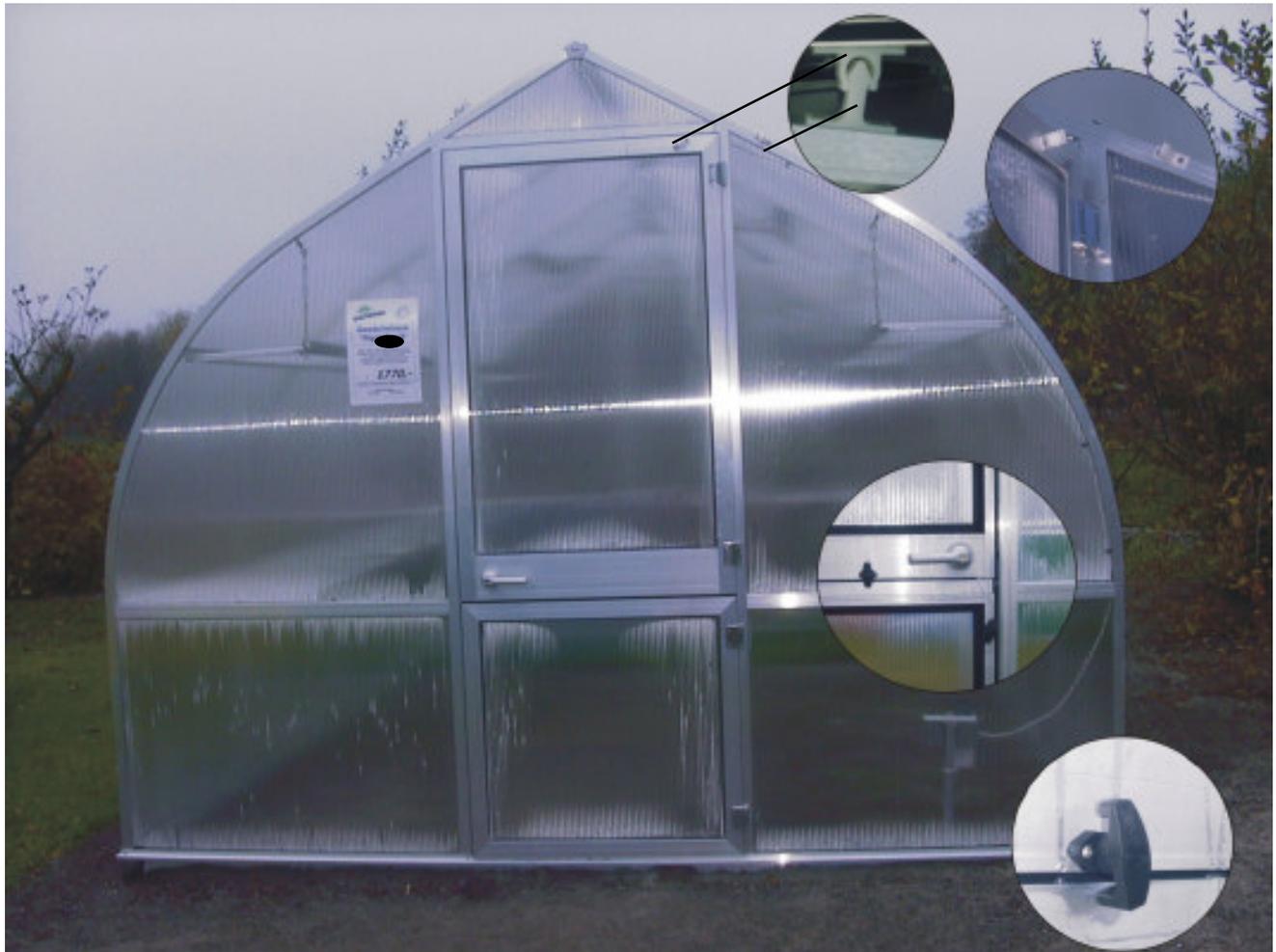
Placing of the sash locks / toggle switches – black PVC –

Attach a sash lock on the inside of the back window into the right hand vertical support (seen from the inside) to the pre-drilled holes using the 3.5 x 16 (0.14" x 0.6") screws . Do the same with the other 2 Sash Locks on the front door as shown on the next page.



Attaching the Automatic Window Opener:

First follow the assembly instructions that come with the Automatic Window Opener. Then attach the Automatic Window Opener to the 2 Hexagon Bolts, earlier placed in both the bottom crossbar of the Roof Window and the Crossbar of the frame – as you can see in the illustration – with the short arm going to the roof window and with the long arm going to the Crossbar underneath.



Door Holder:

The Door Holder - white and made out of two pieces (male and female) - is used to keep the door open in a fixed position. Place the Holder at the top right-hand corner of the door. See picture above. The female part has to be attached to the Curved Corner Profile and the male part to the top profile of the Upper Door - use screws 3.5x19. Hold the parts in place, mark the screw locations with a pen, and then drill your own holes.



Wedge seal to extend centrally

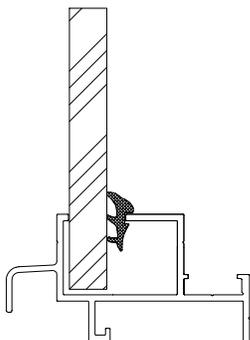
Inserting the Rubber Seals

1) On the inside:

Wedge the narrower seal (3-5 mm) (as shown, pull apart if necessary) between the Front & Back Wall Glazing Panels and the Floor Profiles (see illustration on left). This should require little or no strength - just push it in place with 2 or 3 fingers.

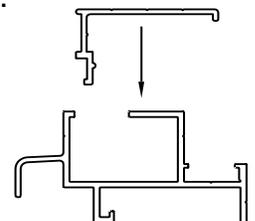
2) On the inside:

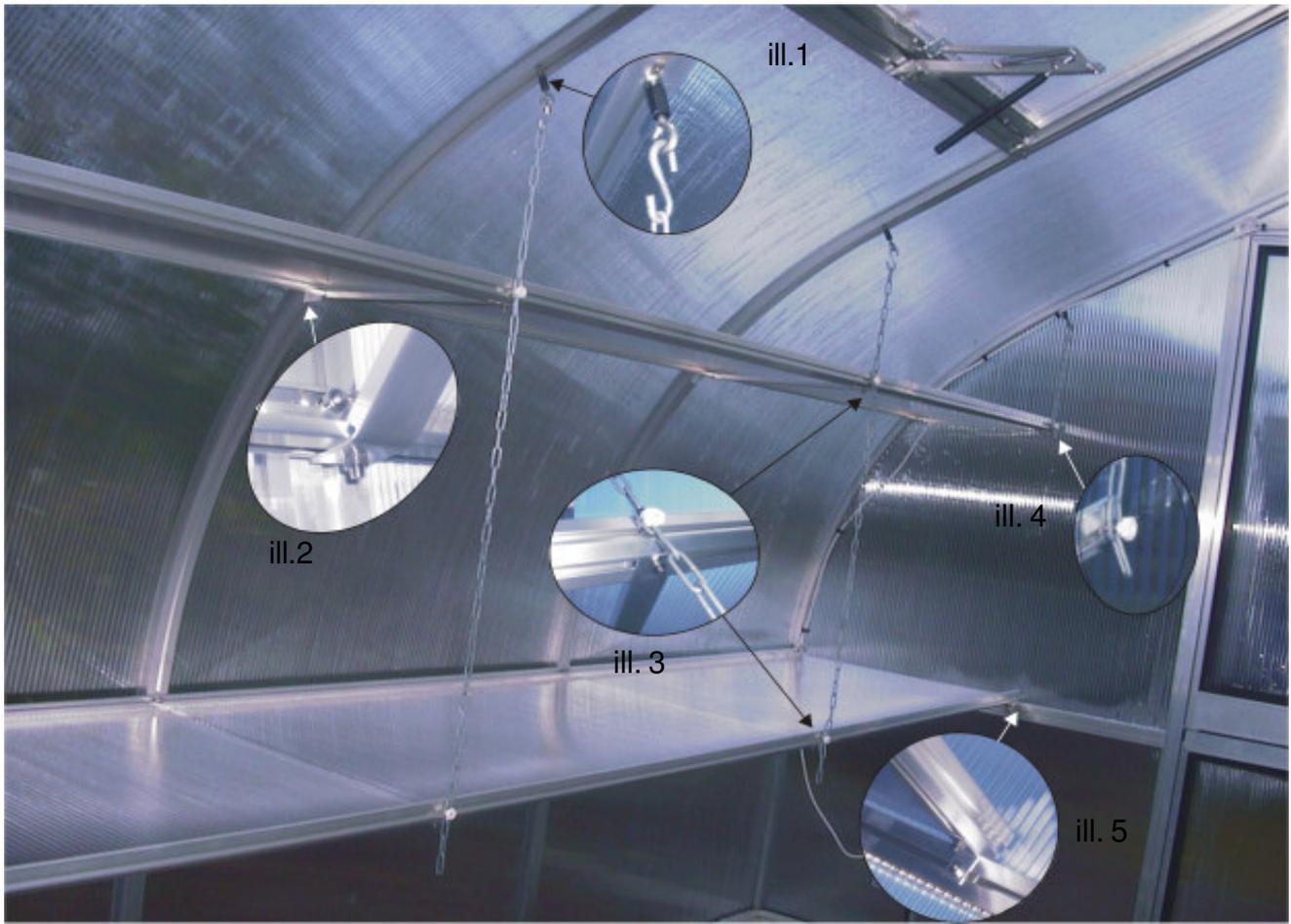
Wedge the broader/larger seal (6-8 mm) between the Roof Glazing Panels both at the top (into the Roof Beam) and at the bottom (into the Side Floor Profiles) (see illustration). This should require little or no strength - just push it in place with 2 or 3 fingers.



Doorsill:

Finally, place the Doorsill on top of the Floor Profile, underneath the door, and attach with 2 tallow-drop screws 3.5x16. See illustration on the left.





Placing the Lateral Supports:

If you have not already done so: Attach 2 Lateral Support #2.0 (full length of greenhouses) on both sides using the Hexagon Bolts. Place in each of the Curved Profiles. One lays on top of the Front and Back Wall Crossbars (#1.4) the other goes at head height - but below the Roof Window.

If you have bought the specially designed optional RIGA shelving system the upper support can be placed wherever you wish to place the upper shelf.

Assembling Top Shelving (Optional Accessory)

Step 1: Place Eye-Ring Hook combination in each Curved Profile (near the top) on the side of the greenhouse where you want to place the shelving. (See Illustration 1- inset in picture above)

Step 2: For the top shelf: Slide as many Hexagon Bolts into the channel at the bottom of the Lateral Supports (against the wall of the greenhouse) as you have Curved Profiles (i.e. RIGA III has 4 Curved Profiles on each side). Attach to each bolt the longer flat end (1.25") of the Cross Struts (about 16" long) and secure with nuts.

Next: Bend the cross-struts to a horizontal position (Ill. 2)

Then: Slide into the bottom and side channels of another Lateral Support (similar to the one already fixed into the wall of the greenhouse) as many bolts as you have cross-struts - in the same locations as the one with the Cross-struts. Now attach the Cross-struts to the bolts on the bottom of the second Lateral Support. Next hang the necessary chains from each of the Eye-Hooks that you earlier put in the Curved Profiles. Raise the top shelf and put the bolts through the rings on each of the chains and secure with white knobs. Make sure the shelf hangs horizontal. You can also adjust the position of the Eye-Hooks to make each chain hang perfectly vertical. See picture above for details. Last: Insert the removable polycarbonate shelves.

Mounting of Lower Shelf (table without legs) (optional accessory)

Step 1:

(If top shelf already exists, start with step 2)

Place an Eye-Hook (III.1) in all the Center Curved Profiles.

Step 2:

Slide as many Hexagon Bolts into the bottom channel of the Lateral Support (which is placed against the greenhouse side wall) as you have Cross-struts. You should have received an extra cross-strut for each glazing section; place half way between Curved Profiles. Insert the same amount of bolts on the bottom channel of the other Lateral Support. In addition slide as many Hexagon Bolts, as you have chains hanging down, into the channel on the front side of the second Lateral Support (chains will be attached to these).

Next: Attach an angle bracket to each end of the second Lateral Support and attach to Hexagon Bolt sticking out of the Front & Back Wall Crossbars. See III. 5

Step 3:

Attach all Cross-struts to both Lateral Supports using the Hexagon Bolts and nuts M 6x16. (III. 2 and 3).

Step 4:

Now attach the chains to the front of the second (front) Lateral Support.

Last: Place appropriate shelves (either polycarbonate glazing or seed trays) in each of your shelf frames. Sections of either are removable in order to provide adequate growing space for tall plants.

Care and maintenance of your RIGA greenhouse

The greenhouse only requires minimal care and/or maintenance:

1) **To clean:** We recommend a treatment similar to those for washing your car: Rub with a soft brush and lots of water (very mild soap). Never use abrasive materials as you do not want to scratch the UV filter on top of the Glazing Panels.

2) The **pressure cylinder** of the Automatic Window Opener should be removed during frost season and be kept frost-free. The rod assembly of the Opener can stay in the greenhouse. Tie the rod assembly arms together with string or wire while the cylinder is not in place to prevent the window from blowing open in stormy weather.

3) Your **RIGA** greenhouse should be ventilated as much as possible especially when condensation develops. (However, high humidity is preferred by some plants and especially during the seed-to-seedling stage).

Have lots of fun and success with your RIGA greenhouse from Hoklartherm - enjoy the fruits of your labor!

Please contact your supplier for information about Special Accessories for your RIGA greenhouse.

If you wish to see what other products Hoklartherm manufactures visit its website: www.hoklartherm.de

In case of problems during the assembly process or questions regarding the RIGA warranty, contact the U.S. importer:

Exaco Trading Co.
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8140 Burnet Rd., Suite 227
Austin, TX 78757
customerservice@exaco.com
(Toll Free: 877-760-8500)
(Fax: 512-407-8554)

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